Cape Peron Tourist Precinct Project

Cape Peron Tourist Precinct Steering Committee

Advice of the Environmental Protection Authority to the Minister for the Environment, under Section 16e of the *Environmental Protection Act 1986*

(This is not an assessment of the Environmental Protection Authority under Part IV of the *Environmental Protection Act 1986*).

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Section 16 advice does not result in environmental approval. The process is intended to allow the EPA to provide advice on any environmental impacts associated with the Project at a strategic level. After receiving the advice of the EPA, Government will then decide if the Project should proceed. If it is to proceed, the proposal developed would be subject to formal environmental impact assessment. **There is no right of appeal against Section 16 advice.**

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Contents

1. Introduction

The Environmental Protection Authority (EPA) has been requested by the Minister for the Environment to provide advice under Section 16(e) of the *Environmental Protection Act 1986* (EP Act), in relation to the strategic environmental implications of the Cape Peron Tourist Precinct Project, Rockingham.

The Cape Peron Tourist Precinct Steering Committee has coordinated the development of a Strategic Environmental Review (SER) document for the Cape Peron Tourist Precinct Project, in which three options have been put forward for the development of a marina and tourist precinct at Cape Peron, Rockingham. The SER describes the likely effects of the options on the environment at a strategic level. It should be noted that the level of investigations undertaken to inform the SER are therefore not as detailed as that which would be required to be undertaken if the Project proceeds. The SER document was available for four weeks public review from 7 March 2006 until 4 April 2006. Over 440 submissions were received.

The concept is for a tourist based marina to be constructed inland of the current shoreline. The marina is proposed to accommodate more than 500 boats to incorporate local boating clubs, commercial areas and boat pens for public use. The surrounding land development is 'mixed-use' with tourism facilities, accommodation, commercial areas, public open space and residential areas.

The purpose of reviewing the Project under Section 16(e) of the EP Act was to identify the key environmental issues associated with the Project and to gather, at a strategic level, information on those environmental issues. It is expected that this advice will be considered by Government in its decision as to whether the marina Project will proceed to the development of a detailed proposal. If Government considers that the Project should proceed further, the detailed development proposal would require referral to the EPA under Section 38 of the EP Act. Formal environmental impact assessment of the proposal would be required.

Section 2 of this report provides context for the evaluation, particularly a policy framework and information on previous EPA advice regarding a marina in Mangles Bay. A description of the Project is presented in Section 3 of this report. Section 4 discusses the environmental issues relevant to the Project. Section 5 provides the EPA's advice on Other Environmental Issues, with Section 6 providing the EPA's Other Advice, while Section 7 presents the EPA's Conclusions and Section 8, the EPA's Recommendations. Appendix 3 contains a summary of submissions and the proponent's response to submissions and is included as a matter of information only.

Context for Evaluation

2.1 Policy framework

2.1.1 State Environmental (Cockburn Sound) Policy 2005

The *State Environmental (Cockburn Sound) Policy 2005* (Cockburn Sound SEP) was established by Government in January 2005 (Govt. of WA 2005). The Cockburn

Sound SEP establishes the framework within which Cockburn Sound and the adjacent land (the Cockburn Sound catchment) are to be managed so as to protect environmental quality in the Sound. The Cockburn Sound SEP establishes a risk-based approach to environmental management, which is underpinned by Environmental Values (EVs) and Environmental Quality Objectives (EQOs) that were identified and spatially defined through consultation with the community. There are ecological and social EVs and EQOs defined in the Cockburn Sound SEP. For each EQO, a set of benchmarks called Environmental Quality Criteria (EQC) have been established. The EQC are used to evaluate the environmental monitoring data collected in Cockburn Sound and determine whether the EQOs are being achieved or if management action is required to improve environmental quality such that the EQOs could be achieved in the future.

The EQO for the Mangles Bay area of Cockburn Sound established by the SEP is that a High Level of Ecological Protection should be achieved. This 'level of protection' allows for small changes in the quality of water, sediment or biota (i.e. small changes in contaminant concentrations with no resultant detectable changes beyond natural variation in the diversity of species and biological communities, ecosystem processes and abundance/biomass of marine life).

The Cockburn Sound SEP also empowers the Cockburn Sound Management Council (CSMC) to report publicly on the findings of environmental monitoring in Cockburn Sound. The CSMC also presents a 'report card' on the quality of Cockburn Sound to Parliament each year. The report cards can be found on the CSMC's web site at csmc.environment.wa.gov.au.

2.1.2 Shoalwater Islands Marine Park Draft Management Plan (July 2006)

The *Shoalwater Islands Marine Park Draft Management Plan* has been released for a three month public comment period (closing late October 2006). It outlines how the Shoalwater Islands Marine Park will be managed into the future.

The draft Plan sets out, among other things, a zoning scheme and a 'best practice' model for managing an array of identified ecological and social values of the Marine Park. The zoning scheme proposes that the areas to the north of Point Peron (to the west of the Garden Island Causeway) be within a General Use Zone. Shoalwater Bay (on the southern side of Point Peron) is a recommended Special Purpose Zone for wildlife conservation.

For each ecological or social value of the Marine Park, the draft Plan sets out management objectives, performance measures and targets. For example, the proposed management objective for seagrass meadows in the draft Management Plan is to ensure no loss of species diversity of seagrass communities and that the biomass of seagrass communities is not significantly impacted by human activity in the Park. The short and long term target in the draft Plan is for no permanent loss in the aboveground biomass of perennial seagrass from 2006 levels in defined areas of highest existing risk. An additional long term target is for no loss of seagrass community diversity as a result of human activity in the Park.

2.1.3 Rockingham Lakes Regional Park Draft Management Plan (2003 – 2013)

The purpose of the plan is to provide broad direction for the protection and enhancement of the conservation, recreation and landscape values of Rockingham Lakes Regional Park (RLRP), by outlining strategies aimed at conserving the special features of the Park and providing for future community requirements.

The plan recognises the potential for the development of a marina Project at Point Peron and notes that it could potentially create a number of negative environmental issues including impacts on seagrass habitats in Cockburn Sound, disturbance to an area of Cape Peron and risks to the hydrology of Lake Richmond. In order to proceed, the proposal for a boat harbour at Mangles Bay may require that land be excised from the Park. An excision would require an amendment to the Metropolitan Region Scheme (MRS) to change the land from "Parks and Recreation" to an appropriate zoning.

The plan notes that, "as the boat harbour is likely to be the subject of further planning, and in recognition of prior planning for the development, the area of the Park that may potentially be affected has been identified as an "area subject to further planning"".

The primary key performance indicators for conserving biodiversity in RLRP include:

- the range of vegetation communities is maintained;
- the abundance and distribution of priority weed species are reduced;
- the status of the Threatened Ecological Communities is improved; and
- landscape linkages that preserve geomorphic features are maintained.

2.1.4 Environmental Protection (Swan Coastal Plain Lakes) Policy 1992

Lake Richmond is listed for protection under this Policy. The Policy effects the protection of listed Lakes by prohibiting the carrying out of activities which cause the destruction and degradation of lakes and requiring persons who cause the destruction or degradation of lakes to undertake, in certain cases, the rehabilitation or re-establishment of those lakes. Activities identified as being significant causes of the degradation or destruction of lakes include:

- the filling in of lakes with materials;
- the carrying out of excavation or mining operations in lakes;
- the discharge or disposal of effluent into lakes; and
- the drainage of water into or out of lakes.

2.2 Previous EPA advice regarding a marina at Mangles Bay

2.2.1 EPA Bulletin 693 – Mangles Bay Marina (July 1993)

In 1989, the then Department of Marine and Harbours referred a proposal for a marina in Mangles Bay to the EPA. After refinement of the proposal, a Public Environmental Review (PER) document was released for public comment in 1992. The primary environmental issue associated with that marina proposal was the loss of between 17 and 32 hectares (ha) of seagrass. The EPA concluded in Bulletin 693 that the proposed marina at Mangles Bay was environmentally unacceptable and should not proceed. In reaching this conclusion, the EPA identified the main environmental factor as the significant impact on the remaining seagrass in the Mangles Bay area and

the ecological significance of preserving the small amount of seagrass that remains in Cockburn Sound. The Minister for the Environment did not issue a statement that the proposal could be implemented and a Mangles Bay Steering Committee was established to consider potential options, taking into account the environmental issues associated with the area.

2.2.2 EPA advice to the Mangles Bay Steering Committee (February 1998)

As a result of appeal investigations from Bulletin 693 and recommendations made by the Mangles Bay Steering Committee (which was established to investigate technical aspects of marina design and to suggest alternative design concepts), a new proposal for a marina was suggested. Major modifications to the original proposal included:

- the loss of seagrass reduced from 17 - 32 ha to approx 7 ha;
- the marina to be inland, rather than offshore; and
- extensive use to be made of the adjacent Cape Peron land for associated tourism development.

In February 1998, the Chairman of the EPA provided a statement about seagrass and the proposed Mangles Bay Boat Harbour. This statement was provided to the Minister for the Environment and the Mangles Bay Steering Committee. This statement provided background on the values of seagrasses in Cockburn Sound and Mangles Bay. The statement noted that:

"*Because of past events, it would be very difficult to argue that any further reduction in areas of seagrass was acceptable from an environmental perspective. However, the EPA recognises that the environmental information is but one part of the information required in the decision-making process by Government. Noting the importance of seagrass there is a clear need to either avoid or at least minimise any further seagrass impact*".

2.2.3 EPA Bulletin 907 – The Marine Environment of Cockburn Sound: Strategic Environmental Advice (October 1998)

In October 1998, the EPA provided strategic advice under section 16(e) of the EP Act, in relation to the cumulative environmental impact of marine-related infrastructure proposals on Cockburn Sound. A number of proposals within or impacting on Cockburn Sound were under development at that time and while the EPA had statutory obligations to assess the potential environmental impacts of individual development proposals, the EPA held a view that the marine environmental implications of each development proposal can not be considered in isolation from the effects of existing and approved developments.

In its section 16(e) report, the EPA provided advice on the potential cumulative environmental impacts of multiple proposals in Cockburn Sound on water quality and seagrasses. The EPA noted that seagrasses not only have intrinsic value as marine flowering plants, but they also perform important ecological functions in the marine environment, and at that time, surveys showed that the area of seagrass in Cockburn Sound was in the order of 700 ha, indicating that there had been no significant recovery since the 1970's.

The advice documented a proposed policy framework to protect marine waters from the cumulative effects of development pressures. It also reiterated the EPA's objectives of protecting the remaining seagrass meadows of Cockburn Sound and the

need to retain those areas where seagrasses once grew (i.e. sand banks and sandy margins) so as not to lose future opportunities for re-establishment of seagrass if conditions became suitable in the future. The establishment and maintenance in Cockburn Sound of environmental conditions that are consistent with the survival, growth, restoration and expansion of seagrass cover are key environmental outcomes for the EPA.

2.2.4 Advice to the Mangles Bay Point Peron Recreational Tourist Development Technical Committee (August 2002)

In August 2002, the Chief Executive Officer of the then Department of Environmental Protection (DEP) advised Landcorp of the Department's views on water quality and seagrass issues associated with Mangles Bay. This advice noted that:
"*most recent reports to the DEP indicate the seagrass meadows are under similar pressures as in 1998, if not increased. Seagrass in Mangles Bay continue to compare poorly with other sites in Cockburn Sound. The direct loss of seagrass therefore remains a primary issue for any proposal to develop the Mangles Bay Boat Harbour. The protection of Lake Richmond which is recognised for its conservation value, and nutrient inflow and pollutants from the Lake Richmond drain on the waters of Mangles Bay are also of concern*."

3. The Project

The concept of the Cape Peron Tourist Precinct Project is for an inland tourist based marina. The marina is proposed to accommodate more than 500 boats and is to incorporate local boating clubs, commercial areas and boat pens for public use. The surrounding land development is proposed to be mixed use, with tourism facilities, accommodation, commercial areas, public open space and residential areas.

The proposed development site covers an area primarily east of the Garden Island Causeway and is bounded by Hymus Street to the east and the proposed Garden Island Highway to the south.

Three Project options were discussed in the SER document (Strategen 2006a) prepared for the Cape Peron Tourist Precinct Steering Committee. A detailed Project description is provided in section 4 of the SER. The key characteristics of the three options are provided below in Table 1. Figure 1 provides plans of the three proposed options. Table 3 of the SER provides a more detailed comparison of the key design elements of the options. Figure 2 provides more detail on option 2.4.

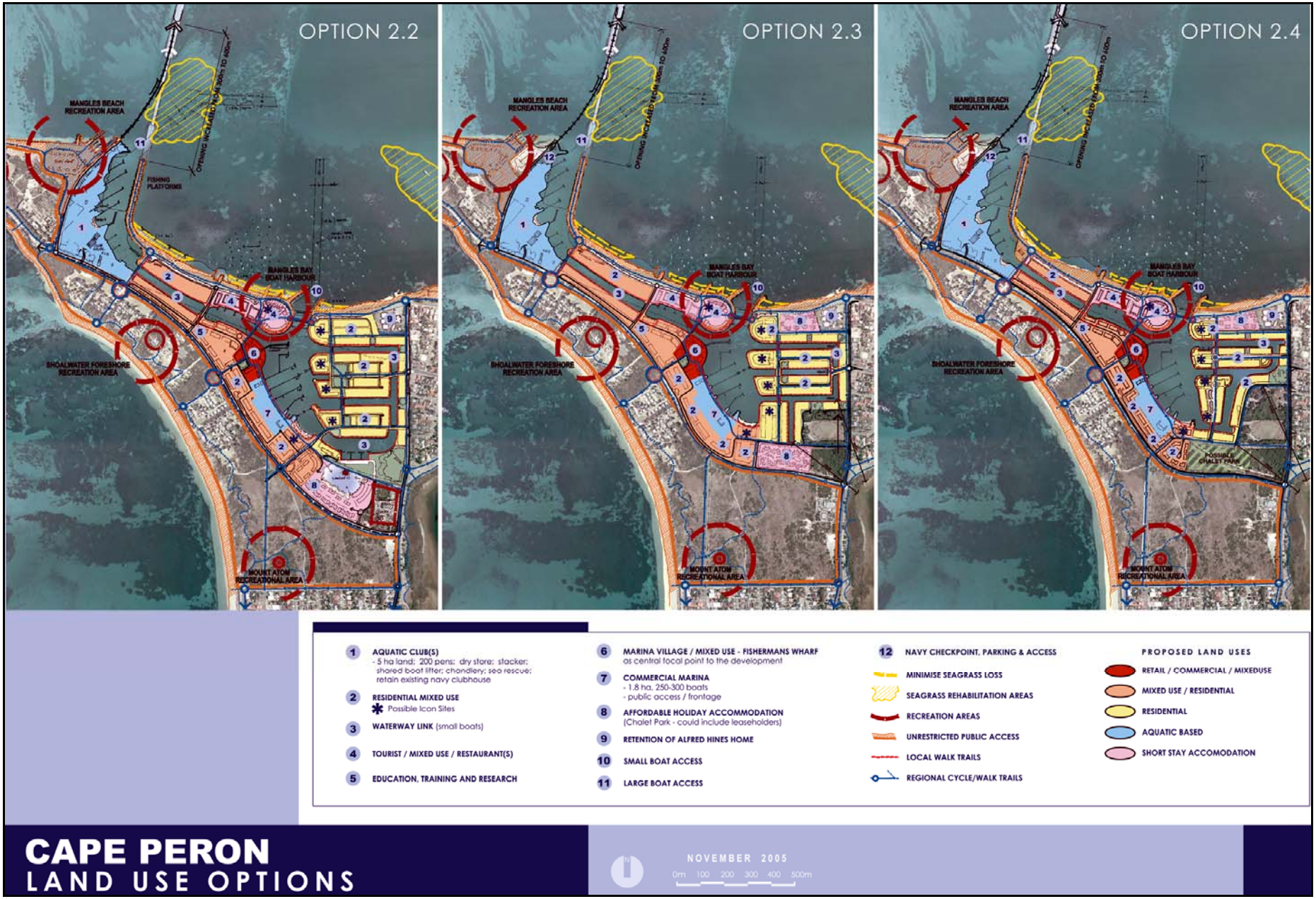

Figure 1: Three Project options discussed in the Strategic Environmental Review

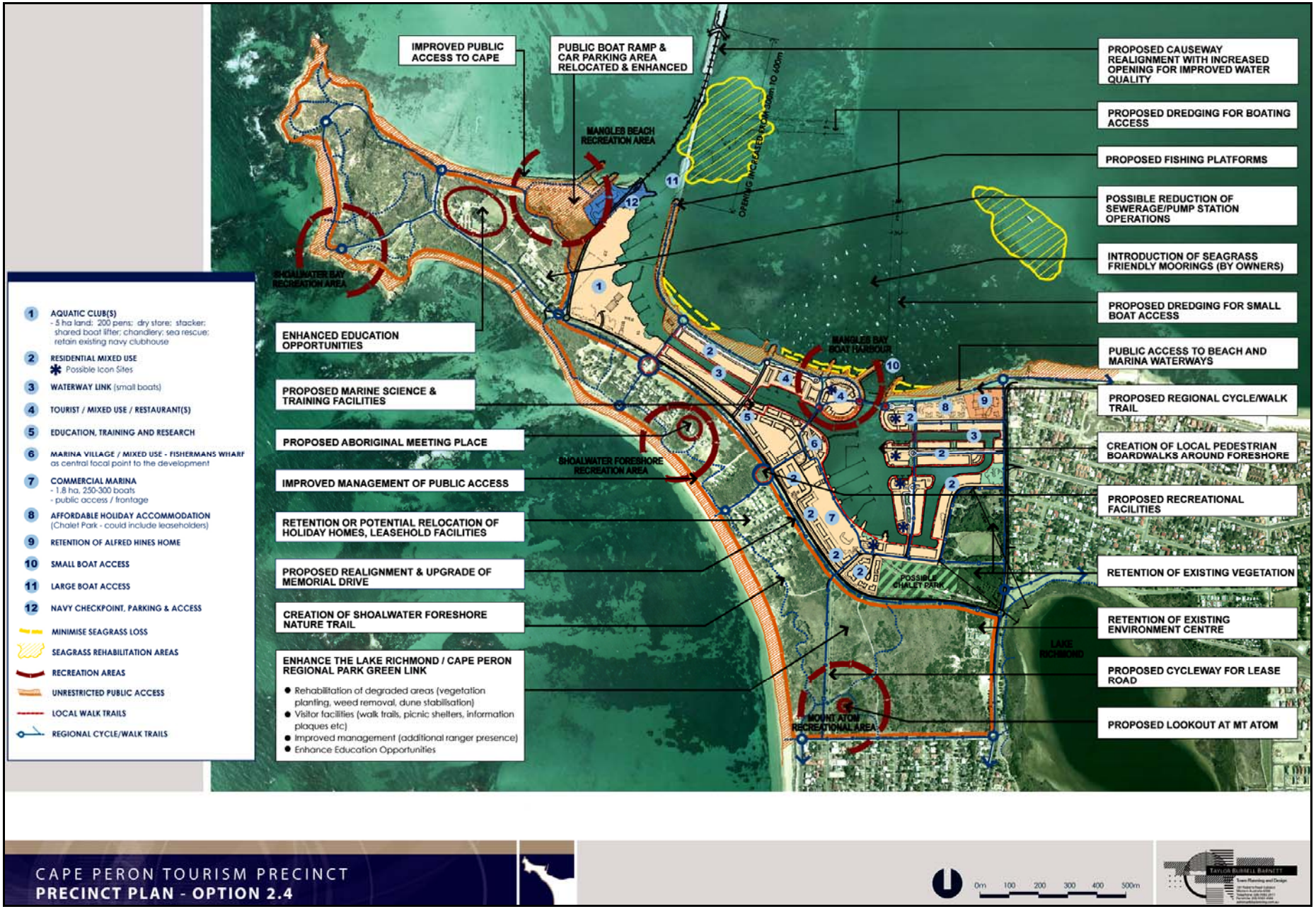

Figure 2: Precinct plan identifying the characteristics of option 2.4.

Table 1: Summary of key characteristics of the three options

Parameter	Option 2.2	Option 2.3	Option 2.4
Direct seagrass loss	5.9 ha in Cockburn Sound 0.1 ha in SIMP *	As for option 2.2	5.3 ha in Cockburn Sound 0.1 ha in SIMP
Indirect seagrass loss	2 ha in Cockburn Sound 1-2 ha in SIMP	As for option 2.2	As for option 2.2
Total vegetation clearing	53 ha	45.5 ha	40.1 ha
Clearing within Bush Forever Site 355	43.9 ha	36.3 ha	30.9 ha
Area to be excised from RLRP*	51 ha	44 ha	39 ha
Distance to Lake Richmond	200 m	330 m	350 m

* SIMP: Shoalwater Islands Marine Park; RLRP: Rockingham Lakes Regional Park

As the Project is being considered at a strategic level, explicit details of the options have not been determined. However, it should be noted that the SER document (Strategen 2006a) states that option 2.2 is not a preferred option because of the extent of its land footprint. It has not been proposed as a viable option by the Steering Committee.

4. Primary Environmental Issues

The following are the primary environmental issues relevant to the Cape Peron Tourist Precinct Project that are evaluated in this report:

(a) Seagrass and water quality – direct loss through construction of the Project footprint and indirect loss through changes in water quality, sand bypassing activities and coastal processes.

(b) Lake Richmond – indirect impact on the Lake and its key attributes (two threatened ecological communities (TEC)) through potential changes in hydrogeology modifying the Lake's water quality and water level, potentially threatening the TECs.

(c) Terrestrial vegetation – direct loss of vegetation and additional indirect loss through fragmentation, edge effects and changes in hydrology of the site.

The above issues were identified through the EPA's consideration and review of all environmental issues identified in the SER document and the submissions received, in conjunction with consideration of the Project characteristics. Details on these issues and their evaluation are contained in Sections 4.1 - 4.3.

4.1 Seagrass and water quality

4.1.1 Description of impact:

- Direct seagrass loss of up to 5.9 ha in Cockburn Sound and 0.1 ha in the Shoalwater Islands Marine Park.

- Increased current velocity and sediment movement associated with sand bypassing activities and changes in coastal processes are predicted to result in an additional indirect loss of approximately 2 ha in Cockburn Sound and up to 2 ha in the Shoalwater Islands Marine Park.
- Potential additional indirect impacts on seagrass health or, in a worst case scenario, seagrass loss may be caused by adverse change in Mangles Bay water quality associated with the discharge of water from the marina. Poor marina water quality may result from reduced flushing, nutrient rich groundwater being directed through the marina following physical changes in hydrogeology, stormwater release into the marina, turbidity, exposure of acid sulfate soils and other water quality impacts from ongoing dredging activity. The SER does not predict any indirect loss of seagrass through changes in water quality as, based on the modeling undertaken to date, the Steering Committee does not consider that this will occur.

4.1.2 Submissions:

A number of the submissions on the SER related to the loss of seagrass and impacts on water quality. Submissions related to:

- The surety of research into rehabilitation of seagrass: whether seagrass will grow in the transplant areas; the feasibility of replanting at such a large scale; low survival rates from existing seagrass transplant trials in Cockburn Sound; and noting improvements in seagrass rehabilitation techniques.
- The potential for changes in water quality to affect seagrass: potential for poor water quality resulting from marina discharge, stormwater, dredging turbidity and construction dewatering to impact on seagrass; and changes to water movement may increase flushing of Mangles Bay and improve seagrass health.
- The potential for sand movement to affect seagrass as a result of changes in coastal processes: potential for seagrass to be smothered through changes in sand movement; and altered coastal processes may increase the availability of areas for seagrass to colonise.
- The potential for impacts on seagrass habitat to influence other values of the Mangles Bay ecosystem such as its value as a fish nursery and fauna habitat.

4.1.3 Evaluation:

As noted in section 2.2, the potential loss of seagrass within Cockburn Sound has been the primary environmental factor in the EPA recommending against earlier marina proposals at Mangles Bay. In considering the issue of impacts on seagrass as a result of the Project, there is a need for the Steering Committee to demonstrate that measures have been taken to avoid and, if this is not possible, minimise the direct and indirect loss of seagrass, as well as to develop and quantify mechanisms to rehabilitate areas of seagrass. In terms of potential effects on the quality of water, sediments and biota, it is appropriate for these to be predicted and evaluated in the context of the Environmental Quality Objectives (EQOs) and associated Environmental Quality Criteria (EQC) established in the Cockburn Sound SEP (Govt of WA 2005).

Predicted seagrass loss

The Project options put forward in the SER have potential impacts on seagrass, both directly and indirectly. While there may be potential for the amount of direct seagrass

loss to be slightly reduced through refinements in a final proposal design, it would appear that a marina proposal in this location would not be able to be designed without the direct loss of some seagrass.

As stated earlier in this Bulletin, in view of the significant historical loss of seagrass in Cockburn Sound, the EPA has an objective to protect the remaining seagrass meadows in the Sound (EPA 1998a).

The EPA also has Guidance Statement 29, *Benthic Primary Producer Habitat Protection for Western Australia's Marine Environment* (EPA 2004) which addresses cumulative loss of benthic primary producer habitats (BPPH), such as seagrass meadows, throughout Western Australia. The Guidance Statement requires proponents to demonstratively address fundamental principles of impact avoidance and minimisation as well as best practice in all aspects of proposal conception and implementation before any residual unavoidable losses of BPPH can be evaluated in the context of "cumulative loss thresholds", which have been defined for each of six different categories of marine ecological protection.

In Cockburn Sound, approximately 80% of the seagrasses have been historically lost either due to water quality changes or direct physical impact. In view of this, any proposal that is predicted to result in further losses of seagrass will be considered in the context of a Category F area – areas where the cumulative loss threshold has been significantly exceeded (see EPA 2004). The EPA's environmental objective in these areas is to ensure no net loss of BPPH and where possible, to generate a net gain in the area of BPPH and/or their associated BPP communities. The Guidance notes that this could be addressed though an appropriate environmental offsets package. Proponents of proposals in Category F areas are also expected to provide substantial technical justification for any further losses of BPPH in Category F areas, and couch the evaluation of those potential losses in the context of maintaining ecological integrity. Robust justification would also be required from proponents to support views on the predicted degree of 'success' of any off-set for losses. In view of guidance provided in Guidance Statement No.29, it is the EPA's expectation that the Project would not cause a net loss of BPPH, such as seagrass, within Cockburn Sound.

The Steering Committee proposes to address the EPA's environmental objective for Category F areas by including a program of seagrass replanting as part of a marina proposal, should the Project proceed to the next phase. In the SER and in the response to submissions, the Steering Committee notes that if the Project were to proceed to the formal proposal stage, it would instigate a trial seagrass transplanting program for an initial 2 ha of seagrass to inform the environmental impact assessment process in relation to large scale seagrass rehabilitation. With respect to seagrass replanting exercises, the EPA notes that successful rehabilitation has yet to be undertaken at the spatial or temporal scale required to achieve the no net loss (and if possible net gain) objectives over reasonable timeframes for seagrass when considered in the context of predicted losses associated with the current marina Project options. While it is noted that planting of seagrass sprigs in Oyster Harbour, Albany has been very successful, trials using similar techniques in Cockburn Sound are, however, not showing the same degree of success. The EPA Position Statement No.9 (EPA 2006a) provides detailed guidance on the EPA's expectations with respect

to these types of 'environmental offsets' and it is expected that the Steering Committee will, if the Project proceeds to the next phase, demonstratively address each of the principles in the Position Statement in developing any environmental offsets package.

In view of the current uncertainties with respect to the success of large-scale seagrass rehabilitation and the timeframes required for replanted seagrass to attain structural, functional and endurance attributes that are reasonably similar to existing healthy meadows, the EPA considers the impact avoidance principle remains paramount (EPA 1998a). The EPA also considers that Government regulators will need to have a central role in the development of measurable and auditable criteria for the structure, function and endurance of any seagrass rehabilitation offset proposed for this Project.

The health of seagrass at sites in Cockburn Sound, including Mangles Bay, has been routinely monitored each summer for a number of years (e.g. Lavery and McMahon 2006). The 2006 Cockburn Sound Management Council (CSMC) report card for ecosystem health in areas of High Level of Ecological Protection (LEP) (CSMC 2006) indicates there has been an improvement in seagrass shoot density and shoot height in Mangles Bay over the last year, though this is not a sufficiently long period of time to indicate a trend. Furthermore, there still remains a very high cover of filamentous algae which is likely to cause light stress to the seagrass and, despite the increase in shoot density, the Mangles Bay site continues to have the lowest seagrass density of the *Posidonia sinuosa* sites being monitored between Fremantle and Warnbro Sound (Lavery and McMahon 2006). Therefore, while the site appears stable, there is evidence that seagrasses are under persistent stress at the site and are likely to be particularly susceptible to any further deterioration in water quality (Lavery and McMahon 2006).

Losses and/or potential deterioration of seagrass health within areas of the Shoalwater Islands Marine Park also require consideration. The targets established within the Management Plan for the Park provide the objective basis for these considerations . It is noted that the current draft Management Plan has short-term and long-term targets for seagrass meadows of ensuring no permanent loss in the above ground biomass of the Park's perennial seagrasses from 2006 levels in defined high risk areas or as a result of human activities.

Water quality impacts

There are concerns about impacts on water quality during the construction and operation phases of a marina in this area.

Dredging to develop access channels is predicted to have direct impacts on seagrass (as discussed above) and has potential to have indirect ecological effects through turbidity and sediment deposition related effects. These matters will require detailed investigation and evaluation if the Project proceeds to the next phase.

Water quality in marina developments has often been of environmental concern due to effects of reduced flushing on the nutrient, organic matter, contaminant and human health-related quality of water, sediments and biota.

As discussed above, it is noted from the 2006 Cockburn Sound report card (CSMC 2006) that improvements have been noted in Mangles Bay between 2005 and 2006 such that phytoplankton biomass (chlorophyll *a*) and seagrass (shoot density and depth limits) meet the relevant EQC for a high LEP, with no significant reduction in the mean seagrass depth limit, though again this does not necessarily indicate the direction of longer term trends. It should also be noted, however, that elevated chlorophyll *a* levels were recorded at Mangles Bay and light attenuation did not meet the Environmental Quality Guideline (EQG) at most sites within Cockburn Sound in 2006.

A marina development that would discharge water into Mangles Bay would need to demonstrate that it would not compromise the objective of achieving the EQOs which have been established for Mangles Bay and the broader Sound in the Cockburn Sound SEP (Govt. of WA 2005).

On the basis of current designs, water leaving the proposed inland marina would enter an area of Cockburn Sound with a high LEP, as identified through the Cockburn Sound SEP. Accordingly, it would be expected that a marina would be designed and managed to ensure that the EQC for a high LEP could be met at the boundary of the marina water body and Cockburn Sound.

Consistent with the EPA's expectations for environmental quality in other harbours and marina's, it is expected that waters in a Mangles Bay marina would, at the very least, need to meet the water quality requirements associated with a moderate LEP. The Cockburn Sound SEP defines this to mean to allow moderate changes in the quality of water, sediment and biota (*i.e.* moderate changes in contaminant concentrations that could cause small changes beyond natural variation in ecosystem processes and abundance/biomass of marine life but no detectable changes from the natural diversity of species and biological communities). To achieve this, it is likely that nutrient rich inputs into the system, such as stormwater and groundwater would need to be monitored and minimised and most likely actively managed.

In view of the above, there are significant reservations at this stage as to whether the Project can be designed to ensure that the ability to achieve improved water quality in Mangles Bay is not constrained.

Considerable investigations and modeling work will be required to describe and predict potential changes in the hydrology and hydrogeology influencing water quality both within the marina and entering Mangles Bay, to ensure that further decline in seagrasses would not result from the water quality entering Mangles Bay.

The design of the marina and the modeling and further investigations to evaluate potential environmental implications would need to be couched and presented in the context of the EQOs and EQC established for Cockburn Sound in the SEP and supporting documents (EPA 2005) as well as water, sediment and biota quality targets set out in the management plan for the Shoalwater Islands Marine Park (DEC 2006).

Acid Sulfate Soils

A number of canal developments are experiencing considerable environmental problems with the exposure of acid sulfate soils (ASS). ASS can cause problems with

water quality, fish health and breakdown of infrastructure. There would need to be a high level of certainty that exposure of potential ASS would not result from the Project. Construction and dewatering of the marina basin may result in the exposure of potential ASS. An on–site ASS investigation has not been undertaken at this strategic level. An investigation of the potential for ASS to be exposed at the site would be required as part of any formal environmental impact assessment process. This would need to include the potential impacts of any dewatering for the duration of the construction program.

Additional investigations if the Project proceeds

In order to inform an environmental impact assessment process and to provide surety to the EPA in relation to the potential impact on seagrass and water quality through a formal development proposal, significant further investigations would need to be undertaken, including, but not limited to the following points.

- Information would need to be gathered to demonstrate that the water quality in Mangles Bay will not deteriorate as a result of a marina and that a proposal should not constrain the ability to achieve improved water quality in Mangles Bay. While it is noted that there are certain indicators within the Mangles Bay area that do not currently meet the recommended EQGs, the Project should aim to ensure that the environmental indicators for the marina meet the EQC discussed in the Cockburn Sound SEP and in EPA 2005.
- Despite several modeling studies which have focused on Mangles Bay and the Garden Island Causeway in recent years, there is still a lack of reliable, long term current meter data and simultaneous physical and biological water quality data for this area which would provide a basis for model validation. Thorough validation of hydrodynamic and water quality modeling would be required to support predictions of any potential long term impacts of the Project on the environmental quality of Cockburn Sound. One to two years of data may be necessary to accurately model current/ flushing patterns in Mangles Bay and the Shoalwater Islands Marine Park. In the absence of this information during any formal environmental assessment, it would be difficult for an adequate evaluation of critical water quality issues associated with this Project to be made.
- More detailed analysis of contaminant inputs to the marina would be required to inform the modeling process.
- Further research into the most efficient sediment bypass system should be undertaken to ensure that the potential for impact on seagrass through erosion and accretion is minimised. Detailed sediment transfer modeling would also be required to address the fate of bypassed sediment and evaluate the potential consequences.
- Further investigation into the feasibility of rehabilitation on the scale proposed would need to demonstrate that the transplanted meadows could become fully functioning benthic primary producer habitats. It is noted that the Steering Committee has made commitments (Strategen 2006c) to undertake seagrass rehabilitation in Mangles Bay to inform the environmental impact assessment process, should the Project proceed to the next stage. Issues associated with the timescale of any such trial will require very careful consideration.
- Seagrass rehabilitation details would need to take into account the EPA's position on Environmental Offsets (EPA 2006a), detail measurable and auditable criteria for seagrass rehabilitation (*i.e.* for structure, function and endurance) and identify the source of propagules for rehabilitation.

4.2 Lake Richmond

4.2.1 Description of impact:

- The Project will not cause any direct impact on Lake Richmond.
- There is some potential for indirect impact on Lake Richmond and its key attributes (two threatened ecological communities) through changes in hydrogeology resulting from design and construction of the marina basin. Changes in hydrogeology may lead to changes in the water level and water quality in Lake Richmond and potential for exposure of acid sulfate soils.

4.2.2 Submissions:

A number of the submissions on the SER raised matters relating to Lake Richmond, such as:

- the conservation value of the Lake and its TECs;
- the inadequacy of modeling undertaken to date to predict potential impacts on the Lake;
- the potential for construction of the canals to impact on the local hydrogeology, impacting the water table and/or causing drawdown in the Lake water level, increasing the likelihood of exposure of potential acid sulfate soils;
- the potential for any reduction in level of the water in the Lake to expose and damage the thrombolites; and
- the potential for salt water intrusion to change the salinity of the Lake and impact on the thrombolites.

4.2.3 Evaluation:

Lake Richmond is an important wetland, which exhibits features of significant environmental value. The relatively shallow water areas fringing Lake Richmond support the only known example of a particular microbiolite community known as thrombolites (English *et al.* 2003). This thrombolite community and a sedgeland community with a very restricted distribution found in Holocene dune swale wetlands adjacent to the Lake are both listed in Western Australia as Critically Endangered TECs. Both are classified as Endangered TECs under the *Environment Protection and Biodiversity Conservation Act 1999*.

Due to the environmental significance of Lake Richmond, detrimental impact on the function and ecology of the Lake and its values resulting from the construction and operation of the Cape Peron Tourist Precinct Project would be environmentally unacceptable. The Steering Committee has also recognised this.

Lake Richmond is also listed under the *Environmental Protection (Swan Coastal Plain Lakes) Policy 1992*. As such, any activity that is likely to cause the degradation or destruction of the Lake (including drainage of water into or out of the Lake) is an offence without authorisation under the EP Act.

Protection Framework for TECs

The key issue associated with Lake Richmond is the potential for the Project to impact on the TECs: the thrombolite community of coastal freshwater lakes of the Swan Coastal Plain (Lake Richmond); and the sedgelands in holocene dune swales.

The TECs at Lake Richmond both have interim recovery plans in place which identify criteria for success and failure of the recovery process (table 2). The Project has the potential to influence a number of these criteria. For example, a loss in the area of the Lake Richmond catchment under conservation management and impact on water quality and level in the Lake may result in success criteria not being met.

Table 2: Criteria for success and failure as identified in the recovery plans for the Lake Richmond TECs.

Thrombolite (microbial) community of coastal freshwater lakes of the Swan Coastal Plain (Lake Richmond), also referred to as Stromatolite like microbiolite community(English et al. 2003)	
Criteria for success	Criteria for failure
Maintenance of water quality and levels in Lake Richmond.	Significant and sustained detrimental changes to water quality or levels in Lake Richmond.
Maintenance of the vigour and extent of the microbial community including maintenance of the composition of the microbial species.	Significant decline in area as measured by physical damage or loss of thrombolite structures.
An increase in the area of this community or its catchment area under conservation management.	Decline in health as measured by a major shift in composition of the microbial community.
Sedgelands in Holocene dune swales of the southern Swan Coastal Plain (SCP19) (English et al. 2002)	
Criteria for success	Criterion for failure
An increase in the area, number of occurrences and completeness of a geomorphic age sequence of this community under conservation management.	Significant loss of area or major decline in the condition of the threatened ecological community, especially any occurrences that are significant in completing a geomorphic age transect.
Maintenance in terms of diversity and basic composition of native species.	
Maintenance of water levels and quality in the wetlands that contain the community.	
Maintenance or improvement in the condition and extent of the community including reduction of exotic species.	

Impacts on hydrogeology

The construction and ongoing operation of a marina at Cape Peron may have long term impacts on the local hydrogeology. Of particular concern is the connectivity between the saline marina water body and the freshwater Lake Richmond.

Changes in hydrogeology may cause two primary impacts:

- drawdown of water levels in Lake Richmond during dewatering of the canals; and
- intrusion of seawater into the freshwater aquifer.

There is little existing information on the hydrogeology of the area. In particular the structure of the superficial aquifer, and the sensitivity of the interface between the aquifer and the saltwater wedge to disturbance from lowering the watertable and intruding seawater into the aquifer much closer to Lake Richmond through the canals, is not well known.

Physical disturbance through dewatering and construction, and subsequent flooding of the canals will respectively produce short-term and long-term changes to the groundwater regime, that will cause seawater to intrude into the superficial freshwater aquifer of Cape Peron to some extent. Depending on the extent of the intrusion, this may result in changes to the water quality and salinity in Lake Richmond that exceed the normal seasonal changes. Changes beyond the normal range could potentially impact on the ecology of Lake Richmond and in particular the thrombolite community, which is considered to be a critical asset.

Preliminary modeling undertaken for the SER, based on option 2.2, identified that dewatering during canal construction may result in drawdown of the watertable of approximately 15 cm at Lake Richmond. It is noted that this is reported to be within the seasonal variation of up to 1 metre. However, there is some uncertainty in these predictions, given the assumptions of the model, in particular, in relation to the hydrogeology of the area. A substantial reduction in water levels, if it occurred in the Lake may alter the salinity and concentrate nutrients and other contaminants. There is potential that a change in water level may also lead to greater exposure of the thrombolites to air, impacting on the growth and health of the microbes forming the thrombolites.

Strategen (2006c) notes that while the predicted impact on the watertable would cause an associated drawdown in the Lake water level, this would also be influenced by rainfall, stormwater and evaporation and would be for the construction phase only. This prediction is based on Project option 2.2 for which the SER proposed a distance between the Lake and the canals of 200 m. In the other options this distance between the Lake and the canals is increased to 330 m (option 2.3) and 350 m (option 2.4).

As there is insufficient confidence in the existing knowledge of hydrogeology of the area, considerable detailed investigations would be required to provide greater certainty that the Lake would not be impacted. It is likely that an increase in the separation distance between the canal construction and the Lake would increase the confidence in predictions relating to hydrogeology of the area and reduce the potential for impact on the Lake. Given the options put forward in the SER, it is unlikely that option 2.2 could be environmentally acceptable, given the lack of separation between the canals and Lake Richmond. The EPA notes that the Steering Committee has already identified that option 2.2 is unlikely to be considered further.

Hydrogeological investigations will need to be conducted to convincingly demonstrate that the separation distances are adequate to maintain the existing hydrological regime.

Detailed hydrogeological investigations may conclude that the separation distance between the canals in options 2.3 and 2.4, and the Lake may also be demonstrated to be inadequate. The EPA notes that any requirement to increase the separation distance between the development and the Lake is likely to reduce the scale of the development.

Careful management of the construction impacts will also be required, in particular management of dewatering activities to allow the marina basin to be constructed.

Saltwater intrusion

The modeling undertaken for the SER document was noted to be preliminary with a number of assumptions made that may not hold true in the natural environment. This model predicted that the current distance between the saltwater groundwater interface and the base of Lake Richmond of approximately 200 m, may be reduced to 50 m following canal construction for option 2.2.

Given the uncertainty in the model, there is potential for canal construction to result in long-term saltwater intrusion into the fresh groundwater and to the Lake. The interim recovery plan for the thrombolite community (English *et al.* 2003) notes that:
"A decline in the lake volume would also increase the salinity and concentrate all other constituents of the lake water. As mentioned, an increase in salinity may lead to a change in the dominant microbes. A salinity increase is likely to have more significant impacts to the function of the thrombolites than would a decrease.
The impact of changes in salinity levels and other water quality parameters on the thrombolites may be dependent on the level of stratification and mixing that occurs in the lake. The thrombolites may occur in an area where there is an upwelling of groundwater and be relatively unaffected by alterations to the water quality of the lake. However, if mixing within the lake is substantial, then hydrological changes may impact the thrombolites."

As such, there is concern at the potential for impact on the ecology of the Lake and, in particular, the thrombolites as a result of saltwater intrusion.

Surety of hydrogeological modeling

The potential for impact on Lake Richmond is considered to be a major issue in the environmental acceptability of a development proposal. In order to move forward on this issue, it will be necessary to have more certainty in relation to potential impacts of the development on hydrogeology. As a consequence, there may be a need to change the design and/ or reduce the footprint of the Project.

As the preliminary hydrogeological model undertaken for the SER makes a number of assumptions that may not hold true in the natural environment, there is concern that the conclusions drawn from the preliminary modeling do not provide any surety about the predictions.

The Steering Committee acknowledges in the response to submissions (Strategen 2006c) that further information and analysis will be required if the Project proceeds to a formal development proposal.

The lack of detailed knowledge on the spatial properties of the Tamala limestone unit within the superficial aquifer is also an issue as it limits accurate estimations of groundwater travel times and of movement of chemicals toward Cockburn Sound (Trefry *et al.* 2006)

The SER notes that should more detailed investigation indicate that there is a significant risk of salt water ingress into the Lake as a result of construction of the canal development, engineering solutions will be investigated to eliminate the potential risk. However, the EPA notes that any engineering solution would need a high level of surety that the hydrogeological barriers would remain in place.

Acid Sulfate Soils (ASS)

The Lake Richmond area is identified as having high risk of ASS less than 3 metres from the surface (DoE Acid Sulfate Soil Risk Map for Swan Coastal Plain). There would need to be a high level of certainty that any changes in hydrogeology associated with the project would not result in the exposure of potential ASS and consequential impacts on the values of Lake Richmond. On-site investigation has not been undertaken at this strategic level. An investigation of the potential for ASS to be exposed at the site would be required as part of any formal environmental impact assessment process.

Additional investigations if the Project proceeds

In order to inform an environmental impact assessment process, further investigations would need to be undertaken to provide greater certainty in relation to predictions of hydrogeological modeling and potential for impact on Lake Richmond and its values.

Such investigations would include (but not be limited to):

- Seeking further information for a sound hydrogeological assessment and model conceptualisation. The information required would include site specific bore logs, geological cross sections and hydraulic data (including recharge, groundwater contour maps, hydrographs and water use data).
- Characterisation of hydraulic connections between aquifers (the superficial and Rockingham aquifers) and Lake Richmond to enable the development of a well-calibrated groundwater model to assess the impact of the marina development and dewatering options.
- More detailed calculation of saltwater intrusion and its potential impact on Lake Richmond, taking into account saltwater dispersion, climate scenarios and effect of groundwater use by bores in the area.
- Investigations of options for appropriate construction methodology to minimise potential for impact on hydrogeology of the site.
- Determine the specific characteristics of the potential silty clay layer in Lake Richmond and the confining capability that this may have upon dewatering drawdown activities.
- Investigation of the potential for exposure of acid sulfate soils.

There is currently not sufficient certainty to predict the potential impacts of the development on the hydrogeology between Lake Richmond and the marina. The further detailed investigations that would be required to provide any certainty may have implications for the scale of the development. In particular, there is potential that the proposal could proceed without impacting on the values of Lake Richmond, but in order to achieve this certainty, it may be reliant on the physical distance between Lake Richmond and any marina development to be increased. Alternatively, the overall footprint of the development may need to be reduced.

4.3 Terrestrial vegetation

4.3.1 Description of impact:

- Direct loss of between 40 and 53 ha of terrestrial vegetation, depending on the Project option. Between 31 and 44 ha of this is clearing within Bush Forever Site 355 and Rockingham Lakes Regional Park.

- Indirect impact on vegetation may result through fragmentation, edge effects and changes in hydrogeology of the site.
- There may be some potential for indirect loss of wetland vegetation within Bush Forever Site 358 at Lake Richmond, including Threatened Ecological Community 19, as a result of changes in hydrogeology.

4.3.2 Submissions:

A number of submissions on the SER raised matters relating to the terrestrial vegetation of Cape Peron, such as:

- vegetation is to be cleared within the Rockingham Lakes Regional Park and Bush Forever Site 355 and these areas should be protected;
- as the population increases, there will be greater demand for the recreational opportunities that the Regional Park provides; and
- Cape Peron contains a large area of native vegetation which should be protected as "Rockingham's Kings Park".

4.3.3 Evaluation:

The majority of the Project area is within both the Rockingham Lakes Regional Park and Bush Forever Site 355. Bush Forever Site 358 is adjacent to the Project area, incorporating Lake Richmond and its surrounding vegetation.

While the flora survey for the SER was undertaken in June, the SER reports that most native annual species and weed species had germinated. No Declared Rare Flora or Priority Flora were identified in the survey. In the analysis of the data from the flora survey, an area of vegetation was identified to be a "probable depauperate TEC" (floristic community type 30a). This area of vegetation would not be impacted by option 2.4 and as such has not been given detailed assessment.

While it is noted that there is an estimated 48% of the Quindalup vegetation complex left in the Perth metropolitan area, only 5.2% of the pre-European extent is secured in conservation reserves. The Cape Peron area is considered to be a large and important protected representation of Quindalup vegetation and a prominent landscape feature. The vegetation is already suffering the effects of an extended interface with conflicting surrounding land uses and significant fragmentation. This Project would clear a significant proportion of one of the larger remaining contiguous areas of bushland in the Cape Peron reserve, further reducing core areas of the reserve and increasing edge effects.

There is potential for the construction of the marina basin to impact on the hydrogeology of the area, in turn resulting in intrusion of salt water into the superficial aquifer. Such outcomes have been reported in relation to other developments of this type. This may impact on the health of the surrounding native vegetation if it is subjected to saline groundwater.

The potential for the development of a boat harbour at Mangles Bay has been discussed in the Rockingham Lakes Regional Park Draft Management Plan. The Plan notes that such a development may require land to be excised from the Park through an amendment to the Metropolitan Region Scheme (MRS). This Plan identifies primary key performance indicators for conserving biodiversity. These include the following indicators which may be impacted by the Project:

- the range of vegetation communities is maintained;
- the abundance and distribution of priority weed species are reduced;
- the status of the Threatened Ecological Communities is improved; and
- landscape linkages that preserve geomorphic features are maintained.

The former Department of Conservation and Land Management (CALM) has advised that the Project would have a significant impact on the Regional Park and broad options for mitigation and offset measures should be considered in any future development proposal. While the broader values of the Regional Park would remain, there is potential for the loss of 30 - 40 ha at Cape Peron to significantly devalue that section of the Regional Park from both a conservation and recreation perspective.

If the Project were to proceed to the next stage, the area of vegetation clearing would need to be minimised wherever possible. In relation to development proposals that would impact on direct loss of regionally significant bushland in "Bush Forever Sites with some existing level of protection", EPA Guidance Statement 10 (EPA 2006c) identifies the EPA's Objective as " Avoid direct loss of regionally significant bushland".

Detailed spring vegetation surveys would also be required, in accordance with the EPA's Position Statement No. 3 – Terrestrial Biological Surveys and Guidance Statement 51, to inform any formal environmental assessment process. The EPA's Position Statement No. 9 – Environmental Offsets also applies and it would be expected that an offset package would be developed as part of a formal development proposal.

Advice to the EPA on the SER from the Conservation Commission recognises the need for improved recreational infrastructure at Cape Peron to support increased use of the Cape. The Conservation Commission also advised that it would consider further proposals that enhance the natural bushland values of the area.

Additional investigations if the Project proceeds

In order to inform an environmental impact assessment process, further investigations would need to be undertaken to provide greater certainty in relation to predictions of impact on terrestrial vegetation. Such investigations would include (but not be limited to):

- Detailed spring flora surveys conducted in accordance with the EPA's Position Statement Number 3 and Guidance Statement 51.
- Investigations into the hydrogeology of the site to ensure that there is no intrusion of salt water into the superficial aquifer, which may impact on the terrestrial vegetation at the site.

5. Other Environmental Issues

There are a number of other environmental issues relevant to the Project and the Cape Peron environment, however these have not been evaluated in detail. It is considered that the matters raised in section 4 are the primary environmental issues that will require substantial investigation if the Project is to proceed to a development proposal. It is expected that other environmental matters relevant to a development at Cape

Peron would also be discussed in detail if the Project is to develop further. These matters include, but are not limited to:

- geoheritage, including impacts on Cape Peron's significant geoheritage features;
- terrestrial fauna;
- marine fauna;
- coastal processes; and
- natural value/ wilderness value of Cape Peron.

These and other matters were raised in the submissions received on the SER document. The response to submissions (Strategen 2006c, summarised in Appendix 3) makes reference to these.

6. Other Advice

6.1 Project Scope – consideration of Cape Peron as a whole

There is potential for future planning options for all of Cape Peron, including the recreation camp leases, to be discussed as part of the Government's consideration of the Project. In its submission to the EPA, the former CALM recommended that the entire headland should be considered as part of the "precinct", given the Project would involve significant changes to the environment and land uses of Cape Peron. In its response to submissions, Strategen (2006c) noted this to be a sound suggestion but recommended that a separate planning study of the area should be undertaken in parallel with, but separately from, the next phase of the Project.

Given the potential for the Project to impact on a large proportion of the Cape Peron area, the EPA supports a planning study incorporating the whole of the Cape area being undertaken. While noting the view of the Steering Committee that it should be a separate study occurring in parallel with the Government's consideration of this Project, it would be important for the outcomes of such a study to be reflected in any future development proposal for the site. Such a study would allow for management measures and potential offset strategies flowing from the Project to be put in place primarily within the Cape Peron area.

In the case of Government determining not to proceed further with the Project, there would still be value in undertaking a planning study of the Cape, noting its features (both environmental and social) with a view to developing a management strategy for the whole area.

6.2 Interactions with other projects

There are other projects in the Cape Peron area that will need to be taken into consideration if the Project proceeds to a formal proposal. The status of the proposed Garden Island highway should be reviewed as discussed below. In addition, the Project is likely to require modifications to significant infrastructure including both the Garden Island Causeway and the Water Corporation's Sepia Depression Ocean Outlet Landline. It is expected that a formal proposal would detail the processes required to manage these interactions.

Garden Island Highway

A reservation for the proposed Garden Island Highway currently runs along the southern edge of Lake Richmond. There would be considerable detrimental environmental impact from the construction of the highway in the alignment as it is currently positioned in the MRS.

The Department of Environment and Heritage (2005) notes that the highway would directly result in the destruction of about half a hectare (about 17% of the total area) of the thrombolite community and could threaten other areas of the community by sediment inputs during construction. However, it would appear that the proposed alignment within the MRS may not directly impact on the thrombolites, but runs adjacent to Lake Richmond and would significantly impact on the Lake and its environmental values.

It is recommended that the need for the Garden Island Highway, and its alignment be reviewed. The EPA has previously provided advice to this effect in its report and recommendations on an adjacent subdivision (Bulletin 892, EPA 1998), in particular recommending that the relevant Government agencies "undertake a study to assess the future need for this road and possible alternatives". The EPA notes that this study has not been concluded and this should be examined as a matter of priority.

6.3 Social considerations

A number of submissions on the SER raised the desire for other uses to be accommodated within the boundaries of the Project. While the consideration of the social issues is not an environmental matter as such, the Steering Committee will need to carefully consider how the mix of uses is catered for. The SER does not appear to provide sufficient scope to accommodate a wide range of social aspects without causing additional environmental impacts through increasing the proposed development footprint. Noting that a final proposal has not been developed, the EPA would be concerned if resolution of these social aspects of the Project in response to community aspirations was to result in an expansion of the Project area and further impact on the environment.

6.4 Alternative sites and development options

Many submissions on the SER recommended that alternative sites in the Rockingham area should be considered for the marina development rather than Cape Peron. In many cases, submitters were not against the concept of a marina development in Rockingham, but more concerned with a marina development in the vicinity of Cape Peron. The primary alternative site raised was at Wanliss Street, with suggestions also made in relation to a marina in the Rockingham town centre and other local locations. Other submissions raised concern that boat launching facilities were needed at the site, but the additional infrastructure, particularly the residential component were not necessary.

A Marina Location Analysis (NS Projects 2005) was undertaken prior to the release of the SER. This analysis reported that advantages of the Wanliss Street site included no seagrass being present, minimal dredging required, and the site being close to the Rockingham centre on council controlled foreshore land with existing infrastructure.

However, disadvantages of the site include deep water increasing the breakwater costs, proximity to residents and limited foreshore land available for development.

This issue is included in the Steering Committee's response to submissions (Strategen 2006c) and has been taken into account to some extent in previous investigations into a marina in the Rockingham area. While these comments are noted, the nature of this strategic advice is to comment on the Project as proposed at this site, and not to investigate alternative options.

6.5 Policy boundaries

The EPA notes the Project will have implications for boundaries of the Cockburn Sound SEP and potentially the Shoalwater Islands Marine Park. The current Project options are dissected by the Cockburn Sound SEP policy area boundary, meaning that part of the marina design is within the current policy area and part is not. Furthermore, if the waters of the proposed marina are to be included within the SEP protected area, this would also require amendment to the existing protected area boundary.

Depending on how the boundary of the Shoalwater Islands Marine Park has been defined, it is possible that the element of the design that involves re-alignment of the Garden Island Causeway may impact on the reserve boundary.

If the Project proceeds to the statutory approvals phase, it is expected that the proponent would present and couch the design in the context of existing policy and conservation reserve boundaries in a manner that enables decision-makers, stakeholders and the community to clearly understand and evaluate potential implications.

7. Conclusions

As the investigations undertaken to inform the SER document (Strategen 2006a) were of a strategic nature, there is a level of uncertainty in making predictions of potential environmental impact from these investigations. However, overarching advice can be provided on the concept of a marina at Cape Peron and Mangles Bay as put forward in the SER document.

The significant environmental issues identified for this Project include:

- Seagrass and water quality;
- Lake Richmond; and
- Terrestrial vegetation.

Previous proposals for a marina at Mangles Bay have been formally assessed and commented on by the EPA. The variations in scale and design of these proposals have resulted in the impact on seagrass varying from 7 ha to 32 ha. The EPA's advice in relation to these projects has noted the high environmental value of the remaining seagrass within Cockburn Sound. In 1993, the EPA recommended against the development of a marina at Mangles Bay requiring the loss of 17 – 32 ha of seagrass noting the ecological significance of preserving the small amount of seagrass remaining within Cockburn Sound (Bulletin 693, EPA 1993). The current Project has

the potential to impact on up to 10 ha of seagrass in Cockburn Sound and the Shoalwater Islands Marine Park, with 6 ha of this being direct seagrass loss. The EPA is also concerned that the indirect impacts have not been adequately quantified and that this may therefore represent a conservative estimate. The EPA's objective in relation to seagrass is that there should be no further net loss.

There is potential for loss of seagrass to be exacerbated in Mangles Bay by the impact of poor quality water flowing from the marina. There is a need for any proposal to ensure that water quality and seagrass health within Mangles Bay are maintained and indeed improved, noting the overall improvements in the water quality of Cockburn Sound since the 1970's. The EPA has recently noted (Bulletin 1230, EPA 2006b) that water quality improvement seems to have reached a plateau level which is significantly better than several decades ago, but where improvement is getting more difficult to achieve.

With the intended long term improvements in the quality of marine waters and health of seagrass in Mangles Bay, it will not be adequate for the marina to receive poor quality water from surrounding areas or for lower quality water in the marina to impact on Mangles Bay. Accordingly, intervention may be required to manage the land based nutrient and other contaminant inputs into the marina.

The water quality leaving the proposed inland marina enters an area with a high Level of Ecological Protection (LEP) when it reaches Cockburn Sound. It would be expected that the marina would be designed to ensure that the Environmental Quality Criteria for a high LEP would be able to be met. To enable these criteria to be met at the interface with Cockburn Sound, the water quality within the marina water body would need to be maintained at a moderate LEP. Nutrient levels within the groundwater and the stormwater entering the Lake Richmond area and flowing through into Mangles Bay do not appear to have reduced even though undertakings have been previously given in relation to improving nutrient inputs in this area. All effort should be made to address this important matter. In the absence of the high nutrient loads in the Lake Richmond area being addressed, the EPA has significant reservations as to whether the Project can be designed to ensure that water quality within Mangles Bay does not decrease as a result of this Project.

Significant investigations will be required to provide quantitative information on the hydrology of the Mangles Bay area to allow for modeling to predict likely changes in water quality as a result of the marina construction and operation and the proposed modifications to the Garden Island Causeway. It is noted that the proposed causeway modifications are likely to increase the water flow in southern Cockburn Sound and may improve the flushing of the marina with water to flow to the west out of Cockburn Sound. However, this flow would then be into the Shoalwater Islands Marine Park and care needs to be taken to ensure that the objectives of the draft management plan for the Shoalwater Islands Marine Park can be maintained.

With regard to ensuring that there is no net loss of seagrass, the proponent has proposed to transplant at least an equivalent area to offset for the proposed loss of up to 10 ha. Not withstanding the comments above about the impacts representing a conservative estimate of seagrass loss, there is not presently sufficient surety in rehabilitation techniques for 10 ha of seagrass to be transplanted and/ or rehabilitated

within Cockburn Sound. While there have been advances in techniques for seagrass transplantation over time, it has not been undertaken at the scale proposed as part of this Project. The restoration of 10 ha of seagrass is a major undertaking and it should be noted that a larger area may need to be planted to counteract the potential low rates of survival over the area. This is exacerbated given the slow growth rates and lateral spread of the predominant seagrass genus in Mangles Bay, *Posidonia*.

In relating the current Project to earlier advice on the Mangles Bay marina, the EPA previously identified that the existing swing moorings in Mangles Bay have had an ongoing impact on the seagrass health in Mangles Bay (Bulletin 693, EPA 1993). It is noted that the mooring scars within Mangles Bay are proposed to be rehabilitated, but it is not likely that the moorings themselves will be removed. While it is understood that the process to declare Mangles Bay as a mooring control area is in progress, this process is being completed separately from the consideration of the marina. Creating a mooring control area over this site is critical in providing more surety in the control on the number and type of moorings permitted at the site.

Lake Richmond has the only known example of a particular microbiolite community known as thrombolites. This thrombolite community and the sedgeland community in Holocene dune swale wetlands adjacent to the Lake area are both listed Threatened Ecological Communities. The Project potentially threatens Lake Richmond through changes in hydrogeology impacting on water quantity and quality.

Currently there is not enough knowledge of the hydrogeology of area to provide any confidence that a marina could be constructed in proximity to Lake Richmond without potentially impacting the Lake.

The EPA notes that increasing the separation distance between the Lake and the marina increases the level of confidence regarding the potential impacts and also provides a greater opportunity to monitor impacts and introduce mitigation strategies if impacts are being detected. Given the options put forward in the SER, it is unlikely that option 2.2 could be environmentally acceptable, given the lack of separation between the canals and Lake Richmond. The Steering Committee has already identified that option 2.2 is unlikely to be considered further. In relation to the other options, hydrogeological investigations will need to be conducted to convincingly demonstrate that the separation distances are adequate to maintain the existing hydrological regime.

The majority of the Project area is within both the Rockingham Lakes Regional Park and Bush Forever Site 355. While no Declared Rare Flora or Priority Flora have been identified in vegetation surveys to date, the Cape Peron area is considered to be a large and important protected representation of the Quindalup vegetation complex and landforms. While the broader values of the Regional Park would remain, the loss of 40 ha of Cape Peron bushland would devalue that section of the Regional Park from both a conservation and recreation perspective.

In developing the options for the Cape Peron Tourist Precinct Project, it is noted that the Steering Committee has incorporated social needs into the design of the Project. However, it would appear that in order to address some of the social aspects, the environmental acceptability of the Project is reduced. In particular, it would appear

that option 2.4, with the smallest development footprint, meets the fewest social objectives for the Project. Submissions raise the desire for other uses to be accommodated within the boundaries of the Project. While the consideration of the social issues is not an environmental matter as such, the Steering Committee will need to carefully consider how the mix of uses is catered for. The SER does not appear to provide sufficient scope to accommodate a wide range of social aspects without causing additional environmental impacts through increasing the proposed development footprint. The EPA is concerned that the social mix of the site may be addressed at the expense of the environment.

Given the potential for the Project to impact on a large proportion of the Cape Peron area, submitters raised the point that a planning study incorporating the whole of the Cape area should be undertaken. While noting the view of the Steering Committee that it should be a separate study occurring in parallel with the Government's consideration of this Project, it would be important for the outcomes of such a study to be reflected in any future development proposal for the site. The EPA supports such a study as this would allow for management measures and potential offset strategies flowing from the Project to be put in place primarily within the Cape Peron area.

The EPA's consideration of the Cape Peron Tourist Precinct Project has resulted in the identification of three primary environmental issues: seagrass and water quality; Lake Richmond; and terrestrial vegetation. For each of these issues, significant investigations would be required as part of the formal environmental impact assessment process if the Project were to proceed to the next stage. These investigations are broadly as follows:

- hydrodynamic modeling, using site specific data to predict water movement both within and outside of the marina;
- on site investigations into the success of seagrass rehabilitation on a large scale, it should be noted that a substantial lead time may be required for the collection of adequate data;
- modeling of the local hydrogeology to provide surety in relation to the potential impacts on Lake Richmond; and
- undertaking a spring vegetation survey to ensure that no significant vegetation species and communities would be impacted by a formal development proposal.

It is noted that detailed offsets are to be provided if the Project proceeds to the next stage. Currently the Project identifies a number of significant environmental impacts and attention will need to be given to marine and terrestrial mitigation and offsets for the losses to seagrass in Cockburn Sound and areas reserved through the Rockingham Lakes Regional Park. Such offsets would need to take account of the EPA's Position Statement (EPA 2006a).

One of the purposes of providing this strategic advice to Government is to identify significant environmental issues with the Project. The environmental matters considered in this report are significant and there is the potential for deleterious environmental impact as a result of the Project proceeding. There is potential for the environmental impacts to be minimised through modification of the design of a final development proposal.

On the basis of the information provided to date, there are significant concerns in relation to the environmental acceptability of option 2.2 with considerable further investigations required to provide a level of certainty in the environmental acceptability of options 2.3 and 2.4.

8. Recommendations

The EPA submits the following recommendations to the Minister for the Environment:

1. That the Minister considers the EPA's strategic advice on the concept of development of an inland marina complex at Cape Peron, Rockingham.
2. That the Minister notes that substantial additional investigation would be required to inform the environmental impact assessment process if the Project proceeds to a development proposal.
3. That the Minister notes the EPA's other advice presented in Section 6 in relation to the scope of the Project and its interaction with other projects at Cape Peron.

Appendix 1

List of submitters

State and Commonwealth Government Agencies:

Cockburn Sound Management Council
Conservation Commission
Department for Planning & Infrastructure
Department of Conservation and Land Management
Department of Defence (Commonwealth)
Department of Environment
Department of Fisheries
Department of Health
Department of Indigenous Affairs
Department of Water
Heritage Council of WA
Tourism WA
Water Corporation

Organisations and Companies:

AIW Recreation Centre (Inc)
Conservation Council of WA
Conservation of Rockingham Environment
Employee Coaching & Assistance Programs Aust.
Fremantle Port Authority
Naval Association of Australia (Western Australian Section) Inc
Peel Health Campus Foundation
Port Kennedy LCDC Inc.
Preserve Point Peron (Inc)
Rockingham Bays Seagrass Monitoring Group
Rockingham Golf Club Inc
Rockingham Marina Action Group
South Coast Regional Chamber of Commerce
WA Recreational and Sportfishing Council Inc (Recfishwest)
Western Australian Naturalists' Club
Wetlands Conservation Society (Inc)

Individuals:
(Including: 246 pro-forma submissions and 174 individual submissions)

S Ackerley
C Adair
P Adair
D Adamson
D Anderson
D Andrew
F Andrews
L Antulov
R Ashton
S Aworen
K Badstuebner
CJ Baker
M Baker
M & J Baker
H Balinski
B Bambach
P Bambach
L Barron
M Bartlet
G Bell
S Belohlawek
F Benad
N Bender
B Bennett
R Bensley
S Beresford
J Best
L Birks
E Bissett
A Bitmead
S Blenin
S Boaden
D Borrowi

T Botton
A Brown
J Brown
N Brown
N & J Brown
P Bryan
K Bryce
M Burns
C Burton
K Butler
M Buzza
G Bywater
G Bywaters
B & J Cairns
A Campbell
M Candye
M Carey
J Carrol
L Carrol
J Carter
N Carter
N Chamberlain
C Champion
J Chapman
K Chapman
L Chapman
J Chauntler
R Cherrie
M Cherry
K Chipchase
N Clark
G Clarke
JB Clithero
R Cockeram
G Coleman
M Conner
S Coombes
S Cooper
GJ Crabbe
L Crawford
S Crotty
A Cummings
M Dale
M Dallamora
E Dan
R Darroch
A & C Davidson
J Davies
S Dawson
G Dean
H deBoorder
A Dennis
R Dennsion
N Devereux
C Dias
N Discombe
J Dodd
L Dodd
M Dorey
T Dorey
B Dorotich
K Dorotich
G Douglas
B & C Dowdall
BE Dowdall
P Draper
A Driver
N D'Rosario
B Duffy
P Dunlop
R Dunlop
N Dunne
E Edwards
M Edwards
R & M Edwards
J Fairweather
K Farrelly
R Ferntorp
P Field
N Fimmano
B Fissioli
K Fissioli
M Fissioli
J Fitzpatrick
R Fitzpatrick
T Fitzsimmons
S Ford
C Forshan
J & S Fowler
J Francis
D Franklin
L Franklin
D Freckelton
G Freeman
I Fullard
C Fyfe
G Gardiner
J Gardiner
G Garwood
A Gelbert
G Gilmour
H Glass
B Godfrey
P Godfrey
W Godfrey
B Goodale
B & A Goodale
K Goodbody
K Gornall
H Gould
A Graham
A Graham
H Gray
K & I Greenshields
E Grogan
A Guthrie
D Haggar
G Hainsworth
D Hamblin
D Hamblin
R Hamilton
J Harbick
P & S Harn
A Harris
R Hartman
G Haunslow
P Heany
T Heany
B Heeney
M Hegney
R Hendrette
J & J Hendry
R Hesketh
T Hewins
S Hewitt
J Hickman
S Hickman
A Hill
D Hill
T Hill
P Hills
C Hine
D Hitchen
M Hoar
C Hodges
R & G Holden
K Hothersall
M Howe
T Howson
W Hughes

J Illescas
A Ingate
D James & B Fremlin
D Jecks
Jessie
A Jetts
B Jetts
I Jetts
J Jetts
M & R Jetts
Y Jewell
D Johnston
J Jones
K Jovanovic
A & L Kaye
T Kearn
D Kelly
B Kenelly
L Kennedy
L Kerferd
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C Kerr
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R & H Kidd
W Kimble
B King
M King
P Kirke
L Kirkwood
I Kitching
A Knight
J Knoll
L Knoll
P Knoll
N Knott
S Krohss
N Labudba
G Lauritsen
B Leavy
M Letter
R & I Leyte
G Lindstedt
PJ Linnington
A Littlewood
C Littlewood
S Littlewood
R Logue
W Longdon
M Lonie
J Luckman
J & G Ludlam
N Mackman
S Maclean
C & L Mahoney
J Maile
W Maile
C Maitland
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D Manit
D Mann
M Mann
L Marchant
C Marks (for grp of 22)
S Marshall
A Martin
M Martin
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P Martin
Martin
M Mason
B Mateer
D Mateer
K May
GJ McAlister
L McCafferty
M McCafferty
S McCafferty
M McFetridge
K McGeachie
G McMillan
P Medwin
G Meehan
J Melrose
D Millar
J Mills
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B Milne
G Mitchell
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J Moncreiff
T Moore
H Morgan
J Morrin
F Moss
A Muir
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D Nash
G Neave
K Needham
D Nelson
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M Nichol
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T Nicols
EW Nock
J Nosworthy
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C Ogilvie
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J O'Grady
D Oliver
M Oosterling
C Osborne
M Osborne
V Ovenden
R Palmer
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W & R Parker
S Pascoe
K Paten
G Paton
K Paul
C Pearn
A Penny
C Penny
J Peselt
J Peterson
G Philp
T Philp
C & M Pidwarko
C Pinkerton
M Pinkerton
N Pipe
J Pommerin
L Potsey
D Pritchard
N Proudfoot
B Rabone
A Ramos
D Ramos

M Ramos
V Ramos
The Ramos Family
M Rath
G Rayner
L Roberts
J Rowell
A Ruella
A Ryan
M Ryan
B Sammels
G Sammels
J Sammels
K Sammels
K Sammels
P Sammels
S Sandover
A Scartaioli
R Seville
J Sheldrake
D Simpson
H Sinclair
A Smith
I & J Smith
J Smith
N Smith
R Solly
T Soward
M Stanich
P Stanich
P & R Stanich
B Stanlake
T Stanlake
T Stanners
J Stansfield
T Steer
M Stevens
K Stevenson
M Stewart
The Stewies
S Stoddart
B Stokes
C Stone
M Stonehouse
M Stoner
S Stragliotto
J Sulc
A Sullivan
J Sullivan
R Taffe
E Tang
C Taylor
D Taylor
G Teague
J Thomas
K Thompson
P Thompson
B Thomson
C Thomson
J Thomson
Mr & Mrs Toonen
B Treacy
J Treacy
D Treloar
J Triscari
S Tucker
J Turner
R Tyler
R Tyler
A Van Geyzel
G Vimsump
J Wajon
J Walkington
S Walkington
H Ward
J White
N White
P Wilcock
B Williams
L Williams
G Winston
S Wood
L Woolfenden
DA Worth
N Youens
N Young
D Zec

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Appendix 2

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Appendix 3

Summary of Submissions and General Responses to Submissions

Response to submissions

Cape Peron Tourist Precinct Project

Prepared for
Cape Peron Tourist Precinct Steering Committee
by Strategen

August 2006

Response to submissions

Cape Peron Tourist Precinct Project

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August 2006

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Client: Cape Peron Tourist Precinct Steering Committee

Report	Version	Prepared by	Reviewed by	Submitted to Client	
				Copies	Date
Preliminary Draft Report	V1	LC		1 electronic	21 June 2006
Draft Report	V2	LC		1 electronic	28 June 2006
Final Draft	V3	LC		1 electronic	8 August 2006
Final Report	V4	LC	CW	1 electronic	10 August 2006

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1. INTRODUCTION

The Strategic Environmental Review (SER) of the Cape Peron Tourist Precinct Project underwent a four week public review period from 6 March to 4 April 2006. The 440 submissions received included:

- 73 individual public submissions in favour of the project
- 86 individual public submissions in opposition
- 258 pro-forma submissions in favour
- 3 submissions that were neither for or against
- 20 government and stakeholder group submissions.

2. SUMMARY OF SUBMISSIONS

The following is a summary of the key issues raised in the submissions.

2.1 BIOPHYSICAL ISSUES

2.1.1 Bush Forever and Rockingham Lakes Regional Park

A submission by the Department of Conservation and Land Management (CALM, now the Department of Environment and Conservation) raised the loss of conservation estate in the Rockingham Lakes Regional Park, for which "appropriate mitigation and offset measures should be sought" in consultation with CALM. It was also noted that this area was recognised (but not endorsed) as an 'area subject to future planning' in the Draft Management Plan for the Regional Park and is zoned 'Parks and Recreation' under the Metropolitan Region Scheme.

The Department of Environment (DoE, now the Department of Environment and Conservation) Kwinana Peel office noted that Bush Forever Protection Area 355 had been reserved due to its conservation significance to the Perth Metropolitan Area.

The Department for Planning and Infrastructure (DPI) noted that CALM was the lead management agency for the Cape Peron Bush Forever site but did note the potential impacts on a TEC and ecological linkages and stated that a spring survey would be required in the future to be consistent with the EPA Guidance Note 51).

Public submissions raised the Bush Forever and Regional Park status of the bushland south of Point Peron Rd as a reason to have no development in this area. Any clearing at all is considered contrary to the term "Bush Forever". One submission stated: "This is not degraded wasteland that we are discussing, but some of the most important natural ecosystems in the State. That is why this land was selected for inclusion in Bush Forever."

2.1.2 Vegetation, flora and fauna

The Kwinana Peel office of DoE submitted that the vegetation clearing required for the project could be inconsistent with the Principles of Clearing Native Vegetation, as listed in Schedule 5 of the Environmental Protection Act 1986. Due to the potential for 38 fauna species of conservation significance (Bamford 2005) to utilise the area, it was considered that the clearing would represent a locally and regionally significant loss of habitat.

The need for a spring survey was noted by several agencies.

Public submissions expressed appreciation of the natural environment of Cape Peron and Mangles Bay as they are, and are against any significant development in the area. Comments on the values of Cape Peron included its "natural beauty", "pristine environment", "high conservation value", "truly wild places" and want to "keep it for our children's future".

2.1.3 Lake Richmond, hydrogeology and acid sulphate soils

Cockburn Sound Management Council (CSMC) recognised Lake Richmond and its threatened ecological communities (TECs) as key issue requiring detailed assessment if project progresses.

The DoE Wetlands Program states that the project has the potential to significantly affect Lake Richmond and that not enough information is presented in the SER to "accurately quantify the impacts of the proposal". Engineering solutions were not considered suitable due to the potential irreversibility of impacts on Lake Richmond. The Kwinana Peel office of the DoE stated that the simplified assumptions used in the groundwater modelling were not appropriate, and further investigation is required.

The DoE position on dewatering effluent is that it is preferable if it can be recharged within the vicinity of the site where possible. A dewatering management plan would need to be prepared in accordance with DoE and Department of Water (DoW) guidelines.

It was also recommended that need for gardens and groundwater abstraction be minimised through the project design and that an acid sulphate soils investigation program be undertaken.

There was a high awareness of the conservation values of Lake Richmond and its thrombolites in the public submissions. Many submissions commented that the risk of impacts from acid sulphate soils, salt water intrusion and changes in water levels from dewatering were considered too high to be acceptable or were listed as reasons for the project not to proceed. Several submissions commented that the Garden Island Highway and traffic would also have detrimental effects on Lake Richmond. Several submissions stated that Lake Richmond never contained saline water.

Many submissions commented that there would be a risk to Lake Richmond and the surrounding environment through the exposure of acid sulphate soils. Both the construction of the marina and, in fewer submissions the established marina, were mentioned as potential causes of acid sulphate soil exposure.

2.1.4 Geological heritage

The CSMC and the DoE Wetlands Program recognised that Cape Peron has important geological heritage values, quoting Dr V Semeniuk: "the cuspate foreland of Cape Peron is the largest sedimentary coastal deposit on the south western Australian coast which, by nature of its formation, contains a 7,000 year Holocene history of seagrass dominated sedimentation, sea level changes, shoreline and beachridge plain origin and development, calcrete development, rocky shore development, and climate history. It is the largest seagrass-sediment-derived seagrass bank, developed on a cuspate foreland, in the world."

2.1.5 Marine ecosystem

The CSMC submitted that any seagrass loss in Mangles Bay should be viewed in the context of previous seagrass losses in Cockburn Sound. The CSMC also raised the discharge of any dewatering water and stated that discharge into Cockburn Sound should be a last resort.

The DPI submission noted that SPP 2.6 requires that development on the coast should not cause discharges of waste and storm water that would be likely to degrade the coastal environment. DPI stated that further investigation into flushing of the marina and its impacts was required.

The Department of Fisheries recognises that the SER is correct in identifying seagrass habitat and water quality as key environmental factors and states that the issue is not one of biodiversity, since the local seagrasses and associated marine life are abundant elsewhere in the south west, and there are no endangered or threatened marine species that are likely to be impacted by the proposal. The key issue is ecosystem function and productivity as raised in the SER.

The Department of Fisheries noted that the effects of any water quality changes on the southern flats mussel farms, and the Cockburn Sound pink snapper stocks should be assessed if the project proceeds.

The EPASU Marine Ecosystems questioned the feasibility of offsetting the scale of seagrass loss stated in the SER. They suggested that an offset ratio of greater than 1:1 would be appropriate as transplant trials have had survival rates of only 55% after six months. The EPASU also suggested that the seagrass in the area would need to be monitored to determine whether any additional seagrass loss occurred due to indirect impacts. A contingency plan would need to be in place so that any additional losses could also be offset.

The public submissions recognised the ecological value of the Mangles Bay seagrass and the ecosystem it represents (especially the King George Whiting fish nursery) was recognised. Any impact on these values and the already "troubled seagrass beds" was considered unacceptable. Several submissions commented that seagrass rehabilitation is still not a proven technology.

2.1.6 Coastal process

The DPI raised that the project would need to address Statement of Planning Policy 2.6 regarding coastal setbacks and foreshore reserves.

The New Coastal Assets group of DPI noted that the sand bypass system would require beach space in the capture zone and the deposition zone. The group commented that this is not included in the plans and requested more information on the design of the sand bypass system. The group also stated that the increased wave energy would change the stable alignment of the Mangles Bay foreshore.

More information on the impact of the project on coastal processes and the sand bypass system was requested by the Department of Defence and DPI.

2.2 POLLUTION MANAGEMENT

2.2.1 Marine water quality

The EPASU raised the issue of water quality during short-term unfavourable weather conditions. These potential situations will need to be considered along with average seasonal conditions.

The Department of Fisheries noted that some other marinas in the state (Port Geographe marina and Jurien marina) occasionally have a build up of sand and seagrass that can cause local fish kills and odour issues. These problems are considered to have very localised effects on the marine environment and are more of a social issue for local residents.

The need for water exchange modelling was recognised by DPI – New Coastal Assets.

Marine water quality and water quality within the marina were both raised as concerns. Mangles Bay was considered especially at risk to water quality impacts due to its sheltered and already nutrient enriched state. Some thought that the SER had not adequately addressed these issues. Some thought that the marina would require mechanical flushing or that there is no way the marina could flush to acceptable levels.

2.3 SOCIAL ISSUES

2.3.1 Balance of Cape Peron

CALM commented that the project should address Cape Peron as a whole and that the project should include consideration of the impact of the project on the recreation camp leases at Cape Peron, and strategies for managing the camps in the future.

DPI commented that the project provided an opportunity to rationalise existing coastal shacks.

2.3.2 Traffic and public safety

The Water Corporation submission detailed its infrastructure, access and public safety requirements for the area.

The Department of Health noted the following public safety and health issues that should be considered in any further assessment of the project:

- dredging and construction could increase risks to water users through the degradation of water quality
- increased noise and traffic
- disturbance of pest habitats (rats and mice)
- possible creation of mosquito breeding areas and associated disease risk

The CSMC stated that traffic congestion and security risks should be considered given the proximity of the project area to the Department of Defence access point to Garden Island via the Causeway. The Council also raised potential environmental and security risks associated with vehicles that may be carrying dangerous or hazardous goods travelling in close proximity to a marina facility.

The Department of Defence did not raise the security of the causeway in its submission on the project.

Some public submissions stated that there could be traffic problems trying to access Cape Peron, public safety issues from increased traffic or that the SER did not adequately address traffic issues. Other submissions thought the traffic management measures included in the design would improve traffic flow in the area.

Public submissions raised the public safety risk and environmental risk from "Navy hazardous goods transport through the proposed marina". The concern is that the Navy will be "taking missiles, missile fuel and dynamite through Pt Peron area" and that due to increased traffic and population there is an increased risk of an environmental accident.

2.3.3 Heritage

The Heritage Council of Western Australia listed three places of heritage significance that exist in the area, with only the Turtle Factory occurring within the project area. Further assessment of the place under the requirements of the Government Heritage Property Disposal Process is necessary prior to considering possible development options in consultation with the relevant government agencies.

The Department of Indigenous Affairs suggested that a suitably qualified consultant be engaged to conduct ethnographic and archaeological surveys of the area if the project proceeds to the next level of environmental assessment.

The aboriginal heritage of Cape Peron was recognised in the public submissions and some thought that disturbance of the heritage values of the area for a marina was not acceptable.

2.3.4 Recreation

Explore mechanisms to ensure that the chalet park areas remain affordable in the long term (Department of Health).

Ensure adequate parking (Tourism WA).

The DPI New Coastal Assets group raised the following points regarding boating facilities:

- the Cape Peron boat launching facilities will be relocated by the project and should be built with the capacity to cater for demand for at least 20 years
- the proposed ramps and adjacent marina entrance are considered insufficiently sheltered
- access for yachts appears to be limited to the clubs area.

Recfishwest believes that a disabled fishing platform is essential for the marina to be a truly community facility.

The Department of Defence raised the issue of accelerated growth of boating activity and requested that the State Government put in place a proper plan and program for managing the increasing boating activity around Garden Island.

Some public submissions supported the boating facilities that the marina will provide due to the high and rapidly increasing local boat ownership, the lack of boating facilities between Mandurah and Fremantle and the environmental and safety benefits of having improved management and facilities for boating.

Many submissions thought that the marina would improve their enjoyment of Cape Peron and Mangles Bay and increase their options and access for recreation.

2.3.5 Other costs and benefits

Public submissions commented that only the wealthy would be able to afford the marina facilities and benefit from the proposal. Comments included "Rockingham is not a wealthy area and local residents would not be able to afford the Marina Fees.", "I want Cape Peron to be available to everybody, regardless of their socio-economic circumstances." and "If this proposal is approved the current users of this land will be mostly displaced by wealthy boat owners who can afford the inflated prices attached to such developments. This is socially inequitable…".

There is criticism that the project will need to be partially funded by taxpayers, and that operating costs (dredging, offsets and bypass specifically mentioned) will be funded by Council rates.

The most common theme in the positive submissions was that Rockingham is overdue for a world-class tourist, recreation and entertainment facility, that local residents would be proud to show their visitors. One submission noted that the project could change Rockingham from a "place" to a "destination". The employment, tourist and recreation benefits of the project were well supported and were considered beneficial (if not essential) to the future economic and social prosperity of Rockingham.

The inclusion of land set aside for marine education was well supported as it is considered that this is lacking at the moment and would be both beneficial and highly relevant in Rockingham.

Submissions recognised that much of Cape Peron is cut off from the general public and that the project would improve public access and use opportunities in the area.

2.4 OTHER COMMENTS

The public submissions also raised the following issues

1. **No development on Cape Peron.** Submissions expressed appreciation of the natural environment of Cape Peron and Mangles Bay as they are, and are against any significant development in the area. Comments on the values of Cape Peron included its "natural beauty", "pristine environment", "high conservation value", "truly wild places" and want to "keep it for our children's future".
2. **Alternative sites.** Submissions criticised the project design and public consultation process as alternative sites should have been examined more thoroughly and put forward for public comment. Some submissions suggested Wanliss St as a more acceptable alternative. Others stated they were not against a marina in Rockingham, just not at Mangles Bay/Cape Peron.

3. **Current state of the environment**. Submissions commented on the current degraded state of the terrestrial environment at Cape Peron and welcomed plans to improve areas of bushland outside the project area. Several submissions commented that the area is an "eyesore" that it is a "known hotspot for crime". The potential environmental benefits of the project through rehabilitation were valued.
4. **Not at the expense of the environment**. Many submissions clarified that their support was subject to acceptable environmental outcomes, which they considered the project provided based on the information in the SER.
5. **Option 2.4**. There was most specific support for Option 2.4 as the most appropriate design configuration.

3. GENERAL RESPONSES TO SUBMISSIONS

This section provides responses to the key issues that were raised in many of the submissions. Additional specific responses to each submission are provided in sections 4 through to section 6.

3.1 BUSH FOREVER AND ROCKINGHAM LAKES REGIONAL PARK

The values, potential impacts and proposed mitigation of impacts on the Bush Forever Protection Area (BFPA) and the Rockingham Lakes Regional Park are outlined in the SER. The potential impacts have been reduced as an outcome of the community consultation and environmental review. The Steering Committee aims to mitigate the residual impacts of the proposal through the provision of offsets.

Statement of Planning Policy 2.8 provides guidance that there is a general presumption against clearing in BFPAs but it is not precluded. The policy gives the following guidance for these areas:

- focus development within cleared, degraded and less intact areas of bushland and where possible avoid fragmentation of the bushland area and provide for ecological linkages
- protect bushland with the highest conservation value
- seek to avoid unacceptable losses, which includes a general presumption against clearing regionally significant bushland containing:
    - Threatened Ecological Communities
    - threatened and poorly reserved plant communities (see below)
    - Declared Rare Flora
    - Specially Protected Fauna
    - Environmental Protection Policy wetlands
    - vegetation complexes where less than 10% of the original extent currently remains on the Swan Coastal Plain
    - wetland dependent vegetation fringing creeks, rivers and estuaries.

The project area falls into only one of these categories; the area contains poorly reserved plant communities. The SPP 2.8 is currently in draft form and discussions with Bush Forever officers have indicated that it is not Bush Forever policy to expect poorly reserved plant communities to be

precluded from clearing. Threatened Ecological Communities and Declared Rare Flora are the primary reasons for a presumption against clearing.

Regional Parks are for the dual purposes of conservation and recreation. The Rockingham Lakes Regional Park Draft Management Plan recognises the project area as an "area subject to future planning". The Draft Management Plan states:

> "The resources required by CALM to manage issues resulting from a harbour development would be considerable and ongoing. In the case that the harbour proceeds, adequate compensation for the loss of Regional Park estate would be sought and appropriate mitigation to minimise environmental impacts would be required."

In a previous submission regarding this project to the Environmental Protection Authority dated 31 March 2004, CALM commented:

> "The *Rockingham Lakes Regional Park Draft Management Plan 2003-2013* recognised previous planning for marina proposals at Cape Peron as an issue that would potentially affect the regional park and its management. It is important to note that the Rockingham Lakes Regional Park Draft Management Plan 2003-2013 did not endorse or support such a proposal. Rather, the Plan identifies the proposal for a boat harbour in this area as something that would have a significant impact on the regional park and outlines that further planning and approvals would be required for it to proceed.
>
> The Plan applied 'management zones' to each Park area to determine appropriate uses and activities, as a guide for management and to communicate management intentions to the public. The management zone applied to the area of Cape Peron affected by the Cape Peron Tourism Precinct Project was identified as 'subject to further planning'. This was in order to allow the existing values of the land to be maintained whilst the outcomes of Government decisions on any proposed boat harbour remained unknown. The Park management zones outlined in the Draft Management Plan are a framework only and do not supersede the Parks and Recreation reservation, which protects the Park under the Metropolitan Region Scheme."

This project would not set a precedent for clearing in Regional Parks or Bush Forever Protection Areas, as this has already occurred in other areas of the metropolitan area and coastal strip for infrastructure and development. Each development is treated on a case by case basis according to the site characteristics and the merits of the project (including mitigation measures).

3.2 VEGETATION, FLORA AND FAUNA

The flora survey by Bennett Environmental Consulting was carried out in accordance with the Guidance Statement 51. An additional spring survey will be carried out to complete the flora dataset if the project proceeds to the next level of assessment.

The SER recognises the need for a spring survey "The survey was undertaken after the annual species had commenced germination. However, many species were still too small for positive identification, and a spring survey would be required for completion of a more comprehensive species list"

However, the SER also states that with regard to species of conservation significance: "No annual DRF or Priority Flora were recorded on the CALM Rare Flora Database for the Cape Peron area, so a spring survey would not be expected to locate additional species of conservation significance".

Therefore, a spring survey is not anticipated to affect the assessment of impact on rare flora.

Bamford (2005) undertook a reconnaissance level survey of Cape Peron and concluded that the area is "not likely to be rich in fauna because it is partly degraded and provides a limited range of habitats, particularly because it lacks banksia woodland" but is likely to be of local significance to fauna. Bamford (2005) identified tuarts in the area as significant habitats and recommended that the vegetation unit 24 (the potential TEC) be retained. Option 2.4 retains all of vegetation unit 24.

3.3 LAKE RICHMOND, HYDROGEOLOGY AND ACID SULPHATE SOILS

Any significant adverse impact on Lake Richmond from the project is considered by the Steering Committee to be unacceptable. Therefore, if further detailed investigation of the issues identifies unacceptable risk to the lake or its TECs, the project design will be modified to eliminate that risk or the project will not proceed. The potential impacts and preliminary investigations regarding Lake Richmond have been described in the SER (SER section 5 and 6).

More detailed assessment will be undertaken if the project proceeds to environmental assessment required by the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986*. The focus will be on developing a comprehensive understanding of the lake, its connection to the groundwater system and the characteristics of the salt water wedge. This information will then be used to model the hydrological changes likely to result from the inland waterway. The model will be used to determine whether there is a risk to the lake from either dewatering, or inland migration of the fresh water / salt water interface.

These investigations would be likely to include:

- investigation of the hydrogeological relationship between Lake Richmond and the underlying aquifer based on geological logs, groundwater levels and water quality sampling in the lake and groundwater
- groundwater flow modelling, to predict the hydrological changes that may occur in the area (in various tidal, seasonal and climate conditions) during construction and operation of the inland marina and assess the risk of salt water intrusion into the lake, exposure of acid sulphate soils or a change in lake water levels
- characterisation of stormwater inflows
- aquatic fauna sampling in Lake Richmond
- investigation into the threatening processes that may be affecting Lake Richmond.

If there is a risk of salt water intrusion or other effects from the inland marina, engineering solutions (such as canal linings) may be investigated to reduce any risk to well below acceptable levels.

A comprehensive monitoring program will be designed to confirm the results of the modelling if the project goes ahead. The monitoring program will be designed so that it provides an 'early warning system' of unexpected hydrological changes before they affect the lake to enable contingency actions to be put in place (such as extraction bores into the salt water wedge).

Methods of addressing threatening processes in the area and protecting the conservation values will be investigated as part of the mitigation package for the project to provide a net environmental benefit in Cape Peron.

Acid sulphate soils

Acidification of acid sulphate soils can only occur if both:

1. Potential acid sulphate generating soils exist, and
2. Those soils are exposed to oxygen causing oxidation of sulphide minerals in these soils through a drop in the watertable or other mechanism.

Preliminary investigations indicate that there may potentially be a temporary small change (<15 cm) in the watertable near Lake Richmond (the area most likely to have acid sulphate soils as it is a wetland) during construction. This prediction did not consider the various methods that may be applied to prevent drawdown (such as re-injection). Nevertheless, this drawdown would not be expected to cause acidification as it will be a temporary drop that is within the normal range of watertable fluctuations. The existence, extent and depth of acid sulphate soils have not been mapped in the area. Soil sampling would be undertaken as part of a formal environmental assessment.

A detailed investigation of any potential watertable drawdown would be conducted as part of detailed environmental assessment required by EPA.

3.4 GEOLOGICAL HERITAGE

The cuspate foreland comprises the sharp headland of Point Peron and the two smooth shorelines of Mangles Bay and Shoalwater Bay. Shoalwater Bay and Point Peron will remain unchanged. The already altered Mangles Bay (causeway, boat ramps and significant accretion and erosion) will be modified by the realignment of the causeway and minor beach reclamation (<1 ha), however the basic alignment of the beach will remain the same. Although some landform modification will take place, the key features of the cuspate foreland will remain.

The effects on coastal processes can be managed and are not considered a potential 'fatal flaw' of this project (the EPA and DoE identified water quality and seagrasses as the key issues) and as such, have been raised but not addressed in detail in the SER. However, this issue would be addressed comprehensively in the final design and environmental assessment of the marina, if it proceeds to the next phase of planning.

3.5 MARINE ECOSYSTEM

Mangles Bay is characterised by sheltered, shallow waters rich in particulate organic matter that result in a degree of nutrient-related stress on its seagrass meadows, but that also determines its ecological value (including a nursery for King George Whiting, and habitat for juveniles of blue swimmer crabs). The work of Valesini et al (2004) classifies six different types of fish habitats in Perth metropolitan waters according to seven characteristics: direct fetch; north-westerly fetch; the minimum distance from the shoreline to the 2 m depth contour; the distance from the shoreline to the first offshore reef chain along a south-westerly transect; and the area of nearshore substrate covered by bare sand, subtidal reef and seagrass. Valesini et al (2004) identify Mangles Bay as one five areas in Perth's coastal waters that are 'Habitat Type 1" (highly sheltered waters, dense seagrass meadows close to shore and also further offshore), the others areas being the waters north of Woodman Point, Buchanan Bay (eastern Garden Island), north-east Penguin Island, and Safety Bay. The seven 'fish habitat' characteristics that define Mangles Bay will not change with the proposed development. There may

be a slight decline in its nutrient levels and productivity due to improved flushing with removal of part of the Causeway, but conditions will not be as well-flushed as before construction of the Causeway.

The ecological value of Mangles Bay is also affected by nutrients and contaminants in stormwater discharge, groundwater contaminated by septic tank leakage, seagrass loss from boat moorings, uncontrolled boat traffic, and contaminant inputs from boats. The proposed development provides a means to positively address these current impacts as detailed in the SER. The development itself will result in some loss of seagrass, but these will be more than offset by seagrass rehabilitation in the area.

Seagrass rehabilitation has been proven to work (i.e. demonstrated survival and growth of transplants, and return of ecological function), although it is a relatively new area of endeavour in the Perth metropolitan area and has not been underway for long enough to demonstrate seagrass survival of greater than four years. The key to seagrass survival is ensuring transplant 'units' remain anchored in the seabed, and are placed in areas where conditions are suitable (e.g. sediment stability, water quality, water movement). The critical period for transplants appears to be the first year—because this is when they are most likely to be washed away by winter storms. Seagrass transplanting methods used in Cockburn Sound have experienced moderate to high losses of transplanting units (those that survive appear to grow well), but considerable improvements have been made in seagrass transplanting methods, and survival is expected to markedly improve. The proposed seagrass rehabilitation to offset seagrass loss in Mangles Bay is also in areas that already have seagrass (i.e. conditions are suitable). The EPA, Cockburn Sound Management Council (CSMC) and community's need for reassurance about the success of seagrass rehabilitation is recognised, and this is why commitments have been made to undertake seagrass rehabilitation in Mangles Bay during the long and detailed environmental assessment process, should the project proceed to the next stage.

The project will potentially result in temporary impacts on seagrass meadows in Mangles Bay and the Shoalwater Islands Marine Park, from turbidity associated with construction and any maintenance dredging that is required to keep the entrance channels of the marina navigable. Careful management these activities should ensure no long-term adverse impacts on seagrass meadows. The seagrass meadows in Mangles Bay tolerated far greater impacts over a longer period when the Causeway was constructed, during a period (i.e. the early 1970s) when nutrient-related water quality was also far worse than at present. The construction and maintenance dredging associated with the proposed development will be of a far lesser scale, and better managed to minimise impacts on seagrass.

The impact on boat usage of the area from the project is likely to be very small. The number of boats launched from public boat ramps into Cockburn Sound in 1999 was 44,270 and is expected to increase to 77,451 by 2021 irrespective of the implementation of the project (Cockburn Sound Management Council 2005). The provision of 500 new boat pens in the area is not expected to significantly alter the number of boats using Cockburn Sound. The DPI is currently preparing an updated report on boating pressure in Cockburn Sound, which is due for release later this year. The level of increase is likely to be greater than previously estimated with a 40-50% increase in the next 10 years, and almost doubling in the next 20 years.

3.6 COASTAL PROCESSES

The coastal processes along Cape Peron and Mangles Bay are already modified by the causeway and the boat ramp to the west of the project area, and sediment builds up at these barriers. The project would include a sand bypass system which would provide a permanent solution to this issue. It is also acknowledged that removal of part of the causeway will result in more wave energy, and therefore potential erosion, on the beaches of the Mangles Bay foreshore, and that this will need consideration.

Mangles Bay is a low energy marine environment resulting in the slower movement of sediment in this area than other, less protected areas of the coastline. The coastal processes issues associated with the project are certainly viewed as requiring very careful management, but are not viewed as a fatal flaw for the project.

3.7 MARINE WATER QUALITY

The requirements for calm conditions that define any marina mean that its water quality will always be poorer than adjacent waters, but this can be minimised by appropriate marina design and management, including mechanically aided flushing if required. Key questions are whether water quality within a marina is appropriate for the intended uses, and the extent to which outflow of marina water affects the social and ecological values of the adjacent environment.

The proposed marina design has far better flushing characteristics (with no mechanical flushing) than other marinas in the Perth and Mandurah area, and is expected to have nutrient-related water quality as good as or better than those of marinas in the coastal waters, and certainly better than marinas in the Swan/Canning and Peel/Harvey estuaries, where the background water quality has higher nutrient levels than Mangles Bay. Other aspects of water quality (contaminants, faecal bacteria) that impinge on the social and ecological values of Mangles Bay are expected to improve with the proposed development, as it will address their causes.

In the SER a 'screening level' assessment of impacts on the nutrient-related water quality of Mangles Bay and Shoalwater Islands Marine Park was undertaken to determine whether major water quality issues might occur: it was never intended to be an exhaustive or detailed study. This screening level assessment indicated (i) slight, localised declines in water quality due to outflow from eastern and western marina entrances, and (ii) no impact on overall water quality in Cockburn Sound or Shoalwater Islands Marine Park improvement - with possible slight localised improvements in Mangles Bay. The results were considered sufficient to conclude that there will not be any significant deterioration of water in Mangles Bay (indeed there is potential for improvement). The full ecological significance of any changes in water quality/circulation that might occur as a result of the marina will require (i) comprehensive and detailed hydrodynamic modelling, and (ii) detailed ecological investigations. These will be done if the project proceeds to detailed environmental assessment.

3.8 BALANCE OF CAPE PERON

The footprint of the project will be offset through the proposed mitigation package described in the SER. Notwithstanding that this package will have benefits outside of the project area, to offset potential effects on Cape Peron as a whole, for example, through changes to the character of the area, demographics, traffic and number of visitors. The Department of Environment and Conservation (DEC) in its comment on the SER suggested that planning was required for the balance of Cape Peron (i.e. outside the project area). The proponents agree with this as a sound suggestion and will support a joint planning study involving the key agency stakeholders to be undertaken in parallel with, but separately to, Phase 2 of this project (detailed planning and environmental impact assessment). The study could also consider recreational marine uses in near shore areas in Mangles Bay.

It is expected the planning study would address land and marine issues including the Mangles Bay moorings and other defined boating usage areas, the camp leases, recreational opportunities and facilities, public access and passive recreation and protection of Lake Richmond in a local, regional and State context. The proposed planning study could be undertaken by a group chaired by the

Western Australian Planning Commission (WAPC) involving the key agencies including the City of Rockingham, DEC Regional Parks Unit, Rockingham Development Office and the DPI. The WAPC was last involved in planning for Cape Peron in 1992 when it published *The Cape Peron Study: A Framework for Future Tourist/Recreational Use*.

3.9 TRAFFIC

The initial traffic study undertaken for the SER concluded that although traffic flows would increase on the major roads in the area, the flows would still be within the current capacity of the roads. Once the final design of the project is complete, a more detailed traffic study can be undertaken including recommendations for the management of increased flows.

The Garden Island highway next to Lake Richmond is not a part of this project. Traffic modelling indicates that the traffic generated by the project is within the capacity of the current major roads. There will be some modifications to ensure pedestrian safety and to ensure the traffic connections with the project are appropriate.

3.10 OTHER COSTS AND BENEFITS

Project beneficiaries – marina for the rich

One criticism of the project is that it will only be accessible to and used by the wealthy and by implication, not the Rockingham community.

Public accessibility was identified as a key objective of the project early on in the consultation process. This was taken into account by the Stakeholder Reference Group (SRG) and the project team as they worked through the concept design phase of the project.

The general community currently has limited access to Cape Peron as much of the area is under private lease. Mangles Bay and Shoalwater Bay beaches are only accessible from either end with no access along the middle where private leases prevent access. Public access to the balance is heavily constrained by the limited facilities. For example, there are no picnic facilities within the Cape Peron area.

The concept plans for the project contain a number of features to enhance access for all members of the community. These include:

1. Pedestrian and cycle paths throughout the project area, including the entire water edge of the eastern marina, along the Mangles Bay foreshore right out to the base of the realigned causeway.
2. The chalets park(s) will allow families to holiday within the Cape. This is not currently available except to those with access to the private lease areas. The chalet parks will be kept affordable to ensure low income families can take advantage of the holiday opportunities offered.
3. The Fisherman's Wharf areas adjacent to the marina and accommodation area will attract a broad range of visitors by incorporating facilities ranging from restaurants to café dining and fish and chip shops or similar.
4. The Mangles Bay beachfront will include picnic areas and facilities to enable families to enjoy beachfront picnics.

Many members of the Rockingham community are already members of the boating clubs which will have sites for new club facilities in the western marina and this should not affect the affordability of membership

The residential component will attract higher prices as could be expected for waterside home sites. This is already the case in the many areas of Rockingham with beachfront locations (for example Palm Beach). The residential component of the project will be an extension of this area and be much the same as the many other beachfront areas of Rockingham.

Cost of construction and maintenance

Should the State Government support the project proceeding further it is likely that LandCorp would become the proponent and undertake detailed planning, pursue statutory approvals and undertake the development. Ongoing management of the precinct is likely to be undertaken by DPI or the City of Rockingham.

The cost of construction would be borne by LandCorp with the majority of the costs recuperated through the sale of lots. At this concept planning stage, the details of maintenance costs have not been determined. The Mandurah Ocean Marina provides one model for the ongoing management of a marina. In that model the maintenance costs are catered for based on the 'user pays' principle through a special rate paid only by property owners within the development, and the marina boat pen users. This income is then quarantined and can only be spent on the marina.

3.11 ABORIGINAL HERITAGE

Consultation with Aboriginal representatives has been undertaken (and will continue if the project proceeds to the next level of assessment) in order to fully understand the Aboriginal heritage values in the area. An 'interpretive site' was suggested by a representative of the Aboriginal community as an appropriate way of providing for an Aboriginal meeting place in the Cape Peron area and to incorporate Aboriginal history and culture into the development. It was suggested that regular heritage walking tours of the area could be conducted by the Aboriginal people in the area. These suggestions will be further investigated and developed in consultation with the Aboriginal community and CALM, if the project proceeds.

3.12 RECREATION

The project will provide increased opportunities for recreation in the Cape Peron area including:

- 500+ boat pens (half of these open to the general public) in a secure marina
- sheltered boat ramps and marina entrances and disabled fishing platforms
- cycleways, nature trails, lookouts and public facilities in the rest of the Cape Peron area
- improved public access to Shoalwater Bay and Mangles Bay and pedestrian and cycle linkages between Rockingham Beach, Point Peron and Shoalwater Bay
- increased management and regulation of boating with associated improvements in public safety
- increased management presence, lighting, traffic management and increased public use of Cape Peron will help discourage anti-social behaviour
- provision of low cost, family holiday accommodation for a wide cross section of the community.

3.13 NO DEVELOPMENT ON CAPE PERON

The Cape Peron Tourist Precinct Project will affect the environment of Cape Peron and change the existing land use in the project area. The project is expected to provide social and economic benefits to the Rockingham community and improve the accessibility of Cape Peron and the opportunity for recreation. All the current recreational uses of Cape Peron mentioned in the submissions (nature appreciation, walking, snorkelling etc) will still be available.

The footprint of the development has been reduced during the planning process to minimise environmental impacts, and mitigation measures have been outlined in the SER that aim to reduce and offset the impacts associated with the project. The overall outcome of the project for the terrestrial environment is expected to be:

- the Cape Peron bushland reduced by less than one third
- the majority of the Cape rehabilitated and managed so that the remaining bushland is in better condition and therefore acting as a better habitat and ecological link between Lake Richmond and Point Peron
- acquisition of land with similar or greater conservation value to secure it for conservation
- facilities and management in place so that more visitors can enjoy Cape Peron and have less impact on the environment.

The marine outcomes are expected to be:

- slight improvements in local water quality in Mangles Bay
- seagrass loss and a greater area of seagrass replanted and monitored than will be lost, to ensure long-term establishment and return of ecological function
- improved management and facilities for boating in Mangles Bay
- facilitated management of the adjoining Shoalwater Island Marine Park.

3.14 ALTERNATIVE SITES

Alternative locations for a marina were suggested and there were concerns expressed that alternative locations or configurations were not considered in the development of the project concept.

The purpose of this study was to develop a concept plan for a marina-based tourist precinct in the Mangles Bay area of Cape Peron to achieve sustainability outcomes (i.e. social, environmental and economic outcomes).

During the community consultation the issue of alternative locations was raised. In response, the Steering Committee commissioned a desktop review by the project team of the entire coastline of the City of Rockingham which assessed the potential of each section of coastline to accommodate a marina-based tourist precinct. The same sustainability criteria were used in the assessment. The conclusion of the report (NS Projects 2005) was " … for a marina-based development, Mangles Bay presents the least current constraints and most opportunities when compared to the rest of the Rockingham coastline."

A complete strategic planning review of potential marina sites along the Rockingham coastline has not been undertaken by the State Government and is beyond the scope of this project. However, Mangles

Bay has been put forward many times over the past 30 years as a potential site for a marina or boat harbour due to the following characteristics:

1. Mangles Bay is a sheltered environment except during some storms from the north west. Sediment movement and wave energy are low in this area, decreasing the potential for erosion/accretion at the marina entrance, and minimising dredging requirements. The sheltered bay also allows for safe entrance and exit of the marina.
2. Mangles Bay has a north facing aspect which is ideal for recreation and tourist enjoyment of the area and facilities.
3. Some land is required for a marina development to provide for hardstand areas, parking, access, public open space and visitor facilities. In this case, a residential component has been included that will largely pay for the development and the boating, recreation and tourist facilities provided. A 500 boat marina backing straight onto a residential area is not desirable or feasible in town planning terms.

The development is based along the foreshore of Mangles Bay which is already developed and is not part of the Regional Park or the Bush Forever Protection Area. The project also extends back into the Regional Park in preference to extending out into the marine environment and increasing the seagrass loss and marine impacts.

A number of submissions suggested that a breakwater would be sufficient to create a safe anchorage in Mangles Bay. The footprint of a breakwater in Mangles Bay would be likely to result in greater seagrass loss than the current project designs. Also, that design would concentrate all the boating activity out in Mangles Bay instead of in an inland marina. It is likely that the anchorage would also need to meet DPI standards for depth, and the shallow waters would require dredging.

Many of the submissions stating that the Mangles Bay area of Cape Peron was not the optimum location for a marina-based tourist precinct, proposed Wanliss Street as a more suitable alternative.

This site was specifically examined in the study referred to above (NS Projects 2005). The report identified a range of opportunities and constraints in terms of engineering, planning, property and environmental aspects. While the opportunities and constraints for all aspects should be read in full, severe engineering and planning constraints were identified for this site. The water depth increases rapidly close to shore. To build anything but a jetty structure would require very large quantities of fill at high cost and questionable availability. A jetty structure would not meet boating demands beyond providing pens for, at best, just over a hundred boat owners. In addition, the narrow foreshore reserve did not provide adequate land area for any of the community facilities sought (e.g. chalet park, tourist facilities and marine science centre site) nor was there space for any parking.

4. GOVERNMENT SUBMISSIONS

No	Department	Topic	Submission	Response
9.	Department of Indigenous Affairs. Manager, Heritage Advice Unit		I write in regard to your letter and attachment dated 3 March 2006 regarding the above. In terms of Aboriginal heritage and cultural issues I note that the proponent has conducted research into previous heritage investigations of the Cape Peron area and that reference is made to obligations under the Aboriginal Heritage Act 1972 (AHA). In this regard I note that previous formal investigations of the project area were conducted in 1997, and they may not have been for the exact same project area and proposed works. Further, I wish to advise that in recent months a number of Aboriginal heritage sites have been recorded in the Point Peron area by Mr Trevor Walley. I wish to recommend to you that the proponent should, prior to any proposed development/activity, so that no site is damaged or altered [which would result in a breach of Section 17 of the AHA], engage suitably qualified consultants to conduct ethnographic and archaeological surveys of the area. This should ensure that all Aboriginal interest groups are consulted so that all sites on the designated land are avoided or identified. Such a survey would involve archival research, consultations and on the ground inspections. Additional information on the requirements for the preparation of heritage survey reports can be obtained by visiting the Department of Indigenous Affairs web site at www.dia.wa.gov.au/Heritage/Standards. It is our preference that any development plans are modified to avoid damaging or altering any site. If this is not possible in order to avoid a breach of the Act, the land owner should submit a Notice in writing under Section 18 of the Act to the ACMC, seeking the Minister for Indigenous Affairs' prior written consent to use the land. If a section 18 is to be submitted it is the view of the ACMC that any supporting heritage survey reports should be no older then five years. In this instance it would appear that another round of heritage investigations is warranted.	Consultation has been undertaken with Trevor Walley during the preparation of the SER. If the project proceeds to the next stage of planning and assessment, the need for engaging qualified consultants to undertake ethnographic and archaeological surveys is recognised, and the relevant Aboriginal interest groups consulted. The advice on appropriate information for a s18 is appreciated and will be taken into account in the future planning of the project.
169.	DEC Regional Parks Unit (formerly CALM)		Thank you for providing an opportunity to review the Strategic Environmental Review for the Cape Peron Tourism Precinct Project. The Department of Conservation and Land Management (CALM) has been represented on the project Steering Committee during the development of the Strategic Environmental Review to provide advice on nature conservation and conservation estate management issues. I previously sent you a copy of CALM's preliminary comments on the draft Strategic Environmental Review, dated 20 December 2005 (Attachment 1). Please take these comments into account in your appraisal of the Cape Peron Tourism Precinct Project Strategic Environmental Review. In addition, please also consider the following advice on three key issues.	-

No	Department	Topic	Submission	Response
		1. Mitigation measures	As the proposal would result in a loss of conservation estate, namely an area of Reserve 27853, which is managed by CALM as part of Rockingham Lakes Regional Park, as well as potentially a portion of Shoalwater Islands Marine Park, appropriate terrestrial and marine mitigation and offset measures should be sought. The mitigation measures proposed in the Strategic Environmental Review are acknowledged, however it is suggested that broader options are considered in consultation with CALM should further planning be undertaken.	If the project proceeds to the next level of assessment, CALM will be consulted further with regard to the development/refinement of mitigation options. Suggested options for broadening mitigation include marine management and a greater focus on Lake Richmond and its TECs. The scope of the mitigation package will be broadened to include these suggestions.
		2. Rockingham Lakes Regional Park Draft Management Plan 2003-2013	The Rockingham Lakes Regional Park Draft Management Plan 2003-2013 recognised previous planning for marina proposals at Cape Peron as an issue that would potentially affect the regional park and its management. It is important to note that the Rockingham Lakes Regional Park Draft Management Plan 2003-2013 did not endorse or support such a proposal. Rather, the plan identifies the proposal for a boat harbour in this area as something that would have a significant impact on the regional park and outlines that further planning and approvals would be required for it to proceed. The plan applied 'management zones' to each park area to determine appropriate uses and activities as a guide for management and to communicate management intentions to the public. The management zone applied to the area of Cape Peron affected by the Cape Peron Tourism Precinct Project was identified as 'subject to further planning'. This was in order to allow the existing values of the land to be maintained whilst the outcomes of Government decisions on any proposed boat harbour remained unknown. The park management zones outlined in the draft management plan are a framework only and do not supersede the Parks and Recreation reservation, which protects the park under the Metropolitan Region Scheme.	This information is acknowledged and information to this effect is provided in the SER.
		3. Planning for the entire Cape Peron headland	The Cape Peron Tourism Precinct Project has developed momentum since the Rockingham Lakes Regional Park Draft Management Plan 2003-2013 was prepared, following the recommendations of the Premier's Rockingham Planning and Development Taskforce, which was established in April 2003. The Rockingham Lakes Regional Park Management Plan is in the process of being finalised, and the proposals contained in the Draft Management Plan are being reviewed in the light of the Cape Peron Tourism Precinct Project. As the proposed Cape Peron Tourism Precinct Project would involve significant changes to the environment and uses of Cape Peron, planning for the proposal should consider the entire headland as part of the 'precinct'. This should include consideration of the impact of the Cape Peron Tourism Precinct Project on the recreation camp leases at Cape Peron, and strategies for managing the camps in the future.	The footprint of the project will have impacts that will be offset through the mitigation package described in the SER. Notwithstanding that this package will have benefits outside of the project area, it is recognised that the project will potentially indirectly affect Cape Peron as a whole, for example, through changes to the character of the area, demographics, traffic and number of visitors. The proponents are supportive of a joint planning study of the balance of Cape Peron (including the recreation camps) involving the key agency stakeholders being undertaken in parallel with, but separately to, Phase 2 of this project (detailed planning and environmental impact assessment). The study could also consider recreational marine uses in near shore areas in Mangles Bay.
			Finally, it is noted that should the project proceed to the next phase, it would undergo full environmental assessment, with detailed designs, investigations and consultation. It is anticipated that further consultation would be undertaken with CALM in due course.	Agreed.

No	Department	Topic	Submission	Response
169.	DEC Regional Parks Unit, formerly CALM (copy of previous submission 20/12/05). The responses were provided at that time.		Thank you for referring a copy of the above document to the Department of Conservation and Land Management (CALM) for review. It is noted that the Cape Peron Tourism Precinct Project is under the auspices of the Premier's Rockingham Planning and Development Taskforce, and that the draft Strategic Environmental Review has been prepared to present a high level environmental review of the project and to propose a mitigation package to offset any potential impacts. As you are aware, CALM has been represented on the project Steering Committee during the development of the Strategic Environmental Review to provide advice on nature conservation and conservation estate management issues. The following comments are provided to the Steering Committee as advice on the draft Strategic Environmental Review, with more detailed comments outlined in Attachment 1. It is understood that should it proceed the proposal would involve a loss of conservation estate, namely an area of Reserve 27853, which is managed by CALM as part of the Rockingham Lakes Regional Park, as well as potentially a portion of the Shoalwater Islands Marine Park. Reserve 27853 is currently in the process of being vested in the Conservation Commission of Western Australia. The Conservation Commission has advised that on the basis of its current understanding and the concerns currently held, it does not support the project as described. A letter from the Commission is attached for your information (Attachment 2). It is noted that should the project proceed to the next phase, it would undergo full environmental assessment, with detailed designs, investigations and consultation. It is anticipated that further consultation would be undertaken with CALM in due course.	Noted.
		Attachment 1 Executive Summary Assessment of alternative marina locations (page ii)	The assessment of alternative locations for a marina was cursory, and is not considered to provide a strong rationale for Cape Peron as the most appropriate site in a regional context.	This section heading has been amended to read "Review of marina location". The intention of the review was to consider the Rockingham coastline and determine which areas had the most opportunities and least constraints for a marina. The review was not intended to be a detailed assessment.
		Key environmental factors addressed (page iii)	Shoalwater Islands Marine Park is incorrectly named.	Amended.
		Rockingham Lakes Regional Park (page v)	The document states that 'it is expected that the proposed development.., will positively contribute to CALM's management of the Cape Peron area of the Park, including management of natural areas and visitor facilities'. This should be an objective of the project, not a stated outcome. This may occur as a result of funding available for compensating the loss of conservation estate and management of impacts, but it would not occur as a result of the project itself.	This statement outlines the expected outcome of the project. The mitigation package results directly from the project and is part of the proposal.

No	Department	Topic	Submission	Response
		Lake Richmond (page v)	CALM advises that more detailed investigations of the impacts of the proposal on Lake Richmond, and in particular the critically endangered threatened ecological community of thrombolites, are required. The statement that 'the development will result in an increase in the conservation values of the lake through the implementation of the proposed mitigation measures' is unsubstantiated.	More detailed investigations will be carried out as part of the next phase of environmental assessment. The preliminary information included in the SER indicates that the project is unlikely to cause salt water intrusion, significant change in water levels or exposure of acid sulphate soils, or a change in nutrient status. Further detailed investigation will be required but the preliminary investigations indicate there are no fatal flaws with regards to Lake Richmond.
		Water quality (page vi)	The long term implications of declining water quality in the marina have not been adequately addressed in the Strategic Environmental Review.	The marina is well flushed, and should therefore not experience any long-term declines in water quality. If anything, water quality in Mangles Bay and Shoalwater Islands Marine Park is expected to slightly improve in the longer-term, as the accumulated nutrients and organic matter in Mangles Bay are gradually flushed out due to improved water exchange through the widened Causeway opening.
		Seagrass loss and rehabilitation (page vii)	The document should indicate whether the conditions in Cockburn Sound are considered suitable to allow for successful rehabilitation of seagrass. The document clearly states that long term seagrass rehabilitation is not, proven, therefore no guarantee can be given that any loss will be offset by recolonisation due to targeted rehabilitation and seeding programs. This applies to Cockburn Sound as well as the Shoalwater Islands Marine Park.	As the intention would be to plant seagrass back into areas that are surrounded by, or immediately adjacent to, existing seagrass, conditions (water quality, sediment quality, hydrodynamics) should be suitable for seagrass rehabilitation, particularly with the slight improvement in conditions expected with the widening of the Causeway opening.
		Social environment, Aboriginal heritage (page viii)	The proposed Aboriginal site is acknowledged. As the proposed site is land that is managed by CALM, the long term lease or other arrangements for the site, and ongoing management of the facility, need to be resolved in consultation with CALM and local Aboriginal elders.	This section has been amended accordingly.
		1.4 Benefits of proposal (page 4)	The proposal to provide funding for CALM for ongoing management of the proposed facilities and the natural environment within the Cape Peron and Lake Richmond areas of Rockingham Lakes Regional Park is acknowledged. However, the document should not specify the provision of funding for an increased ranger presence in the area, and should rather refer to funding an increased 'management' presence in the area.	All references to an increased ranger presence have been removed and replaces with 'management' presence.
		1.5 Relevant legislation and policies (page 6)	Reference should be made to the Rockingham Lakes Regional Park Draft Management Plan 2003-2013	This policy has been added.
		2.2.1 Geology (page 12)	Cape Peron has formed where sand has been trapped in the lee of offshore islands, not Garden Island specifically.	The document has been amended accordingly.
		2.2.4 Lake Richmond (page 13)	This section should explain that Lake Richmond is significant as habitat for the critically endangered threatened ecological community of thrombolites, which is protected under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. It should be noted that Lake Richmond is the only occurrence of this community. Overall, the document does not adequately address the significance of this community, nor the risk to the community should the project proceed.	Amendments have been made to Section 3.2.4 and Section 5.5.1 to add in these points.

No	Department	Topic	Submission	Response
		2.3.1 Cockburn Sound (page 14)	This brief introduction to Cockburn Sound, which notes only degrading pressures, does not adequately indicate the very significant marine biodiversity values and importance of the area.	Despite its history of environmental degradation, Cockburn Sound retains considerable marine biodiversity value. Its sheltered waters and deep central basin provide conditions that are unique along the south-western coast of WA, including meadows of seagrass species only found in calm sheltered waters (along its western and southern margins), unique invertebrate fauna (in the deep basin) and important nursery habitat for fish and crustaceans. These same conditions, plus its proximity to the Perth Metropolitan area, also result in heavy use for recreation and tourism (see Section 2.3.3).
		2.3.2 Mangles Bay (page 14)	Similarly this introduction does not mention the biodiversity values of Mangles Bay and significantly exaggerates the degrading features.	Mangles Bay has extensive albeit patchy meadows of seagrasses species that are characteristic of calm sheltered waters. The sheltered waters and seagrass meadows combine to create an area of considerable value as a fish nursery habitat. Mangles Bay is also heavily used for boating and recreational fishing, particularly smaller vessels that make use of the sheltered conditions.
		3.2 Site and development concept option assessment (page 17)	Under the 'environment' heading in Table 1, the text should read 'offers outcomes that are consistent with CALM's regional park management strategies'.	Amended.
		3.2.1 Site selection (page 18)	The assessment of alternative locations for a marina was cursory, and is not considered to provide a strong rationale for Cape Peron as the most appropriate site in a regional context. The Strategic Environmental Review does not provide a reference to this assessment, and does not provide a summary of its findings.	The review was not intended to be a detailed site selection process. It was intended to review the Rockingham coastline and determine why the Mangles Bay area has arisen as the most desirable location for a marina at this time. A reference has been added to the document, and details of where it is available on the internet.
		3.2.2 Review of Cape Peron development concept options (page 20)	CALM believes that the future of recreation camp leaseholders at Cape Peron needs to be considered in the context of the Cape Peron Tourism Precinct Project, should it proceed. The development is likely to have significant impacts on the lease areas and their management. Early options (1.1 and 2) allowed for areas within the development site for the leaseholders, however Options 2.2, 2.3 and 2.4 do not address this issue. Table 2 (page 30) indicates that Option 2.4 includes a proposal for a chalet park on land within Rockingham Lakes Regional Park, which would be managed by CALM and funded by the Cape Peron Tourism Precinct Project. This proposal is acknowledged, and should be subject to further planning and feasibility study.	Option 2.2, 2.3 and 2.4 all have affordable short term family holiday accommodation included in the concept plans. Currently, the leaseholders have no desire to move and the CALM Rockingham Lakes Regional Park Draft Management Plan (this plan was drafted before the SER commenced) indicates that they are likely to be able to renew leases for some time albeit under new conditions. The proponents are supportive of a joint planning study of the balance of Cape Peron (including the recreation camps) involving the key agency stakeholders being undertaken in parallel with, but separately to, Phase 2 of this project (detailed planning and environmental impact assessment). The study could also consider recreational marine uses in near shore areas in Mangles Bay.
		3.3 Development concept options (page 31)	The document states 'Options 2.3 and 2.4 have both been accepted by the Steering Committee and these are now the preferred Options'. Please note that whilst CALM is a member of the Steering Committee, CALM has not endorsed any of the options.	Noted.

No	Department	Topic	Submission	Response
		3.3.1 Key characteristics (page 31)	The document does not state whether the development includes the Garden Island Highway, or whether that is likely to proceed as a subsequent, but linked, development which would require the further removal of land from Rockingham Lakes Regional Park. Furthermore, if the Garden Island Highway is included in the Cape Peron Tourism Precinct Project, the impact of this roadway on Lake Richmond has not been addressed.	The Garden Island Highway is not part of the proposal and hence not part of the key characteristics. Care has been taken in the project design to ensure that Memorial Drive will be able to cater for increases in traffic loads if required.
		3.3.2 Environmental and social considerations (page 32)	It is noted that Options 2.2 and 2.3 retain native vegetation within the chalet park and other areas of the development where possible, and that Option 2.4 retains all of the Callitris preissii (or Melaleuca ianceolata) forests and woodlands (community type 30a) including a buffer of 1 5 metres (this is considered to be an example of the threatened ecological community, although through degradation it is depauperate in terms of vegetation structure, and therefore its status is inferred). It should be noted that even with the buffer, vegetation within the development is likely to be fragmented and is likely to degrade over time. Information needs to be provided on how the occurrence of inferred community type 30a will be protected from threatening processes such as pedestrian traffic, weeds and fire to ensure its long term viability. The document refers to the buffer between Lake Richmond and the development as 'predominantly vegetated', which is misleading as the area is interrupted by roads and grassland.	Floristic community 30a will be outside the development and will not be further fragmented by the project. The inferred TEC is around an oval and interspersed with tracks so is already fragmented. The project would rehabilitate the vegetation through weed management and the re-establishment of an understorey and control access to that vegetation. This would improve the current condition status of the community.

No	Department	Topic	Submission	Response
		5.1.1 Description of vegetation and flora (page 43-50)	The Strategic Environmental Review states that approximately 9.5% of the pre-European area of the Beard vegetation type (Scrub heath, mixed shrubs and heathland, mainly Proteaceous and Myrtaceous) remains, and that of the remaining vegetated area, 28.5% is protected in International Union for the Conservation of Nature (IUCN) Reserves (Shepherd et a!. 2002). The latter means that only 2.7% of the pre-European area is in reserves. Similarly only 5.2% of the Quindalup Complex (Heddle et a!. 1 980) is in reserves that meet IUCN criteria (EPA Guidance Statement 10). Floristic community type 30a is listed by CALM as 'vulnerable', not endangered as stated in the document. Floristic community types (FCTs) 29a, 29b and 30b as described in Gibson et a!. (1 994) 'A Floristic Survey of the Southern Swan Coastal Plain' are all Priority 3 community types. These communities are all recorded in the proposed development area. Priority 3 communities are defined as follows: Priority Three: Poorly known ecological communities: (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or: (ii) communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or; (iii) communities made .up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing by domestic and/or feral stock, and inappropriate fire regimes. Communities may be included if they are comparatively well known from several localities but do not meet adequacy of survey requirements and/or are not well defined, and known threatening processes exist that could affect them. All of these Priority 3 communities are a high priority for further investigations to determine their status. The reference to Bush Forever as Department of Environmental Protection (2000) is incorrect. The correct author citation is the Government of Western Australia.	The figures presented in the text are accurate. The additional ways of presenting those figures have been added to the description. Floristic community status has been amended. The Priority 3 status of these communities is included in the text. The Bush Forever reference has been amended.
		5.1.2 Assessment framework or policy context (page 50)	This section (and latter sections) should also consider EPA Guidance Statement 1 0.	Amended
		5.1.3 Indirect disturbance and spread of weeds (page 54)	The document implies that weed disturbance has been caused solely by uncontrolled access through the area, however this is also likely to have been caused by past disturbance.	This section refers specifically to disturbance due to tracks etc. The words "some of which is due to uncontrolled access" have been added to make it clear this is not the only source of disturbance.
		5.1.3 Mitigation (page 54)	Comments on mitigation measures are addressed in relation to Section 8 below.	

No	Department	Topic	Submission	Response
		5.1.4 Expected outcome (page 55)	It should be noted that even with the proposed buffer of 15 metres under Option 2.4, the occurrence of inferred community type 30a is likely to be fragmented and to degrade over time. It is assumed that the last sentence on page 55 refers to Option 2.2, not Option 2.4 as stated.	The inferred TEC is around an oval and interspersed with tracks so is already fragmented. The project would rehabilitate the vegetation through weed management and the re-establishment of an understorey, and control access to that vegetation. This would improve the current condition status of the community. Reference to options amended.
		5.2.1 Description of fauna (page 57-58)	Mount Atom is considered significant habitat for the yellow admiral butterfly. The fact that the peregrine falcon is at risk from roads and secondary poisoning is not a reason to discount the need to protect this species. The cumulative impacts of this development for fauna in the region have not been considered.	The reference to Mount Atom has been added. The statement is "Although a widespread species, it occurs at low densities and birds in urban areas are at risk from road-kill and secondary poisoning". The statement is intended to illustrate the threats to this species. The cumulative impacts of this development with other pressures on bushland with the metropolitan areas will be considered in the next phase of detailed environmental assessment.
		5.2.1 Other impacts (page 63)	The discussion does not take account of edge effects.	Edge effects will be considered in the next phase of detailed environmental assessment. However, fragmentation of bushland has been minimised through the site layout and rehabilitation of unnecessary tracks etc will be a priority in the rehabilitation.
		5.2.4 Expected outcome (page 64)	It is arguable whether the development will improve ecological linkages between Lake Richmond and Cape Peron.	The improvement in ecological linkage will result from rehabilitation of the vegetation and habitat values in this area. For example, it is proposed that Lease Rd is downgraded to a cycle path and the excess width rehabilitated.
		General comment - threatened ecological communities	There is no discussion on the level of risk to the threatened ecological communities in and around Lake Richmond, namely the thrombolites and the 'sedgelands in Holocene dune swales'. Any disruption to groundwater and/or lake water levels may impact on the two threatened ecological communities in and around Lake Richmond. Further investigation of possible hydrological impacts on these communities and Lake Richmond is required. The proposal should not proceed unless detailed hydrological information indicates that there will not be any adverse impacts on these values.	For the SER, some preliminary groundwater modelling was undertaken that indicated there is unlikely to be any saltwater intrusion or change in water level in the lake. Therefore, the lake's TECs are also unlikely to be affected. Further investigation would be required in the next phase of detailed environmental assessment.
		5.3 Bush Forever Protection Area (pages 65-69)	The Strategic Environmental Review has misinterpreted Bush Forever policy and Statement of Planning Policy 2.8. The third dot point on page 66 infers that the general presumption against clearing regionally significant bush land applies within Bush Forever Protection Area. Statement of Planning Policy 2.3 refers to bushland that is not within a Bush Forever Protection Area, and also states a general presumption against clearing any bushland within Bush Forever Protection Areas. Table 8 on pages 68 and 69 is similarly incorrect and therefore does not accurately consider the proposal's impact. In reference to footnote 10 on page 66, written advice should be sought on this issue to confirm this position.	The planning policy states in section 5.2.1 'Bush Forever Reserves' "Proposals or decision-making should: support a general presumption against clearing of regionally significant vegetation, except where a proposal or decision: can be reasonably justified with regard to wider environmental, social, economic or recreational needs and all feasible alternatives have been considered in order to avoid or minimise any direct loss of regionally significant bushland; and reasonable mitigation strategies are secured to offset any loss of regionally significant bushland, where appropriate and practical." Therefore, section 5.3.2 of the SER is correct.

No	Department	Topic	Submission	Response
		5.3.2 Environmental offsets (page 67)	Environmental Protection Authority Preliminary Position Statement No. 9 Environmental Offsets recognises conservation estate and Bush Forever Protection Areas as 'critical assets', and does not consider it appropriate to validate or endorse the use of environmental offsets where projects are predicted to have significant adverse impacts on critical assets. The project will clearly have substantial impacts on critical assets. The Strategic Environmental Review states 'with regard to Bush Forever reserves, the Position Statement does state: . "not including those [Bush Forever] areas subject to negotiated planning solutions or complementary mechanisms and for which agreement has been reached that such areas fall outside the conservation requirements" (EPA 2005, pg 14). It should be noted that Bush Forever site 355 is not an area 'subject to negotiated planning solutions or complementary mechanisms and for which agreement has been reached that such areas fall outside the conservation requirements'.	The development area was recognised in the Rockingham Lakes Regional Park Draft Management Plan as an area "area subject to further planning". Although this is not an existing negotiated planning solution, the draft management plan does state "Long term management may depend on the outcomes of further planning and Government decisions on the proposed boat harbour at Mangles Bay. Some development of facilities and infrastructure may be necessary." Therefore, the site is recognised as a possible future development site even though it is included in BFPA 355. The Statement of Planning Policy 2.8 states that in some circumstances clearing within a BFPA may be justified as long as it is offset. See above. Therefore, the area has previously been identified for further planning and the SER is the first step in the process of reaching a "negotiated planning solution" which may involve some impacts and offsetting.
		5.3.3 Potential impacts and mitigation (page 67-68)	The document states that 'the development will have no adverse impacts on the vegetation and flora values of Bush Forever Protection Area 358 (Lake Richmond)', however there is no discussion to support this assertion.	The statement was based on the fact that the development will be 200-300 m away from BFPA 358 and separated by a road. Discussion has been added to the text to this effect. Other impacts such as possible increased visitation to the area will be addressed in the next phase of detailed environmental assessment.
			Table 8 indicates that there will no interruption to the 'corridor' between Lake Richmond and Cape Peron, which is misleading, and does not address the Statement of Planning Policy 2.8 requirement to 'avoid fragmentation of the bushland area'. Clearly the development will further fragment bushland areas in Rockingham Lakes Regional Park.	The development is in the north east corner of BFPA 355 and there is no other vegetation to the north or east of the development. Therefore, the project represents loss of vegetation but does not separate or fragment any other vegetation.
			Table 8 states that the condition of the floristic communities 29a and 29b is rated as 'good' because there have been multiple disturbances. Conversely, it could be argued that the communities are successfully regenerating from past disturbances.	This statement uses the Bush Forever condition rating of vegetation where the full description of 'good' is "Vegetation condition significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it". The SER also states in section 5.1.1 that the vegetation is in fact "recovering well".
			Table 8 states that a 200 metre buffer will be maintained between Lake Richmond and the proposed development, however Section 5.5.3 indicates that there will be a 50 metre buffer. This should be clarified and inaccuracies corrected. The differences between the buffers for the three options should also be noted. It should be recognised that the buffer will not be undeveloped, as it contains roads and developed areas. Consideration also needs to be given to the functions of the buffer, and these functions would need to be considered when determining appropriate dimensions for the buffer. A buffer to minimise the risk of saltwater intrusion would have different dimensions to a buffer that facilitates flora and fauna connectivity, for example.	The 50 m "buffer" referred to the distance of separation of the salt water /fresh water interface and the bottom of Lake Richmond. The word buffer has been removed in this case. The minimum 200 m buffer refers to the surface distance between the development and the lake.

No	Department	Topic	Submission	Response
		5.5.2 Assessment framework or policy context (page 82)	Table 9 indicates that midges are not considered a significant issue in the area. Pest populations of midges can be caused by poor wetland water quality. Should the water quality of Lake Richmond decline over time (potentially from other factors not related to the Cape Peron Tourism Precinct Project), midges may become an issue due to the proposed increase in residences close to the wetland.	The potential for midges was not considered a potential fatal flaw in this SER and was not examined in detail. However, it is unlikely that Lake Richmond water quality would in the future have poor water quality as it is a large, deep lake and the nutrient inputs to the lake are now being managed.
		5.5.2 Threatened ecological communities (page 83)	It should be noted that both the thrombolites and the 'sedgelands in Holocene dune swales' threatened ecological communities are recognised as matters of national environmental significance under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.	This has been added to any appropriate sections where it was missing.
		5.5.3 Potential impacts and mitigation (page 83)	There is community concern about the impact of acid sulphate soils, and an investigation into the level of risk should be undertaken.	This investigation would be included in the next phase of formal environmental assessment.
		5.5.3 Dewatering (page 85)	Information should be provided on the length of the construction period that is likely to cause a change in water levels, and whether the predicted drop in water levels of 1 5 centimetres is within the normal range of fluctuation in the lake. It may be necessary to time the construction to minimise the impact of this water level change.	The 15cm drawdown resulted from a 2 month drawdown period. Section 5.5.2 provides the information that the usual seasonal water level variation in the lake is up to 1 m. Managing both the length of construction period and the time of year of construction will be options examined in the environmental assessment to minimise watertable impacts.
		5.5.3 Saltwater intrusion (page 85)	The document indicates that 'although the preliminary assessment indicates that there would be an approximate 50 metre buffer zone following canal construction, there is a low risk that Lake Richmond could be impacted by saltwater due to tidal fluctuations, diffusion and local variations in aquifer properties that may reduce this buffer'. CALM considers that this is potentially a fatal flaw of the project that requires further investigation. This is particularly important as the two threatened ecological communities in and around Lake Richmond are extremely susceptible to hydrological changes.	The preliminary groundwater modelling was carried out for Option 2.2 only, which is the option that has canals closest to the lake (200 m). Option 2.3 and 2.4 have a distance of 330 m and 350 m respectively between the canals and the lake, therefore the separation distance between the lake and the salt water wedge is also likely to be an additional 130-150 m further away. Therefore, the 'low risk of saltwater intrusion" is not a fatal flaw for the project but may be a possible fatal flaw for option 2.2. The SER also concluded that salt water intrusion required further investigation in the next phase of environmental assessment.
		5.5.4 Expected outcome (page 87)	The document states that 'the development will result in an increase in the conservation values of the lake through the implementation of the proposed mitigation package'. This is arguable as the mitigation package is not focussed on Lake Richmond and does not address key threatening processes acting on the take.	There are no adverse impacts expected on the lake from the project. The mitigation package is intended to include rehabilitation of the vegetation surrounding the lake, however negotiation with the City of Rockingham and local residents will be required to determine what can be done. The rehabilitation in the adjacent BFPA 355 will also improve the ecological linkage of Lake Richmond riparian vegetation with the upland vegetation. Therefore, there is expected to be no adverse impacts and some positive outcomes for Lake Richmond. However, mitigation and offset proposals will be further investigated in association with the DEC during the next phase, should the project proceed.

No	Department	Topic	Submission	Response
		6. Marine environment (pages 88-114)	In regard to impacts on the marine environment, CALM is particularly concerned about the potential for the proposal to impact on Shoalwater Islands Marine Park, particularly on seagrass ecosystems, inter-tidal and sub-tidal reefs, benthic fauna, Australian sea lions (which are specially protected under the Wildlife Conservation Act 1950),. little penguins and dolphins.	The marina will directly impact only a small corner of the Marine Park with a direct loss of 0.1 ha of seagrass. Indirect losses due to sediment movement in the Marine Park could be up to 2 ha. The marina is not expected to cause a significant change in water quality in the Marine Park. There will be impacts due to population increase and increased recreational pressure, but these will occur irrespective of whether the marina goes ahead. Furthermore, the large majority of the boat traffic in the region is trailerable boats, while the (relatively) small number of boats moored in the marina will comprise some already moored in the region. Therefore, the impacts on the Marine Park are small and are not expected to be a fatal flaw of the project.
			The document states the potential of the marina water to 'affect water quality in Mangles Bay and adjacent waters in Cockburn Sound and the Shoalwater Islands Marine Park'. There is insufficient detail in the document to determine the potential long term impacts of water quality decline on seagrass communities and sub-tidal reef ecosystems in Shoalwater Islands Marin Park. CALM considers that further investigation is required to demonstrate that there will be no unacceptable risk to Shoalwater Islands Marine Park from point source or indirect pollution associated with the marina, given the proximity of the marina to the park.	The SER makes this statement in relation to the fact that any marina has this potential. The flushing model indicates that there is going to be no significant change in water quality in the Marine Park. Therefore, the SER concludes this is unlikely to be a fatal flaw of the project but will still require further detailed investigation to confirm this.
			It is considered that further investigation on sediment and shoreline movement and the potential impacts on Shoalwater Islands Marine Park is required. In terms of near-shore sand movement the Rockingham area is a dynamic environment, with near-shore currents transporting tens of thousands of cubic metres of sand around Warnbro and Cockburn Sounds each year. It is not clear what effect the development will have on the direction and rate of this movement.	The causeway and Mangles Bay already have altered coastal processes that require physical management. The proposed marina will again alter the coastal processes and this will require improved management to ensure an effective sand bypass. This issue will require very detailed investigation in an environmental assessment however, Mangles Bay is a low energy area and it is considered an issue for careful investigation and management rather than a potential fatal flaw.
			Additionally, there is little consideration given to the potential impacts of the proposal on turbidity and the near shore movement of sediment. Turbidity during and post construction may cause smothering of seagrass communities well beyond the projected footprint. Combined with an ongoing increase in boat traffic and an increase in marine and terrestrial activity, the loss of seagrass may well accrete over time.	Impacts on seagrass will be carefully monitored and managed during construction (see Section 6.1.3). No post-construction impacts on turbidity are expected, and nearshore movement of sediment will be carefully controlled by a sediment bypass system (see Section 6.2.4). Boat traffic will also be far better directed and controlled (navigation channels, speed limits, opportunities for public education) than at present.
			The increase in boat traffic associated with the marina would increase the potential for boat strike on Australian sea lions, little penguins and dolphins.	By far the largest amount of boat traffic in the region is due to trailerable boats launched from private and public boat ramps. Boat traffic is increasing rapidly due to population growth, and will do so irrespective of whether the marina goes ahead (see Table 15 in the SER). The marina offers facilities for around 500 vessels (incorporating some that are already in the area, from existing boat clubs), and so forms a small proportion of overall boat traffic. The marina will actually improve the regulation of, and facilities for, this growth in boating activity.

No	Department	Topic	Submission	Response
			In regard to Water Corporation infrastructure, information should be given on whether the proposal would require relocation of drainage and other infrastructure, and the associated marine and terrestrial impacts.	All the options presented require some relocation of Water Corporation infrastructure. However, the small potential impacts associated with this were not considered a potential fatal flaw of the project (given that consultation with Water Corporation indicates they are willing to cooperate and the relocation costs have been included in the project costs) and was not investigated in the SER. Existing operating standards for the Water Corporation infrastructure will continue to apply.
			The long term amenity of water quality decline in the marina should be considered.	The proposed marina design is expected to result in well-flushed waters, and no long-term decline in amenity is expected. Water quality should be similar to, or better than water quality in other marinas in Perth's coastal waters (e.g. Hillarys, Success Harbour), and certainly better than experienced in marinas in the Swan River and Peel-Harvey estuary.
			Table 13 states that there will be no significant change in water quality in the Shoalwater Islands Marine Park. It is not clear which parameters are being referred to. CALM considers that further investigation is required to demonstrate that, should it proceed, there will be no unacceptable risk to Shoalwater Islands Marine Park from point source or indirect pollution associated with the marina.	The marina will directly impact only a small corner of the Marine Park with a direct loss of 0.1 ha of seagrass. Indirect losses due to sediment movement in the Marine Park could be up to 2 ha. Nutrient-related water quality, as indicated by chlorophyll levels and (indirectly) water clarity, was the main aspect of water quality addressed by modelling. The marina is not expected to cause a significant change in nutrient-related water quality in the Marine Park. Therefore, the impacts on the Marine Park are small and are not expected to be a fatal flaw of the project. Further modelling and investigation will be undertaken if the project proceeds to the next level of environmental assessment. Some improvements in other aspects of water quality (contaminants, faecal bacteria) in Mangles Bay and the Marine Park are also expected due to conversion of septic areas to sewerage, the provision of sullage pumping facilities, and the removal of large boats (and associated anti-foulants) into the marina.
		7.1.4 Expected outcome (page 117)	The proposed Aboriginal interpretive centre at the former Sister Kate's lease site requires detailed feasibility and business planning. The proposed site is land that is managed by CALM. The long term lease or other arrangements for the site, and ongoing management of the facility, need to be resolved in consultation with CALM and local Aboriginal elders. CALM would prefer this offset to be referred to as an Aboriginal interpretive site, rather than as a full 'centre', which may not be appropriate or feasible.	The reference has been changed to an 'interpretive site'. The SER notes that this proposal will require substantial consultation and planning.
		7.2 Road traffic (page 118)	The document does not state whether the development includes the Garden Island Highway, or whether that is likely to proceed as a subsequent but linked development which would require the further removal of land from Rockingham Lakes Regional Park. Furthermore, if the Garden Island Highway is included in the Cape Peron Tourism Precinct Project, the impact of this roadway on Lake Richmond has not been addressed. The potential impacts of increased boating traffic are considered significant and should receive a similar level of analysis to road traffic.	The Garden Island Highway is not part of the proposal and hence not part of the key characteristics. Care has been taken in the project design to ensure that Memorial Drive will be able to cater for increases in traffic loads if required.

No	Department	Topic	Submission	Response
		Section 8 Mitigation measures (page 121-128)	Note: The following comments apply to all discussions on mitigation measures throughout the document. It is noted that should the project proceed to formal environmental assessment, a more detailed offsets strategy will be developed, including detailed rehabilitation plans, and recreation plans. The proponent should liaise with CALM during that process, and the plans should be developed to CALM's satisfaction. The enhancement of recreational opportunities should also refer to the upgrade or provision of lookouts at Cape Peron, with the details to be resolved through detailed recreation planning.	The need for more detailed planning and consultation in a formal environmental assessment with regard to offsets is noted in the SER. The SER has been amended to include the provision of lookouts in the recreation offsets.
		Section 8.3.1 Rehabilitation of the natural environment (page 122)	It is noted that a Rehabilitation Management Plan for Cape Peron will be developed should the proposal proceed to formal environmental assessment. This plan should be developed to CALM's satisfaction. Included in the Rehabilitation Management Plan for Cape Peron should be performance and completion criteria. Funding for the implementation of the Rehabilitation Management Plan for Cape Peron should allow for a sufficient maintenance period. CALM is supportive of rehabilitation occurring at Lake Richmond. In relation to Table 18 Method of assessment to measure rehabilitation performance (page 126), please note that appropriate performance criteria would be developed during the preparation of the Rehabilitation Management Plan for Cape Peron.	Noted. It is noted in the text in section 9.3.1 that specific rehabilitation prescriptions, performance monitoring and assessment parameters and criteria will all be developed in a Rehabilitation Management Plan.
		8.3.2 Land contribution to the conservation estate - option 2.2 only (page 125)	It is noted that a contribution of land to the conservation estate is only associated with Option 2.2. This is not consistent with Environmental Protection Authority Preliminary Position Statement No. 9 Environmental Offsets which states that offset and impact should ideally be 'like for like or better'. There is a need for CALM to formally consider the proposal to include an area of IP14 in the conservation estate. Consideration needs to be given to the conservation values and condition of the land; the viability of the land in terms of size, buffers and perimeter to area ratio; recreation and landscape values; fire management provisions; the need for rehabilitation works; and the provision of management resources. It should be noted that the inclusion of parts of land known as IP14 in the conservation estate as an offset to this project may not be appropriate. The development plan for this land is still being negotiated and areas of IP14 may not be available for development due to the presence of areas of high conservation values including conservation category wetlands, and the threatened ecological community 'sedgelands in Holocene dune swales'.	As the environmental impact is on Cape Peron, it was judged that the environmental offsets should also be concentrated within Cape Peron where possible. The "restoration or rehabilitation of existing degraded ecosystems" is recognised as a direct offset in the EPA Position Statement 9 Environmental Offsets. This also arose through community consultation where members of the community requested that mitigation should benefit the local Cape Peron area rather than elsewhere. The SER has been amended to include the offset of land contribution to the mitigation package of all options. The reference to IP14 has been removed from the SER. In the next phase of environmental assessment, it is recognised that further investigation, consultation and planning would be required to determine whether this is appropriate and feasible.

No	Department	Topic	Submission	Response
		8.3.3 Rehabilitation of the sea grass meadows (page 127)	The document clearly states that long term seagrass rehabilitation is not proven, therefore no guarantee can be given that any loss will be offset by recolonisation due to targeted rehabilitation and seeding programs. This applies to Cockburn Sound as well as the Shoalwater Islands Marine Park. Although it is implied that the Marine Parks and Reserves Authority is willing to consider that loss of seagrass in a marine protected area if there are substantial resulting social benefits, this should not be viewed as a fait accompli, especially as this may be one of several potential marine environmental impacts resulting from the development.	The SER states that seagrass rehabilitation has been proven so far only in the short term (up to 4 years) and that although the trials look successful they will need to be monitored to confirm the seagrass will survive long-term. It should be borne in mind, however, that the longer transplanted seagrass remains in place, the better its chances of survival. It is the early years that are crucial in the survival and growth of transplanted seagrass. To increase the certainty regarding the feasibility of seagrass rehabilitation in Cockburn Sound, the following is also proposed: "Should the proposed development be approved by Cabinet, to proceed to the next stage of detailed design and environmental assessment, it is proposed to commence seagrass rehabilitation trials in the Mangles Bay area immediately. It is recognised that demonstration of the ability to rehabilitate seagrasses would add significant confidence to any final proposal submitted to the EPA for detailed environmental impact assessment."
		8.3.4 Enhancement of recreational opportunities and public facilities (page 127)	The proponent should liaise with CALM to prepare a recreation plan to CALM's satisfaction. The upgrade of the Cape Peron Battery Complex and lookout should be included within the proposed works. The proposal to provide funding for CALM for ongoing management of the proposed facilities and the natural environment within the Cape Peron and Lake Richmond areas of Rockingham Lakes Regional Park is acknowledged. However, the document should not specify the provision of funding for an increased ranger presence in the area, and should rather refer to funding an increased 'management' presence in the area.	Noted. The document now refers to an increased 'management' presence.
		Appendices	CALM did not receive a copy of the appendices to comment on.	Appendices were provided with a subsequent version of the SER.
		General comment	The draft received by CALM had a number of incomplete sections.	Noted.
170.	Dept. of Health		Thank you for the opportunity to comment on the Strategic Environmental Review (SER) of the Cape Peron Tourist Precinct Project. The Department of Health has reviewed the SER document. The development of environmentally sensitive developmental design options for the Mangles Bay region by the Cape Peron Tourist Precinct Steering Committee and the City of Rockingham appear to accommodate the wishes and concerns of the local community as well as provide for future requirements of the region. The proposed improvements to the marine and Bush Forever Protection Area 355 environments plus efforts to minimise impacts to the existing conservation estate are commendable, especially those outlined in options 2.3 and 2.4. The SER has addressed a number of potential environmental impacts that had been raised during the consultation processes and elsewhere. Some of the issues raised also have the potential to impact on the health and wellbeing of the community. Should the project proceed, some consideration should also be given to the following issues.	Noted.

No	Department	Topic	Submission	Response
		A. Water Issues	1. The proposed dredging and construction activities have the potential to increase risks to recreational water users. It is recommended that, should the proposal proceed, the developers and the City of Rockingham establish a water monitoring programme that reflects the requirements established in the National Health and Medical Research Council's publications; Guidelines for Managing Risks in Recreational Water. This programme should be maintained once the facilities have been established as there is potential for ongoing contamination from stormwater, sewage from existing septic systems and boat and marine activities.	This guideline will be taken into account in the development of management and monitoring regimes for the marina.
			2. The decision to relocate the current treatment wastewater facility and the requirements for residential and commercial premises to be connected to the metropolitan deep sewerage system will produce positive environmental outcomes. However, the provision of public facilities including provision of water and toilets in the regional park area will require excavations that have not been accommodated within the plans. There is the potential for environmental impact from the septic systems or connections to the deep sewerage system from excavation.	It is the intention that the public toilets will be connected to the sewerage system using existing infrastructure corridors. It is acknowledged that this will have some environmental impact and this will be addressed if the project proceeds to the next level of detailed planning and environmental assessment. This was not considered a potential fatal flaw of the project.
		Consultation processes/ outcome	3. The consultation undertaken to date has obviously been extensive however, the specific details of consultation with indigenous groups were not provided. As an indigenous facility has been proposed, you may wish to consider ensuring that appropriate consultation with indigenous groups is undertaken, their needs and wishes considered and appropriate partnerships with Aboriginal people established.	Acknowledged and agreed.
			4. Consultation has indicated that affordable recreational accommodation should be provided for in the proposal. Sites have been selected for chalet park accommodation within the precinct plan. If this is a key issue for the community then mechanisms should be developed to ensure long term affordability regardless of the market status of the residential developments. There may be pressure from marina residents for these parks to reflect the market values of their residences. Consideration could be made of an agreement between the proprietors and the community which guarantees costs will remain a proportion of an agreed standard or index.	The mechanisms for ensuring long-term affordability of the chalet park will be considered in consultation with the community and the City of Rockingham in the next phase of the project.
		Amenity	5. The links between the proposed marina residences and the canals should also be considered to ensure that the proposed public walkways do not become the exclusive domain of these residents.	Full public access around the water's edge (with the exception of the clubs area near the western entrance) has been incorporated into the concept plans and is considered a key element of the project design. Privacy will be provided to residences by elevating their blocks slightly above the public waterfront pathway.
			6. The noise concerns raised by the community about traffic movements are valid, especially for potential residents or holiday makers. The SER argues that these are manageable. Monitoring programmes should be established prior to approval to provide baseline data to ensure current levels are appropriate for residential areas, especially during peak periods. This will also establish baseline data for future monitoring and evaluation. Consideration should also be given to the building materials (insulation, glazing etc) and vegetation used in areas these areas so that internal noise can be reduced. Traffic considerations should be further studied for potential amenity impact and access, especially during peak load periods. Movement to and from the causeway can be heavily congested during specific time periods and this may be exacerbated by further development in the region.	Riley Consulting (2005) conducted a traffic and transport report. The City of Rockingham used traffic counters in 2005 to determine the current traffic volumes in the area. As suggested, this was used as the basis for modelling of future traffic flows and will be used as a baseline for future monitoring. Traffic will be considered in more detail if the project proceeds to the next level of planning and assessment.

No	Department	Topic	Submission	Response
		Other Environmental Health	7. A number of introduced species have been identified in the study area which may result in community risk from habitat disturbance; particularly rats and mice. It is recommended that a pest management plan is established before development commences to ensure minimal risk to neighbouring communities.	Consultation with the Department of Health will be undertaken to ensure that this issue is managed correctly.
		Mosquitoes	8. The SER mentions the presence of nuisance midges but makes no comment about mosquitoes. The proposed development is in a region that can experience nuisance problems from mosquitoes breeding in coastal saltmarsh and freshwater habitats. These mosquito species can disperse considerable distances from their breeding sites. Two of the most prevalent species are also recognised carriers of Ross River virus (RRV). The potential for mosquitoes breeding in Lake Richmond and surrounding wetlands is not known. Therefore appropriately timed adult and larval mosquito monitoring should be established to determine the likely impact of mosquitoes and potential risk of mosquito-borne disease. It is the Department of Health's recommendation that the issue of mosquitoes and requirements for mosquito management programs are addressed particularly the following: • If adult and larval mosquito monitoring and assessment of the incidence of RRV disease in the region demonstrate a potential for nuisance mosquito problems or a risk of exposure to RRV disease, then new residents should be warned via an appropriately worded notification on the property titles. • A mosquito management plan should be developed for the site. This should include adult and larval mosquito monitoring (and treatment where required) in existing or newly created wetlands and control of vegetation to minimise breeding habitat. It is to be hoped that these comments are of assistance.	The Department of Health's recommendations are acknowledged and will be taken into consideration if the project proceeds to the next phase of planning and assessment.

No	Department	Topic	Submission	Response
201.	Tourism WA		Thank you for the opportunity to comment on the Strategic Environmental Review (SER) for the Cape Peron Tourist Precinct Project. Cape Peron has long been an important recreational area for both residents and visitors to Perth. Tourist WA acknowledges there is an increasing demand for facilities that service the tourist industry in the Perth region, particularly in the coastal areas. Tourism WA has no objection to the future development of a marina and people-oriented precinct issues being resolved and the recreational attributes of the Cape Peron peninsula being preserved within limits of acceptable change. In this regard the development options outlined in Concepts 2.3 and 2.4 of the SER are supported. Planning for any future development would need to consider an increased use of the broader Cape Peron peninsula. It will be important to maintain the integrity of the remaining natural features to ensure visitors are able to enjoy the peninsula environment into the future. Planning will need to include initiatives to manage the impacts of increased use as well as providing for appropriate facilities that will enhance passive enjoyment by visitors. In regard to specific sites identified for tourist accommodation development, a 'Tourist Precinct' located on the coast would preferably feature a nominated site at a foreshore location as outlined in No. 8 of the Development Concept Options 2.3 and 2.4. This is particularly important if the precinct is to attract the attention of quality developers and/or investors. The size of any tourism site will need to be carefully considered at the planning stage of the overall precinct development. Depending on the type of development, it is considered essential to provide sufficient buffer areas between tourist accommodation areas and other uses, in particular those uses that are reserved for residential. There are many factors that need to be taken into account when identifying the size of a tourism accommodation site, including the geographic attributes and the type of development itself e.g. a chalet or integrated resort development would require more land than a boutique hotel or apartment type development. Access is another critical element to be considered in the planning of a mixed use tourism precinct. In particular it is essential to provide for adequate parking throughout the precinct to ensure there is ease of access to entertainment, business, tourism and mixed use areas. Tourism WA is currently undertaking two studies relating to tourist accommodation requirements in the Perth region. One is Market Research Study on the Western Australian Caravan Park Industry which will be both qualitative and quantitative, will cover aspects of supply and demand as well as land use and investment.	Conditional support noted. The comments received and the reports mentioned (Market Research Study on the Western Australian Caravan Park Industry, Perth Hotel Investment Study and the Tourism Taskforce Report) will be taken into consideration in future planning. Further consultation with Tourism WA will be undertaken if the project proceeds to the next level of planning.

No	Department	Topic	Submission	Response
			The findings of this study are anticipated to be completed later this year. Early indicators show that there is a supply problem in the Perth region (in particular the southern corridor) for the type of low key experience that caravan/chalet parks offer. The second study, anticipated to commence shortly is a Perth Hotel Investment Study which is aimed at identifying the hotel investment outlook for the greater Perth metropolitan area in the short to medium term and assist with the identification, planning and prioritisation of potential tourism development sites in the study area. The outcomes of these studies are anticipated later this year and will provide valuable information regarding future tourist accommodation needs of the Perth region as well as assisting to identify strategic tourism locations. At this stage Development Concept Option 2.3 is favoured as it also provides for the possibility for a further (low key) accommodation development to be located inland to the south of the proposed marina. In addition the Tourism Taskforce Report (Report of the Ministerial Taskforce: Investigation of the Impact of Combining Tourist and Permanent Residential Accommodation and the Impact of Strata Titling of Tourist Accommodation) has recently been endorsed by Cabinet. This Report outlines a range of recommendations to ensure the sustainable development of the Western Australian tourism industry. Should the proposed Cape Peron Tourist Precinct development proceed, Tourism WA would seek to be consulted on tourism related matters throughout the planning process. Once again thank you for providing the opportunity to comment on this proposal.	As above.
171.	Department for Planning and Infrastructure New Coastal Assets	Introduction	The Department for Planning and Infrastructure, New Coastal Assets (NCA) has received your correspondence dated the 3 March 2006 seeking this Department's comments in relation to the above project. NCA has undertaken a review of the SER document in relation to the "potential environmental impacts associated with the Cape Peron Tourism Precinct project". In undertaking this review DPI (NCA) has also considered advice from a Consultant Coastal Engineer. In particular proposed options 2.3 and 2.4 have been considered in terms of land use and coastal processes and the following comments are provided:	-
		Boat launching	1. The preferred concept options 2.3 and 2.4 seek to relocate and alter the existing public boat launching facility. The proposed boat launching facility ramps are inadequate (in terms of ramp numbers and parking space) to meet the requirements for the predicted future service levels as listed in Table 15 of the SER report, page 15. Additionally, statistics gathered by NCA for the metropolitan area indicate that the numbers as reported in Table 15 (page 98) underestimate the likely future growth in recreational boating in this area. This site is considered an important recreational boating venue and capacities for this facility should address demand for at least the next 20 years.	The project will add more boat ramps than exist currently by relocating the existing causeway ramp and adding ramps in both the western and eastern marinas. It is understood that the DPI is currently carrying out its 'Perth Metropolitan Boating Study', which examines the current and future boating pressure on the Perth region. It is likely that estimated increases in boat ownership will be higher than previously thought.
			2. The proposed ramps and the adjacent marina entrance (Identified on Option Plans 2.3 & 2.4 as item 11) are both considered insufficiently sheltered from ocean wave action. (Section 6.2.4, Page 102 and Options 2.3 and 2.4 pp 33-34).	Wave conditions will be considered during detailed engineering design of the project. The concept plans have been drawn up by planning consultants and may need to be modified in the detailed design phase.

No	Department	Topic	Submission	Response
		Seagrass	3. The boat ramp parking area is located on reclamation, which appears to cover areas of existing seagrass.	The boat ramp parking area is on an existing area of sand that has formed during the last fifty years due to sand accretion. There will be no additional land reclamation for the parking area.
		Sand bypass	4. The permanent sand bypass operation will require beach space adjacent to the ramp parking area to capture sand for bypassing. It will also require a deposition zone of finite size at some point east of entrance 10, where covering of existing seagrass will also occur. The sand bypassing operation, which can have a major affect on beach use and access, has received little consideration within this report. (Section 6.2.6, page 102)	The sand bypass system has not yet been designed. It was considered sufficient in an SER to propose a method of management that is known to be effective elsewhere on the WA coast, in a region of greater wave energy and sand movement (i.e. Mandurah). The sand bypass system will be addressed in full if the project proceeds to the next phase of environmental assessment.
		Wave energy	5. The increased wave energy penetration through the expanded causeway opening will change the stable alignment of the sandy shore between the two entrances.	The SER recognised the potential impact of increased wave energy that will be caused by removal of part of the Causeway. As noted earlier, the Causeway has already resulted in altered coastal processes that require physical management. The proposed marina will again alter the coastal processes and this will require improved management, including an effective sand bypass. This issue will require very detailed investigation in an environmental assessment, but as Mangles Bay is a low energy area it is considered the issue is one for careful investigation and management rather than a potential fatal flaw.
		Coastal setbacks	6. Development adjoining this shore will need to be set back further than shown on the plans, if it is conform with the WA Planning Commission's SPP 2.6.	It is the intention that the project will comply with the State Planning Policy 2.6 by constructing a seawall, buried under the beach on the northern extremity of the project to protect proposed structures with minimal coastal setback as shown in the development options.
		Moorings	7. Accommodation for those yachts currently moored offshore into the new marina appears to be limited (by bridges) to area 1, identified as being for "Aquatic Clubs". The implication is that yacht owners will be compelled to join a club to moor their boat. The future of the offshore moorings in relation to this development is unclear. DPI understands that there would be resistance to the relinquishment of these moorings.	Yacht owners have the choice of remaining on a mooring or joining a club and using one of their pens. Yachts will not be able to be accommodated in the eastern marina.
		Water quality	8. In relation to water quality issues, NCA believes that water exchange modelling needs to undertaken for the Marina and Mangles Bay.	Initial hydrodynamic modelling has been undertaken. As suggested, further detailed and calibrated modelling will be undertaken if the project proceeds to the next level of assessment.
172.	Cockburn Sound Management Council (CSMC)		The following comments largely concentrate in issues relating to the marine environment of Cockburn Sound and within the CSMC management boundary, in respect of the CSMC's Terms of Reference. The CSMC's comments have been drafted to reflect the fact that the Strategic Environmental Review (SER) was prepared in such a way as to allow the Environmental issues associated with this project, including identifying any potential 'fatal flaws'. The CSMC recognises that any decision to proceed with this project as an actual proposal will most likely result in formal environmental assessment by the EPA. Notwithstanding the above, the CSMC believes it is appropriate for it to make comments on other issues that may not necessarily warrant detailed consideration within the SER process, but are of interest to the CSMC and are likely to be important factors for consideration if this project is to proceed to become a formal proposal.	Noted.

No	Department	Topic	Submission	Response
		1. Relevant Policies and Approvals	a). The State Environmental (Cockburn Sound) Policy 2005 (SEP) has established Environmental Values (EVs), Environmental Quality Objectives (EQOs) and Environmental Quality Criteria (EQC) for the marine waters of Cockburn Sound. Any future development in Cockburn Sound is expected to comply with the SEP and its associated Criteria. b). Developments are expected to comply with principles and recommendations of the CSMC's Environmental Management Plan for Cockburn Sound and its Catchment 2005 (EMP) c). The CSMC has received advice that dredging proposals undertaken within Cockburn Sound may require a sea dumping permit by the Department of Environment and Heritage under the Environmental Protection (Sea Dumping) Act 1981. d). The CSMC has recently been advised by the Western Australian Museum of the importance of Underwater Cultural Heritage within Cockburn Sound. Proponents should therefore be aware that there are over thirty shipwreck sites in Cockburn Sound that still haven't been found. These are protected under the Commonwealth Historic Shipwrecks Act 1976 and the State Maritime Archaeology Act 1973.	These policies were taken into consideration in the assessment of potential marine impacts of the project. a). The proposed development will be consistent with the EVs of Cockburn Sound, and should be able to comply with relevant EQOs and EQC except in those cases where the environment does not comply with EQC at present. The intention is that the level of compliance with EQC in Mangles Bay will be no worse, and in some cases may even be slightly better than at present. b). Acknowledged. c). There is some confusion over whether Cockburn Sound comes under the Federal Sea Dumping Act. However, should it be considered that it does, then permit(s) will be required for the groynes that are proposed for the marina, and the landfill. If this is so, then due process for sampling and assessment of the material to be dumped will be followed to obtain the necessary permit(s). d). Acknowledged. Should the marina go ahead, the construction management plan will incorporate the necessary measures required to deal with such a situation.
		2. Guidelines for Developments Affecting the Shoreline and Seabed	a). The CSMC has developed Guidelines for Developments Affecting the Shoreline and Seabed (see Attachment 1). These guidelines will be used by the CSMC when providing advice on future developments and should be used by proponents as guidance when developing a proposal and considering offsets. b). In respect of the above, prior to considering potential offsets, the first component of these guidelines involves proponents taking all reasonable effort to limit (minimise) the environmental impacts resulting from the proposed development. c). The CSMC believes that this project could potentially face considerable challenges in terms of ensuring adequate environmental protection, given the location and nature of the environment in which it is proposed. Noting this, it may be beneficial to consider further the requirements of such a project in light of alternative site locations and potential environmental benefits which may be achieved from such alternative sites. d). The CSMC supports the principles of the EPA's Position Statement No9, which should be given consideration in respect to this project.	The guidelines and EPA Position Statement in question are focussed on minimising impacts as much as possible and only providing offsets where all other attempts to mitigate impacts have been exhausted. The proposed development has followed these principles, and other key principles of considering "direct and indirect effects", and making offsets "like for like or better". Considerable effort has gone into choosing a marina that will have will have minimal impact on regional water quality and actually improve flushing of the Mangles Bay region. Similarly with seagrasses, the development was modified several times to minimise seagrass loss, and a commitment made to return at least the same amount of seagrass loss via rehabilitation. The CSMC's guidelines and all the principles in EPA Position Statement No 9 will be addressed in depth if detailed environmental assessment proceeds.

No	Department	Topic	Submission	Response
		3. Seagrass	a). The Mangles Bay area represents a significant proportion of the seagrass beds present in Cockburn Sound. The CSMC is concerned that seagrass shoot density failed to meet the Environmental Quality Guideline at the Mangles Bay monitoring site in 2005. In addition, seagrass in Mangles Bay has been identified as 'highly stressed' in annual seagrass health surveys commissioned by the CSMC. b). The sensitivity of seagrass within Mangles Bay is a critical issue and should be fully considered ion respect of both direct and indirect effects from this proposal. Although direct impacts through physical means (such as dredging and breakwater construction) may be accurately quantified, it is likely that indirect impacts will be difficult to predict. Key issues for consideration include, for example, the loss of seagrass due to 'scouring' effects from extending causeway openings, impacts from turbidity plumes caused by dredging operations (both construction and maintenance dredging), release of nutrients and contaminants from sediments due to dredging operations and the effects associated with potential reductions in water quality. c). The CSMC recognises that the SER highlights impacts upon seagrass as an important factor associated with this project. The CSMC is concerned that the best case scenario in respect of seagrass loss would be 5.3ha through direct impacts and 2ha through indirect impacts. Thus, the CSMC expects that all reasonable effort is taken by the proponent to minimise impacts upon seagrass beds. Noting the historical loss of seagrass from Cockburn Sound, the acceptability of any future loss of seagrass due to development proposals would require careful consideration by the Council.	a). The seagrass meadow monitored in Mangles Bay has fluctuated between complying with the EQC and being just below it since monitoring first began in 1998. Fluctuations in shoot density are a natural feature of seagrass meadows, and the site in Mangles Bay exists in nutrient-enriched conditions that ensure it is close to the EQC. Key things to note are (i) there has been no long-term trend of decline (ii) there has been no significant change in the nutrient load into Cockburn Sound (if anything there has been a reduction) and (iii) inferences about all seagrass in Mangles Bay are being drawn from one site. b). The vulnerability of Mangles Bay seagrass to further stress is acknowledged. There now exists a great deal of information from which to accurately predict impacts due to construction activities, and there are a wide variety of management measures that can be employed to minimise impacts. This issue will be considered with extreme care if the proposed development proceeds to the next stage of detailed design and environmental assessment. c). This is a concern that the CSMC shares with the EPA. It was the EPA and CSMC's concerns that prompted the SER's statement that "Should the proposed development be approved by Cabinet, to proceed to the next stage of detailed design and environmental assessment, it is proposed to commence seagrass rehabilitation trials in the Mangles Bay area immediately. It is recognised that demonstration of the ability to rehabilitate seagrasses would add significant confidence to any final proposal submitted to the EPA for detailed environmental impact assessment."
			d). The CSMC notes that loss of seagrass as a result of this project could potentially be offset by rehabilitation of at least an area equal to that lost. The CSMC believes it fair to say that the success of seagrass rehabilitation is highly variable, and it may therefore be difficult to make an informed decision relating to the enduring nature of such offsets in the absence of sufficient scientific data regarding the success of rehabilitation programs within Mangles Bay. Significant investigations, such as long-term site specific trials, would be critical factors in allowing an informed decision to be made on loss of seagrass and the ability for the EPA's no-net loss requirement to be achieved.	The results of previous seagrass rehabilitation trials have been variable. However, the parameters contributing to the successful establishment of seagrass are now much more thoroughly understood. The project has budgeted $1 million for the rehabilitation of seagrass which allows 10 ha (greater than the project loss) to be rehabilitated with an allowance of $100,000 per hectare. This figure far exceeds the estimated cost of manual seagrass transplantation and will allow for extensive monitoring and supplementary planting if required. If the project proceeds to the next level of assessment, 2 ha of seagrass will be replanted within Mangles Bay. The intention of this planting is that the replanted seagrass will then have been growing for approximately two years by the time there is a Ministerial decision on the project. The monitoring of this demonstration site is expected to provide added evidence that the replanting of seagrass is a feasible option for offsetting seagrass loss in Mangles Bay.

No	Department	Topic	Submission	Response
		4. Water Quality	a). Mangles Bay has long been highlighted as an area of concern for water quality. The 2005 Cockburn Sound Report Cards highlight that elevated levels of Chlorophyll 'a' were recorded for Mangles Bay. b). The implications of the proposed project on water quality in Cockburn Sound will need detailed consideration in respect of the potential for this project to further degrade water quality within Mangles Bay, and the associated effects this may cause (such as impacts upon seagrass). Further, the CSMC will need to give careful consideration to this project and its ability to ensure that the Environmental Values and Objectives established for Cockburn Sound under the SEP are achieved. c). The CSMC has previously advised the project proponents of the lack of data availability for the Mangles Bay area, and in particular the known gap in specific (Local) wind speed data. The CSMC became aware of this issue following completion of the Mangles Bay "Causeway" Study. The CSMC have advised that 1-2 years of data would be necessary to accurately model current/flushing patterns in Mangles Bay. In the absence of this information during any formal environmental assessment it would be difficult for an adequate evaluation of critical water quality issues associated with this project to be made. d). The 'Mangles Bay drain' currently collects stormwater from a large portion of urban Rockingham (via Lake Richmond) which is discharged into Mangles Bay. This drain discharges nutrients and contaminants into Mangles Bay, and its fate would need careful consideration given its route conflicts with this project. Opportunities to improve the quality of water discharged to Mangles Bay via this drain may exist and should be given consideration.	a). Although there is some debate about whether the elevated levels of chlorophyll in Mangles Bay are due primarily to reduced flushing (due to the Causeway), or nutrient inputs from drains/groundwater, the proposed development provides the opportunity to improve both. b). Noted. Detailed environmental assessment will focus on impacts on the EVs and EQOs of Cockburn Sound. c). The lack of wind data for the Mangles Bay region is an acknowledged data gap constraining the accuracy of hydrodynamic modelling to some degree. The hydrodynamics of Mangles Bay are affected by water level changes at the regional scale (i.e. by winds from the Sepia Depression off Cape Peron through to the northern end of Cockburn Sound. Modelling will be best served by spatial wind field data for the region, and data for Mangles Bay will add to the accuracy of modelling. One year's data will be sufficient, particularly if the critical autumn period is well captured. There also exist modelling tools that enable the interpolation of wind fields. d) Acknowledged. Should the proposed development proceed to the next stage of detailed design and environmental assessment, this will be carefully considered.
		5. Vessel Moorings	a). The CSMC has long recognised the issue of uncontrolled moorings in Mangles Bay. The CSMC first raised this issue with the Department for Planning and Infrastructure (DPI) in March 2004, with the aim of ensuring an appropriate management response be taken in regard to uncontrolled moorings and the subsequent environmental impact on the sensitive seagrass beds of Cockburn Sound. Following a meeting between the previous Chair of the CSMC and DPI Staff in June 2005, in principle support was given by DPI to declare the waters of Cockburn Sound (in particular Mangles Bay) a Mooring Control Area. b). The CSMC received a letter from the DPI dated 29 August 2005 advising the appropriate briefings for the Minister for Planning and Infrastructure had been prepared to progress declaring Cockburn Sound a Mooring Control Area, and the Council are currently awaiting an update on the status of these actions. c). The CSMC believes the current mooring situation is a critical issue that requires immediate attention. In light of this project, there may be opportunities to improve mooring facilities and minimise impacts, however, this should be in addition to the management response committed to by the DPI, and this project should not in any way inhibit the progress or implementation of the required management response.	The project recognises the damage done by long-chain moorings, and aims to undertake the following to improve the current situation in addition to any DPI management. - subsidise the cost of replacing long chain moorings with sea-grass friendly moorings - where suitable conditions exist, transplant seagrass into the many existing mooring scars (where people change their moorings over or have been previously vacated) - offer an alternative (in the form of pens) to moorings to boat owners. Note they have no choice but to establish a mooring at the moment. The provision of re-fuelling and sullage discharge facilities should also reduce the risk of environmental damage from those boats that do continue to moor in Mangles Bay.

No	Department	Topic	Submission	Response
		6. Marine Fauna	a). A summary paper on fish habitat in Cockburn Sound prepared by Dr Glenn Hyndes for the CSMC states that Mangles Bay is an exceptionally important nursery area for juvenile King George Whiting. The importance of this area in respect of this species, and other potentially important species (such as blue swimmer crabs), should be given a high priority in any future assessment.	The SER notes the importance of the Mangles Bay region as a nursery for King George Whiting, and reference is made to the paper by Hyndes. Further work on the fish of this area has also been done by Murdoch University (see Section 3.6). This issue will be carefully considered in any detailed environmental assessment, including consultation with appropriate experts from Murdoch University, Edith Cowan University and the Department of Fisheries.
		7. Dewatering Activities	a). It should be noted that if dewatering is required for this project, there may be limited opportunities for the disposal of this water. The CSMC supports the Department of Environment's preference that all water be recharged back on-site. Disposal of water into Cockburn Sound will be considered only after all other options have been fully investigated. Any proposal to dispose of water from dewatering activities into Cockburn Sound will be required to comply with the SEP and its associated criteria.	Appropriate treatment and discharge of the dewatering water will be defined in the next phase of environmental assessment when the dewatering requirements and water quality are known. A dewatering management plan will be developed in consultation with DEC as part of the Construction Environmental Management Plan.
		8. Lake Richmond	a). Lake Richmond is a unique ecosystem which has significant ecological and cultural importance. The proximity of this project to lake Richmond presents significant concerns to the CSMC and should be a key issue which warrants serious consideration during the SER process. The threatened ecological communities supported by Lake Richmond, including the Thrombolites (listed as endangered under the Environmental Protection and Biodiversity Conservation Act 1999), should be high priorities when considering potential for impacts from this project. b). If this project is to progress further, the proximity of Lake Richmond to the project area would require detailed assessments in respect of interactions between the project, Mangles Bay and Lake Richmond. Detailed hydrological studies will be required before any informed decision can be made regarding the potential for detrimental impacts to occur as a result of this project. c). A key concern is the potential for salt water to move inland via groundwater and affect both the levels and water quality of Lake Richmond and local groundwater. Impacts on water quality and levels have the potential to impact significantly upon the threatened ecological communities present within the area.	The values of Lake Richmond and the potential impacts raised by the CSMC have been considered in the SER. It is recognised that further information and analysis will be required if the project proceeds to the next level of assessment. Refer to section 3.3 for more detail on the future investigations proposed.
		9. Proposed Seagrass Rehabilitation Sites	a). The development options presented include the potential for a seagrass rehabilitation site to be located on the eastern side of the southern causeway opening. A possible dredging channel for marina access is also highlighted as being located through this area. Noting this, the practicality of this location for such purposes may warrant further consideration. b). Of particular concern to the CSMC is the proposed location of a seagrass rehabilitation site in an area where increased water flow rates exist. This concern is based on the fact that seagrass loss has occurred from this area due to increased flow rates through the causeway opening.	The shading of this area as a potential seagrass rehabilitation area was an error and has been corrected in the final SER document by labelling the area as "reduced flow rates due to causeway opening" rather than a potential seagrass rehabilitation area. This area would not be suitable as a seagrass rehabilitation area.
		10. Sepia Depression Ocean Outlet Line (SDOOL)	a). From the concept options presented it appears that the project may require the SDOOL to be relocated. If this relocation is to occur it is likely that this operation in itself will be one that requires significant planning and management. If no changes to the SDOOL's location are required, the proximity of the pipe to the project area may still require careful consideration.	The SDOOL itself is not affected. A section of the pressure main to the Cape Peron sewerage Treatment works will need to be moved.

No	Department	Topic	Submission	Response
		11. Geological Heritage	a). The CSMC is aware that the Cape Peron area contains important geological heritage values which should be given consideration in respect of this project. b). Information provided by Dr V Semeniuk includes "the cuspate foreland of Cape Peron is the largest sedimentary coastal deposit on the southwestern Australian coast which, by nature of its formation, contains a 7,000 year Holocene history of seagrass dominated sedimentation, sea level changes, shoreline and beachridge plain origin and development, calcrete development, rocky shore development, and climate history. It is the largest seagrass-sediment-derived seagrass bank, developed on a cuspate foreland, in the world.	Further investigation into and consideration of the landform values of Cape Peron and its geological heritage will be carried out in the next, more detailed, phase of environmental assessment.
		12. Vehicle Traffic	a). Traffic congestion and security risks should be considered given the proximity of the project area to the Department of Defence access point to Garden Island via the Causeway. b).There are potential environmental and security risks associated with vehicles that may be carrying dangerous or hazardous goods travelling in close proximity to a marina facility.	Traffic will be addressed as a factor if the project proceeds to the next level of environmental assessment. Liaison will continue with the Department of Defence to ensure that their security requirements and met and to ensure the public safety of visitors and residents in the area.

No	Department	Topic	Submission	Response
		Attachment 1	Guidelines For Developments Affecting The Shoreline and Seabed 1. Guidelines that will be used by the CSMC when providing advice on future developments: 2. Proponents should take all reasonable efforts to limit (minimise) the environmental impacts resulting from the proposed development. 3. If despite taking all reasonable efforts, significant impacts remain, offsets will be required which address those impacts on environmental values: without trade between ecological and social values. Offsets should be: • Appropriately located: preferably within the area affected, but must be within the management area of the Council. • Enduring: the offset must be enduring in nature by permanently achieving a no net loss outcome in respect to permanent impacts, while temporary impacts must be rehabilitated as soon as practicable but within a defined period time. • Targeted: the offset should replace the loss of ecological and/or social value wherever possible on a like-for-like basis. When providing comment on a proposal for development, the CSMC will consider: • The extent to which the proposal includes measures that limit and mitigate the environmental impacts of the development in order to achieve guideline No. 1; and • The offsets set out in the proposal and the extent to which they meet guidelines No. 2 and No.3. Unless the CSMC is satisfied that the guidelines are adequately met by the development proposal, the CSMC may be unable to support the development. In providing its advice, the Council recognises that defining suitable “offsets” involves a degree of subjective judgement and may seek wide advice (including from the EPA) before coming to a view on the offsets contained in the proposal.	Noted.

No	Department	Topic	Submission	Response
202.	Department of Defence		Thank you for the opportunity to comment on the Strategic Environmental Review for the proposed Cape Peron marina. The Department of Defence has engaged the services of Associate Professor Peter Waterman to assist Defence in the evaluation of environmental issues. His review of the document is attached at Enclosure 1. Associate Professor Waterman is an environmental scientist who has been involved with Cockburn Sound since the early conceptual design of the Garden Island causeway. His comments are focussed specifically on the environment, but may raise issues which concern the impact of the proposed marina on Defence matters. Defence would like to raise the issue of moorings and the regional impact of accelerated growth of boating activity in the precinct. The WA Government, through its Marine Reserve Strategy (Wilson Report), has long been committed to extending Shoalwater Islands Marine Park to the north and west, including the western coast of Garden Island and potentially around the northern tip to include the Pig Trough Bay area. Defence has requested the State Government to act on this recommendation so that there is a proper plan and program for managing the increasing boating activity around Garden Island. In particular, there are the 120+ public moorings on the northern shores of Garden Island that are managed under an interim Defence plan, awaiting establishment of the Marine Park. The State Government should be encouraged to undertake the upgrade of the regional management of the marine environments that will be impacted by the boating activity that a new marina would promote. Defence also notes that the Strategic Environmental Review does not appear to address the issue of whether facilities for sewage disposal from boats will be provided at the marina. This should be addressed to ensure that the increased boating activity does not cause further water quality problems in the marina and in the shallow waters of the region, such as around Garden Island.	Noted. The project recognises the damage done by long-chain moorings, and aims to undertake the following to improve the current situation in addition to any DPI management: - subsidise the cost of replacing long chain moorings with sea-grass friendly moorings - where suitable conditions exist, transplant seagrass into the many existing mooring scars (where people change their moorings over or have been previously vacated) - offer an alternative (in the form of pens) to moorings to boat owners. Note they have no choice but to establish a mooring at the moment. Agreed. The SER states in Table 1 of the Executive Summary and in section 6.1.3 p95 that there will be sullage pump out facilities included in the marina.
		Attachment for 202.: Requirement	The following comments are made in relation to matters raised in the Strategic Environmental Review (SER) with respect to the interests of the Department of Defence and Royal Australian Navy in the southern sector of Cockburn Sound. This encompasses the implications of the proposal for the Garden Island Causeway (GIC) and HMAS STIRLING. Page numbers quoted in the comments are taken from the electronic copy of the document.	-

No	Department	Topic	Submission	Response
		Overview of SER	A strong case is made in the SER for a much needed marina facility and associated recreational developments in the Mangles Bay area. It is unfortunate that the proponents have limited their development options by failing to recognise that the seagrass meadows in Mangles Bay are naturally highly degraded and there is potential to have offshore development as well as the canal based components. Arguably, the grounds for the rejection of the 1993 marina development proposal have changed substantially. The current state of the art 'seagrass relocation' would allow greater habitat compensation and rehabilitation of other degraded meadows in the southern sector of the Sound. In turn, this would reduce the focus on modification to the GIC to optimise development outcomes. This loss of opportunity to revisit the off shore areas in Mangles Bay for marina development has implications for the Department of Defence in terms of pressures to reconfigure the southern opening in order to increase the utility of the land take component of the marina facilities including boat access to the west of the GIC. The processes used to develop the document are reasonably rigorous and there are only a few points of contention with respect to Defence interests. The major points to be disputed are: • the grounds for arguing for the relocation and redesign of the GIC; and • the trivialising the impacts of increased wave energy dissipation on the Mangles Bay-Palm Beach-Rockingham foreshore if the southern opening of the GIC were to increase to 600 metres. Specific points to be considered are discussed as follows under the headings: • European heritage; • development options and the marine environment; • key environmental studies; • coastal erosion; and • sand by-passing and marine ingress.	Extending the marina offshore to minimise impacts on the DoD is of unquestioned logic from a social perspective. The present marina configurations have, however, been developed in response to EPA Guidance Statement No. 29, which requires the area of seagrass impacted by the project within Cockburn Sound to be offset on at least a one for one basis by seagrass replanting in nearby areas. The EPA Guidance Statement No. 29 further states that where avoidance of impact is not possible, any seagrass loss should be minimised. There is insufficient suitable area available in Cockburn Sound for replanting seagrass to offset a much larger area of loss than is proposed. Under present environmental requirements set for Cockburn Sound, it is better to retain existing seagrass beds with established ecological functions, where possible, than re-establish seagrass beds artificially where ecological function will take time to return.
		European Heritage	The following statement on page 17, under the heading European heritage, is confusing and needs to be corrected: HMAS Stirling Naval Base was commissioned on Garden Island in 1978 (Royal Australian Navy 2000) and gun emplacements were built on Cape Peron in 1942. The development of HMAS Stirling is not related to the establishment of the coastal fortifications in WWII. In the light of this basic error of fact, other statements made on European heritage and historical matters relating to the Cape Peron area should be checked.	This information was sourced from the Rockingham Lakes Regional Park Draft Management Plan. It has been corrected in the final SER consistent with information on the Royal Australian Navy website.

No	Department	Topic	Submission	Response
		Development Options and the Marine Environment	Options 2.2-2.4 see the re-design and realignment of the southern section of the GIC to quote: relocation and redesign of the Garden Island Causeway to facilitate improved flushing in Mangles Bay. This area was naturally sheltered and calm as noted in 6.1.1 (page 85) where the SER states that: Mangles Bay is sheltered by the Garden Island Causeway and Cape Peron, and therefore relatively calm and poorly flushed' by marine waters under most circumstances, but exposed to storms from the north. The relatively high chlorophyll values in Mangles Bay are believed to be largely due to the reduction in flushing of the area by the construction of the Garden Island Causeway in 19 71—73, although the area would also have been naturally calm and sheltered before this time. The first part of the last sentence should be challenged on two grounds. Firstly, that the sources of nutrients are from groundwater discharge which is disconnected from the marine flushing mechanisms. Secondly, that there are major inputs from storm water discharges along the shoreline into the extremely shallow and naturally nearshore waters of Mangles Bay. To quote from page 86: There are seven stormwater drains entering Mangles Bay, but by far the largest stormwater flow is from the Lake Richmond drain (R. Mort, City of Rockingham, pers. comm.). The second part of the last sentence, shown in bold in the quote above, gives a more valid perspective; the area is naturally sheltered and shallow as evidenced by the photograph on the cover page of the SER.	The sentence in question states "The relatively high chlorophyll values in Mangles Bay are believed to be largely due to the reduction in flushing of the area by the construction of the Garden Island Causeway in 1971–73…….". The operative word here is 'believed', and reflects a widely held (public, government, some scientists), but not proven viewpoint. It has to be acknowledged that there are differing scientific viewpoints on this matter too, with some scientists sceptical that removal of the Causeway would ensure that Mangles Bay would meet the chlorophyll criteria established under the SEP for high ecological protection zones. The very next sentence after this quotation is "Nutrient inputs to Mangles Bay are from groundwater discharge". The source of the nutrients is groundwater (and to a lesser extent stormwater), but the accumulation of nutrients that results in the high chlorophyll levels is due to the slow water exchange in the bay.
			To further amplify the point on the importance of ground water the SER states (page 86) that: Groundwater inputs are important as discharge occurs all year round, and nitrogen is largely informs readily available for aquatic plant uptake. Unlike groundwater, stormwater flows mainly in the winter months, and the majority of nitrogen in stormwater is present as organic nitrogen, and therefore not readily available for plant uptake. The major focus of the description of the marine environment in the SER is on the water quality. This is contextualised by the provision of an overview of the flushing of Cockburn Sound under different seasonal conditions. One issue that the discussion of flushing raises is the need to clarify the exact contribution of the southern opening in the overall exchange of water between the sound and the open sea. This has not been done in the SER and is most important in the context of proposing to widen the southern opens of the GIC.	The southern opening of the Causeway is likely to have only minimal contribution to the overall exchange of water between Cockburn Sound and the open sea. This issue is not covered explicitly, but is alluded to in the sense that although widening the southern opening is expected to result in small-scale localised improvements in water quality in Mangles Bay, it is not expected to affect overall water quality in the majority of Cockburn Sound.
			Given the naturally sheltered conditions along the Mangles Bay foreshore and the fact that discharges from ground water and storm water are into very shallow water, where the major forcing factor for circulation is wind, the presence of the GIC should be heavily discounted when assessing the water quality in the Bay. Rather than the case documented on page 85 of the SER, it could be argued that the relatively high chlorophyll values in Mangles Bay are due to ongoing discharges of nutrient-laden ground and storm water into extremely shallow water on a naturally sheltered shoreline. This argument is partially supported by the quotations given above and observations of the natural and historic degradation of the seagrass meadows in Mangles Bay due to exposure at periods of low tide and desecration by the sun as part of the 'land building' processes.	The SER presents information that tides, water density gradients and atmospheric pressure gradients are all factors influencing water circulation. It would be more accurate to state that the relatively high chlorophyll levels in Mangles Bay are due to a combination of the naturally sheltered, shallow conditions in the area, the influence of the Causeway on circulation, and inputs of nutrients from groundwater and (to a lesser extent) stormwater into the area. The relative influence of these various factors remains to be proven.

No	Department	Topic	Submission	Response
			The consultants preparing the SER have made leaps of faith in suggesting the relocation and redesign of the Garden Island Causeway to facilitate improved flushing in Mangles Bay. There are contradictions in the case presented in the SER on the gains to be made by relocation and redesign. Specifically, on page 95 of the SER it states that: . . .but opening up the Causeway is expected to slightly improve the nutrient-related water quality in Mangles Bay and adjacent waters overall. This hope of a slight improvement in water quality is not viewed as a sufficient condition to propose a redesign of the southern opening of the GIC especially when the two major sources of nutrient enriched water will continue to be discharged onto the shallows along the Mangles Bay shoreline.	The improvement of water circulation in Mangles Bay is an added advantage of the causeway re-alignment. The re-alignment of the causeway is also a primary element of the dual entrance marina design which has many social and commercial advantages and has been shown to flush effectively.
		Key Environmental Studies	It is noted that with respect to the key studies undertaken for the preparation of the SER there was a focus on: Hydrodynamic and water quality assessment: to investigate the potential impacts of the marina on water quality and flows in Mangles Bay and Cockburn Sound. No similar investigation was undertaken of the shoreline stability and coastal geomorphological processes in relation to the proposal. This is viewed as a major deficiency in the light of options that would see increased wave energy dissipated on the Mangles Bay-Palm Beach-Rockingham foreshore if the southern opening in the GIC were to be increased to 600 metres. The deficiency is further highlighted when it is seen that coastal processes was one of the topics raised in stakeholder consultations. To quote from Table 1 on page 12. Coastal processes (e.g. water flow and saltation): The development will not result in any additional impacts due to interruption of longshore sediment movement, but will provide a benefit in the form of a long-term solution to the accretion and erosion problems caused by the Cape Peron boat ramp and Causeway. Addressed in Section 6.2.4 This narrow consideration of what constitutes coastal processes is also challenged in that it fails to incorporate erosion and deposition on the shoreline under varying wave and swell conditions, especially as they relate to the already altered conditions arising from 30 years of shoreline readjustment following the construction of the GIC.	Coastal processes are not considered a potential ‘fatal flaw’ of this project (the EPA and DoE identified water quality and seagrasses as the key issues) and as such, have been raised but not addressed in detail in the SER. However, it is fully agreed that these issues would need to be addressed in considerable detail in the final design and environmental assessment of the marina, if it proceeds to the next phase of planning.

No	Department	Topic	Submission	Response
		Coastal Erosion	The SER acknowledges that there would be increased possibility of coastal erosion should the southern opening be increased. To quote from page 102: The narrowness of the southern entrance to Cockburn Sound, the presence of submerged reefs and the broad shallow Southern Flats sand shoal all combine to cause a significant natural attenuation of offshore wave energy to inshore of Cockburn Sound, but the Causeway provides a significant further barrier. The proposed development will involve widening the southern trestle of the causeway, and this will result in increased swell wave energy from the west reaching the shore in Mangles Bay. Under both south westerly and north westerly swell there would be an increase in swell-wave energy in the Mangles Bay area, and therefore an increase in the eastward longshore current along the shoreline in this area. While this represents a return to more natural (ie pre-Causeway) conditions, it could potentially cause erosion of the beach. These impacts will be very carefully monitored but should be readily manageable with sediment bypass systems similar to those that operate at the Dawesville Cut and Mandurah. The SER goes on to say that: Widening the southern Causeway opening will also result in a slight increase in wind-wave energy on the northern beaches of Cape Peron, but this effect would be minor compared to the westerly swell wave energy that dominates this area. An argument is then presented to rationalise the widening of the southern opening by claiming that: The proposed development will not result in any additional adverse impacts due to interruption of longshore sediment movement, but it will provide a benefit in the form of a long-term solution to the accretion and erosion problems caused by the Cape Peron boat ramp and the Causeway, as it will include a properly engineered sediment bypass system. While agreeing with the statement on wave energy the latter statement is disputed on the grounds that no evidence is produced to support the contention that the situation would be manageable by a sediment bypass system. Such a contention has to be supported by a quantitative study of the overall sediment budget of the shoreline to confirm that the rates of accumulation of sand to the west of the GIC would be sufficient to address the losses to the Mangles Bay shoreline due to changes in patterns and rates of erosion.	Such an investigation will be undertaken if the project proceeds to the next level of environmental assessment.

No	Department	Topic	Submission	Response
			On page 99 of the SER, it states that: The Cape Peron boat ramp and Garden Island Causeway prevent the natural pattern of longshore sediment movement from Cape Peron into Mangles Bay (DMH 1992), which has led to an accumulation of sand on the western side of the Causeway (Figure 16) and erosion on the eastern side as far as Palm Street jetty (Figure 17). This statement is disputed. Coastal geomorphological studies, commenced in 1969 and continued until after the GIC was constructed, showed that there were consistent patterns of erosion along the Mangles Bay-Palm Beach foreshore prior to the commencement of work on the GIC. The results of this work are documented in reports prepared in the early and mid 1970'by ERA and the Department of Housing and Construction as well as in the review of the effects of the GIC undertaken in 1996 by Wilkenson and Associates and Environmental Management Services. These studies are referenced in the final Phase 2 report for Project WA 991070 titled Status Assessment Study of the Garden Island Causeway (GIC), Western Australia dated July 2005.	There has been 72 m of sediment accretion west of the current boat ramp and causeway, and this sand would have once continued to move along the shore to the east.
		Sand By-passing and Marine Ingress	Insufficient attention has been given to the need to protect the Mangles Bay-Palm Beach Rockingham foreshore from increased wave energy. To simply state that state of the art sand by-passing will provide sufficient protection is to trivialize the situation. Experience at other locations in Australia has shown that sand by-passing is expensive and the costs are usually picked up by state or local governments. For example the by-passing at the Gleneig Boat Harbour on the Adelaide foreshore costs in excess on one million dollars per year.	Coastal processes are not considered a potential fatal flaw of this project and as such, have been raised but not addressed in detail in the SER. However, these issues would need to be addressed in considerable detail in the final design and environmental assessment of the marina, if it proceeds to the next phase of planning.
			The SER states on pages 99-100 that: The large build up of sand west of the Causeway is attributed to the construction of the Causeway itself between 1971 and 1973 disrupting the natural eastward flow of sediment into Cockburn Sound. However, this eastward sediment flux is now solely restricted by the Point Peron groynes built during the early nineties in response to the sedimentation occurring within the Point Peron boat ramp facilities. The ongoing problem with accumulation/erosion is managed on an ad hoc basis by transport (by truck) of sediment from the western side of the Causeway to renourish beaches on the eastern side. Although this statement is correct, there is a need for the amount of ad hoc by-passing to be quantified in the SER. No attention has been given to the issue of marine ingress. That is the accumulation of marine biological material in the form of seagrass fronds and algae in channels cut through the seagrass meadows. On average each Posidonia sp seagrass plant produces and loses five to seven fronds pre year. Increased energy across the meadows following an expansion of the southern opening will increase the transport of this wrack material into access channels and possibly into the marina basin. Again using Glenelg in South Australia as an example, this is an expensive and ongoing problem to address.	This is a fair point, and will need some attention if the project proceeds to the detailed design and environmental assessment phase. The project does recognise that dredging will be required in the maintenance of the marina channels, and this will address marine ingress as well as sand. The issue of marine ingress is not, however, considered a potential fatal flaw of the project.

No	Department	Topic	Submission	Response
			Of concern to the Department of Defence is the issue as to who would be carrying the liability for shoreline protection and the removal of marine ingress materials should any option that entails the relocation and redesign of the GIC were to proceed. The Australian Government would need to be indemnified from any rehabilitation and ongoing maintenance costs arising from environmental impacts due to changes to the configuration of the southern section of the causeway.	This is an important issue that will need to be addressed if the project proceeds to the detailed design and environmental assessment phase.
203.	DEC, formerly Department of Environment (Wetlands Program)	Lake Richmond	The Cape Peron Tourist Precinct Project proposal has the potential to significantly impact Lake Richmond. While the values of Lake Richmond are acknowledged and described in detail, the potential impacts to Lake Richmond are dismissed and are largely based on inadequate or flawed information. The following potential impacts and issues have not been adequately discussed in the SER to accurately quantify the impacts of the proposal. • Groundwater abstraction (e.g. the predicted impacts of dewatering on Lake Richmond should be considered additional to seasonal variation) • Saltwater intrusion (e.g. conflicting information in regard to the depth of the saltwater–groundwater interface beneath Lake Richmond, the predicted saltwater interface is too close to Lake Richmond to allow for inaccuracies in the modelling) • Altered geomorphology of Cape Peron (e.g. potential impacts to the hydrological regime of Lake Richmond, cumulative impacts to the Lake Richmond catchment) • Geoheritage values of Cape Peron (e.g. 7000 year Holocene history of seagrass dominated sedimentation, sea level changes and climate history) • Other potential sites for development (i.e. the environmental constraints associated with the other potential locations e.g. the Wanliss Street site). In consideration of the national significance of Lake Richmond, the proximity of the proposal and the information provided in the SER, it is unlikely that the potential impacts from the Cape Peron Tourist Precinct Project proposal can be managed to ensure that the proposal will be environmentally acceptable. (203)	At this state of SER, there is no 'proposal', only a concept plan. It is not the aim of an SER to "accurately quantify the impacts of the proposal" but to look at the issues at a high level and determine what the key issues are and whether there is likely to be any fatal flaws. Refer to section 3.3. Refer to section 3.4.
		Vegetation	Table 4 (pxviii) It is stated under the 'Do Nothing' column that 'further degradation of vegetation in areas with uncontrolled access' will occur. However, it is noted on p43, 'it is anticipated that with time, the vegetation will continue to recover and develop into a dense shrubland'. The assumption that further vegetation degradation will occur with the current situation and land use (contrary to advice from botanical experts), does not provide justification for the environmental acceptability of the proposal. (203)	The statement in Table 4 refers only to areas of 'uncontrolled access', that is, tracks. The statement on p43 refers to the general vegetation condition.
		Lake Richmond	It appears that the buffer distances have been determined from a point within the wetland boundary of Lake Richmond. For example, the buffer from the proposed development (Option 2.4) to the edge of Lake Richmond (as displayed on the Geomorphic Wetlands Swan Coastal Plain dataset) is approximately 300m not 350m. (203)	The buffer distance was measured from the nearest waterway to the edge of the wetland boundary as defined on the WA Atlas WALIS website.

No	Department	Topic	Submission	Response
		Landform	3. Overview of Existing Environment (p15) The Cape Peron Tourist Precinct Project proposal will significantly alter the geomorphology of Cape Peron. The SER has not discussed the potential impacts that may result from the proposed change to the landform of the area. For example, the potential impacts to the hydrological regime of Lake Richmond or the cumulative impacts to the Lake Richmond catchment should be discussed. (203)	The potential affect of the development on the hydrological regime of Lake Richmond was addressed in SER section 5.5.3.
		3.2.1 Geology (p18)	It should be noted that information on the geology and coastal evolution of Cape Peron, which is indicative of the area's potential geoheritage significance, has not been included within the SER. The following information has been taken from correspondence of the Wetland Research Association to the Wetlands Conservation Society (dated 25 September 2005). The Cape Peron area is the northern, larger, older and more complex cusp of the double cusp Rockingham-Becher Cuspate Foreland system. This cuspate foreland is the largest sedimentary coastal deposit on the south-west coast, which contains a 7000 year Holocene history of seagrass dominated sedimentation, sea level changes, shoreline and beachridge plain origin and development, calcrete development, rocky shore development and climate history. It is the largest seagrass-sediment-derived seagrass bank, developed on a cuspate foreland, in the world. As such, the seagrass bank deposits at Rockingham present themselves as a globally unique and distinct seagrass bank system. The importance and preservation of the geoheritage values of Cape Peron (as described above) has not been discussed in the SER. The geoheritage values of Cape Peron provide a context to the significance of Lake Richmond. (203)	The information is noted. As the key landscape features in the area are outside of the development area, changes to landform were not considered potential fatal flaws for the project. However, this is an issue that would be addressed if the project proceeds to the next level of environmental assessment.
		Alternative sites	4.2.1 Site history (p24) The SER has not discussed the environmental constraints of the other potential locations for the marina development. A comprehensive discussion and comparison of alternative options should be presented. It is understood that the Wanliss Street site was identified by the community as a possible option and accordingly, this option should be discussed in depth. (203)	Refer to section 3.14.
		Lake Richmond	5.5.1 Description of Lake Richmond (p75) Conservation significance It should be noted that information on the representativeness and rarity of Lake Richmond in regard to consanguineous suites has not been provided. Lake Richmond is identified in the Cooloongup consanguineous suite. The Cooloongup suite comprises Lake Richmond, Lake Cooloongup and Lake Walyungup, two small damplands adjacent to Lake Walyungup, and two small sumplands and one dampland at Becher Point. Lake Richmond is the only freshwater lake in the Cooloongup consanguineous suite. (203)	The information is noted. The SER stresses the significance of Lake Richmond for its geomorphological, ecological and social values.

No	Department	Topic	Submission	Response
		Lake Richmond	5.5.3 Potential impacts and mitigation (p78) Water levels It should be noted that the biology and ecology of thrombolites of Lake Richmond are not well studied and are dependent on the maintenance of water levels and quality within limits that are currently unidentified (English et al. 2003). A reduction in lake levels may expose the thrombolites and prevent growth of the structures, and a decline in lake volume would also increase salinity (English et al. 2003). An increase in salinity is considered likely to have more significant impacts to the function of the thrombolites than would a decrease in salinity levels (English et al. 2003). It should be noted that while the predicted impacts from dewatering are within recorded seasonal variations, the impacts from dewatering will be additional to seasonal variation. For example, if an extreme climatic season was experienced during construction the cumulative impacts of the drawdown of Lake Richmond may result in additional stresses for the thrombolites. The SER has not demonstrated that potential declines in the level of Lake Richmond are environmentally acceptable. For example, the potential effects of drawdown are likely to be dependent upon the length and seasonal timing of the construction phase. The SER acknowledges that more detailed modelling is required, however, in consideration of the significance of Lake Richmond and the scientific uncertainty in regard to the requirements of the thrombolites and accuracy of modelling, the precautionary principle should apply. Saltwater intrusion The SER states that the 'anticipated distance between the saltwater-groundwater interface and the base of Lake Richmond under current conditions is approximately 200m'. It should be noted that English et al. (2003) states that 'a saltwater interface occurs in the Rockingham Sand aquifer at a depth of about 65m beneath Lake Richmond'. The depth to the saltwater interface is critical to the proposal and should be clarified. The predicted saltwater-groundwater interface (i.e. approximately 50m) is considered too close to allow for inaccuracies in the modelling. Reliance on engineering solutions is not considered an appropriate management measure as adverse impacts to Lake Richmond and the thrombolite community may be irreversible. References English V, Blyth J, Goodale A, Goodale B, Moore L, Mitchell D, Loughton B, Tucker J, Halse S and King S 2003, Thrombolite Community of Coastal Freshwater Lakes (Lake Richmond) Interim Recovery Plan, Department of Conservation and Land Management, Wanneroo. Wetland Research Association 2005 Environmental and scientific consequences of a marina at Point Peron, correspondence from Dr V Semeniuk (Wetlands Research Association) to Dr P Jennings (Wetlands Conservation Society). (203)	The SER asserts that no adverse impact on Lake Richmond will be considered acceptable. This includes any change in hydrological regime or water quality. Refer to section 3.3.
204.	DEC, formerly DoE Kwinana Peel Region		Thank you for the opportunity to provide comment regarding the above proposal. The Department of Environment's (DoE) Kwinana Peel Region has reviewed the referral and offers the following comments:	-

No	Department	Topic	Submission	Response
		Groundwater Fatal Flaw Assessment Report	The report describes that in predicting the locations of the freshwater-saltwater interface the following assumptions were adopted: • The superficial aquifer is homogeneous • There is no tidal variation • There is no zone of diffusion The position of the proposed canal development site is a concern, particularly in relation to Lake Richmond. The main concern is that there is potential for the seawater – groundwater interface to migrate inland as a result of the development's substantial spatial and temporal dewatering operation thereby potentially altering the groundwater regime and migrating into Lake Richmond. Therefore, the potential exists for the proposal to impact upon the water quality and water level in the lake. Groundwater monitoring investigations of the superficial aquifer have previously shown that the seawater – groundwater interface actually intrudes up to 2km inland from the coast through solution cavities in the Tamala Limestone landform. It should be noted that the lateral position of the seawater – groundwater interface would vary with tidal fluctuations, moving further inland during high tidal conditions. Similarly, the diffusion or mixing zone at the seawater – groundwater interface will also increase the inland migration of saline groundwater. The effect tidal movements and diffusion potentially have on the position of the seawater – groundwater interface has not been considered in this assessment and should be to enable an objective assessment of this issue to be made. Consideration should be given that the base of Lake Richmond may not comprise of homogeneous silty clay of low permeability. This may have a major bearing upon any potential impact of actual drawdown of the Lake's water level and should be more rigorously assessed. Based on this preliminary assessment, and the predicted movement of the seawater – groundwater interface, it is highly likely bores within 200m of the proposed canal development will be contaminated with saltwater, particularly those screened in the upper 20m of the superficial formation. The buffer zone between seawater – groundwater interface and the base of the Lake Richmond under current conditions is approximately 200m. Consideration should be given that this may be reduced to approximately 50m following canal construction. On the basis of the information currently available, the DoE disagrees with this solution as a result of:	The assumptions were for the purpose of a preliminary assessment. Further investigation and more detailed modelling into the issue of salt water intrusion will be undertaken if the project proceeds to the next level of environmental assessment. Investigation will include characterisation of the aquifer properties, freshwater-saltwater interface and the diffusion zone. A key development since the preliminary groundwater assessment is the development of option 2.3 and option 2.4 which are a further 130 and 150 m away from the lake respectively, compared to the original option 2.2 which is 200 m from the lake. If the project proceeds to the next level of assessment, a final design configuration will be available to enable a more accurate investigation of the potential hydrological changes.

No	Department	Topic	Submission	Response
			• A potential problem with constructing the proposed cutoff wall is that the silty aquitard between the Safety Bay Sand and Tamala Limestone aquifers is not laterally continuos in the region, and is entirely absent in some areas. Unless cutoff walls are well constructed, groundwater / saltwater will simply flow around the wall. The only way to be certain this does not happen is to entirely contain the saltwater with the wall, which may become cost prohibitive.	The cutoff wall is not 'proposed', it was listed as one engineering solution that could be investigated to reduce risks to Lake Richmond.
			• The proponent has made a number of assumptions about the likely result of saltwater ingress into Lake Richmond. It is recommended that the proponent conducts more detailed investigations on Lake Richmond and the proposed canal development site and determine the presence and extent of any underlying aquifer material. Otherwise any assumptions about groundwater flow, permeability of aquifers and location of freshwater – saltwater interface is hypothetical. It is recommended that the proponent undertake further investigation on the following matters: • undertake a bore census in the area which could potentially be impacted by saltwater intrusion; • determine the specific characteristics of the potentially silty clay layer in Lake Richmond and the confining capability that this may have upon dewatering drawdown activities. • more detailed modelling investigation on tidal fluctuation, diffusion and local variations in aquifer properties; • identification and description of local and regional aquifers; • relationship between groundwater levels and groundwater flow systems; • determination of groundwater levels and groundwater flow systems; • determination of the regional groundwater quality; • sustainability of proposed dewatering abstraction; • identification of possible impacts of the dewatering activity on the groundwater systems, both before and after construction; • assessment of the likely time frame within which the impact might develop; and • proposed groundwater management practices and mitigatory measures.	More detailed investigations are planned if the project proceeds to a s38 environmental assessment. Further investigation on all the listed matters will be undertaken if the project proceeds to the next level of environmental assessment.

No	Department	Topic	Submission	Response
		Groundwater Allocation and Dewatering	From a precautionary perspective, option 2.4 is preferred for the development because this allows a maximum distance of 350m form Lake Richmond. The main issue of concern from a groundwater and allocation perspective is the dewatering that will be required to construct the canals. Specifically, the following issues are pertinent:	The preference for option 2.4 is acknowledged.
			At the Regional level the dewatering process will be subject to a 5C licence to take groundwater and an assessment under Section 7(2) of the Rights in Water & Irrigation Act 1914 will be required; • It is anticipated that significant volumes of water would need to be dewatered to allow dry construction of canals walls. As part of the region's assessment (and most likely the EPA assessment) a detailed and comprehensive Dewatering Management Plan will need to be developed in accordance with DoE & Department of Water (DoW) guidelines. More details regarding what is required within the DMP can be provided at a later date, however the main areas of concern to be addressed will be that of saltwater intrusion impacts on groundwater drawdown around Lake Richmond and other groundwater users within the vicinity, impacts on water quality, and disposal options for the dewatering effluent;	A groundwater licence application under RWI 1914 would be prepared concurrent to the s38 assessment. A Dewatering Management Plan will be prepared in consultation with the DoW and DoE as part of this process.
			• It is the DoE/DoW's preferred option that dewatering effluent is recharged back into the ground within the vicinity of the site wherever possible. No dewatering effluent is permitted to be recharged within any environmentally sensitive areas (e.g. wetlands or lakes). Due to the proximity to the cost and potentially large volumes of water to be abstracted options for recharge may be limited however all potential options need to be investigated. Discharge of effluent into Cockburn Sound is not preferred. Should this option be considered, then the water quality being disposed will need to comply with the relevant environmental criteria as specified within the State Environmental (Cockburn Sound) Policy 2005.	The appropriate dewatering effluent discharge method will be determined in consultation with the DoE and DoW during the preparation of the Dewatering Management Plan.
			• It is recommended that an acid sulphate soils investigation program be undertaken to determine if these soils are present within the proposed drawdown area around Lake Richmond. There may be future requirements for the use of groundwater for irrigation of public open space (POS) areas and/or domestic gardens within the development. Groundwater is currently available for allocation in the area however availability will change over time. Accordingly the DoE can advise that:	The need for an acid sulphate soils investigation program is acknowledged and would be undertaken during the s38 environmental impact assessment.
			• Any proposal to take groundwater for irrigation (other then individual domestic use) will be subject to an assessment and 5C licence under the Rights in Water & Irrigation Act 1914; • it is recommended that any POS areas have minimal turfed areas requiring and that development of native garden areas be favoured; • it is also recommended that residential lots have minimal garden or lawn areas again to minimise the need for irrigation within the area; and • groundwater close to the coast is more likely to be impacted by the upcoming of saline water and minimising groundwater abstraction in an area such as the marina is recommended to minimise any impacts on salinity levels.	The recommendations provided are appreciated and will be incorporated into the detailed design of the proposal if it proceeds to a s38 assessment. Water supply for the development will be discussed as part of the s38 assessment in consultation with the DoW, DoE and Water Corporation.

No	Department	Topic	Submission	Response
		Native Vegetation	A permit may be required under the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 for any vegetation cleared on-site. The onus is on the proponent to determine whether any exemptions apply. Prior to the removal of any vegetation, a flora survey should be carried out as per Guidance Statement No. 51 – Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia. Vegetation within the proposed developments area was assessed against the principles of Clearing Native Vegetation, as listed in Schedule 5 of the Environmental Protection Act 1986. Assessment against these principles indicates that the proposed removal of vegetation from the development area is likely to be at variance to two of the Principles, and may be at variance to numerous other Principles. Native vegetation should not be cleared if – Principle A: it comprises a high level of biological diversity: The proposed development site is noted as potentially containing a Threatened Ecological Community (TEC) and significant fauna species as well as being identified within Bush Forever as an area of conservation significance. With the present level of development within the local area, it is likely that the vegetation currently represented within Bush Forever site 355 is representative of a higher level of biological diversity. Principle B: it comprises the whole or part of or is necessary for the maintenance of a significant habitat for fauna indigenous to Western Australia: The proposed development is located primarily within Bush Forever Site 355, and area identified for its conservation significance in the Perth Metropolitan Area. Strategen (2006) outlines data from a survey conducted by Bamford Consulting Ecologists during July 2005. This fauna survey identifies a total of 187 species which may utilise habitat within the area. Of these species 38 species of conservation significance are recognised as potentially being within the area. It is therefore considered that given the scale of vegetation proposed within the development area it would represents significant habitat at both a local and regional scale, and is at variance to this Principle. Principle C: it includes or is necessary for the continued existence of rare flora: Information provided in Strategen (2006) identifies that a flora survey was conducted in the proposed area during June of 2005. While this survey did not identify any species of conservation significance, it should be noted that the survey was conducted in June, and thus the timing of the survey may not have been adequate to conclusively identify flora of significance. The Environmental Protection Authorities Guidance Statement 51 provides guidance and information on expected standards for Terrestrial Flora and Vegetation Surveys. It is therefore recommended that a flora survey be undertaken at the appropriate time of year (ie spring) by a suitably qualified botanist, to determine whether the proposed clearing is likely to impact on declared rare or priority species protected by the Wildlife Conservation Act 1950 as amended.	All clearing required for the project will form part of the proposal and be detailed in the section 38 environmental impact assessment process. If the project is approved, then the clearing detailed in the proposal is also approved and does not require a clearing permit. This is described in Part V section 51F of the EP Act. The flora survey by Bennett Environmental Consulting was carried out in accordance with the Guidance Statement 51. An additional spring survey will be carried out to complete the flora dataset. Principle B, C and D relate to fauna habitat, rare flora and TEC values respectively (see below) and Principle E relates to areas that have been extensively cleared. These values are treated separately to biodiversity in Schedule 5 of the EP Act. Bamford (2005) undertook a reconnaissance level survey of Cape Peron and concluded that the area is "not likely to be rich in fauna because it is partly degraded and provides a limited range of habitats, particularly because it lacks banksia woodland" but is likely to be of local significance to fauna. Bamford (2005) identified tuarts in the area as significant habitats and recommended that the vegetation unit 24 (the potential TEC) be retained. Option 2.4 retains all of vegetation unit 24. The SER recognises the need for a spring survey "The survey was undertaken after the annual species had commenced germination. However, many species were still too small for positive identification, and a spring survey would be required for completion of a more comprehensive species list" However, the SER also states that with regard to species of conservation significance: "No annual DRF or Priority Flora were recorded on the CALM Rare Flora Database for the Cape Peron area, so a spring survey would not be expected to locate additional species of conservation significance" Therefore, a spring survey would not affect the assessment of impact on rare flora.

No	Department	Topic	Submission	Response
			Principle D: it comprises the whole or a part or is necessary for the maintenance of a threatened ecological community; Strategen (2006) identifies three vegetation units within the proposed area which could possibly be representative of Floristic Community Type (FCT) 30a, defined as Callitris presissii and/or Melaleuca lanceolata forest and woodlands. This FCT is listed as a Threatened Ecological Community by CALM. Survey data used to analyse the FCT's of the proposed development area appear to have been conducted in June 2005, a time which may not have been ideal in meeting the necessary requirements for this type of analysis. To further establish the representation of FCT's within the proposed development area, a Floristic Community Analysis should be conducted in accordance with EPA Guidance State 51.	None of the possible areas of FCT 30a are cleared in option 2.4. Further sampling and analysis in accordance with Guidance Statement 51 will be undertaken in a s38 environmental assessment.
			Principle E: it is significant as a remnant of native vegetation in an area that has been extensively cleared: Heddle et al (1980) defines the vegetation under application as Quindalup Complex. This has a representative of 47.1% and is classified Coastal dune complex consisting mainly of two alliance – the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of M. lanceloata – Callitris preissii and the closed scrub of Acacia rostellifera. Despite this relatively high representation figure, the Quindalup vegetation complex spans an expressive distance, encompassing a wide change in community compositions. It is therefore likely that vegetation within this area represents a significant section of this vegetation complex. Vegetation under application is also classified as vegetation association 3048 (Hopkins et al. 2001). This association has a representation of 28.7% of the pre-European extent and is described shrubland; scrub heath on the Swan Coastal Plain. EPA (2000) identifies the 30% vegetation representation level as the "threshold level' at which species loss appears to accelerate exponentially at an ecosystem level. Based on the size, condition, and significance of this remnant, it is considered that clearing of this vegetation may be at variance with this Principle.	The City of Rockingham has been extensively cleared and the SER recognises the significance of the Cape Peron vegetation as an area of bushland within an urban area. The project design was modified to reduce the footprint of the proposal and reduce the clearing required. The mitigation and offsets have been proposed as a way of counterbalancing the remaining clearing associated with the project.
			Principle H: the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area: The proposed development is located within an area identified through Bush Forever (Government of Western Australia, 2000) for its representation of ecological communities, rarity, scientific and evolutionary importance. This vegetated area is considered likely to significantly contribute to ecological linkages within the local area, especially to the adjoining Lake Richmond reserve. Quindalup Complex currently has 5.2% vegetation (EPA, 2003) in secure tenure with JANIS (1997) recommending that 15% of the pre-1750 distribution of each vegetation ecosystem should be protected in a comprehensive, adequate and representative reserve system. Removal of vegetation from this area would result in the reduction in the amount of this vegetation complex currently in reservation, of which the recommended minimum has yet to be met.	The project will require the removal of approximately one third of the Bush Forever Protection Area (BFPA) 355. The majority of the area will be retained and improved through rehabilitation and weed management. No vegetation unit will be lost in BFPA due to the clearing, and the key landscape features and ecological linkages will be maintained. Only A and C class reserves protected by the CALM Act are included in the secure tenure category. Cape Peron is not in this category and therefore, clearing in this area will not affect the amount of Quindalup Complex protected in secure tenure. There is approximately 48% of the Quindalup Complex remaining so the project will not result in the reduction of this to below 30%.

No	Department	Topic	Submission	Response
		Terrestrial Environment	The DOE recommends that the EPA liaises with the Department of Conservation and Land Management for sections 5.2 Fauna and 5.4 Rockingham Lakes Regional Park.	CALM has been consulted during the preparation of the SER and provided comment on an early draft of the document.
		Marine Environment	The DoE recommends that the EPA seek advice form the Aquatic Science Branch and the Cockburn Sound Management Council regarding issues relating to Cockburn Sound.	The Aquatic Science Branch and the Cockburn Sound Management Council have been consulted during the preparation of the SER and they have provided comment to the EPA on the SER.
206.	Water Corporation		The Water Corporation's submission addresses the strategic impacts on the Corporation's existing infrastructure at Cape Peron given its regional significance, and the future infrastructure required through and adjacent to the proposed Cape Peron Tourist Precinct (CPTP). The proposed works for the CPTP also has strategic environmental implications in relation to the Corporation's infrastructure and responsibilities as a service provider. The strategic nature of the infrastructure is demonstrated by the Sepia Depression Ocean Outlet Landline (SDOOL) which conveys almost half of the treated wastewater flows in the Metropolitan Region to the depression for disposal. It is also a contributor for recycled water to the Kwinana Industrial Area and therefore has strategic economic implications. Any reduction of the land available for strategic and other servicing pipeline routes creates issues and additional costs to the Corporation that would need to be resolved by the CPTP project. The Corporation requires a cleared easement corridor of between 20 and 50 metres adjacent to the CPTP project to allow for up to five strategically important pipelines to service the requirements of southern Perth. If the CPTP project was to proceed as proposed there would be a requirement to relocate a portion of the state's significant strategic infrastructure. The direct cost could be in excess of $10 m. To illustrate the significance of the infrastructure in the general area considering the Point Peron WWTP and the existing SDOOL pipeline, the replacement value is in the order of $200m. Additional future infrastructure will add another several hundred million dollars in value. The significant strategic infrastructure and other key issues for the Corporation, proponent, and key stakeholders are described below.	The Water Corporation has been consulted during the design of the concept plans presented in the SER. Initial consultation with the Water Corporation indicated that the required relocation of the pipeline would be possible. It is intended that the project should not prevent the Water Corporation providing current or future services in the area and the cost of any diversion of the infrastructure required would be met by the project. If the project proceeds to the next level of environmental assessment, the Water Corporation will be consulted in detail to ensure that all its requirements are suitably met. The information provided in this submission will form the basis of future discussions with the Water Corporation if the project proceeds to the next level of assessment.
		1. Sepia Depression Ocean Outlet Landline (SDOOL)	The 1400mm nominal diameter pipeline conveys treated wastewater from the Woodman Point and Point Peron Wastewater Treatment Plants (WWTP's), which service over 40% of the Perth metropolitan area. The value of the SDOOL to the community can not be underestimated, as it is essential for providing: • Protection of public health and safety in the treatment process of the community's daily generation of wastewater. • A community accepted option to dispose of its treated wastewater to the ocean. • An environmentally acceptable disposal location for some industrial wastes generated from the Kwinana Industrial Area, versus disposal into the Cockburn Sound. • A disposal mechanism for the by-product from the processes of treatment and reuse of wastewater, accounting for approximately 4% of total reuse of wastewater in the State. The CPTP project straddles the existing pipeline reserve which accommodates the SDOOL pipe.	The cost of moving the existing pipeline will be met by the project and undertaken in consultation with the Water Corporation.

No	Department	Topic	Submission	Response
		Onshore Component	A 2km section of pipeline is directly impacted by the proposal, resulting in the last section of pipeline (between isolating valves) requiring relocation. There are very high operational, environmental and societal risks associated with co-location of the proposal and the pipeline. The main operational issues / concerns are: • Access to the pipeline for normal operational inspections such as moving vehicles and equipment in areas of public and pedestrian access. • Access and the impacts of undertaking operational activities in the event of an emergency event, i.e. access for many tankers to undertake scouring activities. • Impact of release of odours from either manual or automatic operations of air release valves in areas of public access. • Impact of a pipe failure and overflow event on the proposal. • Increased risk of mechanical damage from both construction activities and during normal operations, i.e. third party accidental damage. The main environmental concerns are: • Increased likelihood of direct overflow into the waterways of the proposal. • Increased likelihood of indirect overflow into the waterways of Lake Richmond, an area of important environmental significance. • Increased likelihood of accidental damage to the pipeline with higher frequency and need to instigate emergency overflows from the Woodman Point WWTP, into the Cockbum Sound and Jervoise Bay. The main social concerns are: • Higher risk of human contact with treated wastewater. • Increased likelihood of accidental damage and the unacceptable consequences of emergency overflows into the Cockburn Sound or Lake Richmond. • Higher operational costs associated with managing the co-location issues.	Noted.
		Offshore Component	The CPTP project will seriously constrain the Corporation's requirement for land for any future duplication of the offshore component of the pipeline. In the event of duplication special lay down and launch areas will be required to enable the installation of this section of the pipeline. Transition Tower The transition tower is a potential release point for odours. The proposal is located -in close proximity to the tower creating issues of incompatible land uses. This issue will intensify with any duplication of the transition tower associated with the duplication of the SDOOL pipeline.	Noted.

No	Department	Topic	Submission	Response
		2. Existing and Proposed Wastewater Mains	Rockingham Main Sewer Pump Station Pressure Mains The CPTP will require the relocation of the existing 450 mm diameter pressure main from the Rockingham Main Sewer Pump Station to the Point Peron WWTP. Furthermore, a 450mm diameter duplicate pressure main is planned to be constructed by the end of 2006. The CPTP project will straddle the proposed location of this is pipeline, and relocation or lowering (under the canals) will need to be addressed. The Rockingham Main Sewer Pump Station collects raw wastewater from the suburbs extending from Rockingham to Singleton, including Baldivis. There are very high operational, environmental and societal risks associated with the co-location of the CPTP proposal and the pressure mains. These are similar to the risks involved with the co-location of the SDOOL pipeline. Existing Sewer Reticulation Area The adjacent residential area is serviced by a vacuum sewer system. The CPTP proposal includes land uses with a relatively high potential to generate large volumes of wastewater, at the extremity of the vacuum system. This has the potential to create operational issues with potential servicing problems and requires additional investigation before a commitment to the scheme requirements are made. Other adjacent gravity type sewer systems are relatively small with little or no ability to absorb a large additional sewer loading. A full and proper examination of operational and environmental risks of additional high sewer loadings on the current vacuum sewer system would be required, and if found inadequate, alternative sewer servicing strategies may need to be developed.	Noted.
		3. Water Supply	Existing Water Scheme Area The CPTP proposal is within the existing Tamworth—Karnup Water Supply Scheme. The development is not likely to have significant impact on the water supply infrastructure in this zone, however, the local reticulation mains may not be sufficient to support additional demand and some mains upgrading may be necessary. Once actual demand requirements of the CPTP are known the extent of mains upgrading can be determined. -The existing 460-mm diameter water main to the Garden Island naval base and other existing services will need to be relocated. Future Desalination Pipelines Two possible locations are being investigated for a second desalination plant in the East Rockingham area, Although it is envisaged that any sea water intake will be from Cockbum Sound, environmental considerations will require the resultant brine from the process be discharged into the Sepia Depression area in a separate but shorter outlet line. A 1600 mm diameter onshore desalination brine disposal pipeline has been planned to be laid within, or adjacent to, the existing pipeline reserve. This pipeline is expected to be constructed between 2008 and 2020 depending on related water supply planning requirements. A similar diameter offshore outlet pipeline will be required with necessary land areas for lay down, assembly and launching similar to the duplication of the SDOOL pipeline.	Noted.

No	Department	Topic	Submission	Response
		4. Treatment Plant Buffers	The CPTP redevelopment area adjoins the Point Peron WWTP. Associated with the normal and efficient operation of a WWTP is the generation of odour. In this regard the Corporation, from experience at similar plants, has determined that a distance of 500 metres from the plant boundary is required as a minimum separation distance to allow odours to disperse without impacting on sensitive land uses. Only compatible, non odour sensitive, land uses should be located within the buffer. The CPTP proposal does not recognise the strategic value of the WWTP providing wastewater services to the City of Rockingham area, nor is there any reference to the odour buffer for the WWTP and the need to ensure compatible land uses are proposed inside the buffer. This needs to be addressed. Long term planning proposes the relocation of the wastewater treatment facilities from Point Peron to a new site in the industrial zoned land in East Rockingham. However, this is unlikely to occur before 2015, as the acquisition of a new site in East Rockingham, has not been resolved. Although the WWTP is planned to be relocated, the site will continue indefinitely to accommodate the existing transition tower and bypass facilities for the ocean outfall, plus a possible future pump station and additional transition tower. The buffer will be reviewed at the time the WWTP is relocated, to ensure protection of adjacent land uses from odours emanating from the ultimate two transition towers and pump station. The Corporation cannot support odour sensitive land uses, such as hotels/tearooms/restaurants/residential nor beach recreation nodes being established within the buffer of the WWTP.	Noted.
		5. Rockingham Main Drain	The Rockingham Main Drain flows into Mangles Bay via Lake Richmond. The section of drain from Lake Richmond is located within the CPTP proposal area, and generally consists of an open channel with some piped sections of 1500mm diameter. The drain serves an area in excess of 1500 hectares of industrial and residential land in Rockingham. The drain has been in operation since the early 1970's. The construction of the marina would require a review of the outfall arrangement into Mangles Bay. Alternative options and their environmental implications will need to be considered and resolved by the proponent.	Noted.

No	Department	Topic	Submission	Response
		6. Corporation Pipeline Reserves	The Corporation currently has a 20m wide, cleared pipeline reserve (2733 and 2732), protecting the 1400mm SDOOL pipeline and 450mm wastewater pressure main. The entire width of the reserve is required for the existing and planned pipelines. Any requirements to relocate or realign any existing or future pipelines must include the provision of a suitable fully cleared, accessible and suitably sized pipeline reserve. Future and realigned pipelines will increase the width requirement for the pipeline reserve. For the CPTP proposal to proceed, careful planning and liaison with the Water Corporation will be required; to ensure suitable provisions are made at the structure planning stage for future land requirements, suitable provisions are made for any relocation or realignment of existing assets, studies are undertaken and allowances made for consider alternative options that may require separate environmental approval. The proponent should ensure that there is a program of liaison with the Corporation to ensure the state's strategic infrastructure is retained and continues to provide the level of service expected by the regional community. The proponent of the CPTP is to be made aware that all costs associated with the provision of any alternative or relocated infrastructure, including any studies, p1an, approvals and works will be borne by the proponent.	Noted.
255.	Heritage Council of WA		Thank you for the opportunity to comment on this document. As you are well aware the implications for the future development of the area are most apparent in the natural environment however there are three places identified as having heritage value that are within the vicinity of the future development. They are: • 3203 Turtle Factory Listed on the Shire of Rockingham Municipal Inventory of Heritage Places • 4646, Point Peron Recreational Camp Listed on the Shire of Rockingham Municipal Inventory of Heritage Places • 3365 Cape Peron Battery complex Listed on the Shire of Rockingham Municipal Inventory of Heritage Places Register of the National Estate (Permanent) The report states, at page xvi, that Turtle Factory (3203) is State Heritage listed. This is not correct. The Point Peron Recreation Camp is not mentioned within the report however it is not directly affected by the proposed developments, as it is located well outside the boundary of all five options proposed. The potential impact and mitigation on the two remaining heritage places listed above are recognised by the authors and described at page 72 as follows: *"Two European heritage sites were identified on Cape Peron; Cape Peron Battery complex and Turtle Factory (Section 3.1.6). The Cape Peron Battery complex is located outside of the development footprint and will not be affected by the proposed development. Mitigation measures are likely to enhance values associated with this site.*	The incorrect statement regarding the heritage status of the Turtle Factory is noted, and will be amended in any further documentation regarding this project.

No	Department	Topic	Submission	Response
			The Turtle Factory building is located to the north of Point Peron Road within the Cruising Yacht Club complex and is therefore, not within the Park. Potential impacts on this site and aboriginal heritage values are described in Section 7.1.3. " In the section 7.1.3 headed 'Disturbance to heritage sites' at page 111. There is inconsistency with regard to the Turtle Factory where it is stated that: The Turtle Factory building will require removal as part of the development. As this site is of cultural significance, consideration will be given to relocating the building, however, this may not be plausible given the building is constructed of asbestos material. The project developers will consult with the relevant government heritage agencies, community groups and the City of Rockingham to determine the best outcome for the building. The plans within the report of all options show that the Turtle Factory (3203) is in the location of the channel that provides access to the new waterways. Information from the Shire of Rockingham Municipal Inventory states the Turtle Factory was built in 1923 and renamed Peron House in 1930. It became the Sacred Heart Convent in 1948 and continued in that function until 1973 when it was taken over by the Fremantle Port Authority. The place is currently used by the Cruising Yacht Club of Rockingham. The most significant feature of this report in relation to the Heritage Council of WA is the proposed relocation of Turtle Factory (3203). In summary, the preferred options (2.3 and 2.4) in this report all indicate that the Turtle Factory (3203) will need to be relocated. It is noted that the authors recommend consultation with the relevant government agencies and this is supported. Further assessment of the place under the requirements of the Government Heritage Property Disposal Process is necessary prior to considering possible development options. A brochure explaining this process is included.	'The Park' in this quote refers to the Rockingham Lakes Regional Park. Therefore, it is not inconsistent with the next quote that states correctly that the Turtle Factory will require removal as part of the development. The information regarding the Turtle Factory, and the advice on the possible relocation of the Turtle Factory is appreciated and will be taken into account if the project proceeds to the next level of environmental assessment.

No	Department	Topic	Submission	Response
456.	Department for Planning and Infrastructure Environment and Natural Resource Planning		Thank you for the opportunity to comment on the Cape Peron Tourist Precinct Project Strategic Environmental Review (SER). The comments submitted include advice from the Coastal Planning and Coordination Council (CPCC) of the Western Australian Planning Commission (WAPC), consideration under the State Coastal Planning Policy (SPP2,6) and Country Coastal Planning Policy (DC6.1), feedback from the public consultation process for the Perth Coastal Planning Strategy and acknowledgement of separate comment submitted by the New Coastal Assets (NCA) section of the Department for Planning and Infrastructure (DPI). Key issues • The CPCC has raised some concerns in relation to compliance, with SPP2.6 in particular, coastal setbacks, integration with the Perth Coastal Planning Strategy (currently under development) and increased recreational pressure on the marine environment in Cockburn Sound; • There is evidence of coastal erosion in this location at present. Applying the process set out in SPP2.6 to define recommended coastal setbacks a setback of at least 110 metres would be required. If this setback is not possible then coastal protection measures and management would need to be undertaken; • The width of the coastal foreshore reserve (not the same as coastal setbacks) should be justified by reference to SPP2.6; and • The lead agency for the resolution of the Bush Forever issues is the Department of Conservation and Land Management (CALM) but the Bush Forever Office should be kept up-to-date on progress Other issues • The Perth Coastal Planning Strategy consultation process indicated minimal public support for the project; • Public access to the coast and ownership of the foreshore needs to be addressed; • The potential impact on water quality is not sufficiently detailed; • Indigenous heritage and consultation needs to be further addressed; • Vegetation surveys should be undertaken in spring; • Potential Threatened Ecological Communities should be confirmed. (456)	Responses are provided to each of the detailed submission comments below. The results of the Perth Coastal Planning Strategy consultation process included a variety of viewpoints. Some attendees supported retention of the area as is, others saw the potential for the area to include a marina-based tourist precinct.

No	Department	Topic	Submission	Response
		Coastal Planning and Coordination Council (CPCC)	The CPCC received a presentation on the proposed Cape Peron Marina at its bimonthly meeting, which was held on 5 April 2006. The CPCC resolved to advise the WAPC that it had concerns in relation to the feasibility study and in particular highlighted the following points: 1. The proposal has not addressed SPP2.6 State Coastal Planning Policy, this should have been done as part of the documentation for environmental review. In particular the proposal needs to address: a. Coastal processes - sand movement (including details on the proposed sand- by-passing), marine water circulation and pollution impacts; b. Coastal setbacks for processes (including sea level rise) and reserve factors; c. Responsibility for and funding of waterways management in the short and long term; d. The opportunity to rationalise existing coastal shacks (NB General Measure 5.1(v) to support the State Government Squatter Policy]. 2. Relationship with work emerging from the Perth Coastal Planning Strategy: a. MP Rogers's setback report identified the area as vulnerable and in need of coastal management action within the next 10 years; b. Community precinct mapping and characterisation identified the entire Point Peron peninsula as a predominantly open space high conservation precinct that has a relaxed feel with spiritual significance. 3. Pressure on the Cockburn Sound marine environment from increasing boating activities including concern that the project does not extend to considering removal of existing moorings due to their impact on sea grass. (456)	To minimise the encroachment on the Regional Park, the coastal setbacks in the concept plans are less than 110 metres. Therefore, coastal protection measures will be incorporated into the design. It is likely that a seawall, buried under the beach on the northern extremity of the project would be constructed to protect proposed structures with minimal coastal setback as shown in the concept plans. As the coastline of Mangles Bay is already developed, it was considered preferable to centre development on this beach and leave as wide as possible reserve along Shoalwater Bay. If the project proceeds to the next level of assessment, this approach will be further discussed in relation to SPP 2.6 and in consultation with DPI. Refer to section 0 regarding management costs. The project would incorporate a sand bypass designed to provide a permanent management solution to the ongoing erosion and accretion problems both east and west of the causeway. The conservation and social values of Cape Peron are discussed in detail in the SER. If the project proceeds to the next level of environmental assessment, a trial incentive scheme to subsidise the cost of changing moorings to seagrass friendly fixed moorings will be implemented. This trial will be undertaken during the assessment phase and the results will be used to determine whether this scheme could be included in the proposal. The provision of pens in a marina will reduce demand for moorings. At the moment boat owners have no choice but to use a mooring. The project would welcome DPI, as the responsible authority, putting in a management regime over the moorings to end the environmental damage. The Perth Coastal Planning Strategy also identified a lack of facilities in the area and a lack of public access.

No	Department	Topic	Submission	Response
		Perth Coastal Planning Strategy	The WAPC has committed to the preparation of the Perth Coastal Planning Strategy (PCPS). Although the strategy is not yet finalised, significant public consultation has occurred under its guise. This has resulted in specific feedback from the community in relation to particular precincts along the Perth coastline. The precinct is known as Point Peron (precinct 10) and through consultation the following precinct description has been developed: Point Peron is a predominately open space precinct. This precinct has a relaxed feel with spiritual significance. There are some facilities, although the area is of high conservation value. On the beach, there are paths, dunes and open space, The level of accessibility is medium to low. For your information, there was a clear view expressed by the attendees at the relevant sector workshop that the Point Peron area should be kept in a natural state, which is inconsistent with the proposed Cape Peron Tourist Precinct Project. (456)	The results of the Perth Coastal Planning Strategy consultation process are noted.
		Coastal Physical Processes Assessment	DPI, as part of the preparation of the PCPS, has undertaken a coastal setback study of the metropolitan coastline based on the requirements of SPP2.6 Schedule One. The area known as Mangles Bay (Sector 18S) is included in the SER area. The report identifies the existence of two short seawalls, a timber groyne, and regular sand nourishment to attempt to stabilise erosion of Palm Beach immediately to the east. In relation to coastal setbacks, the consultants report states that an allowance of 7 metres should be made for severe storm erosion (SI), 65 metres for long term shoreline movement (S2) and 38 metres for sea level rise (83). This results in a minimum setback of 110 metres to address coastal physical processes in the area. The report also acknowledges that active coastal management will be required for this locality in the next ten years. The Garden Island Causeway was also included in the study with the setbacks recommended being 20 metres for SI, 20 metres for S2 and 38 metres for S3 which resulted in a physical processes setback of 78 metres. As no infrastructure will be potentially threatened in the next ten years the report does not recommend any active coastal management for the area in the next decade based on existing development. Further to this the SER states on p102 that the development will enable a return to precauseway conditions and that this may potentially cause erosion of the beach. The SER goes on to state that this should be monitored, however it is the view of DPI that the further modelling should be done to provide a scientific basis for any proposed design as the existing coastal environment so that any on-going management of erosion and accretion can be planned for, The nature of the proposed by-pass systems requires more description as this is a significant management cost/responsibility. This should be read in conjunction with the separate NCA advice. (456)	To minimise the encroachment on the Regional Park, the coastal setbacks in the concept plans are less than 110 metres. Therefore, coastal protection measures will be incorporated into the design. It is likely that a seawall, buried under the beach on the northern extremity of the project would be constructed to protect proposed structures with minimal coastal setback as shown in the concept plans. The statement on p102 is “While this represents a return to more natural (i.e. pre-Causeway) conditions, it could potentially cause erosion of the beach.” The DPI advice is accepted and if the project proceeds further modelling of the changes to coastal processes from the project would be undertaken.
		State Coastal Planning Policy (SPP2.6)	There are a number of issues relevant to the SPP 2.6 that will need to be addressed at a later level of planning or project planning, as detailed below. Public Ownership and Access SPP2,6 requires planning proposals such as this to maintain and enhance public enjoyment of the coast and provide public access to the coast consistent with the values and management objectives of the area, including recreation. It also supports	Public access and ownership have been broadly defined in the concept plans but would be addressed in detail in the detailed design phase.

No	Department	Topic	Submission	Response
			public ownership of the coast. This has been addressed to some extent in the SER the issues of public access and ownership will need to be addressed at a later level of planning consistent with the SPP. (456)	
		Aboriginal Heritage	The SER (p111) states that two listed ethnographic sites will be disturbed unavoidably. SPP2.6 requires that significant indigenous features of the coast be protected. This matter will need to be addressed at a later level of planning.	Agreed. Further consultation regarding Aboriginal heritage will be required if the project proceeds to the next level of assessment.
		Discharge of stormwater and waste	SPP2.6 requires that development on the coast should not cause discharges of waste and storm water that would be likely to degrade the coastal environment. The SER states that water quality will be affected by construction of the marina, degraded water discharge from the marina and impacts of increased boat usage in the area. Further modelling is required to investigate potential degradation of water on the Mangles Bay and marina environment. Flushing and its impacts have not been addressed in detail in the SER. It is recognised that the Garden Island Causeway has impacted upon natural coastal processes in Mangles Bay and that coastal erosion is an existing problem. The marina should incorporate best practice design to minimise impacts on water quality in the area.	The water quality modelling results presented in the SER were considered appropriate for a fatal flaws assessment. This modelling indicates water quality is likely to improve. More detailed monitoring and modelling would be required if the project proceeds to the next level of environmental assessment.
		Coastal Foreshore Reserve	In addition to appropriate allowance for physical coastal processes the delineation of the coastal foreshore reserve should satisfy the following SPP2.6 requirement of section 5.1: Ensure that identification of coastal foreshore reserves takes into account consideration of ecological values, landscape, seascape, visual amenity, indigenous and cultural heritage, public access, public recreation needs and safety to lives and property. As detailed above the minimum area for coastal processes is 110 metres with the above factors to be considered and justified in terms of whether the coastal foreshore should be widened to cater for any of the listed criteria. (456)	As the coastline of Mangles Bay is already developed, it was considered preferable to centre development on this beach and leave as wide as possible reserve along Shoalwater Bay. If the project proceeds to the next level of assessment, this approach will be further discussed in relation to SPP 2.6 and in consultation with DPI.
		Bush Forever	As the Department of Conservation and Land Management is the lead Bush Forever agency in relation to this site, no comment is provided in relation to implications of the development on Bush Forever Site No.355 or assessment of vegetation. It is however noted that option 2.2 would require the clearing of a possible Threatened Ecological Community (TEC) and all options will lead to the seclusion of Cape Peron from east-west significant ecological linkage. It is noted that the flora survey was undertaken in June so was not completed following the season which normally contributes the most rainfall in the bioregion (EPA Guidance Note 51) which is spring for the Swan Coastal Plain. In addition to this further surveys are required to ascertain whether any TECs exist in the project area prior to any approvals being considered. (456)	A briefing was offered to the Bush Forever Office (Karen Sanders) during the preparation of the SER. Due to workload constraints, they advised that a briefing was not required, and they were happy for CALM to advise on Bush Forever issues. If the project proceeds to the next level of assessment, the Bush Forever Office would be considered a stakeholder in the project and would be consulted accordingly. Option 2.2 is not one of the supported options and is not likely to be part of the final proposal for this project if it proceeds to the next level of assessment. The survey was carried out after an unusually wet autumn, resulting in a good germination of annual species. It was therefore considered appropriate to undertake a flora survey for vegetation community and condition mapping. A spring vegetation and flora survey would be undertaken as part of any further environmental assessment. Further work will be undertaken to determine whether the potential TEC is actually a TEC. The investigation may be inconclusive due to the lack of species present in the area.

No	Department	Topic	Submission	Response
		Conclusion	The proposal will need to address some key issues that are required by the State Coastal Planning Policy (SPP2.6), most notably coastal setbacks and width of foreshore reserve. The proponent should either address these issues at this time or indicate at what level of planning and project development these matters are to be addressed. (456)	These issues will be addressed in full if the project proceeds to a s38 environmental assessment under the EP Act.
457.	Department of Fisheries		CAPE PERON TOURIST PRECINCT PROJECT Thank you for your letter of 3 March on the Section 16e Strategic Environmental Review of the Cape Peron Tourist Precinct Project (CPTPP), which involves the construction of a marina on the western margin of Cockburn Sound. (457)	
		Jurisdiction of the Department of Fisheries	The Department of Fisheries, Western Australia administers the provisions of the Fish Resources Management Act 1994. The objectives of the Act (as set out in s3 (1) "are to conserve, develop and share the fish resources of the State for the benefit of present and future generations ". With respect to the marine environment the Act contains the specific objective [s3. (2) (a)] "to conserve fish and protect their environment". The Act defines "fish" under s 4 as "an aquatic organism of any species... but does not include aquatic mammals, aquatic reptiles, aquatic birds, amphibians or ... pearl oysters." Consequently in making comment on the environmental issues pertaining to a proposal, the Department of Fisheries may provide advise on any aquatic plant or animal (excluding those mentioned above). The Department is also in a position to comment on social and economic uses of the marine environment including recreational and commercial fishing, customary use of fish resources by indigenous people and aquaculture. The Department of Fisheries is also responsible for the management of pearling (fishing of pearl shell as well as pearl farming), which is managed under the Pearling Act 1990. (457)	Noted.
		Overview of the Department of Fisheries Submission	In constructing a marina there are a number of issues that will arise in respect to the impact of the development on the local marine environment. These issues are generic to all marina developments and have arisen in similar proposals within the State. However in consideration of the CPTPP the most important issues are a consequence of the proposal's location in Cockbum Sound in view of the particular environmental issues and development pressures that apply to the enclosed marine waters in this region. This is the reason that a strategic environmental review has been appropriate for this particular marina proposal. Consequently these comments from the Department of Fisheries focus on the potential impact of a marina on the marine environment of Cockbum Sound, rather than the local impacts. With respect to the marine environment the most important issue that arises in consideration of the indicative development proposal is the potential impacts on hydrology and water quality over a wider area of Cockburn Sound. Changes in the hydrodynamics of Cockbum Sound will have a direct or indirect impact on all components of the marine environment (including planktonic as well as benthic productivity), not just at the site of development, but over a wider area of Cockbum Sound. Changes to coastal processes will also result in impacts on human usage as well as biota along the shoreline of an area that is greater than the project site. (457)	Noted.

No	Department	Topic	Submission	Response
		Hydrodynamics of Cockburn Sound	Considering this development proposal from a strategic level, the important question to consider is what the potential impact will be across the whole of Cockburn Sound. Currently the question of the cumulative environmental impact of all developments on Cockburn Sound is an important issue. This is because large-scale developments with the potential to have significant impacts on water circulation (such as the Outer Harbour project) and on water quality are currently being proposed. In this context the hydrodynamic modelling as discussed on page 90 through to 95 is arguably the most important strategic environmental issue. Most of the potential environmental impacts identified in respect of the CPTPP are localised to the site or to Mangles Bay. The impact on water circulation in Cockburn Sound, however, has wider implications for other developments as well as for the marine environment, aquaculture and fisheries. The marine environment, fisheries and aquaculture of Cockburn Sound are significantly dependent on the water circulation of the Sound. The Review Paper, on the basis of the hydrodynamic modelling identifies “No significant change in most areas, possible slight improvements in localised areas due to direct effects and indirect effects”. However the paper also makes the qualification at the top of page 92 that “There is some low risk that subsequent, more rigorous modelling might identify a major water quality issue.” (457)	Noted.

No	Department	Topic	Submission	Response
		Seagrass Habitat	The proponents have rightly identified that the health of seagrass habitat in Mangles Bay and the water quality of Mangles Bay (which is a critical factor in maintaining seagrass health) are of paramount importance in terms of the environmental impact of this proposal. The issue is not the preservation of biodiversity, since the local seagrasses and the species that are dependent on it for food and habitat are abundant elsewhere on the South West coast. There are no endangered or threatened marine species that are likely to be impacted by the proposal (the Department makes no comment on the Little Penguin colony at HMAS Stirling navy base which may or may not be impacted). However the proposal does raise the issue of ecosystem function and productivity of the marine environment and this is the important issue with respect to the preservation of seagrass beds. In the document "The Marine Environment of Cockburn Sound, Strategic Environmental Advice" (EPA, Bulletin 907, 1998) the EPA has explained its support for the goal of "maintaining or restoring seagrass in Cockburn Sound". The CPTPP has the potential to result in the loss of an area of established seagrass beds. However it may also, as a consequence of improved circulation and water quality, contribute to the restoration of seagrass in Mangles Bay as well as in wider areas of the Sound. In order to be able to determine the net impact of the proposal a reliable analysis of the likely hydrodynamic changes is required. The modelling provided by the proponent in the Strategic Environmental Review is limited and provisional and lacks the input of a detailed local hydrodynamic data set. Earlier marina proposals at Mangles Bay were of concern due to the impact on some of Cockburn Sound's last remaining seagrass beds in Mangles Bay. The current proposal (option 2.) is an improved design in this regard because it avoids the need for dredging in Mangles Bay and increases water circulation. Further more, given that seagrass in Mangles Bay is thought to be stressed under current water quality conditions, the proposal offers the potential for improved water quality within Mangles Bay and that is expected to benefit seagrass. If this is indeed an outcome then the improvement in water quality would allow natural regeneration and possibly expansion of the seagrass beds (that are currently slowly decreasing in coverage) and, along with the proposed replanting, would adequately compensate for the expected loss of seagrass from the proposal. This would occur if improved water quality allowed penetration of sunlight to the deeper stands of seagrass on the northern part of Mangles Bay. Conditions that favour seagrass should in general favour other species that utilise the seagrass as habitat. For example blue swimmer crabs (Portunuspelagicus), which utilize the inshore areas of Cockburn Sound as a habit for juveniles should benefit from improved water quality. (457)	Noted.

No	Department	Topic	Submission	Response
		Mussel Farming	The productivity of Cockburn Sound is higher than contingent marine waters due to nutrient enrichment. Southern Flats is one of the few places in Cockburn Sound that supports productive mussel farming. Mussel farms on Southern Flats are dependent on nutrient enriched waters supporting planktonic flora and fauna on which the mussels feed. The hydrodynamic model discussed above was interpreted in the review paper in terms of the Cockbum Sound SEP, and the authors essentially interpreted a predicted fall in phytoplankton near Southern Flats as an improvement. This is not necessarily an improvement in terms of the viability of the Southern Flats Mussel farms. Further work is required to quantify the impacts of improved water circulation on the productivity of the mussel farms. (457)	Noted.
		Cockburn Sound Pink Snapper Stocks	Resent research has identified that Cockbum Sound is a spawning and nursery ground for Pink Snapper that is important to snapper stocks across the South West of WA. Water quality in the Sound as well as water currents during spring are important factors in spawning and the subsequent growth of young and juveniles. The preliminary modelling presented in the review paper suggests that the proposed CPTPP would not have an impact on these fish, however the modelling work did not include the eastern portion and the main basin of Cockburn Sound. (457)	Noted. However, as the modelling results indicated no significant change in southern Cockburn Sound (except slight local improvements in Mangles Bay), there is unlikely to be significant changes in the northern and eastern parts of Cockburn Sound.
		Other Issues	There have been ongoing concerns with the Port Geographe Marina in respect to sand and wrack build up adjacent to the marina. Similarly at Jurien, there are periodic incidents of extensive seaweed build up in the marina as a result of winter storms with local fishkills and rotten smells occurring with the decomposition of the wrack. These issues, however, have a very localised impact on the marine environment and are of most concern to marina users and local residents. Potential impacts of this kind have not been addressed in this submission because they will depend on the design details of a marina proposal should the CPTPP concept be taken further in the future. (457)	Noted.
		Conclusion	The hydrodynamic modelling presented as part of this strategic review has shown that a marina at Cape Peron has the potential to change the hydrodynamics of Cockbum Sound, possibly for the better. It is recommended therefore that as an outcome of this strategic review, the EPA should require any future marina proposals at Cape Peron to be supported by detailed modelling of the impact of the proposal on the hydrodynamics of the entire Sound as well as on Mangles Bay. Further it will be important that the consequences of the predicted hydrodynamic changes are extrapolated into prediction of impact onto a range of marine biota (in addition to seagrass) as well as current social and economic activities. In particular the potential impact on mussel farming and fishing should be analysed. This information could be used to enhance the design of any future marina proposal to maximise beneficial water quality outcomes. (457)	Noted.

No	Department	Topic	Submission	Response
459.	EPASU Marine Ecosystems	Seagrass	Based on info provided in SER and briefing by Eric Paling and Des Lord, do you consider that rehabilitation of seagrass on the scale that would be required to offset up to 10ha of seagrass loss would be feasible? The proponent has not yet provided technically defendable argument in support of the feasibility of offsetting seagrass loss to the extent required under the Benthic Primary Producer Habitat Protection Guidelines (BPPHPG) (EPA No.29). Under the guidelines Cockburn Sound is assigned a category F rating (section 5.3). The environmental objective in this area is to ensure no net loss of BPPH and where possible, to generate a net gain. In view of EPA objectives for the remaining seagrass in Cockburn Sound, further loss due to this proposal is likely to be judged by the EPA to be a fatal flaw unless the proponent can provide sufficient surety to the EPA that a no net loss, and preferably net gain, outcome that is appropriately located and enduring could be achieved. It is noted that seagrass transplantation has produced encouraging, if limited, results in trials but it is yet to be demonstrated that transplanted meadows will become fully functional BPPH's in any reasonable time frame. The proposed transplanted shoot density (1 "sprig" per m2) is significantly less than ambient values and well below the Environmental Quality Standards for high protection areas in Cockburn Sound (currently >700 shoots/m for waters 2-3m deep). Transplant trials in the Southern Flats area in 2005 reported survival rates of only 55% after six months. These data indicate that there will be a significant net loss in the short term and a high degree of uncertainty in the medium/long term. Based on the information provided it can not be stated that rehabilitation is feasible. Given the significant uncertainty of successful rehabilitation, consideration should be given to having a greater than 1:1 offset ratio if this proposal was to proceed. Consideration will need to be given to specific performance criteria that would signify success of rehabilitation if met, or failure if not. These criteria should address structure, function and endurance. In terms of structure it could be argued that the EQS for seagrass shoot density in the EQC reference document for Cockburn Sound represents the minimum shoot density for a "healthy meadow". Further to this, other aspects such as demonstrating return of function will need to be considered. This could include, amongst other things, successful flowering, pollination and seed production. The issue of endurance will also need to have success criteria determined. This may relate to achieving the shoot density target and maintenance of that target density for a number of years (e.g. 5 years). In considering seagrass rehabilitation, attention needs to be given to the source of propagules and the associated impact of propagule removal from donor sites. It is unclear where the seagrass will come from for transplant/rehabilitation. Some will be removed from areas to be dredged or otherwise directly impacted (5.3-5.9ha) but the source of the remainder, if any is required, is unclear.	Seagrass rehabilitation has been shown to work with the same species that are present in Cockburn Sound, with survival and growth up to 4 years after transplanting, and return of ecological function (including flowering). This has been documented in the Albany region, and Owen Anchorage. The only reason it has not been documented for Cockburn Sound is that serious rehabilitation efforts have only commenced recently. Demonstration of successful rehabilitation in Cockburn Sound is viewed as a matter of 'when', and 'how much effort is required', not 'is it feasible?' The density at which planting units are placed will determine how swiftly a coalesced meadow is produced, and therefore how swiftly ecological function, and any specific shoot density, returns. The trials presently underway in Cockburn Sound (and that have been committed to if this project proceeds for detailed impact assessment) will provide researchers with the necessary information to answer questions about the planting densities and timeframes to achieve return of structure and function, and any need for planting on a greater than 1:1 offset ratio. The SER also proposes a basis for performance criteria to be used to assess the success of rehabilitation. This will need to be discussed with the Marine Ecosystems Branch and relevant scientific experts should the project proceed to detailed impact assessment.

No	Department	Topic	Submission	Response
		Water quality	Do you consider the proposed flushing of the marina would be adequate and whether the "flushed" waters are likely to impact on Mangles Bay noting the shallow nature of waters within Mangles Bay? Under the Cockburn Sound SEP the chlorophyll EQG for high protection areas is 0.8 g/L. The sheltered waters of Mangles Bay do not presently comply with this EQG. In modelling the marina flushing the proponent has calculated an average chlorophyll level in the marina of 2.6-3.2 g/L. This value exceeds the EQG for moderate protection areas (marinas), which is 1.3 g/L. It is likely that waters flushed from the marina into Mangles Bay will have some negative effect on surrounding water quality. The widened causeway opening may have some positive effect on the water quality of the Mangles Bay area and the increase in water volume and velocity will possibly assist with the flushing of the marina but more detailed analysis of contaminant inputs to the marina and a thorough validation of hydrodynamic modelling will be required to determine if there is likely to be any long term impact in the shallows and basin of Mangles Bay. The Cockburn Sound SEP also has criteria to apply to algal blooms. This is currently termed "phytoplankton biomass" and the value is < 2.4 g/L for the non-winter period. It also has a persistence element (i.e. 3 occasions in 2 consecutive years). It is noted that the estimated average Chla level in the marina is predicted to be 2.6-3.2 g/L. On this basis, and if this represented the median Chla content of the marina, this would constitute :bloom conditions" and as such would score "red" on the CS report card and require a management response. Information provided by the proponent on flushing is based on average conditions for summer and autumn. Relatively short periods of unfavourable conditions (wind direction, temp, wrack build up, etc) could result in a rapid decline of water quality in the marina resulting in plankton blooms, reduced dissolved oxygen concentrations and associated impacts. If this is followed by light winds and neap tides the reduced quality water from the marina is likely to reside in the shallow waters of Mangles Bay for extended periods depending on conditions (>30 days based on the proponents modleing). The flushed marina water may at times travel east under the causeway into Shoalwater Islands Marine Park. This may be inconsistent with the targets established in the CALM management plan for the Shoalwater Islands Marine Park. Advice should be sought from CALM on this issue.	The SER presents the results from simple box modelling used to estimate chlorophyll levels in the marina; this produced an increase in chlorophyll levels of a similar magnitude to those documented for other marinas in Perth's coastal waters that are not as well flushed as the CPTP is expected to be, but that have better background water quality. The estimates are therefore considered to be 'in the right ballpark'. The tidal prism calculations presented in the SER also indicate that the volume of water exiting the marina each tidal cycle is very small compared to the volume of shallow nearshore regions of Mangles Bay and the Shoalwater Islands Marine Park. The simple box modelling, tidal prism calculations and preliminary hydrodynamic modelling reported in the SER were intended to confirm whether major water quality problems might occur, with assessment very much at the 'good', no change' or 'bad' level. The preliminary nature of the work is such that it would be inappropriate to comment on the level of compliance with EQC or targets established for Shoalwater Islands Marine Park, or on what might happen during relatively short periods of unfavourable conditions. As discussed in Section 3.8, all that can be said is that results indicate (i) slight, localised effects on water quality due to outflow from eastern and western marina entrances, and (ii) no impact on overall water quality in Mangles Bay, Cockburn Sound or Shoalwater Islands Marine Park improvement, with possible slight improvements in localised areas. To answer more detailed questions will require the more detailed modelling that will take place should detailed assessment proceed. A question that also will need consideration is the appropriate criteria to apply to waters in the marina. The present nutrient-related EQC for Cockburn Sound have been established with a view to protection of seagrass. The marina is being built inland, where seagrasses have never existed; it is the impact of marina waters on water quality and seagrasses in Mangles Bay that is the critical issue.

No	Department	Topic	Submission	Response
		Indirect seagrass loss	As a result of widening the opening of the causeway, up to 4ha of indirect seagrass loss resulting from increased current velocities is proposed (section 6.2.4 p104). Do you predict any additional impact from the widening of the causeway opening, such as smothering of seagrass within Mangles Bay through sand movement from east of the causeway? The proponent predicts possible erosion/accretion on the foreshore adjacent to the marina. This may impact on near shore meadows. It is suggested by the proponent that a sediment bypass system could be used to reduce local impact but the efficacy of this proposal has not been demonstrated in the documents provided. Furthermore the fate of the bypassed sediment will need to be carefully managed. Detailed sediment transfer modelling will be required to address this issue and evaluate the consequences. Vessels wishing to travel east of the causeway will still have to go under the bridge near Garden Island, as the causeway opening near the marina is too small for most boats. Vessels are likely to take the shortest route to the bridge over shallow banks adjacent to the causeway. Without restrictions, this increased boating activity may cause some loss of seagrass due to anchor damage, groundings and prop wash in shallow water (Southern Flats). Estimated loss not quantified. It is proposed that channels will be dredged to enable access to the marina. The impact of the dredging on adjacent meadows has not been discussed and any potential losses due to turbidity or sedimentation will need to be evaluated and considered as part of the total loss and hence require offset if the project was approved. With the increased sand movement under the causeway it is likely that the channels will need to be re-dredged on a regular basis putting continued pressure on surrounding meadows. If losses due to turbidity or sedimentation exceed those predicted, safeguards will need to be established to ensure those losses are offset via rehabilitation (i.e. contingency for further seagrass rehab will need to be put in place).	The need for management of boating traffic under the bridge near Garden Island is noted. With respect to dredging impacts on seagrass, the SER notes the need for careful management of dredging impacts to minimise impacts on seagrass, via a comprehensive Construction Environmental Management Plan that includes agreed reporting requirements, management triggers for water quality and seagrass health, and required actions if management triggers are exceeded (e.g. deployment of a silt curtain, temporary cessation of construction activities) (SER Section 6.1.3).
460.	Department of Water		The Water Resource Assessment and Investigation Branch has reviewed the above report, which provides a strategic environmental assessment for the potential canal development project at Cape Peron. This memorandum provides comments on the geological / hydrogeological assessment, wetland and groundwater interaction, and the modelling work.	
		Geological and hydrogeological assessment	WorleyParsons (2005, Appendix 9) has provided a general desktop study. There is no detailed information, i.e. bore logs, geological cross sections, and hydraulic data including recharge, groundwater contour maps, hydrographs and water use data. There is also no site specific information collected for the project. The above information is necessary for a sound hydrogeological assessment and model conceptualisation.	Agreed. These investigations will be carried out if the project proceeds to the next level of environmental assessment.
		Wetland and groundwater interaction	The report has identified issues relating to canal development and dewatering, and their potential impact on saltwater intrusion, seagrass and water level and quality at Lake Richmond. The work was based on general desktop study, and did not provide a conceptual model for the modelling work. It is important that hydraulic connections between the aquifers (the superficial and Rockingham aquifers), and Lake Richmond be characterised to enable the development of a well-calibrated groundwater model for impact assessment.	As above.

No	Department	Topic	Submission	Response
		Groundwater modelling	The following modelling work has been done and reported in Appendices 6 and 9. Groundwater model – Hot Spot model (Noel Merrick, 2001) has been used to predict the impact of dewatering on water level at Lake Richmond. The model predicted a 25 cm impact on the lake water level for Option 2 dewatering scenario. There is no detailed information about the model construction and calibration. The report suggested that a more detailed model should be developed to represent the complex groundwater and lake system, and provide more comprehensive scenario runs. Climate scenarios that take into account long-term climate variability should be considered in the model.	The preliminary modelling report (WorleyParsons 2005) predicted a 15 cm impact on the watertable level near the lake. This would cause an associated drawdown of the lake water level although this is also affected by rainfall, stormwater and evaporation at the time. Any impact will be restricted to the construction phase only. As recommended in the report, a more detailed model will be developed if the project proceeds to the next level of assessment. The numerical model will be based on a conceptual model derived from hydrogeological investigations into aquifer properties, groundwater – lake interactions and hydraulic gradients..
			Satwater intrusion calculation – Saltwater intrusion and its potential impact on Lake Richmond have been calculated using the Ghyben-Herzberg equation. This is a simplistic approach to the saltwater-groundwater interaction, and did not take into account saltwater dispersion, and cannot handle the climate scenarios, and effect of groundwater use by many bores in the area. Hydraulic flushing – Mike2 FM (the SHE model) was used to simulate the initial hydraulic flushing impact on Mangles Bay. Water level and quality were predicted for several scenarios.	The saltwater intrusion calculation was a preliminary investigation into the potential for saltwater intrusion. More detailed investigation and modelling of the salt water-groundwater interface, including groundwater use and dispersion effects, will be undertaken if the project proceeds to the next level of assessment.
		Conclusions and recommendation	The above work has provided general geological and hydrogeological information. The project has produced simple models to assess the impact of the project on the water level and saltwater intrusion due to dewatering. Results of the models indicated that dewatering would produce significant impact on the lake water level. The saltwater will move inland and towards Lake Richmond. It is concluded that, based on the information provided and modelling results, the development would produce significant impact on the groundwater and lake system and should not be supported. It is recommended that, to support the proposal, the project should carry out more comprehensive investigation and modelling assessment on different development options. Details of previous studies, and site specific information need to be collected for required assessments so that conceptual models can be produced for groundwater modelling. The hydraulic connection between aquifers and Lake Richmond need to be defined so that impact of the canal development and dewatering options can be assessed.	The preliminary conclusion of the SER was that there was not likely to be a significant impact on the lake water level. The suggested comprehensive modelling will be undertaken and based on an extensive hydrogeological investigation if the project proceeds to the next level of environmental assessment.

5. STAKEHOLDER GROUP SUBMISSIONS

No	Organisation	Topic	Submission	Response
184.	Conservation Council		Thank you for the opportunity to comment on this Strategic Environmental Review. The Conservation Council provides the following comments:	-
		Marine Impacts	Cockburn Sound is a semi-enclosed embayment with limited water exchange with the oceanic waters due to the combination of seaward physical barriers (islands and reefs) and the dominant southerly winds that drive an anticlockwise gyre. Mangles Bay is located in the most sheltered south-westerly pocket of the Sound, an area with weak natural flushing. The limited flushing potential of this region was further reduced by the construction of the Garden Island causeway. The proponents are banking on the Department of Defence ultimately agreeing to the realignment and widening of southern bridge section of the causeway to overcome the problem the project area has with flushing. Even so, given the lack of potential for wind- forced currents the twin entrance marina may not get adequate flushing. There are two assumptions here: 1. that Defence / Navy will consent to the re-construction and re-alignment of the causeway, 2. that the increase in water exchange associated with modifying the causeway would be sufficient to produce acceptable flushing in a twin entrance inland marina at Mangles Bay. It is our understanding that there remain significant strategic, security and operational issues for Defence with respect to the proposal and there is no guarantee of an agreement being reached. The modelling of water exchange in Cockburn Sound pre and post marina is mainly related to the causeway alterations. It suggested that there may be a modest (perhaps negligible) improvement in water exchange but it is unlikely that this will offset the decline in water quality from the marina itself. It is noted that the model was run without any actual field data input and should therefore be taken with a pinch of salt. (The EPA should also seek independent advice about the applicability and reliability of any model based information presented in assessment documents). These respondents are certainly not prepared to take any information of this type on face value. The proponent has done some “back of the envelope” calculations on water exchange within the marina and suggests that the western half of the harbour / marina may be exchanged about every 2 days. The water quality and biological significance of this rate of exchange is not assessed. Clearly the channels in the eastern part of the marina will be poorly flushed even with a twin entrance design. The marine waters of Cockburn Sound are eutrophic with excessive inputs of nitrogen from groundwater and other sources. Since most of the significant inputs are now from diffuse sources this situation is not likely to improve in the foreseeable future and may be exacerbated by ongoing development. Needless to say nutrient conditions in the poorly flushed marine will provide a eutrophic environment for blooms of algae. Low oxygen levels and freshwater inputs from groundwater and the Lake Richmond drain may also create the conditions for bio-toxic cyanobacteria and dinoflaggelates.	The SER recognises the sheltered nature of Cockburn Sound. It is recognised Defence support is required. The project team is hopeful this can be achieved. This is not an assumption, it is the result of the initial modelling undertaken by WorleyParsons. More detailed work will be required, but the initial modelling indicates that the marina will flush in an acceptable time frame. The conclusion regarding slight improvement in water exchange takes into account both the marina and the altered causeway entrance (see Figures 14 and 15 in the SER). The necessity for further detailed modelling is recognised in the SER and will be undertaken if the project proceeds to the next level of environmental assessment. The modelling undertaken for the SER was carried out in consultation with the DoE Marine Branch. The SER presents the results from the simple box modelling used to estimate chlorophyll levels in the marina; this produced an increase in chlorophyll levels of a similar magnitude to those documented for other marinas in Perth’s coastal waters that are not as well flushed as the CPTP is expected to be, but that have better background water quality. The estimates are therefore considered to be ‘in the right ballpark’. The tidal prism calculations presented in the SER also indicate that the volume of water exiting the marina each tidal cycle is very small compared to the volume of shallow nearshore regions of Mangles Bay and the Shoalwater Islands Marine Park. Although there is some debate about whether the elevated levels of chlorophyll in Mangles Bay are due primarily to reduced flushing (due to the Causeway), or nutrient inputs from drains/groundwater, the proposed development provides the opportunity to improve both. Toxic cyanobacteria blooms are typically associated with highly nutrient enriched freshwater systems, and toxic dinoflagellate blooms with highly nutrient enriched conditions and strong salinity stratification in estuaries. Neither of these scenarios apply to the proposed marina, although the potential for algal blooms will certainly need careful examination if the project proceeds to detailed assessment.

No	Organisation	Topic	Submission	Response
			The harbour / marina is likely to have compromised water quality and may affect Mangles Bay by increasing the nutrient and already problematic epiphyte burden on the remaining seagrass beds, increasing near-shore phytoplankton (chlorophyll A) concentrations further increasing the light attenuation to the seagrasses and potentially by generating bio-toxic algal blooms. The excavation of the harbour or the dewatering may expose potential acid sulphate materials in' layers that were once dense seagrass beds that trapped the sediment of the cuspate foreland. Such layers are present in the southern cusp at Port Kennedy. Should such layers be present and become exposed then the inshore marine environment may be exposed to significant nutrient and metals contamination. The Garden Island causeway area has seen significant infestations of the European Fanworm Sabella. This exotic pest may benefit from the opening- up of the causeway (especially if it reduces peak sea temperatures in the area) and, along with other ballast water organisms, may be able to establish populations in the marina (as it has now done in the Bandy Creek Boat Harbour in Esperance). The recreational vessels in boat harbours are potentially a significant vector of exotic marine organisms within State waters. The proponents claim that they will replace the direct loss of seagrass by transplanting. The strike rate from seagrass transplanting remains low and the long-term fate of treated areas remains highly uncertain and will require at least a decade for valid evaluation. The existing seagrass meadows in the area are under stress and this would no doubt increase at least during the construction phases of re-aligning the causeway, dredging channels and excavating the marina. We suspect the seagrass meadows will be subject to further long-term decline due to decreasing water quality, shifts in sedimentation patterns and boat damage associated with the marina project. The level of certainty associated with this measure negates it as a viable offset measure in response to government policy on seagrass loss. Mangles Bay is a vitally important nursery for King George Whiting Sillaginoides punctata stocks in the greater metropolitan region due apparently to its highly sheltered position, to the presence of seagrass meadows and beach wrack and a healthy population of harpacticoid copepods (Whitehead 2000, Hyndes et al. 1996). Clearly any interference to the seagrass meadows and coastal process in Mangles Bay constitutes a significant threat to this stock. The Fish Resources Management Act 1994 requires the Minister for Fisheries to protect all fish stocks. It is noted that this requirement is not mentioned in the review of relevant legislation.	Epiphyte growth in the nearshore seagrass beds of Mangles Bay is fuelled by nutrients in groundwater and stormwater. The project will result in the discharge of the groundwater to the marina where a significant proportion of these nutrient inputs entering the marina will be taken up by phytoplankton, and subsequently flushed from the area. Therefore, fewer nutrients will be available for epiphyte growth. The seagrass meadows are in extremely shallow water, and any light limitation will be due to epiphyte loads or particulate organic matter, not light attenuation due to phytoplankton. If acid sulphate soils exist, they are readily managed. Should the project proceed to detailed assessment, a key study required will careful identification of the extent and severity of acid sulphate soils and the management needed. There is a large amount of recreational traffic in the Shoalwater Islands Marine Park and Cockburn Sound and so the potential for introduced marine pests from recreational vessels already exists. An introduced marine pest management plan will be a key part of the operational management plan for the marina. With respect to seagrass rehabilitation and the importance of Mangles Bay as a nursery for King George Whiting, refer to section 3.5.
			Mangles Bay is also thought to the key nursery area for Blue Swimmer Crabs in Cockburn Sound. These crabs are also an important commercial and recreational target species in the area. Boating impacts (eg. mechanical damage, propeller damage, wildlife strike, local over- fishing) are already a significant unresolved problem in the Shoalwater Islands Marine Park. The increase in boat access resulting from the presence of a marina will escalate these impacts.	See section 3.5.

No	Organisation	Topic	Submission	Response
		Terrestrial Impacts	The least worst case 2.4 option for the project will directly remove 30.9 ha (29%) of the native vegetation from BFPA 355. Further native vegetation will no doubt be lost to edge effects, dewatering and the increased penetration of the salt wedge. The potential threatened ecological community (TEC) area with mature, deep rooted, Melaleuca, Callitris, Tuart and Acacia stands will almost certainly be claimed by the dewatering of the canals if not by the subsequent intrusion of saline groundwater. The proponents obscure the fact that the harbour / canal system will claim the most structurally complex area of vegetation (including closed forest and thicket) on BFPA 355 as this occurs on the northern side of the peninsula (photo). The strategic environment review does not mention the loss of the landscape / scientific values of the cuspate foreland dune system between Lake Richmond and the coastal limestone at the Point. This is the northern cusp of the sedimentary feature that is continuing to be degraded by development at Becher Point. In claiming that these losses of remnant vegetation on Point Peron can be offset by purchasing "equivalent" bushland elsewhere the proponents are ignoring the fact that this vegetation has been isolated as an island. The persistence of animal species such as the Quenda will depend on the absolute amount of contiguous habitat area remaining as well as the protection of critical resources (eg. dense low vegetation for predator security). It is likely that the Quenda is already close to extirpation on the Point Peron peninsula and the proposed clearing would negate the prospect of recovery under improved Regional Park management. Their really aren't any suitable offsets left of this size in comparable coastal locations in Rockingham	Consideration of edge effects, temporary drawdown and inland migration of the saltwater wedge will be included in the next phase of environmental assessment. They were not considered potential 'fatal flaws' at this stage of environmental review. The most common vegetation units to the north of Memorial Drive (Bennett 2005), VU 12 and 16, were also the most common vegetation units south of memorial drive and east of Lease Rd. Vegetation on both sides of Memorial Drive were also described as in 'good' condition according to Bush Forever criteria. Therefore, there is no botanical evidence to suggest that the vegetation north of Memorial Drive (other than the tuart vegetation unit identified as a possible TEC) is of higher value than that south of Memorial Drive. The project will not result in the 'loss' of the key landscape features in the area (Point Peron, Mount Atom and Lake Richmond).

No	Organisation	Topic	Submission	Response
		Impacts on Lake Richmond	In order to downplay the threat posed to the Threatened Ecological Community of thrombolites by saline intrusion from the marina are suggesting that this microbialite assemblage may have developed in seawater and would be tolerant of higher salinities. The proponents state: "Historically, Lake Richmond was saline as it was connected to the marine environment. Water quality in the lake in the mid 1960s was brackish to saline with 2000 to 3500 mg/i dissolved salts recorded (English et al. 2003). In the 1960's drains were installed to drain Rockingham's Stormwater into Lake Richmond which have stabilised in the range 300 to 400mglL totally dissolved solids". Lake Richmond was cut off from the sea by the accreting cuspate foreland of Point Peron about 4000 Years BP. Whilst thrombolites are examples of the most ancient forms of life the structures in the Lake have been dated back to 1400-1500 Years BP, that is long after the connection with the marine environment had been severed. The evidence suggest at the unique microbialite communities in Lake Richmond developed in high PH (8.3 -9), low salinity (< 1.4 ppt) environments rich in calcium, bicarbonate and carbonate from groundwater flowing through Holocene dune sands (Moore 1993, Moore pers.com). Prior to European settlement Lake Richmond was an important camping ground for Noongar people due to availability of fresh water and associated plant and animal resources (Trevor Wally pers.com). In 1904 it was a declared a freshwater reserve by the Western Australian Government. During the Great War the Lake was used to water military horses (NB. Horses cannot use brackish water). Residents of the area in the 1960s (e.g. Rod Lenanton pers.com) recall that it was a freshwater lake at that time. Kenneally et al. 1987 suggest that Lake Richmond that was becoming increasingly brackish in the 1 960s. Stormwater inputs from the 1960s onwards and the construction of a drain to Cockburn Sound had the effect of reversing this trend. The drain was designed with double sluice gates to prevent tidal seawater intrusion. The thrombolites will almost certainly be affected by increased salinity. This microbialite community also appears to be dependent on a high pH environment for deposition of the calcium in the thrombolite structures. Acidification of the groundwater by the exposure of acid sulphate soil layers would also be a serious threat to the Threatened Ecological Community. Lake Richmond also supports another threatened ecological community referred to as "Sedgelands in Holocene Dune Swales". These freshwater communities would also be threatened by saline intrusion or acidification.	That is not the intention of the background information provided. No adverse impact on the hydrological regime Lake Richmond or its thrombolites will be considered acceptable by the project. This is made clear in the SER.

No	Organisation	Topic	Submission	Response
			The respondent's have a great deal of scepticism about the salt water-freshwater interface model presented on page 81. Neither the consultants, (questioned at one of the forums), or hydrologists with whom we have had discussions could provide an adequate explanation of the conveniently oblique saline interface (blue lines) post marina. We strongly suggest that the EPA gets independent advice on this model. We note that none of the assumptions listed on page 80 are valid or likely to be valid and that the model does not consider seasonal variations in the freshwater inflow or predicted sea-level rise on top of tidal / pressure variation. The phreatic surface of Lake Richmond can be lower than sea-level in February and March. The consequences of getting the groundwater impacts wrong are likely to be serious if not terminal for the threatened ecological communities of the Lake. History has shown that proponents / consultants consistently do get it wrong. The tidal impacts of the Dawesville Cut were under-estimated leading to significantly increased environmental impacts. It is now apparent that native vegetation is being killed up to 750 m from the dewatering point in the Creery Wetlands and. saline intrusion in water bores is occurring over a wide area. These impacts were not disclosed in the environmental assessment of this project and should be treated as "environmental harm" triggering prosecution.	WorleyParsons undertook preliminary groundwater modelling based on simple assumptions for the purpose of an initial assessment of the likelihood of salt water intrusion from Lake Richmond. More detailed assessment will be undertaken if the project proceeds to a formal environmental assessment. These investigations would be likely to include: - investigation of the hydrogeological relationship between Lake Richmond and the underlying aquifer based on geological logs, groundwater levels and water quality in the lake and groundwater - groundwater flow modelling to predict the hydrological changes that will occur in the area due to the inland marina and assess the risk of salt water intrusion into the lake, exposure of acid sulphate soils or a change in lake water levels - characterisation of stormwater inflows - aquatic fauna sampling in Lake Richmond - investigation into the threatening processes that may be affecting Lake Richmond.

No	Organisation	Topic	Submission	Response
		Summary	If the proponent is to progress this project in any way it would appear that the following would have to be determined: • The Department of Defence / Navy has consented to the re-alignment and design of the causeway. • The seagrass replanting was successful in establishing meadows of equal size, density and vigour as those to be lost to dredging, causeway reconstruction, changed sedimentation patterns, boat damage and turbidity. • That the planted seagrass was not then lost to changes in coastal processes. • The oceanographic (flushing) model used for the Mangles Bay area should be subjected to independent peer review and validated with actual field measurements. • The hydrodynamics of the proposed inland harbour and canals should be modelled. • The consequences of the proposed development on the metropolitan stocks of King George Whiting and Blue Swimmer Crabs are fully understood. • The boating impacts on the Shoalwater Islands Marine Park are predicted and management measures introduced into the Marine Park Plan. • The existence and distribution of potential acid sulphate generating layers should be determined with a comprehensive core sampling program. • The groundwater (saline / freshwater interface) system should be fully understood based on the monitoring of a comprehensive array of observation bores over at least 3 annual cycles. • That the environment consequences of consequential developments eg. parking outside the development and re-routing the Sepia Depression waste water infrastructure are assessed along with the marina proposal. • Access issues will be a problem for such a major tourist development. These will involve major road construction. We are against constructing the garden Island Freeway to provide access to this site because of the damage it would do to Lake Richmond and the social environment of Rockingham. James Point would have much better access because of the new port and outer harbour. • This site is quite inappropriate for a marina for the reasons stated above. If a marina is needed in Rockingham why don't they look at alternative sites, such as James Point, which are already highly degraded and could be developed into a suitable marina with little further damage to the environment. The marina (Fisherman's Harbour) adjacent to the port of Fremantle works well so why not locate it adjacent to the new FPA outer harbour, rather than destroying Mangles Bay?	All the issues raised were discussed in the SER at a strategic level and will be addressed in detail if the project proceeds to the next level of environmental assessment. Consultation would be undertaken with the relevant agencies and stakeholders to ensure that these issues are satisfactorily addressed.
194.	Rockingham Bays Seagrass Monitoring Group (RBSMG)		The Rockingham Bays Seagrass Monitoring Group (RBSMG) is a small voluntary group of between eight and twelve local residents who are concerned about the state of the seagrass meadows off the Rockingham Coast. None of the members has any financial interest in the Cape Peron project. The group meets about ten times year to plan and carry out research into the health and growth of seagrass. Members became aware of the lack of on site information of the state of the seagrass meadows in the area and formed the RBSMG. The group has received grants from Coast Care and from Fremantle Port Authority towards data analysis and equipment including an underwater camera.	Noted.

No	Organisation	Topic	Submission	Response
		The Group's Methodology	In November 2004 the group began again with the new methodology based on CALM's Community Group Monitoring Manual and with hands on help from a CALM marine environmental scientist. The group has established twenty sites from Mangles Bay in Cockburn Sound to Becher Point in Warnbro Sound. The sites are in groups of four seagrass patches or in the case of Mangles Bay one patch and three reverse patches of sand because of the presence of sand patches caused by the swing moorings prevalent in the Bay. The centre of each site is marked by a truck brake drum with a perspex disk screwed to the face containing eight compass points and with a small hole in the centre to allow a spindle to be inserted. Sites were carefully selected to be manageable for the group: they are all accessible from one of the local boat ramps and they are all in less than 2.5 metres of water. For consistency purposes the sites are in groups of four, usually with each pair in proximity, and for comparison purposes they contain so far as possible only one species of seagrass Posidonia australis. The methodology comprises five types of measurements taken annually at the same time of year for each site. The measurements are tape measurements, description of species, observations of seagrass cover density, observations of the density and type of epiphytes, and underwater photographs. Tape measurements are taken on eight compass bearings from the spindle in the disk on the brake drum placed near the centre of the patch out to the edge of the seagrass rhizomes. Measurements are taken to the nearest centimetre. Usually one diver with a compass aligns the tape measure straight along the bearing verifying the disk reading with a compass reading while another diver (with scuba gear for most sites) takes the reading and transfers it to paper underwater or relays the measurement to a recorder on a boat. Seagrass shoot density is estimated visually with three levels — low, medium and high - depending on the amount of bare sand visible between the stems. Epiphyte density is also estimated visually as sparse, medium and dense depending on how the epiphytes cover the blades of grass - low has at least half of the blades green with no epiphytes, medium has most of the blades with some cover and dense has thick coverage of most of the blades. An effort is made to describe the epiphyte type - red, brown, green, crusty or filamentous. Water quality is not sampled but is usually commented on if note worthy. Recordings are entered into an online data base which calculates the area of the patches. Measurements are also entered manually onto graph paper to enable a visual assessment of growth. There is a checking process to ensure that incoming measurements are relatable to last year's measurements. Sites whose measurements are not consistent with the previous year's results are remeasured to make sure. This happened following the tsunami on Boxing Day 2004.	Noted.

No	Organisation	Topic	Submission	Response
		Results	All sites have now been measured twice twelve months apart. Sixteen sites have been measured three times over 24 months including Mangles Bay. Most sites have shown growth in the size of the seagrass patches or a decrease in the size of the reverse sand patches in Mangles Bay. In Mangles Bay the increases at the four sites average out at around 10-15 cm per year. In 2006 one site in Shoalwater Bay has disappeared completely having been reduced by 25% in size after the 2005 tsunami.. In the following year both the marker drum and the patch were unable to be located even with the use of GPS. Although observations of wrack on beaches often reveal large collections of rhizomes of other species of seagrass even without storms, the patches of P. australis seem to be mostly quite stable unless there are exceptional events like the tsunami. Seagrass density and epiphytes in Mangles Bay are different compared to the other sites with sparser seagrass coverage and denser epiphyte coverage. The water quality has been observably reduced at each monitoring in comparison to the other sites. At times visibility has been less than 1.5 metres. In 2005 it was necessary to return to the site on another day due to poor visibility to locate one of the monitoring patches.	Results noted.
		Discussion	The state of the seagrass meadows in Cockbum Sound has been acknowledged by numerous authorities including the Cockburn Sound Management Council. It has been estimated that 80% (over 2200 hectares) of the seagrass has been lost in Cockburn Sound over the past 40 years (State of Cockburn Sound 2005) although perhaps 34 hectares has spontaneously regrown recently as shown by aerial photographs (D.A.Lord appendix 8). Conventional wisdom about seagrass growth says that seagrass stops growing when deprived of light. Turbidity and epiphyte cover sufficient to reduce sunlight by unknown amounts are thought to kill seagrass in three months. The reason generally given for the loss of 80% of the seagrass in Cockburn Sound is high nutrient levels in the water promoting epiphyte growth (Cambridge et al., 1986). The Cockbum Sound Management Council has rated the water quality in Mangles Bay as meeting the guidelines. However the shoot density indicator failed to meet the standard and is now in the “investigate” mode (State of Cockburn Sound 2005). Its recommendation is that water quality must not be worsened and must be improved. CSMC recommended that water quality must not decline further and effort must be made to improve water quality in the area. An indication of the poor conditions in Mangles Bay comes from a comparison with Jervis Bay. Reports of natural rejuvenation of P. australis on sand patches in Jervis Bay indicate that there the regrowth proceeded at about 20 cm a year. In Mangles Bay over two years the average has been 10 — 15 cm a year. This may be accounted for by the poor water quality and much of the growth might be due to the shallowness of the water which allows a modicum of sunshine to penetrate. (SER) An alternative explanation for seagrass death in Cockburn Sound has been given by Dr Eric Paling of Murdoch University. He believes that the major loss of seagrass coincided with the construction of the causeway to Garden Island and was due to the excess and continued turbidity from the reclamation (Public Meeting 17 March 2006 and also Appendix 8 of SER).	Noted. Appendix 8 states “The most rapid loss occurred between 1967 and 1981 (Cambridge and McComb, 1984) on the eastern flats portion of Cockburn Sound, while losses documented between 1971 and 1973 in the southern portions of Cockburn Sound (DAL, 2000) have been attributed to the construction of the Causeway to Garden Island. This is not an alternative explanation for seagrass losses, the causeway is considered another factor responsible for its decline in a specific area.

No	Organisation	Topic	Submission	Response
		Rbsmg's Recommendations To The Epa	Recommendation one Whatever the explanation for loss of seagrass is Cockburn Sound, the RBSMG believes that much of the seagrass in Mangles Bay would be placed at risk by the construction and existence of a canal-based marina of the kind proposed by the Cape Peron Tourist Precinct Steering Committee and that this should constitute a 'fatal flaw'.	Figure 2.1 in Appendix 8 shows that much of the seagrass in shallow water adjacent to the causeway has not been affected in the long term by the construction of the causeway. The exception is the areas adjacent to the causeway openings which have experienced increased flow rates. The presence of seagrass directly adjacent to the causeway in areas that would have been affected by turbidity caused by construction, shows that seagrass can survive these effects.
		Seagrass rehabilitation	Recommendation two The amount of $1 million may possibly be adequate for the initial rehabilitation of 7.9 hectares at $100,000 per hectare and the bald claim in the SER that seagrass rehabilitation "has proved feasible" (appendix 1) may turn out to be accurate. However the planting to date has involved many days of volunteer labour and in Cockburn Sound has been less than a complete success (40% to 90%). Replanting of failed shoots has had to be considerable although Dr Eric Paling maintains that the lack of success of planting was due to deficiencies in the methods (Public meeting 17/3/06) and is optimistic about the success of later attempts. The effects of winter storms, of turbidity from dredging, winter scouring after opening of the causeway and damage due to boating are also unknowns. The optimism of the wording on page 105 "feasible providing conditions are suitable" is revealing. When are conditions in the marine environment ever completely suitable? With at least 9.7 hectare to be planted as offset (8.3.3.) plus the possibly 50% for replanting, there will be nothing left of $1 million for ongoing monitoring of ecological functioning for perhaps eight years following approval of the project. The RBSMG believes that the techniques have not been sufficiently proven and that more work should be done to prove the long-term sustainability of transplanting seagrass in Cockburn Sound before approval of the project.	Advice from Dr Eric Paling and Dr Des Lord indicates that $100,000 per hectare is a generous amount for manual transplanting even assuming no voluntary labour, monitoring and top up planting if required. Evidence that successfully transplanted shoots are spreading indicate that even a planting 'success' rate of 40% may be sufficient to establish a continuous seagrass meadow in time. Completion criteria and triggers for top up planting will be determined for the project in the next phase of environmental assessment. The overall aim of the rehabilitation would be to establish a seagrass meadow within 5 to 10 years of the initial transplantation effort. The SER states that seagrass rehabilitation has been proven so far only in the short term (up to 4 years) and that although the trials look successful they will need to be monitored to ensure the seagrass will survive long-term. To increase the certainty regarding the feasibility of seagrass rehabilitation in Cockburn Sound and specifically Mangles Bay, the following is proposed: "Should the proposed development be approved by Cabinet, to proceed to the next stage of detailed design and environmental assessment, it is proposed to commence seagrass rehabilitation trials in the Mangles Bay area immediately. It is recognised that demonstration of the ability to rehabilitate seagrasses would add significant confidence to any final proposal submitted to the EPA for detailed environmental impact assessment."
		Seagrass rehabilitation cost	Recommendation three The RBSMG suggests that the figure of $1 million is inadequate to fund repair in even best case scenarios when there will be no replanting. The amount shows no provision for ongoing monitoring of ecological function.	Advice received from Oceanica (marine consultants), Dr Eric Paling and Dr Des Lord is that this amount is generous and will be sufficient to provide for the initial planting effort, monitoring and supplementary planting.

No	Organisation	Topic	Submission	Response
		Mangles Bay water quality	Recommendation four The RBSMG is aware of the proposal to open up the causeway to 600 metres and to design the canals so that there will be two entries to enable flushing that, according to the computer modelling by Dr Karen Hiliman of Oceanica, will flush the whole canal system within 6 days at the worst. (Paper presented to Stakeholders Reference Group 2005). There remain concerns about where the flushed pollution would go. Would it further compromise the water in Mangles Bay? The RBSMG requests studies be conducted to investigate the potential decline of the already poor water quality and that would take into account the compounding effect of the already impacted water quality in Mangles Bay, Palm Beach and Rockingham Beach that may result from the proposed flushing of polluted water from the canals into Mangles Bay and exacerbated by the exceptionally low tides and minimal wind forces that occur in the area. There have already been occasions to close the beaches by council for health reasons.	The initial modelling by WorleyParsons indicates that the marina flushes mainly to the west and will quickly be diluted in the ocean waters. However, the request for further work is acknowledged and further work to investigate and model the impact (including cumulative impacts) of the marina on water quality will be undertaken if the project proceeds to the next phase of environmental assessment.
		Causeway lengthening and sedimentation of canal entrances	Recommendation five There are concerns about the impact of winter storms and of sand and wrack deposition along Mangles Bay which might block the dredged entry to the canals and result in seriously toxic algal blooms within the canals. A letter from a Secretary of Defence Establishment stated that the Department of Defence has no plans to reroute the causeway or extend the trestle bridge (Stake Holder Reference Group 2005). The cost has been estimated at $25 million and security of the only road access to the Navy's only western base has been questioned should canals with pens for boats be placed alongside the road. The RBSMG believes that further computer modelling should be carried out to determine the worst case scenario of the effects on water quality both inside the canals and in the Bay of winter storms blocking either or both entrances to the canals. The RBSMG believes that further tests should be carried out to determine the worst case scenario of the effects on water quality both inside the canals and in the Bay should winter storms block either or both entrances to the canals. RBSMG also requests that failure to move the Causeway and failure to open up the trestle bridge to 600 metres be considered a 'fatal flaw'.	The realignment and lengthening of the southern causeway entrance can only be undertaken with the full consent and cooperation of the Department of Defence, even though the project has budgeted to bear the full cost. Discussions are proceeding with the Department of Defence. The marina will be designed to minimise accumulation of material in the canal entrances. Modelling of winter conditions will be undertaken to determine likely water movements and sediment accumulation. Dredging may be required in some conditions to ensure the canal entrances never become 'blocked' and water exchange is maintained.
		Construction effects	Recommendation six Mangles Bay is very shallow. There are photographs of spring tides exposing up to 50 metres of seagrass and therefore leaving maybe a further 100 metres in very shallow water. The length of the dredging in the Bay appears to be about 700 metres, its width has not been stated by the proponents but would be expected to be at least 30 metres. The depth has been stated as 2.4 metres. There will also be dredging at the western entrance. What would be the effects on water quality of repeated dredging of the entrance in order to ensure an effective 2.4 metres depth at all times? The RBSMG believes that the EPA should call for studies of both this issue and of the assertion by Dr Paling that the whole scale loss of seagrass was due to the construction of the causeway.	The dredging method, potential impacts and management have not been established at this stage. These issues have been acceptably dealt with in other harbours in Western Australia. If the project proceeds to the next level of environmental assessment, construction and dredging impacts will be fully investigated.

No	Organisation	Topic	Submission	Response
		No offset for seagrass loss	Recommendation seven The SER's position is that the provision of offsets against the loss of seagrass "is expected to" meet the EPA's requirement for no net loss of seagrass. The proponents have similarly optimistic views of the effectiveness of terrestrial offsets. The RBSMG does not believe that a modern view of ecology can allow for such naïve assumptions that one habitat can simply be replaced elsewhere by replanting an entirely different species in another location. Seagrass meadows are well recognised for their role in providing a valuable and important habitat for broad range of marine fauna and are an important source of primary productivity in nearshore areas. Loss of seagrass habitat in the marine environment with its flow on effect to broader nearshore marine system cannot be compensated for by mitigation, The RBSMG calls on the EPA to demand that the proponent provide evidence of not merely the survival of transplanted seagrass but the reestablishment of complete marine flora and fauna systems.	The aim of the seagrass rehabilitation will be to establish a full seagrass meadow with a return of ecosystem function within 5 to 10 years of initial planting. Return of ecosystem function has been demonstrated in replanted seagrass in Albany.
			Recommendation eight In dealing with issues in mitigation of loss of seagrass the SER treats everything with blissful confidence (6.2.4 page 108). The SER states that "It is intended that fewer boats . . .will have environmentally friendly moorings that don't damage seagrass (sic)." There is no evidence of any financial commitment by the proponents to the provision or moorings. Marina facilities "will ensure that informal refuelling practices and illegal sullage disposal no longer occur." There is no guarantee of this.	The project recognises the damage done by long-chain moorings, and aims to undertake the following to improve the current situation in addition to any DPI management. - subsidise the cost of replacing long chain moorings with sea-grass friendly moorings - where suitable conditions exist, transplant seagrass into the many existing mooring scars (where people change their moorings over or have been previously vacated) - offer an alternative (in the form of pens) to moorings to boat owners. Note they have no choice but to establish a mooring at the moment.
			Further the discussion of mitigation contains many items that could be implemented without the marina. For example improved boat ramps could undertake the educational, research and surveillance roles which the SER claims the "development offers a means and support" for. On the contrary the expected traffic flow stimulated by the movement of 3,800 vehicles at weekends (7.2.3 page 114) would be likely to have unexpected deleterious effects unless considerable sums are expended to educate and monitor. There are no measures suggested in the SER to pay for this. Finally in the summary discussion of Mitigation measures (8.3) it has to be pointed out that the amount of money for offsets totalling at most $6.8 million is tokenism in relation to the expected $500 million economic impact (1.3.1 page 4). The RBSMG recommends that the amount of money allotted for mitigation for loss of seagrass should be increased to allow for adequate replanting and undersea monitoring of results for an adequate period.	The SER has used the current situation as a base case when predicting the impacts of the marina and project offsets. The $/ha for seagrass rehabilitation will cover both monitoring and replanting.
207.	Rec Fishwest		Thank you for the opportunity to provide comment on the proposed Cape Peron Tourist Precinct Project. Recfishwest is the peak body representing the interests of the estimated 643,000 recreational fishers in Western Australia. We are formally recognised and funded by the Government in that role. Recfishwest places the highest priority on preserving the future of recreational fishing and the resources it depends upon in Western Australia.	-

No	Organisation	Topic	Submission	Response
		Seagrass losses	Our principle concern with the project is the potential for further losses of sea grass in the already threatened area of Mangles Bay. Recfishwest has previously vigorously defended seagrass from any and all new developments and any further losses would impact on the already degraded ecology of Cockburn Sound.	The project will ensure that there will be “no net loss” of seagrass.
		Moorings	The moorings currently in Mangles Bay are under no form of management and desperately require environmentally suitable moorings. We believe as a minimum trade off for the loss of seagrass for the required dredging that the proponents should upgrade the moorings to the same standards as Rottnest Island, with a preference that the moorings be moved eastward away from the seagrass beds in Mangles Bay. Recfishwest does not support the complete removal of the moorings as we believe the public should have the option for a cheaper alternative to moor their boat other than the proposed marina.	The project recognises the damage done by long-chain moorings, and aims to undertake the following to improve the current situation in addition to any DPI management: - subsidise the cost of replacing long chain moorings with sea-grass friendly moorings - where suitable conditions exist, transplant seagrass into the many existing mooring scars (where people change their moorings over or have been previously vacated) - offer an alternative (in the form of pens) to moorings to boat owners. Note they have no choice but to establish a mooring at the moment - the project does not propose the complete removal of all moorings but would welcome DPI introducing a management regime for mooring in this area. There is a proposal to undertake a trial incentive scheme to replace a selection of swing moorings in Mangles Bay with seagrass friendly fixed moorings. This will commence as soon as possible in the second half of 2006 (SER section 6.2.4).
		Water quality	Recfishwest requires an assurance that the water quality of Cockburn Sound will not be compromised by the proposed development. A comprehensive action plan with clearly defined trigger points and defined penalties must be developed should water conditions change. The public would require substantial compensation should water conditions be affected as result of the marina. Recfishwest has long been concerned about poor water flow through the causeway. The attached letter to the Premier, dated 16th December 2005, highlights the extent of these concerns. We would not like to see the modification of the causeway impact on the water quality of Mangles Bay or cause sediment accretion around the marina entrance. Recfishwest believes a greater response and action plan must be made should this occur.	The initial modelling indicates that the water quality of Cockburn Sound will not be affected by the development and that there is likely to be a slight improvement in water quality in Mangles Bay due to the lengthening of the causeway entrance. If the project proceeds to the next level of environmental assessment, more detailed modelling will be undertaken to further define the risk to the water quality of Mangles Bay, Cockburn Sound and west of the causeway. Appropriate management, mitigation and contingencies will then be designed in consultation with stakeholders.

No	Organisation	Topic	Submission	Response
		Lake Richmond	The protection of the Lake Richmond environment is obviously a major issue controlling the likelihood of this project being granted approval. A detailed action plan should be developed in the event that any seepage occurs into Lake Richmond.	Any adverse impact on Lake Richmond from the project is considered unacceptable. Therefore, the focus will be on developing a comprehensive understanding of the lake, its connection to the groundwater system and the characteristics of the salt water wedge. This information will then be used to model the hydrological changes likely to result from the inland waterway. The model will be used to determine whether there is a risk to the lake from either dewatering, or inland migration of the fresh water / salt water interface. If there is an acceptably low risk of adverse impact on the lake, a monitoring program will be designed to confirm the results of the modelling if the project goes ahead. The monitoring program will be designed so that it provides an 'early warning system' of unexpected hydrological changes before they affect the lake. See section 3.3 for more detail.
		Disabled fishing platform	Recfishwest believes that in order for the development to be truly a community facility it must provide a disabled fishing platform and able body fishing access to fish the rock wall and jetties of the marina. Developers for the Port Coogee Marina were very receptive to our requests for fishing platforms and though not the only factor, subsequently received our full support for the project. Unfortunately, suitable sites for disabled fishing access are limited. However, marinas provide a perfect opportunity to develop new locations. We would be happy to arrange a meeting with developers when the time arises to choose a site for fishing platforms and their subsequent design.	A potential site for a disabled fishing platform has been identified in the concept plans designed by Taylor Burrell Barnett. A disabled fishing platform could be located in the area of the current southern causeway entrance that will be partially removed and replaced by the new alignment (see designs in the SER). If the project proceeds to the next design phase, consultation with Recfishwest to discuss appropriate locations and design will be undertaken.
		Effluent disposal	Effluent disposal is major concern of marinas which provide moorings for a 'large number' of vessels. Appropriate facilities must be put in place to deal with sullage and black water from vessels moored in the marina. The dumping of sullage in Cockburn Sound, or even worse the Marina, will have a devastating effect on water quality. Another water contamination event such as that which recently occurred at Hillarys Marina will not be accepted.	Appropriate sullage disposal facilities will be provided in the marina and will be available not only to boats utilising the marina but also to the general boat traffic in the area. This is considered a significant improvement on the present situation where there is no sullage disposal or re-fuelling facilities between Fremantle and Mandurah.
		Funding	Our final concern is who will pay for the management of the development. Will the responsibility be left with CALM or local council? A clear management plan needs to be developed outlining the responsibilities of organisations.	This question is addressed in section 0.
		Conditional support	Recfishwest is willing to give it's conditional support to the project provided that our recommendations mention above are incorporated into its development and planning and our questions are able to be fully answered.	The conditional support is acknowledged and if the project proceeds, Recfishwest will be considered a stakeholder in the project and will be consulted further to ensure that all issues raised are addressed.

6. INDIVIDUAL PUBLIC SUBMISSIONS

6.1 ALTERNATIVE SITES

Topic	Submission (verbatim)	Response
Wanliss St	8. Extensive alteration to the Causeway bridge and road system. There is an alternative site - the Wanliss Street area. Here there is deep water and an urban infrastructure already in place, with good access via existing roads and bus services. (5)	Planning constraints and private ownership of both the land and water at Wanliss St mean that there is no room for a 500 boat marina in this area.
Questioning the site	The decision to build a marina/housing/hotel development at a site that requires such extensive modification to make it SUITABLE must have reasons apart from stupidity. The 'vision' offered by the Rockingham Shire is skewered. This was the answer given in response to a question at a public meeting - "the Council brief was the site at Point Peron". (5)	Refer to section 3.14
Alternative sites	The proposed Point Peron marina concerns me because of; 1) the spread of unnecessary development. Walking along the Parkin Street and the foreshore there as so many derelict houses/developments why must we spread humanity to bush forever site. (14)	There is high demand for improved boating facilities in Rockingham. The houses and developments along Parkin St and the Esplanade foreshore are privately owned residences.
Alternative site	3) To ensure economic success of the Rockingham foreshore lets concentrate marina development around the existing jetties or Wanlis street. (14)	Refer to section 3.14
Consider alternative sites	This is a very important project and needs to be looked at from many angles not just tourist and boats, there are areas along the beach front that have already been destroyed for one reason or another please do not let another one go. There is a deep water channel further up the coast that would be far better fitted for this sort of thing. Would the people of Perth allow Kings Park be developed, NO! so leave the small piece of unspoilt area for those that enjoy ALL aspects of cape Peron. While you are at it remove 2/3 of the causeway and replace with a bridge to restore some of the damage done by allowing the water to flush the sound out, as last time Cape Peron was tampered with when all were told it would do no harm (many knew it would). (23)	The development is primarily based along the foreshore of Mangles Bay which is already developed and is not part of the Regional Park or the Bush Forever Protection Area. The project also extends back into the Regional Park in preference to extending out into the more sensitive marine environment. A complete planning review of the Rockingham coastline is beyond the scope of this project. The question being addressed is whether or not an environmentally acceptable project can be designed for Mangles Bay.
Consider alternative locations	I believe there should be a marina in Rockingham, but all possible locations should be looked at, not just the area of Mangles Bay which seems to be pushed by the council as the only location for a marina. I believe that Mangles Bay is an environmentally sensitive area with the possibility of Lake Richmond being affected and vote no to a marina in the Mangles Bay area. A much better alternative would be to locate the marina in the 'old Rockingham' area west of the grain terminal. (27)	Refer to section 3.14
Alternative location	I must, however point out that neither myself or my associates have any objections against a development of this kind, the problem is the position, for what ever reason silting up within Wanbro Sound has formed a groin almost adjacent to Safety Bay road, we believe this would be a far better position providing free and open access to the ocean and the attractions it provides. (52)	Refer to section 3.14.

Topic	Submission (verbatim)	Response
Alternative sites	There are bays and beaches all to way up to Fremantle, where a boat harbour could be build at a much lower cost, as they have done everywhere else, and they won't have to worry about clearing the silt out, that will bank up, as it does at the Naval Base. (67)	Refer to section 3.14 regarding alternative sites for the development. Mangles Bay is a low energy marine environment. Therefore, the movement of sediment in this area is much slower than other, less protected areas of the coastline. The coastal processes are already modified by the causeway and the boat ramp to the west of the project area and sediment builds up at these barriers. The project would include a sand bypass system which would provide a permanent solution to this issue of erosion/accretion along this coast..
Alternative location Maintain natural state of Point Peron	Point Peron does not need a marina, build one elsewhere. Please leave point peron in its natural state so as we can learn about our natural water ecosystem, and not damage the seagrass in Mangles Bay not to mention the effect on the bush and creatures that inhabit the area. Lets leave a little bit of paradise, unchanged by mankkind, like everything else. If a marina has to be built, why not at Wanliss st, Jetty, where there is already building and industry? (72)	Refer to section 3.14 regarding alternative locations for a marina. Refer to section 5 addressing the opposition to any development on Point Peron. Point Peron is no longer “unchanged by mankind”. The area has been partially developed and the remnant vegetation is considered to have been “severely altered by very obvious signs of multiple disturbances”, with weeds occurring extensively throughout the area.
Breakwater sufficient	If, as suggested by the Mayor, he is concerned about the safety of boats in the area - all that is needed surely, is a breakwater. This could be constructed from old tyres, chains and concrete. (113)	The footprint of a breakwater in Mangles Bay would be likely to result in greater seagrass loss than the current project designs. Also, that design would concentrate all the boating activity out in Mangles Bay instead of within inland waterways as in the current design. It is likely that the anchorage would also need to meet DPI standards for depth, and the shallow waters would require dredging.
Wanliss St Seagrass	Why not keep this wonderful area for our children and future tourists to enjoy as recreation in its own right, and build a marina close to Rockingham, such as Wanliss St Jetty, which is closer and more easily accessible to tourists and passing trade, and would not be destroying valuable sea grass beds in Mangles Bay. (116)	Refer to section 3.14 regarding alternative sites.
Wanliss St	7. why not build a marina at Wanliss Street jetty. (117)	Refer to section 3.14 regarding alternative sites
Wanliss St	Could the proposed marina not be built at Wanliss st Jetty? (118)	Refer to section 3.14 regarding alternative sites
Degradation of Mangles Bay	The draft policy of Mangles Bay does not show the particular circumstance or deficiencies of the plan. If the Bay was to be degraded for development, the marine environment of Cockburn Sound that sets Rockingham And Kwinana apart from a number of outer suburbs would become obsolete. (121)	The impacts of the project on Mangles Bay water quality and ecosystem are discussed in the SER. The preliminary conclusion from the SER is that there will be no adverse impact on water quality and even possibly a localised improvement. Construction impacts on the marine ecosystem will be temporary and offset.
Seagrass loss still unacceptable	In the past a number of proposals have been put forth for a marine based development at Mangles Bay, they have not been able to obtain environmental approval due to the event of an unacceptable loss of seagrass. The plan put forth by Land Corp & Co still remains to be inappropiate in regard to a new concept plan. (121)	The policy regarding seagrass loss states that there should be “no net loss” of seagrass, not ‘no loss’. Therefore, as seagrass transplantation techniques are successfully being undertaken in Cockburn Sound, there is an option to offset seagrass loss with transplanted sites.
Alternative site	If a marina is needed in the Rockingham area then a degraded area of coastline near James point could be used instead and this could minimise the social and environmental impacts. (135)	Refer to section 3.14.
Alternative sites	There really is no need for this proposal on this site. There are other sites on the eastern shores of Cockburn Sound that have fewer social and environmental values, where a marina could be constructed with fewer adverse impacts, if it is needed. (135)	Refer to section 3.14.

Topic	Submission (verbatim)	Response
Alternative site	If there is a need to add to existing marina facilities for boats in the Rockingham area then such facilities could be provided in other locations at far less environmental and economic cost. Unfortunately the choice of Cape Peron for the marina and the design of the proposal would appear to be motivated by a desire to develop and sell prime public coastal land for profit, land which has to this point been "out of bounds" to developers. (137)	Refer to section 3.14. The project includes many public facilities and is unlikely to make a profit and, more likely, will require a small government subsidy.
Alternative sites	My concerns: The need for a marina in Rockingham has been recognised for some years and despite several proposals a marina has never evolved, each having aspects that were unacceptable. The optimum word is 'marina', a secure environment in which boats can be penned for ease of access and in which they can shelter from bad weather. The proposal put forward is a canal development and it has to be asked why is it necessary to dig canals when we have kilometres of coast that with skilled engineering can provide for the needs of all those people with boats from tinnies to larger vessels. (139)	The aims of the project are broader than just housing boats safely. The project is intended to bring social and economic benefits to Rockingham through the development of recreation, tourism and educational facilities. Refer to section 3.14.
Alternative site	We acknowledge there may be a need for a marina in Rockingham, but I feel a better site is at Wanliss St Jetty which is nice and close to town for tourist accessibility & passing trade great for families like Hilarys. Rather than digging a 400 Birth canal site into sea grass floor and destroying all the fantastic marine playground and life. (143)	Refer to section 3.14. The inland marina has been designed specifically to minimise impact on seagrass and the marine environment.
Alternative site	I realise that we need a marina for the yachties, and for other tourist uses if we are serious about bringing tourists down, but it has been moated that it is too expensive to build just a jetty or marina (no profitable housing or construction), but why not at another location, specifically Wanliss Street Jetty, or is that the need for the big allocation of land to build the houses, hotels etc. I know that marinas and golf links never pay for themselves, and it is the housing around that pays for this. It would make great business sense to build faculities with such cafes, restaurants on a floating type jetty for eco-tourism adventures, especially being located centrally, near our ongoing fledgling café strip. I am sure that they would welcome the extra business of the tourist crowds as well. We don't want to divide Rockingham Beach front. We do not want two tourist areas/coffee strips etc., as the business people on the present café strip will be against it. (144)	Refer to section 3.14. The project is expected to complement not compete with the traditional beachfront and increase the overall number of tourist visitors to the area.
Alternative sites	I believe alternative sites were not given due consideration. The first step in my view should have considered all possible sites for safe anchorages/marinas. Then it would have been appropriate to develop a short list for further evaluation. But it seemed that the race was on to use Cape Peron. Wanliss Street has been mentioned many times in local discussion and yet it received little consideration in the report. Possibly the Cape Peron site is attractive because a big tract of public land can be exploited at probable little cost to the developers. Cape Peron could well have been the site for a southern campus of Murdoch University. Consider the beauty of Cape Peron as a Murdoch University Campus relative to the current location so close to a LIA! (156)	Refer to section 3.14.
Alternative sites	Alternative sites for the marina are only given cursory treatment in the report. (157)	Agreed. An extensive review of the Rockingham coastline is a planning matter and beyond the scope of the SER. However, the location desktop review conducted by the consultants and referenced in the ER concluded that Mangles Bay was a site that had the least constraints and the most opportunities.

Topic	Submission (verbatim)	Response
Alternative sites	There are a number of marina options and sites available which the proponents are aware of, but have chosen to continually ignore, despite community concerns being continually voiced. This was admitted to a meeting of the SRG group, and noted by one of its members (confirmation in council minutes attached as "Questions to the mayor") (159)	Refer to section 3.14
Alternative sties	7. I acknowledge that there may be a need for a marina in Rockingham but feel a better site is at Wanliss St. Jetty (the last jetty north towards the grain terminal..nice and close to town for tourist accessibility and passing trade, great family beach like Hilarys) etc. Rather than digging a 400 berth canal site into the sea grass floor and destroying all marine life that this seagrass beds supports. (164)	Refer to section 3.14. The inland marina has been designed specifically to minimise impact on seagrass and the marine environment.
Alternative site	I agree a marina would be great for Rockingham. One only has to visit Mandurah to see how many tourists their marina has brought into the town. However there is a much more suitable location for a marina in Rockingham. What is wrong with Wanliss Street? Pardon me, I almost forgot the dollar hungry developer who wants to create luxury housing, canals and hotels within the marina. The view wouldn't be the same from Wanliss Street would it, overlooking the grain terminal and the Kwinana Strip, with the major industries which create employment for so many of Rockingham's residents. No, I can see why they want to have the development overlooking the beautiful Shoalwater Bay! On a day when the summer sky is vivid blue and the sun is shining on turquoise dappled waters, this side of Point Peron is as picturesque as The Whitsundays, minus the yachties.! (168)	Refer to section 3.14 The project is not profitable and is likely to require some Government funding support.
Alternative site Bush Forever	I am hoping/praying that the persons making decisions on Point Peron marina will decide that a favourable position is at Wanliss Street. I think this a better place because then Point Peron will be left as a "bush forever" as wisely designated by past planners. At present it is mostly accessible to the public to enjoy a remnant natural coast. (176)	Refer to section 3.14.
Alternative site	The development is being promoted as a tourist based marina so all the extras such as shops, restaurants, tours and services will also be built in the marina. Why are we trying to duplicate what is already developing along the Rockingham foreshore? Surely it is more logical to build it in the foreshore area where it will be a natural flow between the marina, foreshore precinct and also any new rail line connection services already planned for the foreshore area. The only thing not there is room for residential areas, but that is no reason to destroy a natural and unique park	Refer to section 3.14. The project aims to complement not compete with the existing beachfront cafes.
Alternatives	(17) The community consultation has been aggressive and forceful with no alternatives to development of Cape Peron considered. There are other huge opportunities for Cape Peron which have not been considered, such as recognising its preservation value and turning into a park to complete the adjacent marine park. This need to be discussed openly before proposals for 3 different marina options are locked in. (179)	A comprehensive stakeholder consultation program was undertaken (SER Section 2.4.3) with many different mechanisms employed (public forums, small telephone survey, stakeholder reference group, website including public feedback page and an information line) to allow the community to comment on the project. This process has contributed to the development and review of option designs as well as identifying potential issues that would require further detailed investigation.

Topic	Submission (verbatim)	Response
Alternative site	We acknowledge there is a need for a marina in Rockingham but we feel a better site is at Wanliss St. Jetty (the last jetty north towards the grain terminal..nice and close to town for tourist accessibility and passing trade, great family beach like Hilarys) etc.Rather than digging a 400 berth canal site into the sea grass floor and destroying all that fantastic marine playground. Point Peron is a tourist attraction in itself where loads of divers are attracted to the easily accessible reefs, dolphin watch boat attracts hundreds of tourists there to watch the dolphins. Keep it for our childrens future. PLEASE DO NOT DO THIS IN THIS LOCATION (180)	Refer to section 3.14. The inland marina has been designed specifically to minimise impact on seagrass and the marine environment.
Alternative sites	If a marina is to be provided somewhere in the south of Cockbum Sound, I query whether serious assessment was made of a water-based marina, possibly without attendant commercial activities and accommodation, situated somewhere just south of the grain terminal in an area of the Sound virtually devoid of sea grass and marine life in general. The SER states that “In the initial consultation for this project, the community expressed interest in the evaluation of other potential sites for the marina development. Wanliss Street was identified by the community as a desirable alternative site. In response to this concern, a review of the benefits and constraints of Mangles Bay and other potential sites along the City of Rockingham coastline was conducted The constraints and opportunities for each coastline section were compared having regard to the project objectives (Table 2) to determine the potential for a marina-based development site. In summary, the review identified some potential locations where a marina-based development of some type could be considered in the future. The review concluded that for a marina-based development, Mangles Bay presents the least constraints and most opportunities when compared with the other sections of the coastline in the City of Rockingham. “. That conclusion is not surprising, given the grandiose objectives of the project. Those objectives went far beyond what appeared to be the chief objective stated as “The project’s primary aim is to meet the high demand for boating facilities in the Rockingham area.” as the full set of objectives included realising “the shared vision” (presumably for a large multi-purpose marina), providing “a complementary mix of marine and dry land facilities” (which pretty much ruled out Wanliss Street); providing “a range of tourist accommodation including affordable holiday options and activities”; providing “a family friendly development concept”; ensuring “the activation of street frontages”; providing “high quality public spaces including streets, boardwalks, squares and marine facilities” etc. It is clear that by setting up such a list of objectives, the proponents evaded having to properly assess a water-based marina, or indeed any location or style of marina other than the multidimensional one that was what they called their “shared vision”, notwithstanding their own admission that the “shared vision” of the community identified Wanliss Street as a desirable alternative site. A cynic might suggest that two additional reasons for the proponents’ preference for the land-based Mangles Bay site might be that the Bush Forever Protection Area 355 offers a virtually free site, and that the commercial activities at the Mangles Bay site are intended to subsidise the boat owners so as to avoid having the primary beneficiaries pay for the full costs of what they get to enjoy. On page 10 the SER states “These options all involved an inland marina (to minimise seagrass loss) and differ in layout and the extent of the land footprint. It was felt that an offshore marina involving the loss of a substantial proportion of seagrass in Mangles would not be found environmentally acceptable even with rehabilitation of seagrass.” It is my opinion that an offshore marina off Wanliss Street could be constructed with almost no loss of seagrass. The SER presents no detailed reasons for its rejection of that location, so I am unable to find either justification or refutation of my opinion. (185)	Refer to section 3.14. The cost of acquiring private land for the marina project would be prohibitive. There is no subsidy planned to any marina user. The full cost of the marina is intended to be borne by the users.

Topic	Submission (verbatim)	Response
Alternative sites	12. much better options for the general area are available that will result in better social, economic and environmental outcomes - I feel these need to be examined and discussed before this particular Cape Peron proposal goes any further. (188)	Refer to section 3.14.
No development on Cape Peron	[2] How lucky we are that the foresight of earlier generations prevented housing development at Cape Peron. Although the Cape Peron precinct is far from pristine, it is one of the best park areas we have in terms of preserving a tiny fragment of mainland Perth region coastal environment to hand on to future generations. [3] I am saying that it is incumbent on us, the wealthiest generation of West Australians in history, not to permanently alienate this 40 plus ha of the Rockingham Lakes Regional Park with the proposed marina / canals / luxury housing / commercial development. All of the proposed development options are gross intrusions into the miniscule Cape Peron landscape and will inevitably increase pressure on those remaining public areas. [4] I wonder what my grandchildren will say to their grandchildren in 2060 when asked why our generation allowed development to intrude on and crowd the coast to such an extent. By then they will have to travel to the south coast to have any chance of experiencing the quiet recreational values that we luckily take for granted. (192)	Refer to section 3.13. The project will provide facilities that cater for passive recreation in the park while protecting the environment with formalised walkways, cycle paths, lookouts and public toilets.
Alternative sites	[5] On the subject of the need for a marina or small boat harbour I would say that it should be built in the Sound and should not be based on canals. We have experts in government departments to do with ports and harbours and they should plan the facility. This is not "rocket science" or anything new, there would be hundreds of small boat harbours / marinas created around the world from which our engineers can draw up the best options for the southern end of Cockburn Sound. A boat harbour / marina for Rockingham should be promoted and financed in its own right as a stand alone project, not as a appendage to a luxury seaside canal housing project (192)	Refer to section 3.14. Marinas are costly to build and in this case, a residential component to the development will offset the cost of the project and the public areas.
Alternative sites	Page 24, point 4.2.1 — Site History - Why wasn't the community invited to comment on these other possible locations? Some of these locations already have plenty of infrastructure in place such as residential accommodation and hotels, roads and car parks. Wanliss Street would be suitable for a marina and there would be no need to dig up Cape Peron. Or is that the point of all this - a way to get Cape Peron and the Parkiand used for canals and residences, commercial activity and hotels etc. It is the community which has to live with the results of the project. (216)	Full consideration of the entire Rockingham coastline including consultation and other designs was beyond the scope of this project. The task was to investigate the potential for a marina at Mangles Bay.
Alternative sites	The Alternatives Build a marina at Wanlis Street or some other location. The infrastructure is already in place at Rockingham Beach. Extra high rise residential accommodation could be built as 'infill' if desired, another hotel if that was wanted, commercial activity could be built further back from the beach. Only activities that are essentially connected to the beach should be located on the shoreline. This would provide just as many employment opportunities. The elements most relevant to the marina in the SER could be addressed without taking the park and bushland from the people. As for canals and public art, there are plenty of these already. (216)	Refer to section 3.14.
Alternative sites	We are not against this proposal Tourist Precinct being built elsewhere in Rockingham, where precious natural values will not be destroyed. The marina should go where established tourist precincts already exist, such as Rockingham or Kwinana beaches. Cape Peron belongs to all West Australians to enjoy. The proposed Tourist Precinct would benefit only a few, excluding the general public that it all belongs to. (218)	Refer to section 3.14 The Tourist Precinct will be open to the general public. Much of the Mangles Bay foreshore is currently occupied by private leases with limited public access.

Topic	Submission (verbatim)	Response
Alternative site	A marina in the Rockingham area is necessary to provide safe anchorage for boating but there are other areas available which would not lead to loss of habitat. On a recent long weekend 24 yachts anchored off Becher Pt. This area has been excluded as a site for a marina because it has been reported to be a breeding for fish on which fairy penguins feed but same site has been proposed for a desalination plant! (219)	Refer to section 3.14.
Alternative sites	The issue of project options bedevilled the proponents who constantly referred to their options as if they were the only possible courses of action to improve Cape Peron. Frequently anyone who questioned the proposals, was described as wanting to “do nothing” and “against a marina” and stakeholders and the community were frequently told that this was Rockingham’s only opportunity to have a marina. This language was common amongst some stakeholders and in the media but surprisingly it was formalised by the proponents in the Options Comparison Matrix produced for the July SRG meeting. Four so-called options were listed on an A3 sheet. The first was headed “Do Nothing” and was amplified in the following terms amongst others: • No Development • No commercial Marina Facilities • Existing boating access to Cockburn Sound maintained • Needs of boating community not addressed • No direct vegetation clearing • Further degradation of vegetation in areas with uncontrolled access • Activity and visitation limited to existing users • Existing mooring facilities (226)	These assertions were not part of the SRG presentations. The “do nothing” scenario is a hypothetical situation that allows comparison of outcomes.
Alternative sites	There are other sites far more suitable for a marina and have far less impact on the environment than Point Peron. We do not consider this submission to be confidential. (232)	Refer to section 3.14.
Wanliss St not a good alternative	3. The foreshore area near the old town centre is already heavily congested with traffic and tourists. To continue to pack an even greater amount of development into this small area will simply place greater stresses on it. There can be no margin to think that placing the marina in this location is an alternative – irrespective what some local conservationist might argue about the studies conducted to determine Mangles Bay as the most appropriate place. Existing town planning for this area will greatly enhance it (Village Green and so on) but to superimpose a marina then along the foreshore at Wanliss Street will be an eyesore and only provide for a rock seawall. All the other amenities (educational centres and the like) will be lost as there will be insufficient places to construct them). (233)	Noted.

6.2 MARINE ISSUES

Topic	Submission (verbatim)	Response
Causeway re-alignment	Will the Garden Island causeway be diverted first to ensure an improvement of water quality prior to any other operations? Note: The proponents claim that by doubling the length of the Garden Island first bridge this will improve the water quality in Mangles Bay. Worley Parsons report indicates only partial improvement over short periods See Table 2.1& 2.2 The assumption used is that this will double the water flow. In effect this is not true since by reducing the flow rate there will be less scouring beneath the existing bridge span and the sand bottom will reduce in depth and the flow rate increase accordingly. The scouring will still be present in the extended bridge section and subsequently undercut and kill the sea grass section beneath and to the east of the extension. Further there will still be sand migration (Commonly from West to East) which will accrete to the East of the remaining causeway and further kill the sea grass. This is evidenced by the continuous dredging of the existing Point Peron Boat Ramps This one fact discredits the proponents statement that only 6 hectares of sea grass are at risk (See Also Fig 2.1 Fig 1 Oceanic Consulting P/L.(1)	The staging has not been determined as yet. The Worley Parsons report does not assume a doubling of the flow, the effects were modelled rather than calculated, and the model took into account the bathymetric surface, wind and tides. Under the modelled conditions, the flow rate through the opening does decrease. The seagrass loss due to flows through the lengthened causeway entrance has been included in the indirect seagrass loss figures presented in the SER. Also, the reduction in flow velocity near the current entrance may reduce the range of the scouring effect and allow seagrass to grow a little closer to the entrance. This has not been included in the indirect seagrass impact figures. The sand will still accumulate to the west of the causeway and boat ramps as it does presently. This will be transferred to the other side of the marina entrance through a sand bypass system.
Water quality	Who/What authority will monitor water quality before, during and after causeway transfer and for what period before opening the canals? To date no one has claimed that this proposal will not cause pollution of water within the canal system. Potential causes are l. hydrocarbon runoff from car parks, 2. silage spills from boats, 3.fuelleakage from boats, 4.fish offal, 5 Phosphate/fertilizer drainage from lawns etc., and 6.general waste from tourism/seagull activity(Cigarette ends, Chip Papers, plastic bags etc) Over what period will water quality be monitored after completion and occupation of the project and what penalties will be implemented on the designer/developer for not meeting the criterion set?. The proponents claim that it will be necessary to mechanically flush the canal system to stop the water becoming and dead. To not do this would increase the amount of pollution in the water in s6 N it; diluted, will be further spread. At what distance will the purity test be taken from the canal area and how many tests over the arc of that distance from the “exhaust’ opening will be taken? (1)	An operational management plan for the marina will be required as part of any environmental approval (if given). Typically, either Ministerial Conditions and/or proponents commitments will (legally) require monitoring to be undertaken (i) before the development proceeds (called ‘baseline‘ monitoring), (ii) during construction and (iii) at regular intervals once the construction is complete. The water quality and sediment quality monitoring plan will stipulate the measurements to be taken inside and outside the marina, and the management measures to be implemented if any specified management ‘triggers’ are exceeded. The monitoring plan will need to be to the satisfaction of the EPA Service Unit’s Marine Ecosystem branch, CALM, and CSMC. Given the intense scrutiny on Cockburn Sound, monitoring requirements will be stringent. Mechanical flushing of the marina is viewed as a ‘last measure’, only to be used if marina design alone cannot ensure sufficient water movement to safeguard the environmental values of Mangles Bay and the Shoalwater Islands Marine Park. If undertaken, it would be done so to ensure that water quality in the marina does not deteriorate. However, the modelling indicates the marina water body will flush adequately without mechanical assistance.
SEAGRASS Concerns	Will the planting of sea grass be proved (in Mangles bay) first before the channeling for access is undertaken? How long (How many seasons?) will the proving process be to ensure success? Where has this undertaking been successful with guaranteed results? Note The Ecosub 2 project claims a success of 3000metres over 10 years (1)	2 ha of seagrass will be transplanted as a demonstration site in Mangles Bay, if the project proceeds to the next level of environmental assessment. The rest will be planted if the project is approved. The monitoring of the seagrass beds will be undertaken for 5 to 10 years as necessary. Appendix 8 in the SER provides an overview of the seagrass transplantation results to date in Cockburn Sound.

Topic	Submission (verbatim)	Response
Swing moorings	In July 2005 there was 280 swing moorings in the Mangles Bay area In February 2006 this number had increased temporarily to 357 and many of the increased number were over shallow water/sea grass and at low tide these vessels were “bottomed” on the sea grass. It has been acknowledged by the R.D.C. And other organizations that this is a major cause of sea grass destruction. In spite of the former the proponents are seeking to increase the attractiveness of the area to induce more small craft to visit in this fragile area. There is no deterrent to this and in fact there is an inducement not to use the proposed marina because of the cost. The proponents claim there is a necessity for a marina in a sheltered water position and cite many instances of boats being beached after storms. This does cause considerable damage to sea grass but in all instances it can be shown to be directly attributable to poor seamanship or maintenance or equipment failure. As previously explained this statistic will be increased and the destruction of sea grass proportionately increased. How will this increase be accommodated/policed/monitored and what penalties and to whom will they be applied? (the yacht club ? The fishing club? The rate payer?) (1)	The project recognises the damage done to seagrass by the swing moorings and will be trialling a program to subsidise the cost of changing over to seagrass friendly fixed moorings. The marina will provide an alternative to moorings for keeping large boats in the Rockingham area. This does not currently exist and will make any future regulation of the moorings in Mangles Bay much easier to implement. It is expected that many boats owners with boats currently on moorings will take the option of a more secure pen. The number of moorings is therefore expected to reduce.
Sand migration	Any waterway with two supply points will have a point of null water movement. This may move according to the pressures/flow applied but will at the null point deposit water borne particles which will mainly be sand. The classic example of this is both the Penguin Island Sand Bar and the north east corner of the main arch bridge to Garden Island. If this is accepted then there will also be a “sand bar” produced within the canal system which from time to time will need to be dredged and deposited elsewhere (as with the point Peron Boat harbour) or if the mechanical flushing is strong enough will cause the sand to be deposited elsewhere. If mechanical flushing is the engineering answer then that sand will be deposited randomly (according to general sea water movement at the time) but has the propensity to deluge the sea grass in that area and kill it Further is the mechanically induced flow is of such, a “strength then it will also cause channellings and undercut the sea grass, kill it. (1)	There will be some ingress of sand as water moves in and out of both marina entrances, and this will require maintenance dredging from time to time to keep the entrances navigable. The amounts of sand will be small, due to the use of a sand bypass system. If mechanical flushing was required, it would not take the form of an increased water velocity exiting the marina that was sufficient to undercut seagrass. Such velocities would compromise boat safety within the marina. Mechanical flushing is intended to keep water gently, but constantly, moving.
Marina access channels	The proponents consider that by cutting channels for access to the marina (some 6 hectares in area and up to 2.meters deep (and the destruction of the sea grass therein) can be countered by planting sea grass elsewhere. They do not determine where that successful planting might be, and, if there is such an area, why is there not sea grass growing there already?. Neither do they determine how they will induce sea grass to grow in these barren places. It can be relied upon however that the channels cut will require continuous dredging to maintain them open. In this case who will do it? At who’s cost ? How frequently? and where will the dredged material be deposited? (1)	Potential sites for the transplantation of seagrass are indicated in SER section 6.2.4 in Figure 18 and on p105. These areas are places where seagrass used to grow but the cause of their reduction is no longer present. For example, when moorings are replaced with seagrass friendly moorings, seagrass is known to be able to grow there and the area can be rehabilitated. There are other areas that are currently barren such as the southern flats where seagrass transplantation has occurred and the plants have grown successfully. The various methods for seagrass transplantation are well documented in the SER references and Appendix 8. The dredging procedure and frequency has not been determined at this concept plan stage. Section 0 describes the maintenance cost arrangements.
Land Base concerns Reclaimed Land	The area of land reclamation is not advised by the proponents but is considerable. Initially it lies over existing sea grass and is a definite loss to the total vegetation. However, considering that there will be sand accretion in the same area and tidal movements will further reduce the oceanic side of the sea grass cultivation then an area of 10m to 20 from the reclaim perimeter will also be lost to sea grass. The application of a sea wall will do nothing to alleviate this condition since it will still be subject to low water velocity and therefore silting/sand accretion will occur. (The idea that the area will be also available to groin/beach fishing is also contentious as there is a high probability that the area will be sand/beach) (1)	The area of land reclamation required in Option 2.4 is approximately 2.1 ha and Option 2.3 requires approximately 2.7 ha. This reclamation and the ‘halo effect’ are included in the direct impacts on seagrass. The remaining section of the old causeway will provide for groin fishing in the area. Mangles Bay foreshore will continue to be beach.

Topic	Submission (verbatim)	Response
Fish stocks	Again the fish environment will be stressed by the reduction of sea grass, the movement of boating (both motorized and sail) and the increase of localized pollution Again there is a probability that unwanted fish species will be drawn to the area E.G. Bull shark. (1)	The marine ecosystem and marine water quality impacts are discussed in the SER. There are expected to be overall localised improvements in water quality in the area due to the project.
Dredging	The proposed site will require continual dredging to maintain access as access is naturally poor - damaging precious sea grass and being expensive to maintain (why should the community foot the bill for elite marina residents?). (3)	The loss of seagrass due to dredging has been included in the discussion of impacts in the SER (section 6.2.4)
Marine Environment	My hobbies include sailing, fishing, snorkelling and SCUBA diving. I believe I have observed the water in Mangles Bay in particular getting shallower and shallower over the years. The sea grass in there often appears to be covered in a "dust" which I have been told is algae. It is obvious to me that the causeway has affected the water flow and thus affected the sea grass. I have spent nights on my boat there and awoken to the sound and sight of mullet and herring jumping and pelicans, dolphins and stingrays feeding. The water is alive, but seams to be less healthy than I remember it. I believe the proposal to alter the "trestle bridge" which forms part of all the proposals for the Tourism Precinct will benefit Mangles Bay. Better control of access to and use of the Bay should minimise the impact of people and boats in the area. (4)	Noted.
Marine ecosystem	3. The dependent marine ecosystem will be destroyed. (5)	Both the direct and indirect effects of the project on the marine ecosystem have been discussed in the SER.
Seagrass rehabilitation	Seagrass rehabilitation is better now than at any time previously; thus arguments against the proposal on these grounds are not justifiable and with a estimated slight increase in sea-grass meadows as a result of transplanting (Page xiv) should put any concerns in regard to this point to rest. (11)	Noted.
Section 6 marine environment	Section 6 which deals with the Marine Environment requires some comment. As a long term resident of the area it goes without saying that much has been done in recent decades to improve the overall water quality in Cockburn Sound thanks to the efforts of industry and growing legislative empowerment of government authorities to safeguard this unique environment. It is therefore, surprising that the local environmental lobby should remain so quiet about the desalinisation plant currently under construction in Kwinana or further plants planned for Port Kennedy. There singular focus by this group on a fairly denuded 29 ha of 'bushland forever' at Point Peron seems perplexingly distorted in relation to the much greater threats that hyper-saline water poses to the best snapper fisheries nursery in the metro area. Simultaneously, the opportunity to address nutrient loading of Mangles Bay through engineering solutions is completely neglected as part of the overall marina construction. There is an apparent acceptance that current nutrient levels, namely through (P and N) are a better long term outcome for seagrasses. This is not true and steps must be taken to reduce the eutrophication of this area and thus reduce epiphytic growths on posidonea and other species. Any impacts in short term caused by turbidity in the construction of the marina are but a small part of a longer term problem that the leaching of nutrient through groundwater is causing in this area. (11)	Noted. The project will connect Cape Peron to the sewerage mains which is expected to reduce the nutrient input to groundwater and Mangles Bay in the project area. Other methods to reduce the nutrient inputs to Mangles Bay in stormwater and groundwater may be investigated in a formal environmental assessment as part of the mitigation package for the proposal.

Topic	Submission (verbatim)	Response
Dredging	The proposed site for the marina will require on going dredging on order to maintain access, which the community should not have to pay for. The sea grass in Mangles Bay is already under enormous pressure and the dredging and pump flushing of the canals and marina will only add to this pressure. (13)	Dredging will be required to maintain the depth of the marina access channels. The funding structure for maintenance of the marina has not yet been determined. However, it is likely that the rates from the marina residents will have an additional amount added to cover maintenance of the marina. No mechanical flushing of the canals is proposed. Initial modelling indicates that the canals will flush naturally in an acceptable timeframe. The project is expected to result in overall localised water quality improvements which will be a benefit for seagrasses.
Seagrass Lake Richmond	9) The damage to the seagrass and Lake Richmond concern me greatly. (14)	No adverse impact on Lake Richmond will be considered acceptable. Preliminary investigations indicate there are unlikely to be any impacts.
Causeway	(A) "The proposed relocation of the causeway to Garden Island", this original development on completion, generated major silting and erosion problems within Cockburn Sound. Claims are made that this action will resolve this problem, no study has been completed to substantiate this. (52)	The realignment of the causeway is not aimed at solving silting and erosion problems. These issues will require management through the installation of a sand bypass system. The aim of the causeway realignment is to allow for a dual entrance marina that reduces the depth of the channel through Mangles Bay by having a separate deep entrance, improve access to the marina facilities and create a separate club/commercial area. As the causeway required realignment to make the dual entrance design feasible, the opportunity to lengthen the causeway entrance at the same time was put forward, to improve water quality in Mangles Bay. The water quality and other effects of this are discussed in the SER.
Dredging	(B) "The Dredging of two access channels for the development", following on from the above mentioned problems one can only assume these will not hold, ultimately becoming an annual event. (52)	The frequency of dredging required has not as yet been estimated. However, as Mangles Bay is a low energy environment and the channels will have gradually sloping sides that will be rehabilitated with seagrass, the frequency of dredging is not likely to be often.
Marina would reduce need for moorings	Detailed environmental research has been investigated by my company in the Mangles bay area over 9 years. Forward me an email address in response and I can provide you with photos from 2006 of the impact from helicopters of the environmental impact of swing moorings. There are over 200 moorings in this area, 40% are abandon and could be removed over a period if the council would tag all of them and any that are not registered in a two year period should be removed. These moorings although abandon, along with current ones continue to remove the ability of sea grass to rehabilitate. A canal style marina would remove the need for additional moorings and any new moorings should be of the environmental type. (82)	Noted. The moorings are not a Council responsibility but that of the Department for Planning and Infrastructure. The project would be in favour of improved management of these moorings.
Improve water quality Improve boating management	The first Navy cause way (I am in the Navy as well) changes the natural shape of the water flow area creating all the needs of dredging for the boat ramps. The relocation of this causeway with a larger/wider bridge would improve sound water flow and aleviate sand banking around this coast line section. A marina allows for government control over boat discharge, fuel and larger boats to be attracted to the area. The price tag and life style the apartments along the sound provide are for people who would like a boat in a marina as well. Rockingham can only benefit from a well planned and managed Marina as a draw card to the area. (82)	Noted.
Fish nursery	The proposal threatens the King Sound whiting nursery ground. (100)	Refer to section 3.5 regarding the marine ecosystem

Topic	Submission (verbatim)	Response
Marine impact	How can the project be an eco-friendly development when acres of the sea bed will be ripped up to be replaced by huge masses of concrete and steel. (113)	Seagrass losses will result from the dredging of the marina access channels. There is to be less than 1 ha of beach reclamation and no infrastructure built in Mangles Bay. All seagrass losses will be offset through replanting of seagrass in the area. Modelling indicates that there may be overall localised improvements in water quality resulting from the project.
Seagrass	I am concerned about the impact this development will have in relation to the following points: 1. seagrass in Mangles Bay; (117)	Refer to section 3.5 regarding seagrass.
Marine degradation	What about future generations seeing what was once a good fishing snorkelling spot turn to waste? (120)	Refer to section 3.5 regarding the marine ecosystem.
Pollution from boats	The pollution that will occur from up to 500 boats? (120)	Cockburn Sound is a popular area for recreational boating and there are currently around 260 moorings in Mangles Bay. The marina will marginally increase the numbers of boats utilising the area but it will also provide sullage discharge and re-fuelling facilities that will help to reduce the risk of pollution from boats in Mangles Bay. These sullage and refuelling facilities are not available now and the current ad-hoc practices of boat owners presents an environment risk.
Marine concerns	From meetings we have attended over the last few months we have been left with many concerns regarding the proposed Marina, our questions have gone mainly unanswered without any satisfactory response. Bush Forever Sites. Australian Heritage listed Lake Richmond. Rockingham Lakes Regional Park. The critically Endangered Ecological community of Thrombolites. Seagrass in Mangles Bay. King George Whiting breeding grounds. (121)	-
Cockburn Sound	The Environmental Protection Policy of 2001 the specific section on the Cockburn Sound report stated ,Cockburn Sound must not only be protected from the effects of pollutants, waste discharges, deposits and loss of visual amenity but its environmental values must be improved. A canal system which will call for continual dredging and the loss of 5 hectares of seagrass meadows will upset the biota and release the acid sulphate soils when the canals are being excavated. In other countries some have similar systems for the wealthy, it was stated they have near catastrophic levels of pollution. Why should Australia follow suit hasn't our country learnt anything? The Sound is not a boundless open ocean, if a proper environmental study had been carried out it would have shown how the southern end has limited circulation trapping pollutants in the circular flow. Knowing how susceptible the grasses are to pollution, pests & sea level change why would a council or government consider dredging as well? (121)	Refer to section 3.7.

Topic	Submission (verbatim)	Response
Seagrass	The area where 5 hectares of grass meadows will be dredged is part of the King George Whiting breeding grounds & other fish stock's nursery's. Many species of fish are on the decline which has become more prominate of the last few years. Some commercial uses previously established around the Sound would not have commenced if stringent environmental laws had been in place, further more the plans now being put forth in our opinion should not be contemplated. Previous reports which establish a range of environmental objectives and criteria, the extent of research in regard to many problems needing to be corrected have not been met. It has already been said by the EPA "there should be no further removal or decline of seagrasses. "Seagrasses are extremely highly valued for their intrinsic biodiversity as well as being important habitats for commercial & recreational valued fish, mollusc, and crustacean species. They play a major role in the cycle of our coastal ecosystem. It seems to have been forgotten that the seagrass cover is the best plant indicator of the local marine environment. (121)	The project recognises the need for "no net loss" of seagrass and will offset all of the seagrass loss through the rehabilitation of seagrass in and around Mangles Bay. Refer to section 3.5.
8.3.3 Rehabilitation of the sea grass meadows	• There will be a much greater direct loss of seagrass than estimated area suggested by the proponents. • The rehabilitation proposed to offset the loss of hectares of ecologically viable seagrass meadows due to the project, does not make sense, as the seagrass in the area proposed for rehabilitation is in poor shape. With the current lack of successful technology for seagrass reestablishment and reproduction, the imagined 'offset' could not occur. (129)	The direct loss of seagrass included the channels, channel slopes, reclamation and 'halo effect' around the reclamation. Most of the rehabilitation area proposed is in and around Mangles Bay where the water quality and velocity conditions are known to be suitable for seagrass. The published literature on the successful transplantation of seagrass in Cockburn Sound is discussed and referenced in the SER.
Marine ecosystem	It not only puts at risk the sea grass areas, as well as all the fauna that frequent the area such as sting rays, dolphins, bird life, seals. The risk to Lake Richmond is large, potentially endangering it to salt water intrusion. (130)	Refer to section 3.5 regarding the extent of impact and benefits to the marine ecosystem and section 3.3 regarding Lake Richmond.
Marine environment	Thirdly there is the serious risk to the marine environment of Mangles Bay and Cockburn Sound generally. This has been well documented in the paper by David Treloar, `Submission on Cape Peron Precinct with later footnote references', dated July 2005. The EPA will already have a copy of this document; if not I can email it. The document has an extensive list of references, including at least two EPA documents, `The Environmental Protection (Cockburn Sound) policy of 2001', and `A Supporting Document to the Draft Environmental Protection (Cockburn Sound) Policy 2002, on your own website. (133)	Refer to section 3.5. Modelling indicates that there may be overall localised improvements in water quality resulting from the project. These results are discussed in the SER.
Marine environment	The construction of the marina will have a severe and ongoing impact on Mangles Bay. The area is already under stress, but it is the most important king george whiting nursery on the west coast and it contains some of the best remaining sea grass meadows in Cockburn Sound. It is therefore vital to the ecological balance of the marine ecosystem in the Sound and the proposed marina will destroy at least 5 hectares of this seagrass and probably more as an indirect result of increased boat traffic and ongoing dredging and the discharge of polluted water from the canals. (135)	Refer to section 3.5. Modelling indicates that there may be overall localised improvements in water quality resulting from the project. These results are discussed in the SER. There will be no net loss of seagrass due to the offset of any seagrass losses with the rehabilitation of at least an equivalent area of seagrass.
Dredging	The canals and harbour entrance channels will require regular dredging which will lead to sediment dispersal and smothering of the sea grass. This will indirectly lead to further losses. (135)	The sand bypass system will minimise the amount of sand entering the marina entrance channels and the need for maintenance dredging. Any maintenance dredging that is carried out will need to be carefully managed to ensure there are no impacts on seagrasses due to turbidity or siltation.
Potential water quality improvements	4. Having seen the decline of mussels and crabs since moving here I believe the proposed new bridge will increase flushing of the sound and help reduce pollutants coming from the industrial area and inturn bring back the declining sea life. (136)	Noted.

Topic	Submission (verbatim)	Response
Marine environment	The project would certainly have a serious impact on water quality and sea grass in Mangles Bay. Canal style developments of this type have proved to be very harmful in other locations and are now recognised as being inconsistent with best practice coastal management planning. This is all the more so in protected waters such as Mangles Bay, where the water quality is already under threat and where water circulation is restricted. The loss of further sea grass should not be tolerated and it is unacceptable to jeopardize the water quality at the nearby swimming areas at Point Peron, Palm Beach and Rockingham Beach. (137)	Refer to section 3.5. Modelling indicates that there may be overall localised improvements in water quality resulting from the project. There will be no net loss of seagrass as all losses will be offset through rehabilitation of seagrass.
Seagrass	Sustainable Sea grass rehabilitation in Cockburn Sound is yet to be demonstrated and there is the possible impact of super saline water from desalination plants south and north of Rockingham to be considered and modelling it's effects should be part of the proponent's submission to the EPA. The South Metropolitan Coastal Waters study should be considered in any modelling to be done. (139)	The nature of saline discharge is such that it is denser than ambient seawater and so will follow the contours of the deeper waters of Cockburn Sound rather than migrating up to the shallow flats where seagrasses are present. Information from the Southern Metropolitan Coastal Waters Study will be fully considered if detailed assessment and modelling proceeds.
Seagrass	1 My concern is the damage to all the Sea Grass beds in Mangles Bay which provides valuable habitat and feeding areas for much marine life. (143)	Refer to section 3.5.
Dredging	I consider that the amount of dredging that will be done on the coast line between Hymus Street and the Causeway area would be very, very considerable. It costs the local shire approximately $200,000 per year now, and this will be an ongoing project, and what I am considering who will pay for this – will it be the tax-payer and rate payer. I have been told (which could be hearsay), that in approximately 1984, there was a survey done regarding the causeway, and that the beachfront foreshore is solid rock, and it was recommended that no harbour or marina be built in this area. The survey was taken from Palm Beach jetty to the causeway area. (144)	Refer to section 3.5. Dredging will be required in the marina access channels as outlined in the SER. All costs associated with the marina are expected to be met by marina users – not the ratepayers generally.
Water quality	With the hydraulic flushing models was the impact of the desalination plant at Kwinana taken into account. With the increased usage by vessels in the Mangles bay area has there been any modelling done on the potential higher usage of antifouling paints and procedures (and accidental spills or incorrect usage/disposal) been undertaken. Are there any assessments of potential spills (due to refuelling) been undertaken and if so what the proposed methods of cleanup. (146)	If required, the effect of desalination discharge can be incorporated into the hydrodynamic modelling of Cockburn Sound that will be undertaken if detailed environmental assessment proceeds. Estimates of antifoulant leakage can also be made if required, or empirical data (obtained from existing marinas) used. A full risk assessment of the potential implications of fuel spills will also be needed during detailed assessment, and a spill response management plan (including cleanup equipment to be maintained and methods to be used) will be a key component of the operational management plan of the marina.
Moorings	Proponents should furnish evidence that damage to moored boats is not connected to poor maintenance of mooring tackle by owners. Marina pens are unlikely to improve statistics since the owner is unlikely to take up an expensive marina pen when he ignores basic boat maintenance. Statement in SER is speculative and lacks evidence. (159)	At present, there is no choice for boat owners if they want to keep their larger boats in Rockingham. Some mooring boat owners will relocate to pens. How many is not known.
Marine water quality	6.1.4 There is a suggestion, carefully worded, to explain that an active 500 boat marina carved into the coastline will be beneficial to Mangles bay, its environment, waters, and seagrass. There is a huge gap between the image and the reality of these statements, which is worthy of further investigation. It should be considered that trailer launched boats present less hazard of fuel transfer, and antifoulants while satisfying the need (?) to get the local population onto the water. The proponents admit with population increase there will be more pressure on the marine environment, and then state they will improve these circumstances by adding 500 permanent boats, and intensive accommodation. (159)	The results of the hydrodynamic modelling indicate that the marina is expected to cause slight, localised impact but the opening up of the causeway is expected to slightly improve flushing in Mangles Bay and adjacent waters overall. This is the conclusion stated in section 6.1.4. An increase in boats will occur irrespective of this project and the project will provide improvements to the facilities available and management of boating in the area.

Topic	Submission (verbatim)	Response
Seagrass	6.2 Any suggestion that the seagrass meadows will be improved by the marina should be challenged. Boats with mooring tackle degrading the seagrass fields can be required by legislation to occupy the same space but use the system of mooring which does not drag on the floor. Any statements suggesting a marina pen alternative will assist seagrass growth is not valid as the 2 arguments are separate. This section intimates that the marine environment is improved but you have statements in the same section actually contradicting each other! Attachments 1) Questions to the mayor 2) Analysis of public forum on Land use at Point Peron. (159)	Refer to section 3.5. The SER is clear that the project will have an adverse impact on seagrass, the seagrass loss is proposed to be offset with seagrass transplantation. The project will assist in the changeover to seagrass friendly moorings through the proposed subsidy. There are no measures currently in place to either encourage or require the replacement of swing moorings.
Seagrass	1.The main concern is the damage to all the sea grass beds in Mangles Bay which provides valuable habitat and feeding areas for much marine life, as the intention is to dredge canals through it all. (164)	Refer to section 3.5.
Seagrass	And the seagrass - dredging and pump-flushing of canals and a marina in Mangles Bay would destroy seagrass which is already on the brink. Doesn't the EPA care about this prospect? I always believed EPA stood for Environmental Protection Authority? Sorry, I don't see much evidence of the current EPA protecting the local environment. (168)	Refer to section 3.5.
Marine environment	(16) The canal and marina development will have a significantly detrimetal effect on sea-grass off Mangles Bay, with unknown long-term impacts. (179)	Refer to section 3.5

Topic	Submission (verbatim)	Response
Seagrass in Mangles Bay	Seagrass:	Refer to section 3.5
	Aspects of the development that could impact on seagrass include:	
	• the development footprint (principally construction of boating channels to the marina) will cause a direct loss of seagrass.	Agreed, but both direct and indirect losses have been taken into account in the SER and will be offset through the transplantation of seagrass.
	• water quality changes due to the marina could (will) potentially cause indirect losses of seagrasses.	There may be localised impacts on water quality from the marina but overall the water quality in Mangles Bay is expected to improve as a result of the project.
	• Changes in current speed/sediment movement for those marina options that involve lengthening the southern opening of the Causeway could (will) potentially cause indirect losses of seagrass.	Agreed, but all losses will be replaced.
	Changes in current speed can cause:	Agreed, but all losses will be replaced.
	• changes in the degree of erosion or 'scour' on existing seagrasses (either via the currents themselves, or sand mobilized by the currents	As above
	• changes in seedling re-establishment (both the settling out of seedlings, and their ability to remain anchored in the area)	
	• changes in the amount of 'drag' on-and therefore erosion of seagrass epiphytes (epiphytes can grow to a larger size in calmer waters,), therefore and reduction incurrent speed (caused by the development), will have an adverse effect.	
	• Changes in the degree of accumulation of organic matter in and around seagrass meadows. Extremely low currents can be almost be as bad for seagrass meadows as currents that are too fast.	
	Submission quotes impacts section of the SER	
	"Fatally Flawed" – substantial and sustained seagrass loss!	
	"Long-term rehabilitation of seagrass (.10 years) in Cockburn Sound has yet to be demonstrated"!	Accepted but indications are strong that it will be.
	Sustained damage to habitat, increased pressure on the fishery, disturbance to sea life, increased turbidity, sewerage and waste detrimental to water quality; killing of marine flora, the list is endless!	Old septic tanks are currently a source of nutrient outflow to Mangles Bay. The connection of the area to the mains sewerage system will improve the current situation.
	According to the diagrams, it could be said that there is no lengthening of the causeway trestle at all, only realignment, therefore, the expected increase in flow is also questionable.	The proposed configuration of the marina was modelled and the results indicated that there would be an increase in the water exchange in Mangles Bay.
	"Total Flawed" and totally unacceptable. (183)	

Topic	Submission (verbatim)	Response
Marine ecosystem	The project is radical. It aims at entrenching a set of essentially private, intense commercial and consumer-good interests in place of a Reserve and on the margin of a highly sensitive aquatic environment that borders a major suburban area apd is the principal reason for its attractiveness, as well as being an important aquatic habitat. As the SER itself states, "Cockburn Sound has a history of poor water quality and large-scale loss of seagrass meadows", Mangles Bay "is sheltered by the Garden Island Causeway and Cape Peron, and therefore relatively calm and poorly 'flushed' by marine waters", Mangles Bay "has approximately 100 hectares of seagrass, comprising the main area of seagrass meadow along the shore between the Causeway and Woodman Point" which is distant to the north, Mangles Bay "is an important fish nursery habitat", and it "is currently degraded and under continuing pressure, because the level of human use exceeds that catered for by the present minimal level of management". Therefore the butt end of Mangles Bay is, from an environmental impact point of view, by far the most inappropriate part of Cockburn Sound in which to locate any intensive activity with further potential negative effects from an environmental point of view, or even the risk of such negative effects. On the contrary, Mangles Bay requires urgent conservative attention, including opening of the causeway to improve flushing, removal of the existing 261 swing moorings, reduction of inflow of nutrient-bearing run-off, and replanting of areas denuded of seagrass. Cockbum Sound as a whole also requires additional protection, for example super-saline water from the desalinisation plant should not be discharged into the Sound; noticeable reductions in the level of "chlorophyll a" and noticeable improvements in water clarity from the grain terminal to the causeway should be achieved, especially in Mangles Bay; more industrial effluent from Kwinana's and Rockingham's industries should be discharged through Water Corporation deep-sea outfalls; some adaptation to the causeway should be undertaken to increase flushing of Mangles Bay; there should be greater attempts made to re-establish seagrass in the largely sterile area south of the grain terminal and if necessary greater limits on whatever commerce-related activities are the cause of the sterility; there should be reductions in the movement of nutrients into the Sound from domestic gardens — in particular no storm water (road run-off) should enter the Sound; and there should be strict policing and prohibition of both additional and unlicensed moorings in Mangles Bay. (185)	Refer to section 3.5. The foreshore areas are currently leased to private recreation groups. The project will open up the area for public use. Agreed. The project will contribute to addressing these issues in Mangles Bay. Broader issues and threats in the rest of Cockburn Sound are beyond the scope of this project to address.
Marine ecosystem	Because of the inter-relatedness of all the factors affecting Cockbum Sound and all its own environmental aspects, and because most of the remedial actions that I have just listed are justifiable in their own right, no decision to take any one of the actions should be able to be claimed as an offset against any particular deleterious activity in the Sound, rather than against some other present or indeed future deleterious activity, unless it is patently clear that the private commercial and consumer-good beneficiaries from the deleterious activity are paying the full cost of the offset. The SER does not make clear who will pay for the offsets it claims. For that and other reasons outlined below, the SER should fail in its attempt to have the marina approved. Hopefully it may succeed in drawing more attention to the drastic environmental threats to Cockburn Sound and to Mangles Bay in particular. (185)	The remedial actions outlined are extensive and expensive. It is unlikely that significant progress would be made to achieving these outcomes unless funded by a major project. The offsets are part of the cost of the project as is construction etc.
Shoalwater marine park	7. the development will negatively impact the Shoalwater marine park (188)	Refer to section 3.5 and section 3.7.

Topic	Submission (verbatim)	Response
Seagrass	The EPA guideline statement #29 on the "Assessment of Environmental Factors" refers to "cumulative loss thresholds for benthic primary producer habitats". Mangles Bay falls into category F where loss thresholds have been significantly exceeded. Justification for development in such areas is expected to be substantial. We would suggest that this would be extremely difficult to demonstrate in the light of viable alternatives and the possible impact on an already fragile ecosystem. The concept of a "no net loss" in respect of the permanent impacts of the proposed marina would be hard to achieve. Ongoing provision of Offsets to address environmental impacts would be a continuing burden on the long-term viability of the proposed development. Seagrass regeneration attempts have been a dismal failure and the ability to provide Enduring, Quantifiable, like-for-like offsets that are located in the same area has not been demonstrated and the concept that this type of Offset can actually be made is flawed. (196)	The seagrass transplantation methods and results are well documented in the SER.
Marine water quality	If the health of the already delicate, less-than-healthy, Mangles Bay is further degraded by sedimentation and turbidity during construction and possible future use, the option of restoration would be difficult or impossible. Consideration of Cockburn Sound as a whole must be given due weighting. It would be ecologically unsound not to take into account the combined impacts of all proposed developments in the sound. In the "pipeline" are • James Point - a privately operated port • Desalination Plant • Fremantle Port Outer Harbour • Mangles Bay Tourist Precinct. The impact of these projects, if not subject to enforceable and enduring offsets, may turn Cockburn Sound into an ecological disaster. … would urge the Environmental Protection Authority to reject the current proposal for a Tourist precinct at Mangles Bay. (196)	Refer to section 3.7.
Marine effects	I would like to say something about the ocean-side aspects of this project but that's an area to be covered by experts. However, one thing I do know as a non-expert is that on occasions the skeg on my short shaft outboard motor can hit a bank a long, long way from shore. Also the channel from the shallow bank will also have to be long and deep and inevitability will silt up regularly. The other thing I also know is that the re-dredging of the channel on a regular basis will have to be paid for. Again, the cost is bound to be borne by the general ratepayer public of Rockingham and not the occupants of the residences of the marina or the boat owners. (205)	Noted. Refer to section 0.
Coastal processes	I can see problems such as: Cockburn Sound – shifting sands will cause silting up of channels and canals. Regular dredging required causing further loss of seagrass. Costly and unnecessary relocation of the causeway and present boat launching ramp. (214)	The cost of dredging is addressed in section 0. All direct and indirect impacts on seagrass have been included in the SER.

Topic	Submission (verbatim)	Response
Anthropogenic impacts	Page 36, point 4.3.1 — Key Characteristics — The changes will be so huge those of us who love a bit of 'wilderness' will be locked out forever. With 520 boats there is high likelihood of fuel spillages, garbage such as plastic bags and fishing lines which can be detrimental to bird and fish life, penguins and sea lions. There will be run off from oils and spillages from the huge car parks which will be needed and which should not be on the shoreline anyway. Public access around the 'Mangles Bay foreshore and canals' seems minimal. (216)	The provision of re-fuelling facilities is likely to decrease the number of fuel spills in the area. Carpark runoff will be managed as stormwater as for the rest of Rockingham. There will be public access around all of the marina, except there will need to be some security for the aquatic clubs area. The rest of the Cape will either have no change in public access, or public access improved through the provision of cycleways and nature trails etc.
Marine environment	Page 83, point 6— Marine Environment - I make the general comment that a marina of 520 boats with associated people, cars and animals and the need for roads and large car parks can only bring extra pollution and have a huge impact which it may not be possible to mitigate. I point to the value of the Shoalwater Islands Marine Park, the penguins and sea-lions to residents and tourists. There are experts better qualified to discuss this in detail than I am. (216)	These values and the potential impact of the project on them have been discussed in the SER.
Climate change	Expert scientists are warning of climate warming and tsaumanis. Should any consideration be given to building further back from the shoreline? (216)	The project will comply with coastal planning requirements.
Seagrass	The proposal will also impact on the already stressed sea grass communities of Mangles Bay within Cockburn Sound. (218)	Refer to section 3.5
Seagrass	Dredging for a channel to give access to the proposed marina will destroy much of the sea grass in the area. This can only be replaced at vast expense and must surely be disturbed by future dredging to maintain such a channel – and who pays for future dredging?. (219)	Refer to section 3.5 regarding seagrass loss and section 3.10 regarding the cost of dredging.
Seagrass	There is the sea grass beds which will certainly die with the amount of dredging that will be required for a canal & marine development. (232)	Refer to section 3.5
Coastal processes	I believe that the project involves partial removal of the causeway and this generates our concern at the potential for the removal to cause increased wave energy to reach the commercial shipping jetties in the Sound (CBH, Fremantle Ports, BP and Alcoa). We were recently made aware of some anecdotal evidence that prior to the construction of the causeway some difficulties were experienced occasionally in keeping ships secured to their berths and that this was considerably alleviated following construction of the causeway. We would wish that this be investigated as part of the strategic assessment to ensure that it doesn't increase the risks for existing shipping in the Sound.	Coastal processes will be fully investigated if the project proceeds to the next phase of environmental assessment.

6.3 LAKE RICHMOND, HYDROGEOLOGY AND ACID SULPHATE SOILS

Topic	Submission (verbatim)	Response
Soil type	The area is known to contain acid sulphide soils The exposure to oxygen of this type of soil produces sulphuric acid and releases metals to the surrounds. The effects of this chemical change is well documented but in a limestone environment, as is Point Peron, the effect and result of these changes cannot be determined with respect to the rock structures or to the Drainage of Lake Richmond or to the Fresh water quality. (1)	The potential for exposure of acid sulphate soils will be investigated fully if the project proceeds to the next phase of environmental assessment. At a fatal flaws phase it was considered sufficient to use the Western Australian Planning Commission Planning Bulletin No. 64 as a guide to the potential for acid sulphate soils to occur in the area. The whole of Cape Peron with the exception of Lake Richmond is listed as 'low to no risk' of acid sulphate soils occurring, generally at depths > 3m depth.
Soil permeability I porosity	Any excavation in the area will alter the Soil permeability which in turn may change the direction of underground water courses ,both the salt and fresh, and while now not researched will change due to this one factor. (1)	The hydraulic gradient is low and towards the coast, with groundwater discharging to both Mangles Bay and Shoalwater Bay (Perth Groundwater Atlas). These general flow directions are not likely to change significantly due to the project. Groundwater investigation and modelling will be undertaken if the project proceeds to the next level of environmental assessment, so that any impact on groundwater flow will be evaluated.
Lake Richmond drainage and de-watering	During the course of excavation it will be necessary to de-water and on large scale. This activity must lower surrounding water tables affecting adjacent property bores but inevitably to affect the drainage and level of Lake Richmond placing that ecosystem under stress including the renowned thrombolites. This will not be conducted over a few hours but over many months to facilitate other foundation works. It will also affect the existing water courses, both salt and fresh and possibly cause irreparable changes to even planned outcomes What safeguards are to be in place to prevent this. (1)	Refer to section 3.3 regarding impacts on Lake Richmond.
Salt water aggression to adjacent land /lake	There are many instances of salt water aggression to surrounding land and not least in Mandurah. Even though the Peel inlet is mainly salt the effect has been extended there. Murphy's law has prevailed. A detailed engineering plan is required along with a program of activity duration and date of implementation to ensure action and reaction can be monitored. (1)	The SER recognises that the salt water wedge will move further inland as a result of the inland waterways. Preliminary groundwater modelling for the SER was used to investigate this movement. More detailed modelling and the management plans will be undertaken in the next phase when a detailed engineering design is available, and more detailed groundwater investigations have been carried out.
Type of lining if any	If the engineering of sea water containment is addressed by means of a liner then the liner must be of a kind which will allow no water to transfer from, one side to the other. In normal circumstances a liner is used to contain fluid only in one direction relying on internal pressure to maintain its position and integrity. In this instance it is necessary to contain the difference in water pressure applied by tidal change and wave action of the sea against varying! seasonal fresh groundwater levels. Any leakage of seawater will spread salinity and any leakage of fresh water will cause erosion to the soil with the resultant weakening of the liner and eventual failure. (1)	As no adverse impact on Lake Richmond is acceptable, engineering solutions may be investigated to manage any low risk to the lake. These engineering methods, and the need for them, have not as yet been established at this early stage in project development. If the project cannot be modified to ensure there is no adverse impact to Lake Richmond, the project will not proceed.
Lake Richmond	The project is a threat to the adjacent Lake Richmond and its internationally significant thrombolite community (it is also significant in its own right to the region as a unique and biodiverse freshwater lake): there is the risk of hydrological incursion from disturbance of acid sulphate soils during development; any increased urban activity adjacent to the Lake increases the risk of pollution through accidents and wastewater runoff. The Lake is already under threat. Pt Peron should be left natural to provide a clean buffer area. (3)	The direction of groundwater flow is towards the coast from the lake. Therefore, no groundwater from the project area would end up in the lake. The project would be designed to ensure that no surface water from the project area would flow towards the lake. No adverse impact on Lake Richmond would be considered acceptable. The potential impacts and preliminary investigations have been described in the SER and more detailed assessment would be undertaken if the project proceeds to a formal environmental assessment.

Topic	Submission (verbatim)	Response
Possible litigation	4. The unsuitability of the site: (a) Exposure of acid sulphate soils (b) Sand from maintenance dredging must be disposed of outside the marina. The creation of shifting sandbanks is a hazard to boats and yachts, and the drift cannot be controlled. (c) The presence of the Sepia Depression Ocean Outlet pipeline. In every aspect, the environmental health of the area cannot be sustained. 5. Possible litigation by users of the marina and home owners because of the above factors (4 a, b, c). (5)	Acidification of acid sulphate soils can only occur if a) potential acid sulphate generating soils exist and b) if those soils are exposed to oxygen through a drop in the watertable or other mechanism. At this stage, preliminary investigations indicate that there will be a temporary small change (<15cm) in watertable near Lake Richmond (the area most likely to have acid sulphate soils as it is a wetland) during construction. This would not be expected to cause acidification. It is also not known whether acid sulphate soils occur in the area. Sampling would be undertaken as part of a formal environmental assessment. The maintenance program for the marina access channels will be devised as part of the detailed design phase that will only be undertaken if the project proceeds to a formal environmental assessment.
Lake Richmond	7. The unique Lake Richmond thrombolites, a 'Critically Endangered Ecological Community', will be in danger through the influx of a floating population and gross disturbance of the natural environment.(5)	Refer to section 3.3 regarding Lake Richmond.
Lake Richmond	Finally, I would like to comment on the hydrological studies undertaken by Worley Parson in respect to the risk of salt water intrusion at lake Richmond. It goes without saying that Option 2.4 places a large area of land between the two water bodies and as such an increased buffer from the 50m model as shown in Option 2.2. This should be more than enough to account for natural discrepancies and put to rest any concerns in regards to the health of the Thrombolites. It is unfortunate, however, that these natural scarce features will probably be exploited in a reverse fashion to conjure arguments more based on fallacy than fact to oppose any such development in the area. (11)	Noted.
Lake Richmond	Another concern is the 15m deep fresh water lake, Lake Richmond. The thrombolite community in the shallow perimeter zone of the lake are unique living fossils whose survival is dependant upon light and a continuing supply of fresh (non-salty) water rich in calcium, bicarbonate and carbonate that comes largely from groundwater that has passed through the calcium rich dunes that surround the lake. I fear that soil disturbance for infrastructure will expose the acid sulphate soils, which will erode the limestone landscape. This acid will destroy the limestone protective layering that has shielded the critically endangered, Australian heritage listed, Thrombolite community at Lake Richmond from salt incursion up until now. (13)	No adverse impact on Lake Richmond will be considered acceptable. More detailed investigations will be undertaken as part of a formal environmental assessment to ensure this.
Lake Richmond	(E) "Richmond Lake reserve", this reserve is of world heritage and there is no guarantee that its sovereignty will be protected. (52)	Refer to section 3.3 regarding Lake Richmond.
Lake Richmond	I know Bob Goodale, is very much against this move, even though they are trying to kid him that it will bring a lot more trade to Nangabup Environment Centre. It will only ruin the ecology of all the fauna and flora around lake Richmond, also I don't give much hope for the Stombolites' future, the only ones in the World, that should be protected at all costs if this fresh water becomes tidal. Having aired my views locally, I think I speak for most of Shoalwater, so please stop this bastardisation of our last piece of natural environment. (67)	Refer to section 3.3 regarding potential impacts on Lake Richmond.
Salt water intrusion	2. Excavations may destabilise Lake Richmond's ecology by causing salt water intrusion either directly project works, or through rendering the lake more prone to salt water intrusion through chance weather events. (100)	Refer to section 3.3 regarding Lake Richmond

Topic	Submission (verbatim)	Response
Dewatering	c. Dredging for a marina is bad enough but if a cut into Cape Peron for a canal however small to accommodate the boats, that would involve dewatering. (112)	The construction of the waterways will require dewatering during construction.
Acid sulphate soils Lake Richmond	d. Cape Peron is mainly limestone and porous with acid sulphate soils. Dewatering would draw from Lake Richmond and would effect the already critically endangered Ecological community of Thrombolites. (112)	The temporary drawdown of the watertable near Lake Richmond is expected to be 15 cm with an even smaller impact on the actual lake water level. This change is expected to be within the usual seasonal water level fluctuations. However, if the project proceeds to the next phase of environmental assessment, more detailed investigation of the lake's relationship with groundwater will be undertaken and more comprehensive modelling of the likely impacts of dewatering.
Lake Richmond	I feel that developing the marina at Cape/Point Peron would also set a dangerous precedent for developers. It would also endanger a salt water intrusion in to the fresh water (and Australia Heritage Listed) Lake Richmond, which will put at risk the critically endangered ecological community of Thrombolites. (116)	Refer to section 3.3 regarding Lake Richmond.
Lake Richmond	6. the Heritage listed Lake Richmond and its critically endandered, ecological community of Thrombolites; (117)	Refer to section 3.3 regarding Lake Richmond.
Lake Richmond	I am the Natural Resource Manager for Naragebup. It is my responsibility to protect the Critically Endangered Ecologically Community of Thrombolites that exist at Lake Richmond. The proposed marina will expose the acid sulphate soils, eroding the limestone landscape and impacting my Thrombolites. (118)	Refer to section 3.3 regarding Lake Richmond.
Lake Richmond	There are the Critically Endangered Ecological Thrombolites at Lake Richmond, also fragile limestone structures beneath the Lake. Thrombolites are a unique living fossil which many are totally unaware of, their survival depends on a continual supply of fresh water rich in calcium, bicarbonate & carbonate which is believed to have come largely from the underground groundwater which flows through from the calcium rich dunes. There should be no developments that will impact on Cape Peron it should be protected from man made influences. To shift the causeway due to it partially blocking the flushing of the Sound would mean continual dredging to keep it open if a marina were built. (121)	Refer to section 3.3.
Improvements for Lake Richmond	2. Lake Richmond facilities. Lake Richmond is being linked as an important and interregnal part of this development, but nowhere does the S.E.R. mention or set aside any funds or means to upgrade the walkways [now beach sand tracks] and control access to sensitive areas, yet allow our many visitors to view the unquie features of this lake. Has any plan been considered for this. (128)	The SER does not go into detail about rehabilitation around Lake Richmond, however it does state that rehabilitation of the area will be included in the offsets package. Further investigation into the most appropriate rehabilitation measures and facilities will be undertaken if the project proceeds to the next level of environmental assessment.
3.2.1 Geology	• The geological heritage of the project site is unique and globally significant. (Dr Vic Semenuik pers.com) (129)	The project will not remove or endanger the geological features that characterise the area.
3.2.2 Hydrogeology	• The hydrological implications of de-watering, construction of canals, back-filling canals with salt water and drainage will need to be subject to an independent scientific hydrological survey over the entire area and conducted for the length of the three differing water flushing periods of Mangles Bay and Cockburn Sound, namely summer, autumn and winter-spring. (129)	Agreed. These detailed studies will be undertaken if the project proceeds to the next level of environmental assessment.

Topic	Submission (verbatim)	Response
3.2.4 Lake Richmond	• The project will adversely impact Lake Richmond, which, in addition to being protected under the EPCA Act, is also Australian Heritage listed. Option 2.3 – A canal development 330m from Lake Richmond • Similar intrusions of saline water in soils in Mandurah have resulted in extensive death of trees and other flora up 750 metres. (Vic Beacham Pers.com) The proposal directly threatens the ecological health of Lake Richmond. The dewatering will impact on the remaining mature, and some endangered, trees in the Bush Forever site and the endangered sedgelands around the edge of Lake Richmond. This could also impact directly on the 'Critically Ecological Community of Thrombolites'. The dead sedgelands would allow nutrients into the edge of the Lake causing algal blooms smothering sunlight needed by the Thrombolites. • Engineering solutions suggested in the proponents' proposal are only constructed after the dewatering and after the damage is done. (129)	Refer to section 3.3 The effect of the project on water levels will be further investigated as part of a formal environmental assessment. No significant change in water levels (such as that suggested in the submission) around Lake Richmond will be considered acceptable. Lake Richmond will be protected both during and after construction.
5.5 Lake Richmond 5.5.1 Description of Lake Richmond	• Lake Richmond itself never contained saline water. • Contrary to the proponents claim that the Lake was brackish in the 1960's, it was classified as a Freshwater Reserve in 1904 by Hansard; horses and soldiers used water there during WW1. (129)	Anecdotal evidence exists both that the lake has always been fresh and that it was once saline. In the SER, the CALM management plan and the Interim Recovery Plan for Sedgelands in Holocene Dune Swales were used as the references for the historic salinity of Lake Richmond. The salinity profile of the lake will be measured if the project proceeds to the next level of environmental assessment.
5.5.3 Potential impacts and mitigation	• Proponent's dewatering estimates are grossly conservative – locally relevant studies (Vic Beacham pers.com. Mandurah) has demonstrated potential drawdown occurs up to 750m from dewatered construction sites killing mature trees and understorey. • Figure 13 is thus a totally incorrect misrepresentation of saltwater-groundwater interface for Option 2.2. All options thus present a high and unacceptable risk of adversely affecting the water quality of Lake Richmond. (129)	Refer to section 3.3. The preliminary groundwater assessment will be replaced by a full groundwater investigation and modelling assessment of the changes to the hydrological regime both during and after construction.
Lake Richmond	First, there is the serious risk to Lake Richmond and its thrombolites. Lake Richmond is an Australian Heritage listed site, and is unique among our coastal lakes, in that it is a freshwater lake, and is quite deep, about 15 metres in the centre. It is a perched lake. Thrombolites are very rare in the world, and are an example of the earliest forms of life on the planet. Those at Lake Richmond are unique; even the thrombolites at Lake Clifton are a different species. The lake has a rich bird life - some 120 species have been observed there, some of them are migrating species who use the lake, and would be in difficulty if they were denied its use. The proposed development is very close to Lake Richmond, and would interfere with its natural drainage and pose other threats, so it cannot help but seriously damage the lake environment. (133)	Refer to section 3.3. Any adverse impact on Lake Richmond would be unacceptable.
Coastal geomorphology values	The proposed site is part of the Cape Peron cuspate foreland or tombolo. This is a site of international geological significance and the proposed excavation would desecrate this site. We have sought independent verification of this assertion from Dr Vic Semeniuk of the Wetlands Research Association. He is a recognised international expert on coastal geomorphology and his opinion on this proposal is attached. It is our view, confirmed by Dr Semeniuk, that this site has such major geomorphological values that it should be kept intact as part of the Rockingham Lakes Regional Park. The proposal therefore fails a second test of sustainability because it involves irreversible degradation of an important natural heritage site. (135)	The cuspate foreland comprises the sharp headland of Point Peron and the two smooth shorelines of Mangles Bay and Shoalwater Bay. Shoalwater Bay and Point Peron will remain unchanged. The already altered Mangles Bay (causeway, boat ramps and significant accretion and erosion) will be modified by the realignment of the causeway and some small beach reclamation, however the basic line of the beach will remain the same. Therefore, although some landform modification will take place, the key features of the cuspate foreland will remain.

Topic	Submission (verbatim)	Response
Salt water intrusion	The excavation of the proposed boat harbour will destroy the local aquifer and could lead to a serious salt water intrusion that could affect neighbouring properties and even Lake Richmond and its thrombolites. This project is a dangerous large-scale experiment on the environment and the EPA should not allow the proponents to take such risks with the conservation estate. This is not degraded wasteland that we are discussing, but some of the most important natural ecosystems in the State. That is why this land was selected for inclusion in Bush Forever. (135)	Refer to section 3.3.
Lake Richmond	The Project poses an unacceptable risk to Lake Richmond, which as you would be aware is a place of very high environmental value. (137)	Refer to section 3.3.
Lake Richmond	No-one can guarantee that the Thrombolites of Lake Richmond will not be impacted upon and this projects own consultants in essence state that they should not be effected - but! These thrombolites are not only important to our community but create worldwide interest and they should not be put at risk under any circumstances. (139)	Refer to section 3.3.
Lake Richmond	Endangers salt water intrusion to the Australian Heritage Lake Richmond (a Fresh Water Lake) which will put at risk the critically endangered ecological community of Thrombolitas which are unique to this area. (143)	Refer to section 3.3.
Water level drop	The water table would drop, so therefore bores would become redundant. Any of the trees within 700 metres of the canal would die because of the drop in water table, which in summer time here it is 4 ft, and in winter 2 ft for me here. (144)	The dewatering and associated drop in water levels is only during the construction of the canals. After the canals are filled, there will only be a small change in hydraulic gradient in the area and water levels are not likely to be greatly affected.
Lake Richmond thrombolites Acid sulphate soils	One very important concern for me is the thrombolites. Owing to the fact that the soil in this area is sulphur acid soil (rotten sea weed – as my neighbours bores smell of sulphur if the bore is not taken down to a certain level to avoid this), and when air hits the sulphuric acid soil it corrodes limestone and metal, and the concern for me is that all marinas are built of limestone in their structures, and the walls will corrode and leach salt water into Lake Richmond, which would then kill the thrombolites who survive on fresh water, and the thrombolites are also on the National Heritage List. (144)	Refer to section 3.3.
Lake Richmond	I will quickly list my environmental concerns, and I'm sure others will do it better. Canals are scary, especially the acid soil rising. Lake Richmond's Strombolites should be enough on their own to kybosh this scheme. There is also concern re the risk of saltwater in the lake. I have concerns re the flora, fauna, water creatures, and seagrass and don't feel these have been addressed. We need to make sure we keep systems living, not only worry about near extinct creatures. In sum, Cape/Point Peron needs to be preserved and restored not squandered in this proposal. If the proposal can't be refused, put it on hold for ten years and decide then. Really examine the other sites for a Marina rather than see it as cheap land at Cape Peron. (157)	Refer to section 3.3.
Lake Richmond	5.2.4 Since the ecological linkage to Lake Richmond is central to the environmental considerations, then it would be reasonable to assume that this plan should, in no way threaten Lake Richmond itself, and the chance of salinity increase. (159)	Refer to section 3.3. Agreed.

Topic	Submission (verbatim)	Response
Lake Richmond water quality	5.5.1 This SER makes the statement that Lake Richmond was saline in, and prior to, the 60`s. There is a classic historical photograph showing a battalion of horses drinking from the lake in 1914, in connection with our efforts in WW1. The proponents demonstrate a lack of concern for data which may conflict with their version of history, but acknowledge that strata surrounding the lake is permeable. (159)	In the SER, the CALM management plan and the Interim Recovery Plan for Sedgelands in Holocene Dune Swales were used as the references for the historic salinity of Lake Richmond. The salinity profile of the lake will be measured if the project proceeds to the next level of environmental assessment. Anecdotal evidence exists both that the lake has always been fresh and that it was once saline. In the SER, the CALM management plan and the Interim Recovery Plan for Sedgelands in Holocene Dune Swales were used as the references for the historic salinity of Lake Richmond. The salinity profile of the lake will be measured if the project proceeds to the next level of environmental assessment.
Lake Richmond	5.5.3 Proponents declaring concerns for Lake Richmond, its Fauna, Flora, its TEC`s, and significance to the environment and community, propose to drive canals to within 200 300 or 350 meteres of the lake. This is on the evidence shown by the graph detailed on Figure 13 (page81). This representation of the risk of saline intrusion was shown to 24 members of SRG`s, and community members who were allowed to spectate. The expert paid to justify this evidence was unable to convince those present and admitted the line showing “post canal predicted interface” was an “unlikely outcome”, and stepped back from any further discussion. The fact that this line exists demonstrates the proponents lack of expertise in supervising taxpayers funds to investigate land use on Point Peron. There is not sufficient justification for its existence, and to proceed with excavation work and discover the “Fatal Flaw” when saline waters start to have an adverse effect on Lake Richmond would be a monstrous insult to this community. The SER explains strata of a permeable nature surrounding the lake, then disregards the assumptions which conflict and make the bold statement that there will be no risk of saline intrusion. This example of irresponsible disregard for technical evidence, to suit an optimistic commercial outcome is evident through this SER. (159)	Refer to section 3.3. The consultant (WorleyParsons) who undertook the preliminary groundwater modelling for the SER was not present at the SRG.
Salt water intrusion	The proponents talk glibly of impermeable cut off walls, as if they hold the ultimate solution at all times. Its simply a matter of the community sacrificing enough tax payer funds. If these walls exist then please tell Kwinana Nickel Refinery, who have a tailings pond (not very far away) over a kilometre from the coast, and its contents have sent a wide plume of noxious fluid through the underground waters. In fact, without remedial steps the tailings pond effluent would pollute Cockburn Sound, and bring about community concern. If they (KNR) put these “impermeable cut off walls” around the comparatively shallow tailings pond then they could have saved a lot of money. Maybe the effectiveness of these walls is suspect. The proponents show a casual attitude to examination of scientific data when protection of Lake Richmond from salinity is of concern to the community. There is factual and historical evidence of movement of fluids underground with a 1.2 km buffer. We are being asked to accept that 200metre would be safe. In fact 300 or 350 metre buffer zone is absolutely safe according to this SER, while the chairman explains (in public) that he will not still be mayor when this is tested. The environmental consequences of poor research, or supervision lacking in integrity, would end Lake Richmond as we now know it. (159)	The SER states that engineering solutions could be investigated as a means of protecting Lake Richmond from salt water intrusion. This is unlikely to be a fatal flaw as option 2.3 and 2.4 are much further away from Lake Richmond that option 2.2, which was modelled. It is accepted and understood that comprehensive research is required if the project proceeds. A tailings pond above a groundwater table is a different hydrological situation (vertical infiltration and then spread with the groundwater flows) to a saltwater canal dug to below the current groundwater level. In this case the salt / freshwater interface is a dynamic system with the more dense salt water pushing inland under the fresh groundwater that is being pushed towards the sea by the hydraulic gradient.

Topic	Submission (verbatim)	Response
Lake Richmond	6. Endangers salt water intrusion to the Australian Heritage Lake Richmond (a fresh water lake) which will put at risk the critically endangered ecological community of Thrombolites. (164)	Refer to section 3.3.
Lake Richmond	Soil disturbance for infrastructure would expose the acid sulphate soils, dangerously eroding the famous limestone landscape. There would be impact on the critically endangered ecological community of Thrombolites at Lake Richmond. (168)	Refer to section 3.3.
Lake Richmond	2. Lake Richmond environs and the fragile thrombolites with seepage. (176)	Refer to section 3.3
Lake Richmond	http://www.estill.com.au/capeperon/fag.html Furthermore, the canals are perilously close to Lake Richmond and its critically endangered ecological community of thrombolites. Their survival is dependent upon light and a continuing supply of fresh (non-salty) water rich in calcium, bicarbonate and carbonate, which comes largely from groundwater that has passed through the calcium-rich dunes that surround the lake. Any plan to 'develop' the Precinct should first attend to the inflow to and outflow from Lake Richmond. There are two danger of increased nutrient from the houses in the canal or even local surroundings houses. Either would cause an increase in agal growth, smothering the thrombolites. The Rockingham Development Office claims that the proposal to include a 200 metre buffer zone between the canals and the Lake will protect them. This completely ignores the complex hydrological issues underground and is not supported by sound scientific research. (177)	Refer to section 3.3. The hydraulic gradient is towards the coast from Lake Richmond, any surface inputs from the development area (lawn fertiliser etc), will flow away from the Lake and not towards it. The 200 metre buffer relates to surface impacts only. The hydrological changes that result from the canals are a separate issue that has been the subject of preliminary modelling and will be further investigated if the project proceeds to the next level of environmental assessment.
Lake Richmond	With Lake Richmond and the Thrombolites only a few hundred metres from this development the long term damage from pollution and heavy public access cannot be denied.	Refer to section 3.3. The groundwater flow in the area is towards the coast from the lake. Therefore, there is little risk of marina inputs affecting the water quality in Lake Richmond.
Lake Richmond	(5) The proposal will adversely impact the fragile Lake Richmond ecology (including stromatolites) through saltwater intrusion and urban pollution seepage. (6) The proposal will adversely impact the fragile Lake Richmond ecology and Cape Peron surrounds through acid sulfate soil exposure, which sound engineering is unable to guarantee total control of in the long term. (7) The proposal will adversely mpact the fragile Lake Richmond ecology and Cape Peron surrounds through higher vehicular access to the area. (179)	Refer to section 3.3. No adverse impact on Lake Richmond will be considered acceptable.
Lake Richmond	This project will likely cause salt water intrusion to the Australian Heritage Lake Richmond (a fresh water lake) which will put at risk the critically endangered ecological community of Thrombolites. hello- these are critically endangered!!! (180)	Refer to section 3.3. See above.
Lake Richmond	The Australian heritage listed Lake Richmond and its critically endangered, ecological community of thrombolites. Submission quotes from Lake Richmond section of the SER Note: quoted buffer zones have been proven to be incorrect, e.g. waste intrusion from the Kwinana evaporation pits extends into Cockburn Sound, a distance of 1.2 kms! The proposal in the submissions only allows a protection barrier of between 50m and 350m! Saline intrusion into the lake is a definite possibility. (183)	Refer to section 3.3. The 200 metre buffer relates to surface impacts only. The hydrological changes that result from the canals are a separate issue that has been the subject of preliminary modelling and will be further investigated if the project proceeds to the next level of environmental assessment.
Lake Richmond	3. the Lake Richmond stromatolites/thrombolites will be at risk from pollution and potential road expansion and these are of state, national and international heritage significance (188)	Refer to section 3.3. The project does not propose building the Garden Island Highway.

Topic	Submission (verbatim)	Response
Point Peron headland	5. the undeveloped limestone headland is unique geologically and geomorphologically. The visual amenity and rare habitat (both marine and terrestrial) it provides will be lost and any remaining habitat will be at high risk from direct and indirect negative impacts from development. (188)	The headland of Point Peron is not within the project area. The project will fund rehabilitation and protection works in the headland.
Lake Richmond	Excavation for the marina will expose sulphate acid soils and this will affect groundwater, Lake Richmond ecosystem and Cape Peron ecosystems. (191)	Refer to section 3.3. The existence of acid sulphate soils in the area and any management measures required are yet to be determined.
Unique landform	[1] Cape Peron, comprised as it is of a complex of rocky points is an uncommon geomorphological element on our mainland coast. Long sandy beaches and sandy points are much more the rule. Indeed it is only a whim of timing on a geological time scale that Cape Peron is connected to Rockingham because it has been an island in past eras and might be again in the future. (192)	The prominent Point Peron headland is outside the project area.
Lake Richmond	[7] With reference to Figure 13 section 5.5.3, with its huge vertical distortion, we can only hope that the modellers are correct and that the "Post canal predicted interface", that is the subterranean interface between saltwater and groundwater will indeed remain as steep as Figure 13 shows. (192)	Refer to section 3.3.
Lake Richmond	In relation to Lake Richmond, I cannot understand the protest based on environmental grounds. Just yesterday evening I walked around the lake. The rubbish still collects in the drainage outlets. The construction of the nearby Anchorage Estate has left masses of builders rubbish lying by the bushland around the lake. I don't believe people are genuinely concerned about Lake Richmond. I am not certain if the claim in the SER that "Lake Richmond is considered by the local community to be a major environmental icon …" can be supported. If the lake was a 'major environmental icon', wouldn't someone have complained about and moved all the rubbish that the water birds have to live with? I have asked the City of Rockingham to arrange for the removal of this rubbish, but with no success. (195)	Noted. The project will fund improvements to the surrounds of Lake Richmond.
Salt water intrusion	The proposed development includes canals cut into Cape Peron. The Badon Ghyben-Hertsberg principle when applied to the salt water/freshwater interface existing under Lake Richmond would suggest that the lake is in danger of salt water intrusion, especially during the de-watering stage necessary for the construction of such canals. The lake and surrounding Sedgelands are Australian Heritage listed and the home of a critically endangered community of Thrombolites which rely on the water quality for their very existence. (196)	Refer to section 3.3.

Topic	Submission (verbatim)	Response
Salt water intrusion	As a geologist I find two aspects which, together, suggest that the discussions are far from conclusive. A. Modification of the existing interface between freshwater and saltwater following the proposed excavations. In the Groundwater Fatal Flaw Assessment, WorleyParsons Services Pty Ltd arrive at a predicted "likely post canal interface" between freshwater and saltwater (Figure 1 of the Assessment). The prediction assumes: 1. the superficial aquifer is homogeneous (i.e. that the hydraulic conductivity of the Safety Bay Sands is the same as that of the underlying Tamala Limestone) HOWEVER, the superficial aquifer is not homogeneous but is highly inhomogeneous because of the original composition and architecture of the Tamala Limestone (Section 2.1 of the Assessment). IN ADDITION, the Assessment by WorleyParsons states, in paragraph 2.3.1: " … The potential for high variation in hydraulic conductivity across discrete zones of the project site is one factor which makes it potentially difficult to assess the hydrological impact of marina and canal developments. …" Here, the high variation in hydraulic conductivity is acknowledged and introduced as a factor which is difficult to handle. The high variation in hydraulic conductivity in the Tamala Limestone results from the numerous irregularly shaped cavities which resulted from differential dissolution of the original material by circulating groundwater, characteristic of karst weathering. Consequently, in the Assessment variation in hydraulic conductivity is left out altogether. 2. the thickness of the superficial aquifer is 30 m HOWEVER, the variation in thickness is unknown. 3. no tidal variation (sea level held constant at 0 m AHD) HOWEVER, there are tidal variations. 4. no 'zone of diffusion' HOWEVER, there is always a zone of diffusion (see paragraph 4.1 " … In coastal areas, there is a 'zone of diffusion' … "). (197)	The modelling undertaken was for the purpose of a preliminary assessment of risk and the system was simplified for this purpose. However, it is recognised that an extensive investigation into the hydrogeology of the area and subsequent detailed modelling will be required to address this issue if the project proceeds.

Topic	Submission (verbatim)	Response
Groundwater modelling	The results of the Assessment are given in Figure 1. HOWEVER, there is no explanation of the method(s) other than a reference to the Ghyben-Herzberg equation (the "1:40 ratio") and the modified Darcy equation. The hydrological problems appear to have been treated as a (sub)horizontal subsurface infiltration of seawater from the ocean to the terrestrial subsurface. HOWEVER, the modification of the interface by the construction of the marina is a matter of downward percolation of relatively heavy seawater into a domain of existing lighter freshwater. This implies continuous, forceful substitution, not only following a hydraulic gradient, but also a gravity gradient. These processes have not been described. The assumptions underlying the estimates are not met, while the real problem does not appear to have been defined. This means that the estimates are flawed and that the conclusions most probably are irrelevant. B. Lake Richmond From the above it follows that there are at present no guarantees for Lake Richmond to escape salination. Although the Assessment states that there are solutions in case the groundwater behaves different from the estimates, details and relevant budgets are not given. While ecology, ecological problems and reserve status in the Point Peron and Lake Richmond area have been set out exhaustively elsewhere, it is perhaps less well-known that the origin of the unique marine microbial colonies on the coast of Western Australia and the extreme age of their ancestors as in the Pilbara enjoy international attention. The freshwater counterparts of these, the thrombolites as in Lake Richmond, are equally special as they also occur only in a few other localities (Sunday Times, 01-04-06). C. Groundwater Fatal Flaw Assessment (GFFA) and Lake Richmond The GFFA itself is flawed because none of the assumptions underlying the estimates are met. It is not certain that the problem has been adequately defined. Consequently, the behaviour of the interface between existing freshwater and intruding saltwater following the proposed excavations is still entirely open. That is – nobody is any wiser. Although it might be an interesting darwinian experiment to subject the Lake Richmond thrombolites to a change of environment to see if they could adapt to brackish and marine conditions at short notice, this cannot in good faith be left to marina engineers and project developers with their totally different priorities, particularly in the limelight of the international media. (197)	As above. Agreed. The fate of Lake Richmond cannot be left to "good faith". An extensive hydrogeological investigation and modelling assessment needs to be undertaken to confirm whether or not Lake Richmond is at risk. In addition a monitoring plan and a contingency plan must be developed.
Distance from Lake Richmond	At the beginning of the SRG consultation process both Option 1.1 and Option 2 (Figs 4 and 5) were seen by many of the group members as being too big: - too close to Lake Richmond; - too close to Shoalwater Bay in the vicinity of the existing leases; and - too far to the West and too close to Cape Peron arising out of the movement of the existing causeway (and the road to the West). As a result of the subsequent public consultation process and further meetings of the SRG, the development has been moved away from Lake Richmond and now Option 4 (Fig 8) is probably acceptable in this respect. (200)	Noted.

Topic	Submission (verbatim)	Response
Lake Richmond	Blurb from the project proponents claim the project team, comprising environmental consultants, engineers and marine biologists would work closely with key stakeholders and the community to develop and assess a number of options and consider a range of issues. All options I have seen show the digging out of large areas of land to bring seawater into an area to provide canal living for a select few. (Stakeholders taken care of.) The introduction of seawater in the proximity of Lake Richmond would be one of the most foolhardy suggestions I have heard for some time. Over 30 years ago a causeway/bridge project was built to Garden Island. Problems with flushing and sand movement are still being experienced. DAL Science and Engineering Pty Ltd. Report No. 02/247/2. Dated JUNE 2003. Salt water into Lake Richmond is too big a risk, whatever the experts say. (215)	Refer to section 3.3
Lake Richmond	Page 19, point 3.2.4 — Lake Richmond and page 21, 3.3.4 Shoalwater Islands Marine Park - It is essential that these remain to the highest possible levels and any added activity is not allowed to create degradation. (216)	Noted.
Lake Richmond	This proposal will almost certainly impact on Lake Richmond via hydrological change of depth and nutrient input threatening the stromatolite community. Lake Richmond is a EPP Swan Coastal Plains conservation category wetland. The many values of this lake are well discussed again in Bush forever site 358. The dangerous effect: release of Acid Sulphate soils has recently been discovered throughout the coastal plain. Dredging proposals to construct canals could cause catastrophic harm to the bay and Lake Richmond. (218)	Refer to section 3.3 No adverse impact on Lake Richmond will be considered acceptable.
Lake Richmond	I am sceptical that even the revised concept option for the CPTPP will protect the Australian Heritage listed Lake Richmond and its critically endangered ecological community of thrombolites. (219)	Refer to section 3.3. Extensive investigations will be undertaken to determine whether there is any risk to Lake Richmond.
Lake Richmond	Then consider the effects on Lake Richmond with the Australian Heritage listed Thrombolites, if seepage of salt water from the canals were to reach it. Also the exposure of acid sulphate soils from soil disturbance for construction works would have a disastrous effect on the whole ecology of the area. (232)	Refer to section 3.3.

6.4 VEGETATION, FAUNA, BUSH FOREVER, REGIONAL PARK

Topic	Submission (verbatim)	Response
Flora	To destroy 75ha of flora is saddening but to do this in what is adjacent to and part of a bush forever site has greater ramifications. There is a danger of total loss of native flora in the area due to the probability that cross use by insect, bird and animal species will reduce pollination, seeding and viability and accelerate competition from exotic species introduced for the project. (palms etc) (1)	The total clearing required for Option 2.3 and 2.4 would be 45.5 ha or 40.1 ha respectively. 75 ha of vegetation will not be cleared. There is no basis to the assertion that the above clearing would result in the "total loss of native flora in the area…". The majority of the vegetation in the area will remain intact and will be improved through rehabilitation and weed control.
Fauna	As with Flora there will be an inordinate reduction in Fauna not in proportion with the land occupied, the problem with this aspect is that many species will be reduced due to the lack of diversity due to stripping and by the introduction/conducive facilities offered to feral dogs, cats, rats etc which will hunt beyond the project boundaries. (1)	The full range of habitats will continue to exist on Cape Peron although the total area available will be reduced. Feral dogs are not known to be common in the Metropolitan area. Options to restrict the ownership of cats in the project area could be investigated. As part of the rehabilitation of the area, a trapping program to eradicate feral cats from the area may be undertaken if further investigation indicates they are a problem in the area.
Maintain area as Bush Forever/Regional Park	Point Peron is a rare and unique natural heritage area and should be preserved for posterity as a Bush Forever/Regional Park - not sacrificed to greedy developers for their own personal gain. The whole project smacks of corruption! (3)	Noted.
Fauna (3.2.3)	The proposal for a tourism precinct and marina will result in a loss of habitat. (Page xi, of the Executive Summary) Accepted! But the Cape is degraded already. Old soldiers who served at the Cape have told me of "Quokkas" waking them because of they were scratching at peoples' back packs looking for food. Where are those animals now? The wild life on the cape has been decimated. In fact, the largest animal I have seen there is a feral rabbit. I doubt the proposal will have an impact of any significance on naturally occurring fauna unless it provides an opportunity for a greater proportion of the Cape to be rehabilitated and managed so that native animals can be reintroduced and managed. The plan to keep much of the bush forever site will alleviate pressure on birds. I believe the proposed Tourism Project could enhance the environment for natural fauna. (4)	Noted. An extensive rehabilitation program is planned.
Flora (3.2.3)	"The vegetation of the project area consists mostly of coastal shrub lands dominated by species of coastal areas on the Swan Coastal Plain" The Rockingham Regional Park includes significant tracts of land where one can see coastal shrub lands thriving. Probably the largest is the Port Kennedy Scientific Park which is fenced and managed, but hardly ever traversed, (Except by trespassers who wreck the fences and gates to gain access to the beaches so they can go fishing.) There is also a strip of land between the sea and the suburbs of Warnbro, St Clair and Port Kennedy which is protected. In the Tourism Precinct Proposal, there is a plan to set aside land on Cape Peron and actually fund its management. The flora and land forms on Cape Peron are not unique, even to the Rockingham region. I believe the Tourism Precinct will have a positive impact on the management of the remaining land and flora set aside as reserves. (4)	Noted.

Topic	Submission (verbatim)	Response
Bush Forever/Regional Park	I OBJECT to the 'Cape Peron Tourist Precinct Project': 1. The project is sited in a designated Regional Parklands and Bushland Forever zone. (5)	The values, impacts and proposed mitigation of impacts on the BFPA and the Regional Park are outlined in the SER. The impacts have been reduced as an outcome of the consultation and environmental review. Steering Committee aims to mitigate the impacts of the proposal through the provision of offsets.
Bushland forever:	I could understand preserving a area if it was unique in flora and fauna but not a area that has become a dumping ground, wind swept desert that has become overrun with weeds (Bennett 2005 report) (6)	Noted. The project will contribute to rehabilitation and improving management of the Cape.
Revegetation	The opportunity to finally revegetate the denuded areas of Cape Peron as part of an offset approach to this development is to be applauded. The infestation of exotics is advancing at an unparalleled rate and steps need to be taken to arrest this so that native species can propagate in sufficient numbers to return this area to something resembling its natural state. (S. 8). The efforts of the local environmental centre whilst admirable are limited due to a lack of real funds and manpower. A grant in the vicinity of 4-5 million dollars, however, provides real hope for a new ecological balance to be established. This should be seen as a crucial win in this overall scenario. (11)	Noted.
Precedent for clearing in Regional Parks	As you would be aware Point Peron is part of Rockingham Lakes Regional Park and is managed by CALM under a draft management plan. I am concerned that if the marina and canals go through in the section named "Bush Forever" at Point Peron (which is legislated to mean bush being preserved), that this would set a precedent for other regional parks. (13)	Clearing is not precluded in Bush Forever Protection Areas (Statement of Planning Policy 2.8). Regional Parks are for the dual purposes of conservation and recreation. The Rockingham Lakes Regional Park Draft Management Plan recognises the project area as an "area subject to future planning". Although the recognition of a harbour proposal in the Plan does not imply endorsement of the project. The Draft Management Plan states: "The resources required by CALM to manage issues resulting from a harbour development would be considerable and ongoing. In the case that the harbour proceeds, adequate compensation for the loss of Regional Park estate would be sought and appropriate mitigation to minimise environmental impacts would be required." This project would not set a precedent for clearing in Regional Parks, as this has already occurred in other areas of the metropolitan area for infrastructure and development.
Management of the reserve	2) Lets have a vision for nature reserve like someone did for Kings Park. (14)	Existing policy and planning for the Cape Peron area has been taken into account in the development of the concept plan.
Bush Forever	7) Is bush forever for real? Or do we just keep slicing the corners of parks until there is nothing worthwhile keeping? (14)	The Statement of Planning Policy 2.8 regarding Bush Forever Protection Areas does not preclude clearing.
Regional Park will not be impacted	The Regional Park will not be impacted upon by the works proposed and should be considered a separate issue. (24)	Noted. The project has attempted to minimise the area of Regional Park affected by the project, however as detailed in the SER some land will need to be excised from the park for the project to proceed..

Topic	Submission (verbatim)	Response
Project opposition. Bush Forever	I cannot understand why this last piece of natural bush should be gobbled up by the land hungry developers, which seems to be the main reason for this move, when they have got all the rest of Australia to build on, because, lets face it, a marina is the thin edge of the wedge. There is a sign at the end of Arcadia drive stating 'bushland forever', is this just another broken government promise? I can imagine when the rich guys move in with their big yachts, which are mostly left in the pens from one year to the next, they will be followed by the encroachment of a boathouse, houses hotels etc,. The only excuse being six yachts broke their moorings a few years ago, in a bad storm and ended up on the beach. .The whole concept of natural bush will be ruined forever, something to tell our grandchildren, that we could have prevented. (67)	Refer to section 3.1 regarding Bush Forever policy and section5 regarding preservation of the natural environment
Bush Forever	e. Cape Peron is a “Bush Forever” site. A treasure for future generations. (112)	Refer to section 3.1 regarding Bush Forever values.
Bush Forever	3. Bush forever site (117)	Refer to section 3.1 regarding Bush Forever and the Regional Park.
Regional Park	4. the Rockingham Lakes Regional Park; (117)	As above
Bush Forever	The damage that will be done to this Bush Forever site if the plans for Point Peron go ahead. (118)	Refer to section 3.1 regarding Bush Forever and the Regional Park.
Bush Forever	Bush Forever is legislated to being preserved now we’re informed it’s fine to excavate canals through, we find this highly hypercritical. (121)	Refer to section 3.1.
3.2.3 Flora and fauna	• Loss of 40.1-53 Ha of regionally significant remnant vegetation most of which is within Bush Forever Protection Areas, represents a loss from Point Peron of 36% to 48% of its remnant vegetation. • There is no way a loss of habitat of this magnitude would not adversely affect the regional abundance of fauna species? (129)	The SER recognises the loss of fauna habitat due to the clearing required. Mitigation would include the restoration of adjoining areas to improve faunal habitat values (including planting, provision of habitat logs etc).
5.2.1 Description of fauna	• Birds – at least 125 species of birds use the habitat including endangered Peregrine Falcon which breeds in this area. The International Treaty we share with China and Japan includes protecting habitat for visiting ‘waders’ such as: Greenshank, Tattler, Red-necked Stint, Sanderling and many others. • The report omits the regionally significant presence of the White Browed Scrub Wren at Point Peron. (129)	The SER presents the results of Bamford (2005) which include that the Cape Peron area may support 121 bird species, and that the Peregrine Falcon has been recorded in the area. There is not expected to be a significant loss of habitat for bird species, especially as there is no wetland habitat in the project area. Not all the bird species expected to occur in the area were listed in the main report. The White Browed Scrub Wren is included in Appendix 5 and is given a conservation significance rating of 3 as it is considered at least of local significance.
5.3 Bush Forever Protection Area	• This proposal sets a dangerous precedent to the use of ‘Bush Forever’ protected areas as “land banks” for developers. On these grounds alone, the project should be discarded as it is fatally flawed. (129)	Refer to section 3.1.
5.4.2 Assessment Framework or policy context	• As stated in the report, a key objective of the Rockingham Lakes Regional Park Draft Management Plan 2003-2013 is to: Ensure that developments do not adversely affect values of the Park. The proponents’ proposal directly threatens environmental values of Point Peron and Lake Richmond. (129)	Refer to section 3.1.
Bush Forever	Secondly the development would destroy much of the Bush Forever site, and damage or destroy the flora and fauna of the area. (133)	Refer to section 3.1.

Topic	Submission (verbatim)	Response
Regional Park	The proposed marina will destroy at least 40 hectares of the Rockingham Lakes Regional Park. This land would be excised from the Park and handed over to a private developer. This act would set an appalling precedent that would encourage other opportunistic developers to pick the eyes out of the conservation estate for their own private gain. While this might produce an economic gain for the developers it would be at the expense of the community and the environment. (135)	Refer to section 3.1. It is likely LandCorp, a Government agency, will be asked to undertake this project to ensure the social, environmental and economic outcomes for the community are realised.
Bush Forever	The land in question is mostly contained in Bush Forever site 355. This site has high conservation and recreation values and was selected for protection on this basis. The public of WA is entitled to expect that Bush Forever means exactly that and therefore this land should be off limits to developers. (135)	Refer to section 3.1.
Bush Forever	The project would result in the loss of a large tract of prime coastal bushland which is part of the "Bush Forever" land previously set aside by government. Does the expression "Bush Forever" have any meaning to our government?? The bush in question is an integral part of Cape Peron's attraction and is a tremendous natural asset to Rockingham which under no circumstances should be destroyed. Nearly all the bush in and around Rockingham Beach has been eradicated and we cannot afford to lose this area. (137)	Refer to section 3.1.
Rockingham Lakes Regional Park	The SER states that around 1% of the Rockingham Lakes Regional Park will be excised if the marina was to be approved. This is a statement whose intent is to minimise the impact of the proposal. I would suggest that the Lake Richmond/Cape Peron area should be looked at in isolation as in reality they are separate from other parts of the regional park by some kilometres and this marina will gouge at least 50% from the Cape Peron bush forever site. (139)	This is an accurate statement regarding the Rockingham Lakes Regional Park and is not intended to be misleading. The very next paragraph on p71 of the SER (in the Regional Park impacts section) states the amount of clearing in the Cape Peron section of the Regional Park. The clearing loss in the Cape Peron section of the Regional Park would be 29-34% (option 2.4 and option 2.3 respectively).
Bush Forever / Regional Park	3 It is a Bush Forever site. 4 It is part of Rockingham Lakes Regional Park. (143)	Refer to section 3.1.
Bush Forever	I write at the risk of alienating some that I am perplexed about which words in the term Bush Forever are causing so much dyslexia. My account has not been specific in terms of natural environmental impacts. I believe the major topics have been raised but I am not at all content that the concerns have been examined. The solutions to possible problems seem to be addressed by somewhat vague and untested notions of intent. (156)	Refer to section 3.1. At this stage only a concept plan and preliminary environmental studies have been carried out to determine whether there are likely to be any fatal flaws associated with the project.
4.2 Project objectives Environmental benefits	Environmental If the project results in the removal of introduced plants and animals, improves the recreation and environmental management, opens access to the general public in a managed way; these will be huge positives for an area that is currently a degraded rubbish tip used solely by a select few in a fashion that suits them with no regard for the environment or the general public. (162)	Noted
Section 8. Mitigation	The document outlines offsets and forecasts other benefits which I believe will result in the improvement of the area for the use of all the people of WA without any additional long term stress being placed on the environment. (162)	Noted.
Bush Forever / Regional Park	3. It is a Bush Forever site. 4. It is part of Rockingham Lakes Regional Park (164)	Refer to section 3.1.

Topic	Submission (verbatim)	Response
Regional Park	Point Peron is currently a Regional Park for the people, that means you and me and all the other people who enjoy a stroll around this area. This current proposal would exclude people from major sections of Rockingham Lakes Regional Park. (168)	There are few facilities currently within the development area that are open to the public. Currently, the area includes private leases, bushland, Point Peron Rd and the yachting and boating clubs. The project includes full public access to Mangles Bay, all around the marina waterways (except near the western entrance) and cycleways and nature trails that link through the project area, out to the point and along Shoalwater Bay. The project will also fund major facilities (walking and cycle ways, lookouts, information, disabled fishing platform) to the balance of the Cape to allow visitors to enjoy the area.
Bush Forever	I am a boat owner and use the point peron boat ramp at present. It appears that the marina is designed primarily to cater to large water craft, tourism and residential development. Why is it being planned to put it in an area preserved under the bush forever? Under the plan between 29% to 41% of remnant vegetation will be destroyed. The remnant will be put under extreme pressure as will the few remaining wildlife species. We are losing an alarming rate of bush habitat through residential development. I am cynical that the marina is really just a greedy land grab by all parties.	Refer to section 3.1.
Bush Forever	(1) Part of the proposed site is "Bush Forever". This is entirely in conflict with the principles of Bush Forever. Offsetting land elsewhere is unsatisfactory. The purpose of Bush Forever is to maintain the few designated remnants of native bush and habitat. (179)	Refer to section 3.1.
Vegetation buffers	(3) The proposal leaves no buffer between development and native bushland, leaving unsustainable remnants which will deteriorate under close proximity to housing, roads, heavy pedestrian usage and household and garden chemicals. (179)	Roads will exist between the development and the remnant bushland. Roads or paths are the preferred interface between native vegetation and developed areas as they form a barrier to the spread of weeds and to human impacts.
Vegetation and biodiversity	(4) The proposal will destroy and deteriorate good stands of significant vegetation such as Garden Island Tee Tree and associated habitat which is becoming scarce or destroyed elsewhere. The proposal would lead to a reduction in the sustainability of the remaining area and potentially leave an unsustainable width to maintain current biodiversity. (179)	The floristic community types that occur in the Cape Peron area and the relative amounts that would be cleared in each option are presented in SER Table 4. The project will reduce the total area of bushland. Offsets include the management of threatening processes (weed management, formalising access areas, dune stabilisation) which will help improve the vegetation condition.
Bush Forever	Submission quotes Bush Forever section of the SER Note: For the proponents benefit at the environments expense! 'Critical assets' represent the most important environmental assets in the State that must be fully protected and conserved (EPA 2005). Bush Forever? A protected area? Or do we remove 43.9 ha / 30.9 ha Plus Threatened Ecological Communities. The Government and its Departments, the EPA and CALM's integrity and ethics are at stake on these issues! "Fatally Flawed"! The area is "Bush Forever" (183)	Refer to section 3.1. Note, the TEC identified is retained in both Options 2.3 and 2.4.

Topic	Submission (verbatim)	Response
Regional Park	Submission quotes Regional Park section of the SER Not for concentrated tourist or high-density residential purposes with limited access to the general public. (183)	Refer to section 3.1. The general public will have greater access to Mangles Bay than is currently available.
Vegetation and flora	Submission quotes from the Vegetation and flora section of the SER Critical asset loss, therefore “fatally flawed” (183)	Refer to section 3.1
Bush Forever	My concerns include 1.aThe site is a Bush Forever site and I strongly feel it should remain so - if it becomes developed this makes a mockery of the whole Bush Forever intitiative. 1b. The site was declared a Bush Forever site because of certain values - why should these values now be deemed unimportant? (188)	Refer to section 3.1.
EPBC	8. the development will impact species listed under the EPBC Act (188)	The EPBC Act protects Lake Richmond and two Threatened Ecological Systems. Lake Richmond is outside the project area and no adverse impact on the lake ecosystem will be acceptable. There are no species listed under the EPBC Act within the project area.
Bush Forever	The proposed site is a Bushland Forever site. When does forever not mean forever? When people can make lots of money? (191)	Refer to section 3.1.
Rehabilitation	[8] I notice in 8.3.1 of the Stratagen report, reference to rehabilitation of vegetation. Can I just say that CALM can be tasked at any time to get on with those good works. It is a ridiculous notion that the "Cape Peron Tourist Precinct Project" is somehow required for this work to proceed. (192)	The offsets provided through the project would allow for additional resources for rehabilitation above that which is currently available.
Regional Park	The development encompasses a Regional Park, and much of the area of the proposed marina is classified as ‘Bush Forever’. Any development in areas with such classification would create a dangerous precedent, causing a run of proposals in similarly protected areas of the State. (196)	Refer to section 3.1. This is not a precedent as Bush Forever areas have been put to other uses on previous occasions.
Rehabilitation	Page 19, point 3.2.3 - Flora and Fauna - Rehabilitate with flora which would have been present before degradation occurred and fauna and birds might return. (216)	Noted. This is planned.
Regional Park / Bush Forever	Page 73, point 5.4.4 — Expected Outcome - I object to the excision of 44 ha or 39 ha or any other number of hectares from the area of the Regional Park and Bush Forever areas. I cannot see any mitigation measures making up for the loss. It sets a bad precedent for the later clearing of what is left of the Cape Peron Regional Park and Bush Forever areas. It sets a bad precedent for losses to other regional parks and bush areas. (216)	Refer to section 3.1. This is not a precedent as Bush Forever areas have been put to other uses on previous occasions. Existing land uses in the Cape Peron Bush Forever site include shacks built on private leases.

Topic	Submission (verbatim)	Response
Regional Park	Please consider my submission regarding the above reference. The Cape Peron Reserve was ceded to the State Government of W.A for recreational use. The inclusion of private residential areas in the proposed Cape Peron Tourist Precinct Project sets a dangerous precedent for private development in this, and other reserves. I subscribe to Landscope, a Conservation and Land Management publication, which frequently features endangered flora and fauna of WA. If the CPTPP proceeds more habitat, and flora and fauna, will be lost. Cape Peron Reserve is one of the few bushland areas remaining and, once flooded for a marina, is lost forever. The commercial and residential components proposed are adequately catered for at Rockingham Beach. (219)	Refer to section 3.1. A comprehensive set of offsets is proposed in recognition of the loss of Regional Park land. The tourist components will complement the existing Rockingham beachfront.
CALM management plan	This document does make mention of 'the current CALM plan' but omits any detail of what CALM's Management Plan actually proposes suggesting that the Plan is not even worth looking at. In their haste to discount CALM'S plan the proponents fall over themselves and become nonsensical. For instance the issue of facilities for tourists is expressed thus: "No new Tourism Facilities — other than those already existing [sic]/proposed[sic] by CALM" and "No further improvements at the Cape other than implementation of the current CALM plan." Any positive reference to the CALM plan by stakeholders was met with ridicule — 'CALM has no money,' one stakeholder said. No one raised the idea that the funds so readily available from three levels of government for the feasibility study could be used to implement the CALM measures. CALM are currently implementing many management measures as set out in the Draft Management Plan i.e. woody weed removal, establishment of dual pathways, dune restoration, construction of car park perimeters, a snorkel trail and a viewing platform to preserve natural landscapes. (226)	The Rockingham Lakes Management Plan is both referred to and quoted from in SER section 5.4. SER section 5.4.2 states the key environmental and social objectives from this plan. This statement was amended to read in the SER Table 4: "No further improvements at the Cape other than implementation of the current CALM plan" The offsets provided through the project would allow for additional resources for rehabilitation etc above that which is currently available.
Regional Park / Bush Forever	Point Peron is a very unique and valuable Regional Park – a park for the people – Bush forever. If this project were to go ahead it would set a grave precedent for further development in other Regional Parks. We feel apart from loosing most of this to a small privileged group it will have a marked detrimental effect on the eco-system of the area. (232)	Refer to section 3.1. The project will result in extensive public access to areas in which the public currently is excluded by private leases.

6.5 CONSULTATION PROCESS

Topic	Submission (verbatim)	Response
Consultation process Lack of alternatives	I am totally against the project for the following reasons: The process of community decision making has lacked transparency. For starters, the community should have been given the option of alternative sites, such as at Wanliss Street, right at the beginning. People's objections have been misrepresented by the format of, and method of recording community feedback on the project. For example, this has been phrased as if the project was a fait accompli and only opinions of what should or should not be included have been invited. Also "Expert" reports have appeared biased in favour of the project and lack rigour and detail. (3)	The stakeholder consultation was indeed focussed on a proposal at Mangles Bay, the constraints and opportunities of the site, and how to design the best concept plan for the area. The terms of reference for the Stakeholder Reference Group were made clear and transparent from the start. All comments and protests against the proposal were recorded and reported, however, after the constraints of the area had been fully discussed, the meetings moved on to "what should the project look like" if it was to go ahead. The same level of rigour and detail that is appropriate in a formal environmental assessment is not expected in a strategic environmental review.
Consultation process General support	This process has been subject to claims that it has not been fully consultative. As a interested person I would like to state that for intents and purposes, the levels at which people were identified for discussions was high professional and done in a very sensitive manner. It is disappointing that those most distant and disparaging of the tourist proposal concept were unable to participate on the grounds of 'higher morals' and 'environmentalist cause' to effectively work towards some possible solutions. These so called 'deep greens' and a handful of 'red greens' only serve one purpose and that has been to distract the debate from the real facts conducted under scientific parameters by the consultants. Thus, they have formed various strange alliances with other self-interest groups such as the Perth RSL whose 'mesothelioma time bomb' shacks are not only a disgrace but an environmental hazard in themselves. The desire to lock up the Cape on a status quo policy will not, as your the report (Table 4) indicates, solve any of the existing and growing environmental issues already present. The small squatocracy who form an elite occupying the Cape should recognise that as a privileged group they have had decades of lease tenancy; however, with progress comes change and this land must now be returned to the people in a value added form so that the $500 million dollars in economic growth (page x) it can engender begin as soon as possible. (11)	Noted.
Community consultation process	The method of recording community feedback did not allow for genuine objections to be included and in fact the strength of public opinion has been totally disregarded. Those keen to see the project proceed have manipulated the whole process of "so called" community consultation. (13)	A comprehensive stakeholder consultation program was undertaken (SER Section 2.4.3) with many different mechanisms employed (public forums, small telephone survey, stakeholder reference group, website including public feedback page and an information line) to allow the community to comment on the project. Genuine objections were certainly able to be expressed through the consultation process. For example: The first question on the SER community feedback form that was distributed through the CRG was "To what extent do you support the concept plan for development of Cape Peron as a marina based tourist precinct?" The options were "strongly support", "support", "oppose", "strongly oppose" and "unsure/don't know".

Topic	Submission (verbatim)	Response
Good consultation	In this document I would specifically like to respond to Part 2 of the SER which deals with the SER process itself. It is the view of RMAG that every attempt was made by Estill and Associates to consult fairly and widely with all sections of the community on the issues raised from the Stakeholder's Reference Group despite assertions from elements within the Rockingham community that this did not occur or was biased in the manner with which it was conducted. The inability for some groups such as the Preserve Point Peron for the People (PPPP), to accept a role in the consultation process is disappointing as a result of their steadfast refusal to consider the Mangles Bay location as the preferred site. Consequently, the opportunity for this group to have a real say was not denied rather than rejected by its own members and, as such, should not be considered -as in -any way balanced or pro-active but defensive and reactive. (53)	Noted.
RMAG 2003 survey indicated majority support for the marina	RMAG began its inquiry Into whether a marina was wanted in Rockingham by placing advertisements asking people to respond either FOR or AGAINST this proposal. Later we were successful and instrumental in acquiring a -$240,000.00 regional partnerships grant [later matched by the State Government) to put towards the studies which have been completed to date. There were some 17 letters opposing the marina concept but a much larger number in favour of it. These have been photocopied and attached as evidence in support for the intents of this correspondence. They show that RMAG has and remains open to community input end reflects the long term aspirations of the local community for a marina facility. (53)	Noted.
Consultation process	Whilst groups such as PPPP refused to send a representative to the SRG meetings the RMAG did, as we sought to establish a position characterized by cooperation and compromise (give and take) over outright conflict. The 40 or more people involved in the SRG were indicative of the views found within the local community and it remains an affront to them that minority groups such as the PPPP continue to dictate terms of the democratic process from outside of the established consultative model [Minutes of SRG meetings will verify this point] When confidential surveys, such as those conducted by phone were undertaken, there has been a truer representation of the community opinion; whereas opportunities for open public feedback have mirrored doctored' strategies. (53)	Noted.
Criticism of the Preserve Point Peron group	RMAG has sought to recognize that there will be a number of environmental balances or off sets that need to be considered in relation to a Tourism Precinct at Mangles Bay and has supported the means by which the SRG could best address and manage them; whereas the PPPP have maintained a dogmatic and steadfastly inflexible position involving a negative, indeed doomsday perspective by conjuring outcomes such as an increase in eutrophocation and turbidity of local waters, increased epiphytical growth on seagrasses to quote a few examples. They often use the word 'will' or 'would' rather than 'may' or 'might'; and in doing so use fear as a means of seeking to dictate the terms of this debate. (see evidence — yellow brochure attached). It should be noted that the PPPP have not conducted any scientific research to support their claims. I implore, the Chairman to consider not just the volume of responses for and against this proposal but rather the manner with which they have been made and whether a fair playing field has been established by all parties from the outset. It is the view of RMAG that it is not merely a case of the EPA taking on feedback for the SER as a document per se but rather recognizing the efforts to undermine the legitimate decision making processes associated with relevant policy. In succinct terms, the PPPP not only oppose the Point Peron Tourist Precinct but also seek to challenge the statutory authority of the relevant Minister by engaging in tactics which misrepresent the verve of the community on this issue. (53)	Noted.

Topic	Submission (verbatim)	Response
2.4.2 Objectives of consultation	Stakeholder consultation lacked transparency and was cynically conducted to effectively stifle a range of inputs that were not in accord with the proponent's commitment to the project proceeding. (129)	The stakeholder consultation was indeed focussed on a proposal at Mangles Bay, the constraints and opportunities of the site, and how to design the best concept plan for the area. The terms of reference for the Stakeholder Reference Group were made clear and transparent from the start. All comments and protests against the proposal were recorded and reported, however, after the constraints of the area had been fully discussed, the meetings moved on to "what should the project look like" if it was to go ahead. The project was never a review of the entire Rockingham coastline. The funding was provided to determine whether or not a marina could be designed for Mangles Bay that had acceptable environmental, social and economic outcomes.
2.4.3 Consultation programme	Public survey represents a distortion of the spirit of community feeling and opposition to this proposal. By their own admission the proponents found that 59% of the community surveyed were totally opposed to the project on environmental grounds. Many of those reported as supporting the proposal were merely supporting the idea of a marina for Rockingham and not the tourist development on Point Peron. (129)	There is currently no statistically valid survey on the level of community support for the project. The community's understanding of the project is also likely to have changed in the last year of consultation and media attention so that all previous surveys would be out of date. It is apparent from submissions and letters that there is both strong support and strong opposition to the project.
Lack of alternatives in consultation	In May/June 2005 there were two public consultation forums which if the outcomes were looked at carefully the support for a Cape Peron marina was anything but overwhelming. It was only after the Strategic Reference Group was formed that the project "got legs the SRG consisting of a few interested people who were able to push it. The only proposal at the meetings was for a marina on Cape Peron and it was not until a month later that a feasibility study was released which looked at other sites. This study was never widely distributed, (despite being on the internet), or discussed and when I tried to table it at a Council meeting it was dismissed as Councillors told me I was always tabling documents without notice at meetings that they hadn't seen and they should have the chance to read them first. I told them that was the point of tabling the document, they had not seen it never mind had a chance to discuss it. This document should have been the primary information tabled and discussed at the May/June public meetings. Other sites could have greater benefits for a larger part of our city than Cape Peron. (139)	The location analysis was undertaken in response to community feedback that they wanted to know why Mangles Bay had been chosen and not other areas such as Wanliss St. Refer to section 3.14 for further consideration of alternative sites.
Project opposition Biased community consultation	Preamble In this submission a great deal is said about the subject of Community Consultation. Since this is your opportunity for seeking a "Fatal flaw", from an environmental standpoint, the writer strongly believes that the will of the people has been largely ignored to date, and this is the first opportunity to correct this, prior to ministerial comment. Community members are well aware that the process here (in Rockingham) can allow planning approval for projects to forge ahead by successive rounds of what is described as "consultation". We have high rise on our foreshore, contrary to measured support in Perth as a whole, but as a result of 3 rounds of consultation. The first 2 did not succeed, but the third resulted in 97 letters in support. This happened a while back and local planners will explain that the folk of Rockingham support high rise on the shoreline, and continue to press State planners to continue to allow this situation in 2006. It would be a historical event to have a community consultation contract approved by both the proponents, and the community, before payment was approved to the organisation contracting to undertake this work. There is a belief amongst many community members that we are seeing this flawed process in operation again. (159)	There is both strong opposition and support for this project. Both views have been recorded in the consultation process. As the task of the project team was to try and develop the best concept plan possible, the terms of reference for the community consultation focussed on that task. The concerns of both those that support and oppose the project were taken into account in the later options 2.3 and 2.4, which have smaller footprints than early designs. Now that concept plans have been designed, there is an open process for community comment both for and against the project.

Topic	Submission (verbatim)	Response
Public opinion	Evidence from the public forum for land use at Point Peron, shows more community support for trailer boat facilities than marina berths, and this ratio is unlikely to change with population increase. In this SER there is not sufficient justification for concluding that an inland marina at Point Peron is • supported by the community, • is warranted by demand from boatowners • is in the optimum location (The proponents` "experts" admit other locations are valid) needs to be part of a "tourist precinct" (159)	There is certainly a much higher number of trailer size boats than large boats. The boat ramps in the area are utilised by thousands of boats every year and the marina proposes to build a marina with 500 boat pens. Both types of boats require facilities in proportion with demand.

Topic	Submission (verbatim)	Response
Stakeholder consultation	2.4 Stakeholder consultation. The community has been the victim in a campaign to distort and manipulate the concerns of the public in Rockingham, in relation to this SER. The advertised "Public Forum" for land use at Point Peron was attended by 297 people of this district. Even with the agenda for this meeting, its questions, and its statistical analysis being influenced by the proponents the public chose a land use entirely different to the plan you now see. I attached the results from this forum which is a document having a short public life before it was withdrawn and modified. At what point does the manipulation of statistical data provide a "Fatal Flaw" in the assessment of stakeholder consultation? The more obvious conclusions from this feedback are:- • Conservation of land……..150 supporting • Park and open space……155 • Picnic and BBQ area…… 140 • Cycling and walk paths…… 160 • Toilets……..165 • Boardwalk……...148 • Fishing platform……140 • Boat ramp……...140 • Marina with boat pens……...75 You will notice that the public chose bush over concrete, trailer ramps over marina pens, and 40 people said they wanted a hotel. Comparing the plan in this SER with the pubic survey focuses on exactly how this community has been ignored. 40 community members were chosen by the proponents, and after 4 meetings, and their number reduced to 24, they were not united in supporting this plan. The press/media coverage drew conclusions not evident to a spectator, and was a gross fabrication, sponsored by the proponents. The community was left with its mayor to represent its concerns over a plan that was taxpayer funded but bore no resemblance to community desires for Point Peron. The Mayor said he was impartial but stubbornly refused to consider legitimate concerns during the only forum available to the community-monthly Council Meeting. (159)	The proponent recognises that there is both strong opposition and support for the project. A comprehensive stakeholder consultation program was undertaken (SER Section 2.4.3) with many different mechanisms employed (public forums, small telephone survey, stakeholder reference group, website including public feedback page and an information line) to allow the community to comment on the project. This process has contributed to the development and review of option designs as well as identifying potential issues that would require further detailed investigation. The key environmental issues raised by stakeholders and the proponents responses are included in SER Table 1, p12. The membership of the SRG remained unchanged during the consultation process, although attendance varied.

Topic	Submission (verbatim)	Response
Biased community consultation	The meetings are minuted and will read as a continual suppression of any public concerns despite ratepayer funds being granted to keep the Rockingham Development office publicising its plan for land at point Peron. The mayor has continued to use his position in this society as a blunt instrument in preventing obstruction to his vision for this land.	Numerous locations along the City of Rockingham coastline were assessed (economic, environmental and social assessment) and the Mangles Bay area presented the most viable option; SER Section 4.2.1.
	There has been continual criticism of the one single use for this land. From a community perspective a marina for the area is a legitimate objective, but its type, size and location is a matter for community comment and advice. If Point Peron is to be regarded as a Tourist destination, then its role should be open to public discussion.	
	The proponents of this SER have commissioned a report, but the conclusions can only be reached with a set of parameters not revealed in the report. The chairman has continually and stubbornly refused to consider community input to be considered alongside this location analysis.	
	The location report is “Lightweight” and its credibility is suspect , as well as the conclusions which have been constantly challenged by community members. The proponents demonstrate a lack of responsibility in commissioning and financing a report which is funded by taxpayers, but the basis for its findings still remain secret. At one of the SRG meetings Dr Bill Burrill, acting for the proponents, admitted that their were 2 other sites that could be considered.	The Location Analysis was not intended to be a full site selection analysis.
	The proponents of this SER commissioned “Estill” to provide community consultation, and when this contract is clearly not achieving its objective (measured by the community) the proponents lack the integrity to require the contractor to perform is they are to be paid. From a community perspective this contractor was commissioned to provide “image”, and substance was not required. This contractor has used an agenda, and posed questions, and manipulated statistics to report a desired result-which is not impartial. (159)	

Topic	Submission (verbatim)	Response
Community consultation	2.4.3 The SER outlines the illusion. The reality is that Estil effectively screened out any input from community members which conflicted with the plan prepared by the RDO. You may wish to examine the specific questions asked, and their appropriateness in terms of soliciting an answer reflecting community desires for land use at Point Peron. I am attaching a document breaking down the 182 forms received as feedback. This document had a short exposure to the public, but please compare this with the plan put before the meetings of SRG`s. What the community wanted, and what it got are 2 entirely different creatures. The SER is shy about revealing that 56%(of 800 replies) of respondants to the public display said they believed this plan would be detrimental to the environment. The nonsense that by marginally changing the plan, then this would bring these folk back on line, is an arrogant disregard for community desires. How is the public supposed to make informed comment on economic predictions on a 2 dimensional sketch? It is central to the consultation program that we are led to believe that 40 stakeholders agreed that this is the course of action preferred by the community. As an observer I find these statements to be deliberately misleading. The community can only question through the chair, which is the Mayor at local council meetings. In the minutes of the Sept 05 meeting you will find a series of questions put to the mayor as a result of the 4th SRG meeting. Attached document titles “Questions to the major” directly quotes attempts by community members to obtain answers to issues of concern. Though he did not attend any of the stakeholder meetings, the Mayor stubbornly refused any attempt to draw feedback from the SRG members concerning their role in the planning process and their level of agreement with the decision. The SER completely presents an image of community consultation which is false, and deliberately misleading. The community has more trust in CALM and its current management plan, than a scheme hatched by the Chamber of Commerce which is motivated by short term financial gain for their group (159)	Appendix 1 of the SER, summarised in Table 1, includes every submission received from the Stakeholder Reference Group in August 2005. It is clear from the submissions that not all of the SRG members were in favour of the project.
Community consultation	11. the community consultation was not balanced or thorough (188)	A comprehensive stakeholder consultation program was undertaken (SER Section 4.4). As a result of public feedback on development option 2.2, two further development option were developed.
Misleading opposition group	I have read the protests of the Preserve Point Peron for the People Group. I do not understand the name. Point Peron is not currently available for the people, as it is mostly taken up by leaseholders that prohibit the people traversing on their land. In any event, I think this group have mislead many people into believing that the actual Point Peron area, with the trails and gun emplacements, is to be destroyed and replaced by a marina. This is clearly not the case. This misinformation is not helpful and if I had the time I would investigate the Group’s potential breaches of the Trade Practices Act in taking part in misleading and deceptive conduct. I have also complained in my submission to the SRG, that representatives of this group acted as bullies in the SRG process and often acted in a manner that discouraged comment from other participants in the SRG. (195)	Noted.

Topic	Submission (verbatim)	Response
Page (ii) Stakeholder Consultation	A great deal is made in the report about stakeholder participation and I have enclosed a letter to the editor expressing concern about that aspect. Proponents of the project may argue that sample interviews were conducted and public forums were carried out presumably by the Cape Peron Tourist precinct Steering Committee but what is the absorption capacity of the listener to encompass specifics like 40 hectares land clearing and so many hectares of seagrass loss. The S.E.R covers all of this detail and what has been the attitude to its dissemination amongst the population? Certainly there have been newspaper articles advising the S.E.R is available for $10 but as I pointed out in my response also with spin in favour of the marina. Nowhere in any of the articles (except my letter to the editor) has a simple expedient like the address for submission been given. I know that at a meeting in the Cruising Yacht Club called by the South Coast Regional Chamber of Commerce to its members specifically to get advice from the Cape Peron Tourist Precinct Steering Committee of which Major Sammels is the Chairman on the impact of S.E.R. I understand that there was a strong input to the meeting from people committed to the environmental aspects of the proposal hence the follow up newspaper articles by proponents of the development. I would have thought that there is an obligation by the Mayor and Councillors to include more specific information about the SER than newspaper articles. The simplest would be to circulate the Executive Summary of the SER to all residents because that's where I have had the time to extract sufficient details for my response. (205)	A comprehensive stakeholder consultation program was undertaken (SER Section 2.4.3) with many different mechanisms employed (public forums, small telephone survey, website including public feedback page and an information line) to allow the general community to comment on the project. In order to gain informed comment and have detailed interaction with a cross-section of the community, the Stakeholder Reference Group was formed for more detailed consultation. This process has contributed to the development and review of option designs as well as identifying potential issues that would require further detailed investigation. Advertisements with all relevant submission information (address, dates, purpose etc) were placed in the West Australian, the Weekend Courier and the Sound Telegraph. The SER was available on the web throughout the public comment period. The process for advertising the SER and how it was made available was determined by the EPA.
Consultation	I refer to the Strategic Environmental Review – Page 9, point 2.4 — Stakeholder Consultation - I cannot see that residents were allowed the opportunity to comment on various locations within Rockingham. We were told the location would be Cape Peron and only invited to comment on three different plans, all of them very similar. I object to this. (216)	Although consultation on other sites were not part of this project, all input into and objections to the project have been recorded.
Phone survey	Page 10, point 2.4.3 — a random sample of 100 Rockingham community members, possibly without them having the full picture in relation to the loss of Regional Parkland and Bush Forever, is hardly representative of the almost 85,000 people who live here. I believe these two points alone are sufficient for me to say that the stakeholder consultation is flawed, distorted, incomplete and unacceptable. (216)	Noted. The phone survey was not extensive enough to be statistically significant. The results of the public feedback forms and environmental submissions were also stated in section 2.4.3.
Issues Militating Against Genuine Community Consultation	The use of biasing language in the presentation and discussion of controversial public issues plays an important role in creating public opinion for and against. In the case of the Cape Peron Tourist Precinct Project community consultation has been proven difficult because of the ways in which the proponents selected and presented information and manipulated the public consultation process. The public image of the project, which the proponents were at pains to create at the first meetings, was initially one of calm respectful concern for both the environment and the needs of the citizens of Rockingham. However, this submission argues that the language used by the proponents actually manipulated public opinion. A careful consideration of their language reveals an obsolete view of environmental protection which fails to value both environmental and the social significance of that environment. (226)	A comprehensive stakeholder consultation program was undertaken (SER Section 2.4.3) with many different mechanisms employed (public forums, small telephone survey, stakeholder reference group, website including public feedback page and an information line) to allow the community to comment on the project. This process has contributed to the development and review of option designs as well as identifying potential issues that would require further detailed investigation. The key environmental issues raised by stakeholders and the proponents responses are included in SER Table 1, p12.

Topic	Submission (verbatim)	Response
Community consultation	Misuse of Survey The proponents' use of the survey they asked people to fill out at the public meetings on 31 May and 1 June 2005 (and later over the phone) illustrates a number of manipulative strategies designed to bias findings. The first concerns the numbers of people filling out the surveys. Out of the 350 people who attended 179 (182 in the SER) people responded in writing. Nothing was made of the 171 people who were also provided with feedback forms but did not respond. Were they disenchanted with what they heard? Were they a sleeping majority? Who knows but the proponents labelled it "Community Feedback" and paraded the results as if they accurately represented community opinion. The first question of the survey was the most problematic: "If the concerns raised in tonight's workshop are satisfactorily addressed, to what extend do you support the concept of developing Cape Peron as a marina-based tourist precinct?" The question itself begs the whole underlying question of what the concerns might be and whether they can be addressed at all. Of course if all problems can be solved, why not do anything we like? The proponents' eagerness to produce the desired result tripped them up: from a research point of view such a question has no validity at all. Feedback about the above question did not deter the proponents from trying again with a telephone survey of 100 people and proudly publicising the results. The survey appeared to support the project — 71% in favour if all problems could be solved. Although the SER claims that these were 'random sample interviews', no data was presented as to the stratification of the sample or the sample size of the reliability of the findings. This is the most blatant example of misuse of science in the name of the proponents objectives. Most of the other questions produced similarly specious results. Most people will of course say, if asked, that they'd like children's playgrounds, cycle and walking paths, etc. What is significant is the number who opposed residential development — over 80 out of 182 — yet this issue of privately owned development is a central plank of the whole proposal. Sale of crown land is hoped to be the source of funding for the project and therefore the main justification for siting it on Cape Peron. In typical fashion the proponents proceeded to ignore this finding in stakeholder meetings. Similarly those who wanted 'conservation land' totalled over 150 out of 182 — a huge majority. Again the proponents ignored this completely until the later public submissions showed that concern about the environment was the dominant reservation in the public mind. Similarly again hotels were not favoured by the sample from the public meeting — 86 against and 68 in favour. But what do we get in the final plan? Three hotels. This opposition from the public continued throughout the SRG meetings but was largely ignored in the conclusions by being 'consolidated' by the proponents to produce their predetermined outcome. (226)	It would be unusual to get 100% response to a survey. It was explicitly stated in the SRG when the results were presented that these were not statistically representative. The results were used to get an idea of the community's concerns and what they would like to see in a marina proposal if it went ahead. The concepts do not include three hotels.

Topic	Submission (verbatim)	Response
Community consultation	Distorting language The mission statement presented at the initial public meetings proudly proclaimed 'a development in harmony with the environment'. Linton Pike, in his introduction, spoke of the Steering Committee's priority as achieving sustainability with the 'best balance of environmental, social and economic outcomes". Later, in a graphic titled Key Considerations (www.estill.com. au/capeperoiconsiderations/lnrnl 7/6/05), environmental considerations were placed on top of the graphic and included "contributing positively to the marine [and terrestrial] environment". Yet the true priorities of the proponents are revealed elsewhere. When the Planning Process was described (Estill 24/5/05), the aim of the first stage was "to create a number of options that are sensitive to the land and marine environments while reflecting the social and economic goals of the proposal." As one of the participants in the SRG suggested, far from balancing outcomes, the project in fact views environment as nothing more than a constraint against the true 'goals' of the project. (226)	Noted.
Community consultation	This negative view of the environment was reinforced by Linton Pike who, in the first public meeting referred to the terrestrial environment of the Cape as 'largely degraded'. This view emerged later in the public controversy where writers of letters to the editors of the local papers consistently attempted to downplay the environmental significance of the Bush Forever site and the Regional Park in various articles and letters to the Community Courier and Sound Telegraph. One in particular referred to the amount of rubbish in the Park as supporting his argument that the marina would give the area a good clean up. In fact the Bush Forever site has been assessed as 80% 'good' (Bush Forever) and flora and fauna surveys have found over 35 species of birds, 125 species of birds around Lake Richmond, several unusual reptiles, remnant mammals, and valuable and nearly impenetrable stands of several species and one TEC. Moreover the area has been kept relatively clean by both City of Rockingham and CALM and three clean-ups by volunteer groups revealed mostly minimal rubbish except in one hollow along Memorial Drive (which as now been cleaned up). In this context the use of the word 'offsets' became revealing. One of the proponents' group facilitators at the first Stakeholders Reference Group meeting, when questioned about the contradiction between 'harmony with the environment' and the destruction of over 4Oha of Bush Forever site and at least 5.9 ha seagrass, glibly said that any environmental losses could be compensated for by 'offsets'. Since she is herself an environmental scientist, one would have expected a more sophisticated and realistic attitude toward ecology. Given complete information about ecological habitats, the general public, unhindered by other motivations, is able to grasp the value of micro-habitats. It was only following the results of the public survey which indicated that majorities of the 800 odd respondents were concerned about the environmental impacts of the project, that the proponents reduced the size of the terrestrial and marine impacts of the project. The basic motives of the proponents become clear in the language of the Options Comparison Matrix July 2005 used in the discussion of financial viability of the project. The proponents write, "Financial and economic viability is driven by the fundamental need to create and/or add value to whichever solution is determined. The value add must outweigh the cost as measured against creation of place and activity, social desires and environmental impacts. Place and centres evolve against a backdrop of common economic and social needs. ... Financial viability is about creating supply to satisfy demand at market price. The current status quo fails to address this." (226)	The full definition of 'good' vegetation condition is "Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it". The values of the Cape Peron terrestrial environment are outlined in the SER. Environmental offsets are recognised by the EPA as one of the tools that can be used in environmental management to achieve a net environmental benefits (after avoidance, minimisation, rectification and reduction). The project team responded to feedback obtained in their consultation process and reduced the footprint of the development.

Topic	Submission (verbatim)	Response
Community consultation	Manipulating Stakeholder Reference Group (SRG) Meetings Because of the way the proponents structured the SRG meetings, the numerous assumptions in this argument were not teased out there. There might, for instance, be other ways to meet financial viability of improvements to Cape Peron user fees for example. The word 'value' here appears to include only finances and to exclude the value on which all economic and social values are predicated, that is, the environment. 'Demand' is assumed to be of a conventional consumerist kind whereas amongst the general population there is demand for activities in nature as distinct from the built environment, activities which cost little and so tend not to figure in economists calculations. Yet social psychologists and town planners are coming to realise the value of green and wild spaces to the psychological health of populations (eco-psychology). The future demands of the people of Rockingham when its population reaches the proposed 250,000 in 2025 may well be for fully restored natural habitat on Cape Peron which would serve the function of Kings Park. Omission of Important Information Another area in which the proponents omitted evidence to back up their assertions concerned the expressed needs of the boating community. Each of the options preferred by the proponents was described as meeting the "needs of the boating community" (Options Comparison Matrix July 2005). That document asserts that "demand for improved boating and associated infrastructure is known" but nowhere was there any information presented to indicate what the current users of the existing boating ramps along the coast said their needs were. There were for example no surveys conducted down at the ramps at peak user times. It is highly likely that most of the public using the existing facilities would find little use for a marina as their craft are carried on trailers and stored away from the water. It is likely that the proponents knew that the evidence would weaken their case. Some members of the SRG did express opinions about this but because of their allegiances with various members of the Steering Committee, what they said can not be taken as evidence. (226)	Financial viability was one of the objectives of the project. The concepts have been developed in response to the community feedback on reducing the environmental footprint of the project. The marina boat pens are not aimed at trailerable craft that can utilise boat ramps.

Topic	Submission (verbatim)	Response
Community consultation	Other Forms of Manipulation of the SRG Meetings Manipulation of the SRG discussion group meetings took other forms — structuring the four discussion groups of stakeholders so as to neutralise opposition, apparently random appointment of reporters from groups, illogical procedures for expression opinions in the discussion groups, control of group processes by facilitators, control of expressed views by the chairman as he summarised opinions, differential responses to opinions in favour of the proposal, production of one version of the minutes, and controlling the flow of information to the group. Only one of these is dealt with here. Structuring of the discussion groups was a prime example of 'divide and rule'. It was little wonder that at the final meeting there was a walkout. Division of stakeholders into disparate groups prevented holders of opposing views the chance to develop their views together. It is little wonder that the Preserve Point Peron group has achieved such a level of public prominence and support in such a short time and in spite of the media power exerted by the proponents. The positions of Aboriginal people with a connection to Cape Peron posed a problem for the proponents. One, Trevor Walley, attended the SRG as an invited stakeholder. At the SRG meeting of 27/7/05 he spoke of continuing Aboriginal connection with several parts of the peninsula including a meeting place at the Sister Kate's lease, burial place and camping near Lake Richmond. Without explicitly criticising the project he also spoke passionately about the homes of the geckos which would be destroyed by the canal excavation. There was no response and the comment was not recorded in the minutes - significantly geckos are not something the proponents were overly concerned about. Later at a meeting which Mr Walley did not attend, he was quoted as 'being happy with the arrangements'. In fact the situation was much more complex. He spoke with another of the stakeholders later and said he was not happy at all with the proposal but that the proponents had met with some other Aboriginal people who had indicated that they were happy (after they had been entertained by the proponents). As a result of his cultural obligations of respect towards these (older) people, he could not speak out. There is however no doubt that Trevor Walley possesses more knowledge and a greater capacity to articulate this to non-Aboriginal audiences than any other prominent Aboriginal person in the area. (226)	The discussion groups were structured to group people with similar interests (environment, boating, general community interests such as traffic etc) together to allow detailed discussion on those aspects of the proposal. This also allowed a project team member with the most experience in their area of interest to be present at the table. All the spokespeople for the tables were volunteers. If no one volunteered, the project team member would present the table's discussion. The format was informal so that anyone was free to add information if appropriate (this happened). The facilitator frequently asked if anyone had any thing further to add. Groups were given topics to discuss (e.g. constraints and opportunities, regional context, links etc) and the discussion was facilitated. The discussions at each table were then outlined for the whole group by a volunteer spokesperson. Written submissions on the project were invited and gave an opportunity to express views not raised within the SRG meetings. These submissions were included in the SER. Consultation with Aboriginal representatives will continue if the project proceeds to the next level of planning and assessment.

Topic	Submission (verbatim)	Response
Accountability	Lack of Accountability to Citizens of Rockingham The City of Rockingham's State of the Environment Report and Environmental Action Plan 2000 adopted by the COR in 1994 states that the report has the objective of providing "all stakeholders with accurate, timely and accessible information about the condition of and prospects for the Rockingham environment." In fact the present Mayor of Rockingham has failed to do this either in print to citizens or in answer to questions from the public in council. In answer to a question from one ratepayer about why councillors approved the original grant of $110,000 to the project for the feasibility of only one site instead of surveying all possible sites, the Mayor simply said that Councillors made the decision based on the information they had at the time. What information did they have? The study of a range of sites by NS Projects was only completed in July 2005, long after the money was approved. The only conclusion possible is that the decision about site was predetermined and councillors, like the SRG, were presented with biased and partial information. Another issue of accountability to ratepayers concerns the socio-economic status of the majority of residents of Rockingham. ABS data indicate that Rockingham/ Kwinana is an area of relatively low income. Estimates from other canal developments, especially Mandurah, indicate that land releases along canals demand extremely high prices and the kind of housing built is not affordable by people on low incomes. (226)	Comments on the City of Rockingham are beyond the scope of the SER. Noted. While low income earners cannot afford a waterside residence anywhere in Perth the project incorporates extensive public access and an affordable family holiday chalet park specifically to assist enjoyment of the Cape by all income levels.

6.6 PROJECT BENEFICIARIES

Topic	Submission (verbatim)	Response
Potential users of boat pens	The project has been promoted on the strength that we need a marina, and yet will provide little extra space for existing and local boat owners - in fact, the existing boating clubs will be forced to coexist on a dramatically reduced area. Pens created by the project will only serve the elite who buy canal homesites. (3)	The boating clubs will not be forced to co-exist. The clubs will have significantly more facilities (pens, refuelling, chandlery etc). Pens will be available to the general public as well as club members.
Marina not affordable for boat owners	The proposal to construct a marina as shown on the plan, is simply an excuse to satisfy the greed of the developers. The marina is simply an excuse to construct more expensive housing and business property. The marina is not to provide safe mooring for the owners who presently moor their craft in Mangles Bay. These folk will not use these facilities if they are constructed, because they will be unable to afford the high cost of leasing a pen within this project. Ask yourselves, why are so many craft driven ashore in winter by strong NNW winds? The answer is really quite simple - because the owners cannot afford the correct type and weight of chain and ground tackle that would keep their craft safe under these conditions. If they cannot afford to buy the gear for a secure mooring, how on earth do you expect them to afford to rent a pen in your expensive marina project? I doubt that you will wish to address these questions. I do voice the opinion of a person with over 50 years professional experience of the marine industry, as a managing director of two sizeable companies in Europe with large marina interests and also as a Lloyds approved surveyor to yachts and powered vessels to about 200 tons, including commercial vessels. As a point of interest, I served as a crew member with the Royal National Lifeboat Association for many years. So I have considerable experience in the field. If you are really interested in providing secure moorings in Mangles Bay. .A simple "island" breakwater, to the North of the present mooring area would solve the problem at very little cost, this would also improve the tidal flow in Mangles Bay if placed correctly and would satisfy the needs of many, except of course the greedy developers and council. If required, I will be happy to discuss the matter further, face to face. (66)	Refer to section 3.10 addressing the concern that the marina is only for the wealthy. In addition, the marina is expected to provide a choice for boat owners that does not currently exist. A breakwater of this nature would be likely to affect a greater area of seagrass than the current inland marina options.
Marina not affordable for locals	What will be the fate of the present users of the area. As far as I can see 99-100% of the people who at present use the area could not afford the high fees that marinas inevitably command. (113)	The Mangles Bay beach, Mangles Bay itself, Point Peron, the moorings, walkways, cycleways and cafes/restaurants will all be accessible to the general public. Only a small proportion of those that utilise the facilities will actually have boats in the marina, or buy into the residential areas.
Coastal real estate	4. The narrow-minded view by some that a few people may benefit from the project's residential opportunities is simply an emotional smokescreen to gain support for preventing the project's implementation. It ignores the existing situation that foreshore real estate around the Rockingham, Shoalwater, Safety Bay, Waikiki & Warnbro areas has always proved popular & is no different from other WA regions where close proximity to the ocean is sought after. After all, just because some people might not be able to afford such foreshore real estate does not mean that it should not be offered via the Cape Peron project. (134)	Noted.
For the rich	If this proposal is approved the current users of this land will be mostly displaced by wealthy boat owners who can afford the inflated prices attached to such developments. This is socially inequitable and the proposal therefore fails this basic test of social sustainability. (135)	Refer to section 3.10.

Marina for the rich	In many ways the proposal is based on the premise that Tourism is a Good Thing. I am not sure that it is. Certainly many people will benefit financially but few will gain much benefit while some will gain great benefit. And the cost will be to the citizens of the country and more specifically those of Rockingham and the adjoining areas. The natural environment will of course bear a major consequence. (156)	Refer to section 3.10. Tourism often provides the revenue and economic benefits which allows preservation of the natural environment. It also often provides the opportunity for the community to understand and appreciate the value of its assets and act to manage them sustainably.

6.7 PROJECT COSTS

Topic	Submission (verbatim)	Response
Project costs	The project requires very expensive realignment of major public infrastructure (e.g. water corp pipes, Garden Island access) - it is unethical and undemocratic to foiste such costs onto the taxpayer for the benefit and gain of a few individuals. (3)	The realignment of major infrastructure was the result of a planning process that aimed to minimise the environmental footprint of the project while achieving social and economic benefits for the Rockingham area. The costs are borne by the project not the taxpayer. The recreation, employment and economic opportunities provided by the project are expected to benefit the Rockingham community and the broader Metropolitan population. The benefits will not be confined to a "few individuals".
Project costs	The marina elite will benefit from this project however the local and existing boat owners will not. The costs for the realignment of water corporation pipelines and the Garden Island access will have to be paid for by the taxpayer. I believe this is unethical and undemocratic. (13)	Refer to section 3.10 see above
Maintenance costs	a. Constant dredging of the area would be needed to make it deep enough. I wonder if we rate payers would be billed for this. (112)	Refer to section 3.10 regarding project costs All costs of maintaining the marina are expected to be borne by marina users and not the ratepayers of Rockingham.
Project cost / revenue	What is crystal clear is the reason Cape Peron was selected, it is the preferred option because of the dollar value. Blocks would be pre-sold for high profits which in turn would pay for some works associated to the project, the remainder would fall on rate payers even though very few could afford to use a marina. (121)	Refer to section 3.10 see above
Costs	I am sure with this new proposed canal/housing development that is a money grab by the council and developers, and once the dust is settled and damage is done the big concern with a majority of the rate payers is – do I pay for the environmental damage! Will the government of the day take a substantial multi-million deposit from the developers to be held in trust to fix any problems or will it be left to the council/rate payers to pick up the pieces. (144)	Refer to section 3.10. see above

Topic	Submission (verbatim)	Response
Cost of project	The SER nowhere makes the claim, let alone offers evidence, that in total these possible beneficiaries will bear all the cash costs of the project (excluding the offsets). Neither does the SER refer to whether or not these beneficiaries will be bearing any of the opportunity costs of using a large area of reserves. That opportunity cost is very much greater than the cost of vaguely "providing" a new reserve at some unspecified location, and must be the cost of acquiring at market prices some privately-owned land suitable for accommodation, a hotel, etc. to create a new reserve in an equivalent coastal location. Because I am unconvinced that the beneficiaries will bear the true cost of the project itself, I am left with the conclusion that the beneficiaries are exceptionally unlikely to be bearing the costs of the claimed offsets. Therefore the claimed offsets are indeed not justifiable offsets against this project at all. Many of them might as well be claimed as offsets against any other of the many past or future "developments" in or adjacent to Cockburn Sound. Most of them should not be counted as offsets at all against any future development, because they should be seen as collective responses to many decades of past mismanagement and bad planning. I am left with the following personal conclusions about those various possible beneficiaries. The users of the range of built commercially-oriented facilities within the project ["Affordable chalet style accommodation. Boutique resort hotel. Apartment style short stay accommodation. restaurants, cafes.... and shops, Residential areas along canals and part of the Mangles Bay foreshore "] probably will pay market prices for their use of those facilities. Therefore the reserve land being used by them should be costed at market prices for land used elsewhere for such facilities by their competitors and they should pay this cost. However, these facilities should not be paying more than that so as to be cross-subsidising the boat pens. I see no explanation in the SER of how the land will be priced, or cross-subsidisation avoided. Therefore it is impossible to be persuaded that the offsets can be claimed. • The users of the "improved public access to Shoalwater Bay and Mangles Bay" will obtain such improved access free. That is unavoidable, access being a public good. Therefore some contribution to the cost of the offsets could justifiably be borne by the general taxpayer. However, it is my opinion that overall public access to Mangles Bay will be diminished, especially through the complete disappearance of substantial parts of the foreshore of Mangles Bay and of the Bush Forever Protection Area. The improved access to Shoalwater Bay is quite separate from the essence of the marina project, and looks as if it has been added in just to give another positive benefit to tick. It could be achieved without the marina project. • There may well be beneficiaries of an "increased management presence, lighting, traffic management and increased public use of Cape Peron (which) will help discourage anti-social behaviour" However, it would have been possible at any time in the past to have provided an increased management presence, lighting, and traffic management, for that same reason. Therefore this claim is one of the many probably fallacious claims of offsets, unless it is shown that the chief beneficiaries of the project are paying the full cost of those provisions. The same is true for the "improved pedestrian and cycle linkages between Rockingham Beach, Point Peron and Shoalwater". All could have been provided in the past without threat to the fundamental nature of the reserves. This is another fallacious claim of an offset. (185)	Refer to section 3.10. Offsets cannot be claimed twice. The Mangles Bay foreshore is currently under private lease and the beachfront interrupted by these lessees facilities. The project will improve public access considerably. Public access to Shoalwater Bay beachfront and the Cape itself can be improved without the project. However, there are no plans to undertake further work after the current CALM improvements to Point Peron.,. This project is the only firm proposal to do so.

Topic	Submission (verbatim)	Response
Project beneficiaries	There would indeed be beneficiaries of "increased management and regulation of boating activity". Boating activity has become extremely environmentally damaging in Mangles Bay, as well as physically dangerous to other users of Mangles Bay. Judging from the SER it is highly unlikely that any costs of this management and regulation would be borne by anyone other than the general taxpayer. Therefore it could have been accomplished at any time in the past, as it should have been. Therefore it is not a valid offset. • The "provision of a secure marina area specifically designed for commercial and recreational boating and yachting clubs" undoubtedly will result in the major beneficiaries being the boat owners. The benefits to these beneficiaries are likely to so greatly outweigh the benefits to all other beneficiaries that I believe it is realistic to think of the marina project as being designed overwhelmingly to benefit boat owners. Boat owners are private individuals with no special claim on the taxpayers' dollar. Therefore the owners of boats parked in the marina should bear the entire cash costs and opportunity costs (of land transferred from reserves) of the project after accounting for cash contributions made by owners and users of commercial activities within the project, on the proviso that the boat owners are not cross-subsidised by these other activities. I see no assurances in the SER that the boat owners will bear all those costs. In the absence of such assurances, it is impossible to believe that the boat owners will bear the additional costs of any of the offsets. Therefore it is fallacious to claim the offsets as benefits of the project. In summary to this point, I see the marina project as most likely to provide highly subsidised boat parking at costs that cover less than the full cash costs of provision. I see no prospect of the boat owners bearing the costs of the so called offsets. I see the costs of major offsets as being borne by the general taxpayer. If that is so, the offsets cannot legitimately be claimed against the project, and the entire proposal fails a most elementary test. Putting those arguments more generally, proponents of developments that would have a net negative environmental impact often conveniently attempt to "claim" as offsets environmental improvements that (a) have been needed and requested for years quite independently of the development and therefore are "good things" that government in particular should have attended to previously, (b) are not funded by the development, or users of it or beneficiaries of it (but by government for example out of general tax revenue), and (c) are logically unrelated to the development, and thus could have been potentially claimed as offsets by any development in a widely defined region (Cockburn Sound, Rockingham.. ..). A prime example of a fallacious claim of an offset is the claim that widening the opening in the causeway provides an "offset" This is mentioned in various places for example page xvii "Water quality in Mangles Bay improved by widening the causeway opening"; and in addition a number of pertinent objections raised by submissions, especially my own submission identified as "10", and tabulated in SER Appendix 1 have as the response against them "The modification of the causeway will result in improved flushing and water quality in Cockburn Sound. SER Section 6.1". Widening the opening in the causeway (a) is an excellent idea, and has always been such (b) has been advocated many times before (c) is made even more necessary by any marina (185)	Refer to section 3.10. As there are no current plans to increase funding for boating management in Mangles Bay, this is a legitimate offset. The lengthening of the causeway entrance is considered a beneficial part of the project. It has not been claimed as an offset.

Topic	Submission (verbatim)	Response
	(d) seems to be a matter for the Commonwealth government, which is independent of the marina proponents. (e) should have been part of the original building of the causeway, but being charitable to the lesser understandings of the time can now be said to be a necessity regardless of the marina. Because of the Commonwealth control over the causeway, widening the opening is both a vital pre-condition for the marina and the condition most likely to not be guaranteed unless prior definite commitment of funding (by the Commonwealth) is obtained. Therefore in any schedule of works leading to the marina, the widening of the causeway (and its relocation if that is necessary for environmental reasons) should be the FIRST thing that is done. Otherwise there is the possibility of despoiling the site by cutting channels and flattening bush etc and then discovering that the Commonwealth will not move the causeway or widen the opening in the foreseeable future. However, the beneficial effect of the widening is absolutely not an offset against the marina project by any sensible analysis, except in the remarkably unlikely event of the boat owners paying the full cost of the widening. This is a most important defect in the SER because of its dependence on the statement that "the proposed widening of the southern opening of the causeway is expected to provide localised improvements to the flushing of Mangles Bay and is expected to be a greater benefit than the adverse impacts of the marina construction and operation on water quality". (185)	As above The lengthening of the causeway trestle bridge is expensive and is highly unlikely to go ahead without the project. The support for the opening of the causeway and concerns about who bears the cost are noted.

Topic	Submission (verbatim)	Response
3. Inadequate Budgeting For Some of The Offsets	The SER on page 146 lists those offsets that have been costed, as follows. "The offsets strategy is described in this section. However, if the project progresses to a detailed environmental assessment, more comprehensive assessment of impacts and consultation will result in the refinement of the proposed offsets in accordance with EPA Position Statement No 9. The proposed offsets strategy includes at this stage: 1. A provision of about $4-5m for offsets to redress the direct impact and reduce threatening processes on the Bush Forever Protection Area and terrestrial flora, vegetation and fauna: - rehabilitation of the natural environment of the Cape Peron and Lake Richmond area to enhance the conservation values of the area and the ecological linkage between the lake and Point Peron - acquisition of land with similar or greater conservation value to secure it for conservation 2. Rehabilitation of the buffer area between Lake Richmond and the development to enhance conservation value of the lake. 3. Reduction of threatening process from the indirect effect of the development through increased usage of the area: - provision of about $0.8m to a trust for CALM to use for ongoing management and provision of facilities of the Cape Peron area	
	- provision of environmental/educational opportunities (eg. Marine Science Centre site, interpretive nature trail and Aboriginal cultural site)	a. The widening of the causeway is included in the construction costs and is part of the project design, not an optional extra.
	4. A provision of about $1M for offsetting the impact on seagrass by rehabilitation of areas of seagrass meadows in and around Mangles Bay at least equal to the area lost through the construction of the development 5. Enhanced management of boating in the locality to reduce risks to water quality and seagrasses." My problems with this list in the SER are as follows.	b. The cost of the offsets are considered part of the overall project cost.
	(a) The list does not include all the offsets claimed in the full text plus Appendix. For example it does not include widening the opening in the causeway. (b) The list does not clearly state that it is the intention of the SER that the costs of "provisions" listed will be met by the boat owners. To the careful reader it could seem that the costs of the provisions might be met by the general taxpayer. The SER refers to EPA Position Statement No. 9, which emphasises the same sorts of conclusions reached in the NSW report referred to above, but takes many pages to clearly get to the crucial requirement that the offsets have to be paid for by the interests that create the negative environmental impacts. Statement No. 9 first approaches this point on page 2 where it describes offsets being purchased by "companies wanting to offset environmental impacts". Statement No. 9 shortly later very justifiably emphasises that there "must be clear and unambiguous delineation about the role and use of offsets as an environmental impact management tool, and not as a project approval negotiation tool. (185)	The opening of the causeway is not claimed as an offset.

Topic	Submission (verbatim)	Response
Offsets costs	It emphasises the need to reaffirm the mitigation sequence for environmental impact management and to reaffirm the conservation and protection of 'critical assets' that represent our State's most important environmental assets." It is my view that the marina project suffers from exactly those two defects. First, it neglects to be based on a broadly conservative and protective vision for the entire Cockburn Sound, and secondly that it claims offsets that do not meet fundamental criteria and thus is playing with attempted "negotiation" in circumstances where the particular vested interests favouring the marina are not in a position to offer or withdraw the offsets (for example the widening of the causeway). Position Statement No. 9 returns in an unfortunately vague sort of way on page 8 to the vital issue of who pays for the offsets where it says "Where a proponent is unable to undertake restoration, rehabilitation, reestablishment or sequestration activities, they may consider the use of 'banking' or 'credit-trading schemes' to purchase equivalent environmental credits (improvements) to offset their adverse environmental impacts. As an alternative to banking, an appropriate financial amount could be contributed to a statutory trust fund with the sole purpose of being used for an environmental improvement activity." It seems fairly clear from that excerpt that Position Statement No. 9 requires the "proponent" to pay for the offsets. In my view, as explained above, it is far clearer to say that the beneficiaries must pay for the offsets, and in the case of the marina this would be the boat owners, and definitely not the taxpayers in general, even if the proponent were the State Government. The fact that the proponents or beneficiaries should bear the costs is reinforced on page 11 of the Position Statement in the following terms. "The costs of enduring management and maintenance form part of the offset and should be factored in. Where it is proposed to transfer enduring management responsibility from the proponent to another party or parties, agreed completion criteria may be relevant." Finally, although the two examples in Position Statement No. 9 clearly have the developer (whether private or State) paying the entire cost of providing the offsets, the Statement is generally deficient in the extent to which it does not make abundantly clear that in order for a valid offset to be claimed, the proponents, developers and/or beneficiaries of a project have to pay the full cost of the offsets. (185)	As above. Refer to section 3.10 regarding project costs.
Cost of marina	[6] The current Cape Peron Tourist Precinct Project options are a contrivance to produce a marina at little cost by making it a by-product of what will be very profitable luxury canal housing. However there is no free lunch as this luxury housing project alienates scarce land left to us by earlier generations as public open space to hold in trust for future generations. (192)	Refer to section 3.10.
Sewerage	Sewerage – Costly relocation of pumping station and mains to permit development. Suggested reduction of sewerage pumping does not seem possible in developing area. (214)	These costs have been included in the construction cost of development.
Project costs	In closing I want to draw your attention to an article in a 'lift out' from the West Australian of Saturday 1st April 2006 by Maureen Eppen, entitled High-end Waterfront alternative. The item mentions the silting up of canals and the need to dredge them. When the Shire of Murray accepted responsibility for dredging the channel it was anticipated it would need to be done every 10/15 years, but it now appears to require doing every five (5) years or so. In 1999 it cost the Shire $200,000. Its almost time to do the job again with an expected cost of $500,000. Similar costs would also become the responsibility of our local council and a drain on ratepayers. Developers are probably rubbing their hands with glee, hoping that the project gets the green light, because they will be the main beneficiaries should this project go ahead. (215)	Refer to section 3.10. It is expected all ongoing costs associated with the marina will be met by marina users and not the general ratepayers.

6.8 PUBLIC ACCESS

Topic	Submission (verbatim)	Response
Public access	4) The proposed marina appears to be just a expensive housing estate. All of the foreshore should be public access. Every evening I walk the foreshore there are young and old couples, disabled people, kids all walking and playing along the foreshore. Canals are exclusive restricted areas solely for those who can afford them. Look at Mandurah, I have often walked between the houses on the canals but rarely see others yet the Mandurah foreshore is always packed. 5) Twice I have been to the highest peak and looked out with a friend/relative who has suffered the loss of a loved one. The peace and tranquillity was a much needed respite. The 'rat race' was only discernable in the distance. I am sure others have sought Point Peron for similar refuge. (14)	The residential areas are only one aspect of the project. Currently there are fences blocking public access to Mangles Bay. The project includes full public access along Mangles Bay foreshore, with parking and grassed picnic areas etc to allow enjoyment of the area by the general public. In addition, there will be full public access around the marina. The effects of the project on Point Peron are likely to include further rehabilitation of vegetation, provision of public toilet facilities and lighting.
Current lack of public access	The vast amount of land is currently only accessible to special interest groups, many of whom do not even live in the area. As a result, most residents currently do not recreate in this area. (24)	Noted
Improved public access	This project would open up the area to the local community and tourists alike. Most of it is currently inaccessible. The proposed cycle/walk trails will allow greater access to more people. (28)	Noted
Public access	(D) “Direct access to the open ocean”, To their credit the Council along with vested interest are in the process of developing a dive park, the placing of a Marina in this position creates excess traveling to access this and known fishing areas within the open ocean for any boat that is in the larger bracket (52)	The only boats unable to access the open ocean from the new southern causeway entrance will be large yachts. Almost all powerboats will be able to clear the bridge.
Public access currently limited	7. Additionally, public access to beach areas on the southern side of Cape Peron is substantially restricted by the location of various camp properties occupied by small groups who confine access to their members only. An access road & boat ramp needs to be provided on the southern side allowing public entry to the many delights of Shoalwater Bay. (134)	Noted.
Existing tourism / accommodation	The project would result in the loss of areas and infrastructure which are currently utilized for family holiday accommodation and recreation. These places are part of the character and attraction of Point Peron and benefit many, many people of all walks of life and economic circumstances. The label given to the project - “Tourist Precinct” - is inaccurate and inappropriate. The project would in fact destroy an existing tourist precinct and replace public and semi public facilities with private land and moorings, mostly for the wealthy. (137)	The recreational leases in the area are not open to the general public. The existing fishing and yachting clubs will be incorporated into the project, with new facilities. The marina will have full public access to the Mangles Bay foreshore and around the main marina area. The project will incorporate a range of short stay tourist accommodation and recreation facilities. This is the case now and the project will help to address these issues.
Public access	2 Why should these areas be unavailable to the public and only to a chosen few. (143)	The majority of the project area will have full public access. The Mangles Bay waterfront and all the edges of the waterways will be fully public (except where the clubs needs security near the western entrance).
Public access	I especially regret that there is a threat to the following: 1. Access for all people in the proposed marina area of Mangles Bay (176)	The marina will be open to the general public with walkways, boardwalks, full beachfront access with picnic areas, restaurants etc.
Public access	2. The development will result in a loss of public access to this unique site. (188)	The project will improve public access to Mangles Bay.

Current lack of public access	A large amount of the area that is proposed to be redeveloped is currently reserved for the use of a few. For members of the TCYC, the Mangles Bay Fishing Club, the City of Perth RSL, the Union that leases the caravan park and the various other groups that lease and run the holiday parks in the area. Most local residents are shut out of this area. It is an exclusive area reserved for those who are associated with these groups. This situation has been allowed to go on for too long and should be redressed, and I believe that the marina development will open up a lot of this area for the residents of Rockingham. (195)	Noted.
3rd para same page (ix)	A.I.W's "recreation group-limiting access to the beach". The beach in front of the centre is currently used by dog owners and by walkers without dogs. It is seldom that after returning from fishing there is not a passer-by ready to assist me in negotiating my dinghy and small hand push 3 wheel type trailer over the sand build-up on the ramp. I would think that a deep-water several meter wide channel scheduled to be dug where our current ramp is will be a much more severe "limit to beach access" than is currently perceived to exist. (205)	There is access along the beach, from south of Boundary Rd or from Point Peron. Public access to the beach from Memorial Drive or Lease Rd is limited.

6.9 PUBLIC SAFETY

Topic	Submission (verbatim)	Response
Public safety	The project creates unacceptable risk to marina residents and to the Naval Base as it will necessitate the transfer of dangerous Naval goods through the development. (3)	The route to the navy base will go around not through the project area. If any hazardous goods are brought in by road now (i.e. not by ship) this will continue but on a safer road.
Public safety	Marina residents will be exposed to risks associated with the delivery of dangerous goods that will have to pass through this development. This is also an unnecessary risk for the Naval Base. (13)	As above
Navy hazardous goods transport	5. heightened risk of environmental accident from Navy hazardous goods transport through proposed marina; (117)	As above
Hazardous navy goods	5 There is rish of serious environmental accident from hazardous Navy goods through the marina. (143)	As above
Navy hazardous goods	One concern that I have is the fact that the Navy (who have the right of way to deliver these goods and for our security), will be taking missiles, missile fuel and dynamite through Pt Peron area, and whereby their could be a heightened risk of an environmental accident because of the more dense population and traffic also with the hazardous goods transported through the proposed marina if this is a built up area. The people who would have these proposed luxury units will be on the protesting end of not wanting this. The security of this country is a paramount to myself and all, and the Navy have the first preference, and I am sure that there will be great objections as to this. Also the traffic from the Navy base is quite considerable, as I see and hear it everyday, particularly in the afternoon, and I can assure you it is very heavy and noisy, and will not get any smaller. (144)	As above
Hazardous navy goods	5.There is risk of serious environmental accident from hazardous Navy goods through the Marina. (164)	As above
Hazardous navy goods	There is risk of serious environmental accident from hazardous Navy goods through the Marina. (180)	As above
Hazardous Navy goods	The risk to this recreational area from an accident involving hazardous goods en route to a naval establishment must be given careful consideration. (219)	As above
7.2.4 Expected outcome (road traffic)	• The proponents' proposed Tourist Precinct road re-alignments would bring Navy traffic closer to water, greatly exacerbating the potential impact of accident (e.g. rollover) with hazard loads escaping into Mangles Bay. (129)	As above The navy traffic will be further from Mangles Bay, not closer.
Naval base security	Building a major tourism/boating /residential site next to The Naval Base seems really bizarre. If the base is needed for defence, surely easy access is important. If attacked, building residences near it is short sighted and are there not security aspects of allowing anyone to live next to a base in this time of concern re terrorism? (157)	The project is approximately 3kms from the Naval Base. Access to the navy base will be improved by the project.

6.10 OFFSETS

Topic	Submission (sic)	Response
5.4.3 Potential impacts and mitigation	Further, environmental offsets proposed by the proponents are spurious: • Improvement of vegetation condition through rehabilitation by the proponents is just a meaningless statement with no scientific backing. The whole area is subject to a Draft Management Plan researched over many years with scientific and community input. C.A.L.M. is currently working on a weed management plan and rehabilitation. • Due to its massive impact on the local ecology, impact on biodiversity diminish new research and education opportunities, not create new ones! (129)	The vegetation survey undertaken by Bennett (2005) investigated the current vegetation condition and status of weeds in the area. The results of the survey indicate that rehabilitation and weed control would be beneficial in the area. CALM does not have the funding to undertake the scale of works that is proposed in the offsets package. The rehabilitation and weed management undertaken by CALM is currently focussed mainly around the carparks at the point.
5.4.4 Expected outcome	• How will the proposal improve Park management regimes? The provision of natural area management and visitor facilities is no offset for the dramatic habitat loss directly incurred by the proposal, nor the risk of severely impacting Lake Richmond. • It is impossible that replacing natural vegetation with unnatural bitumen surfaces and artificial canals, housing, hotel would, as the proponents claim, enhance biodiversity values of the remaining natural environment in any way at all. (129)	The offsets proposed have been based on the EPA Position Statement, which recognises rehabilitation and land transfers into the conservation estate as direct offsets, and improved management (fencing, buffering, removing threats, monitoring etc) as contributing offsets. The development area and its effects are considered the adverse 'impacts' that require first minimising and then offsetting. Rehabilitation of areas outside of the development will enhance the biodiversity values of these areas through the removal or management of threatening processes and the direct benefits of planting.
No suitable offset	There is no realistic possibility of the proponent providing a suitable offset for to compensate for the loss of 40 – 50 hectares of prime waterfront conservation land. Any offsets are likely to be inland or very remote from Rockingham. Therefore this project fails another key sustainability test because it will clearly cause a loss of social amenity and degradation of the natural environment. (135)	Land offsets are only part of the offset package put forward in the SER. In addition to this, it is proposed to undertake rehabilitation of the bushland around Cape Peron and Lake Richmond.
Offsets	The report refers to the popularity of the existing Cape Peron "Land Based Activities i.e walking, scenic driving, enjoying the scenery (lookout) and nature appreciation and study". As I have said in my letter to the Editor recognising aboriginal sites and rehabilitating vegetation have absolutely nothing to do with building a marina. Page 118 to 121 of the report :Cape Peron rehabilitation" only re-inforce my view that the developers may wish such an undertaking of "goodly" works to be seen as major offsets to the devastation to Cape Peron arising from the construction of the "marina", but I certainly don't' Once again we are confronted with an inference that building a "marina" plus extras will overcome social shortcomings. If toilets are needed on the Cape "to support the use of beaches, walking trails and snorkelling? Trails" why haven't they been built, to satisfy existing demand if its there? (205)	The SER presents both the impacts of the development and the proposed mitigation measures. This is consistent with DoE guidelines on environmental impact assessment. Prior management of the area by CALM is beyond the scope of the SER.

2. The SER Deals Too Vaguely Or Incompetently With Offsets	On page i the SER states the objective to "outline management and mitigation measures as part of the project that would be designed to avoid, minimise and offset any potentially significant adverse impacts". In substantial part these "mitigation" measures take the form of formally claimed "offsets". It might be thought that an offset is a well-understood notion. For example, according to the Australian site http://www.epa.nsw.gov.aulgreenoffsets/index.htm, offsets may be described as follows (using the example of pollution). "Green offsets are a way of having both economic development and environmental protection. A green offset is action taken outside a development site (but near to it) to reduce pollution. The developers either take the action themselves or pay for others to do it on their behalf A green offset scheme ensures that there is 'no net impact' from development. Any additional pollution that is generated by a development is offset by action taken off-site that reduces at least that amount of the same pollutants." If I substitute "adverse net environmental impact" for "pollution", and make other matching changes I obtain the following in my own words. "Environmental offsets are a way of having both economic development and environmental protection. An environmental offset is action taken outside a development site (but near to it) to reduce adverse net environmental impact. The developers either take the action themselves or pay for others to do it on their behalf An environmental offset scheme ensures that there is 'no adverse net environmental impact' from development. Any negative environmental impact that is generated by a development is offset by action taken off-site that produces/creates at least a matching positive environmental improvement." In the original quotation and in my rewriting of it, a key requirement is that the "developers" must bear the cost of the offsets. In more general situations, what that means is that the direct final beneficiaries of the project must bear the cost of the offsets, because the developer is expected to pass the costs on to the final consumer of the goods or services derived from the development. One problem with the SER is that it is difficult, if not impossible, to judge from the SER who these major net beneficiaries of the project are intended to be. The difficulty arises from the absence of detailed budgets showing the full expected costs of the project, including the "opportunity cost" of the land (rather than the zero cost of taking reserved land), together with associated calculations showing the extent to which various possible beneficiaries might be cross-subsidising others. Various possible net beneficiaries are listed in the SER as follows on page ix "The concept has also been designed to provide the following: • provision of a range of public recreation and tourist facilities • improved public access to Shoalwater Bay and Mangles Bay • provision of a secure marina area specifically designed for commercial and recreational boating and yachting clubs • increased management and regulation of boating activity • increased management presence, lighting, traffic management and increased public use of Cape Peron will help discourage anti-social behaviour • improved pedestrian and cycle linkages between Rockingham Beach, Point Peron and Shoalwater Bay • acknowledgement of local heritage and cultural aspects of the Cape Peron area with the potential being investigated for provision of an Aboriginal meeting place in the Regional Park." (185)	The SER uses the definitions and principles outlined in the EPA Environmental Offsets Position Statement. The offsets are part of the overall cost of the project as is construction etc.

Offsets	In addition, the following seem to be claimed in the SER as offsets but fail to meet the necessary criteria because they have simple solutions that probably should have been attended to by the relevant authorities in recent years. "Infrastructure available to support the increased use of the Cape has however, not kept pace with the increased use. For example, there are no public toilet facilities on Point Peron to support the use of the beaches, walking trails and snorkelling trails." That is true, but the provision of such a toilet has no logical connection to a marina project. The existing usage of the Cape already is sufficient to justify a toilet, so the toilet should be provided. "Evidence of the imbalance between use and facilities/management that currently exists in the Cape Peron area can be seen in the number of informal paths and tracks through the vegetation". That also is true, and extremely difficult to prevent without high barrier fencing. Again the existing usage of the Cape has caused the tracks, so if they are environmentally degrading their existence and extension should be dealt with now. There is no logical connection with the marina. "Although Cape Peron is a popular destination for recreation, much of the Mangles Bay and Shoalwater Bay beach is backed by Crown land leased to private recreation groups. This limits access to the beach in these areas." That also is true. It could be argued that for decades this leasing of Crown land to soft users has succeeded in preserving sensitive foreshores and shallow waters rather well, compared to the sort of revolutionary changes involved with a marina. However, if the spread of urbanisation means that the time has come to not renew the leases, that is very readily and quickly attainable in most cases, and has no logical connection to the marina. (185)	All actions that are considered 'offsets' such as rehabilitation, education, etc could be funded by anyone. However, if they are not already being undertaken, these actions can be undertaken by a proponent as part of a project, to offset adverse impacts (after the rest of the mitigation hierarchy has been considered). Formalising access with convenient hardened pathways and board walks will allow informal paths tracks to be closed and rehabilitated. The question of whether or not to renew the private leases is outside the scope of the SER. However, The proponents are supportive of a joint planning study of the balance of Cape Peron (including the recreation camps) involving the key agency stakeholders being undertaken in parallel with, but separately to, Phase 2 of this project (detailed planning and environmental impact assessment).
Offsets	Carrots to help influence acceptance of their project includes: - Improved public access to the cape Enhanced education opportunities Improved management of public access Retention or relocation of Holiday Homes leasehold facilities Proposed upgrade of Memorial Drive Creation of Shoalwater foreshore nature trail Enhance the Lake Richmond/Cape Peron Regional Park Green Link (Rehabilitation of degraded areas [vegetation planting, weed removal, dune stabilisation]) Visitor facilities (walk trails, picnic shelters, information plaques etc.) Improved management (additional ranger presence) Enhance Education opportunities. Proposed lookout at Mt Atom Proposed cycleway for Lease Road Proposed recreational facilities Proposed regional cycle/walk trail Public access to beach Introduction of seagrass friendly mooring (by owners) All of the above could be encompassed without the need to dig a drain from the ocean to Lake Richmond, leaving the bulk of Cape Peron as BUSH FOREVER.. Truly a place to take visitors. A place for passive recreation, fishing, swimming, snorkelling or photography. If they want to look at canals, go to Mandurah. (215)	The offsets proposed have been based on the EPA Position Statement, which recognises rehabilitation and land transfers into the conservation estate as direct offsets, and improved management (fencing, buffering, removing threats, monitoring etc) as contributing offsets. The offsets provided through the project would allow for additional resources for management of Cape Peron above that which is currently available through CALM. While these community benefits could be provided without the marina-based tourist precinct project, there are no existing plans to undertake these works.

Mitigation	Page 38, point 4.3.2— Environmental and Social Mitigation - How can an area be rehabilitated when the flora has been removed and no longer exists? I haven't yet seen a 'rehabilitated bushland area' which retained all its biodiversity. Much of it certainly won't grow to the size of that being removed during my lifetime or even that of my children. How is it possible to protect that which no longer exists? How is it possible to grow a full size tuart tree in 20 years?	The majority of the Cape Peron bushland is outside the project area. This is where the rehabilitation will occur.
	When people visit an area they may bring a dog but they don't usually bring cats and other exotic animals. When cats live in an area they roam and feast on small animals and birds. (I used to keep a cat.) Feral animals on the Cape could be destroyed humanely but this would not be possible when the cat has an owner. After people move into high cost housing it is not unusual for them to insist that any remnant trees that remain and spoil their views be cut down. (216)	It is likely that cats already exist in the Cape Peron bushland from the nearby residences.

6.11 HERITAGE

Topic	Submission (verbatim)	Response
Heritage Issues	Before this SER commenced, I did not know there was any link between Aboriginal heritage and the Cape. Considering my association with the community and my general knowledge of it, I think it's safe to bet the majority of people in the region are similarly ignorant. I do know something of the military history and how the Royal Australian Artillery had barracks on the Cape where manned guns and search lights to protect the seaward approaches to Fremantle. Again, not many people know anything about that. I do know that the first Catholic school in the region was run from the old Turtle Factory which is now within the Cruising Yacht Club hard stand area on the cape. I enjoy telling visitors about that. There are adults still living in Rockingham who attended that school. Under the current management regime, the historic sites are being degraded and the stories behind them lost. I believe a tourism based project at Cape Peron will encourage the protection of sites of interest and help us keep our history. (4)	Noted. The project aims to provide opportunities for this Aboriginal Heritage to become more widely known.
Aboriginal heritage	Point Peron has considerable Aboriginal traditional significance - it was an important burial and ceremonial site. (3)	The Aboriginal heritage values of Point Peron have been noted and discussed in section 7.1.1 of the SER. The burial site is outside the project area.
Aboriginal heritage	Point Peron is particularly important to the local aboriginal people as it has burial and ceremonial significance. This type of project demonstrates a lack of regard for the aboriginal community. (13)	Representatives of the local Aboriginal groups have been consulted in regards to the heritage values of Cape Peron. The option of creating a meeting place and interpretive site is being explored at their suggestion.
Cultural heritage	There is also of European Heritage an example being the Old Gun Emplacements and munitions tunnels from the war. Then we have the signicificant Aboriginal Heritage where ceremonial rights were performed, and an Aboriginal dreaming site , also some areas were used as burial grounds. Is this all to be lost for the sake of a wealthy few wanting a view with a boat pen? (121)	The Gun Emplacements are not within the project area. The project will provide funds to assist with the restoration and signage for this site. Consultation with Aboriginal representatives has been undertaken (will continue if the project proceeds to the next level of assessment) in order to fully understand the Aboriginal heritage values in the area. An 'interpretive site' was suggested by a representative of the Aboriginal community as an appropriate way of providing for an Aboriginal meeting place in the Cape Peron area and to incorporate Aboriginal history and culture into the development. It was suggested that regular heritage walking tours of the area could be conducted by the Aboriginal people in the area.

Aboriginal heritage	One of the points I would like to speak of is the fact that this land also before our time and our forefathers time, was the land of our indigenous people. It is their burial grounds (I have been shown these), their 'boro" grounds (ceremonial), and Lake Richmond was their camping sites, as this had the fresh water to sustain them. They danced to celebrate the seasons, the fishing etc. Of the burial grounds the indigenous people buried their folk, sitting up with a shallow amount of soil on top, so that they could see "Mother Sun" come up. We have in the past been ignorant of the use of the indigenous sites by most people of the State, and tended to destroy the sites, and we should introduce to the young and old what is left of these sites. Just a few months ago, myself and a friend were walking in Pt Peron, and I came across an aboriginal elder, whom I knew, and he asked me if we wanted to be taken on a tour around the area. He told us of the burial grounds and showed us, the various shrubs you could and could not eat, and mythical meanings of Pt Peron and stories, the mythical foot steps in rock, and other stories. To me, I will always remember this, as the most magic afternoon of my life, and my friend he also speaks of this as well. This should be a way of a natural tourist project, as I am sure that there must be many others like myself who would love to have had this experience. (144)	As above
Aboriginal heritage	3. Aboriginal sacred grounds that are used for dreaming and ceremony to be ignored or lost. (176)	Close liaison and consultation with local Aboriginal representatives was maintained throughout the development design and in the consideration of appropriate mitigation measures. This consultation will be ongoing.
Aboriginal heritage	I am aware that the land may hold cultural/historical significance to our indigenous neighbours and for this reason any development should take their views into account. (199)	This is happening.

6.12 GENERAL OPPOSITION

Topic	Submission (verbatim)	Response
Construction phase	There is no doubt that if this project proceed then there will be a complete decimation (flattening) of the land, flora and fauna within the area (there are many examples of this in the Mandurah/Rockingham area). During this stage, and equally evidenced, prevailing winds deposit builder's rubble, sand, plastic bags etc. wherever the prevailing wind will take ft. hi this case the prevailing winds will be from the South -West, with the resultant deposits ending up in Mangles Bay. The laws require that due care be taken but the proof of responsibility are onerous. Will the developer be responsible for all works on the project and who will police it? (1)	The details of project construction responsibility have not been determined at this early stage. It is likely that LandCorp will be the proponent for the construction of the project and will be required to prepare a construction environmental management plan acceptable to the EPA to ensure those sort of events do not occur.
Human Factor	In spite of the fact that the monies allocated to This scheme was for feasibility/impact study on a marina it has changed to a Tourist Precinct proposal. It's given name of Point Peron Tourist Precinct is misleading as it is hidden /isolated by placing it behind a private canal housing development The steering committee contracted a company called NS. Proiects P/L to research suitable sites for a marina ignoring that report by choosing Point Peron Before that report had even been finalized. Also the fact that a marina is proposed for an area (Wanlis Street) which is far less onerous to the ecology and more central to the cultural /entertainment area of Rockingham. Point Peron is degraded but mainly by the proponents who backing is the yacht club and fishing club This project is driven only by money Conversely, many people enjoy Point Peron for holidays and for its natural beauty and to quietly reflect when the pressures of urban living, fence to fence roofs, kids playground with fountains will not suffice. In Doing this we remain a friend of the environment and not a vandal. The Proponents have shown themselves to be irresponsible in this matter and oblivious to public wants and concerns. (1)	Refer to section 3.14 regarding alternative sites. The residential canals are only one component of the entire proposal. NS Projects were not engaged to research suitable sites for a marina.
Project opposition No development on Cape Peron	I would full heartily like you to note!! My total disagreement to your damn department to allow the Rockingham Council to touch off Point Peron [sic]. It's one of the only places I have to release wildlife in this area because of the natural bush and dense wattle bush and native under-growth right thru form Pt Peron and LK Richmond to that other mess you lot have made due you not remember the so called green coastal "corridor" well migration for native animal is nearly totally buggard!! [sic]. As I am a wildlife carer for CALM up here in Medina I have to cover Approx from Sth Freo to Oakford to MH and Local coast and Pt Peron is very important as a release area for me and my little fellows the local vet fix up [sic]. Let alone can you guarettee our fairy penguins will not suffore !!?? [sic] As also is it not true sea levels are suppose to be rising??? The run off from the LK Richmond goes that way as well so all I can say is hands off and pray "u" lot have some bloody brains in your heads!! I would like to know if you receive this and really care. (2)	The majority of Point Peron will still be available for the uses that are outlined in this submission. Refer to section 3.1 for further comment. The project will also fund rehabilitation of the balance of the Cape which will improve the remaining habitat.
Community opinion	Most people polled are totally opposed to a Cape Peron Marina (56%). Many more have serious reservations. In fact, a proper and transparent poll has not been undertaken. The process smacks of corruption! (3)	A statistically valid poll has not yet been undertaken. More extensive consultation will be undertaken if the project reaches formal environmental assessment, this consultation is likely to include a statistically valid market survey.
No development on Cape Peron	I like Point Peron just how it is. Hands off! (3)	Noted.
General opposition	2. The construction and maintenance of a marina/canal and housing development is irreconcilable with the natural geography of Mangles Bay and its seagrass meadows. (5)	Noted.

Topic	Submission (verbatim)	Response
Management of behaviour	6. The issue of policing the occurrence of incorrect mooring, spilled fuel, paint pollutants, canal speeds, pets in the conservation areas. (5)	The project is expected to improve the facilities and resources available for the management of threatening processes in both the marine and terrestrial environments.
Availability of Cape Peron to all	Up to now, there has been freedom for the ordinary citizen or boatie to enjoy Cape Peron without constraints. As a natural resource it remains available to all, from scientists to families. If this disappears, future generations will perceive you, and the EPA of which you are Chairman, as failing to uphold your duty of 'Protection'. (5)	The project will provide facilities for recreation (public boat pens, toilets, entertainments areas, walkways, cycle ways, beach access etc) and allow public access to areas of Mangles Bay that have previously been fenced off to the general public.
Project opposition	As a local resident I am very concerned about the Proposed Cape Peron Tourist Precinct Project. I am totally opposed to this project as are the majority of Rockingham residents (13)	Opposition noted.
Point Peron values	Point Peron is one of the remaining areas of coastline that is unique in its own right and should not be violated with this type of development. The ambience and general atmosphere of the remaining bushland will also be spoilt if this type of development is allowed nearby. (13)	Refer to section 3.13
Project opposition	I am by no means against development as it has provided me with an interesting and challenging career for the past 25 years however there are such massive social, economic and environmental arguments against this proposal that I find it hard to believe that it has made it this far. (13)	Noted.
Project opposition	As residents of Rockingham for thirty two years, we would like to express our objection to the Cape Peron Project. We have various reasons concerning the marina, canal and residential development in this area. 1. Disturbance of sea grasses. 2. Development of any kind s the "bush forever" and parkland areas. 3. Lake Richmond and its thrombolites 4. Disturbance of the land in this area will bring sulphuric acid to the surface which is highly corrosive 5. Traffic problems trying to access Cape Peron. We hope that when you are making your decision you will take into consideration our objection to this proposal. We are not against a marina in Rockingham, but definitely not in this fragile area. (17)	These issues, the existing values, the relevant policy and legislation, the potential impacts, mitigations and expected outcomes have all been discussed at a strategic level in the SER.
Concerns regarding project issues and process	Will holiday units that already exist be available to the groups already using them will they cost more because of the development. Has the issue of the effect on the seagrass been properly assessed, and has the effect on the surrounding flora and fauna been looked at. I personally do not trust the EPA to do the right thing. (26)	The existing holiday units are privately leased. The project has no control over the cost or public access to this accommodation. The issue of seagrass loss has been thoroughly investigated in the SER. Advice from Dr Eric Paling from Murdoch University, Dr Des Lord who has been working with Cockburn Cement, and Oceanica the project's marine consultant indicates that seagrass transplantation is a viable method of offsetting seagrass loss. The offset plan has been devised consistent with the DoE and EPA policies. Effects on flora and fauna have been reviewed at a strategic level consistent with a s16E assessment. Further detailed investigation would be required for a formal environmental assessment.

Topic	Submission (verbatim)	Response
Project opposition	This project, although important to a minority group of business stakeholders within the City of Rockingham, needs to be considered in a more global environmental perspective. I am of the view that the community needs to seriously consider the credible environmental voice opposing the development. The business community ought to oppose this development because of its proposed location and the serious environmental impact it will have on this pristine area. I am not opposed to such a development within the City of Rockingham in a more suitable location. However, the proposed location will have devastating effects on the landscape/flora/fauna and the lifestyle of many Rockingham residents. After considering the proposal and alternative options I DO NOT consider 2.4 to be based on solid scientific research. Furthermore, I am definitely not convinced that there will be acceptable environmental off-sets to ensure an eco-friendly development at the proposed location. As a community, we need responsibly planned tourism projects, in locations that do not harm the unique pristine environment, if we are to boost business opportunities and provide employment prospects for everyone. This project needs to be viewed as significantly more than just an ideal location for safe mooring, and its consequent affect on the tourist dollar. It needs to be considered as an eco-lifestyle issue that could have serious long term ramifications for the entire area. Point Peron is a source of pride to the people of Rockingham. It is unique within the landscape and needs to remain so. It has a natural wonder that delights locals and visitors alike, and should remain as it is – open for all people to enjoy its intrinsic beauty. In my view, Point Peron is an attractive recreational asset, with a wonderful landscape and marine environment, in need of our protection. (35)	Refer to section 3.14. This remnant vegetation in the area is not currently pristine. The potential impacts of the project on the flora and fauna, and the mitigation measure proposed are detailed in the SER.
Environmental concerns	I welcome the opportunity to express concerns that not only I but my family and friends share the same concerns, I point out that in the past I have corresponded with the Shire of Rockingham in relation to this project and are fully aware of pretty well all aspects of what is proposed. The main concerns are as follows. (52)	Noted.
Residential	(C) “The naming of this development as a Marina” the detailed drawings that have been supplied to me clearly indicate, that with the appropriate “R” rating this is a “Residential Canal Development’, my associates are not able to concede use of gazetted reserve for this purpose. (52)	The residential component of the development is only one component of the entire proposal.
Project opposition Caravan parks Water quality	I don't agree with the Point Peron marina development; caravan parks are such a lovely part of Western Australian life - I am devastated that Club Capricorn is going in the North and now you're taking the best south retreat also! The kids learn so much in these areas, so important for their growth. There are too many marinas causing terrible environmental damage - e.g. Hillarys marina near me is an absolute sham, so many big boats, the water is polluted with rubbish and fuel and oils, the kids can't even swim in there anymore. The coast is so developed already, leave it be, please! (70)	Low cost family accommodation is included in all development options. The existing leases are private. They are not public caravan parks.

Topic	Submission (verbatim)	Response
Project opposition Bush Forever Lake Richmond	I am OPPOSED to any development that will affect Lake Richmond and Point/Cape Peron. I believe the proponent's project is a threat to Lake Richmond and will drastically reduce Point Peron to a small, and therefore less useful, reserve. The proposed tourist complex would dig canals through parts of Point Peron, a "Bush Forever" site. Lake Richmond, as we all know, is home to the nationally declared “Critically Endangered Ecological Community” of Thrombolites. By even making this proposal it is obvious the proponents have little understanding of the area and its beauty, its importance to wildlife and its historical and environmental significance. I implore you to REJECT the proposal. (77)	Refer to section 3.1 regarding the Bush Forever site. Refer to section 3.3 regarding Lake Richmond. Any adverse impact on Lake Richmond is not acceptable.
Environmental concerns	If this project proceeds what would the effect be on. 1.the already degraded seagrass areas. 2.lake richmond 3.many more people damaging the last remaining bush areas at pt peron 4.more boat exhaust emissions. (86)	The SER provided a preliminary environmental assessment of impacts on seagrass (SER section 6.2), Lake Richmond (SER section 5.5) and vegetation in the Cape Peron area (SER section 5.1). More detailed information on these issues will be provided if the project proceeds to the next level of environmental assessment. The number of boats launched from public boat ramps into Cockburn Sound in 1999 was 44,270. This is expected to increase to 77,451 by 2021 (Cockburn Sound Management Council 2005). Therefore, provision of 500 new boat pens in the area is not expected to significantly alter the number of boats using Cockburn Sound.
Project opposition Lake Richmond No development in this area	I believe that the residents of Rockingham do want a Marina but we do not think that the proposed site can support that kind of development. The developers must be aware that Lake Richmond is a fresh water lake, I have heard that they were not aware of this !! The ecosystem here is a very delicate one and must be handled that way. The same goes for the Point Peron area. Please develop somewhere else, lets preserve this beautiful area the way it is. (88)	The SER states that “Lake Richmond is a perennial freshwater lake” (SER section 5.5.1). The environmental and iconic values of Lake Richmond are also recognised and no adverse impact on Lake Richmond will be considered acceptable.
No development in this area	I would like the area in question to be preserved as it is. No more development. It is a unique piece of coastline. Building a marina in mangles bay would open the flood gates for even more destruction of point peron. (93)	Refer to section 3.13.
Project opposition For the rich	The way of life at mangles Bay. You can see the mullet come right up to the shore to feed and the rays which follow not to far behind them. I don’t think there would be to many other places you could go to see that sort of thing. Rockingham is a work class mans area and if we put a Mairner there we would be cartering for the rich man who can't get his boat in Fremantle or Perth. These people would only come down on weekends spend there time on their boats and most likley not spend $ 1 in the city of Rockingham. Mangles Bay is the last bastine of the workclass man in the Perth area and should be kept that way. (97)	Refer to section 3.5 regarding the marine ecosystem. The project is expected to slightly improve the overall water quality in Mangles Bay. The project will cater for low income families through low-cost family holiday accommodation and passive recreation opportunities throughout the Cape.
Project opposition Bush Forever	I object to the proposal as follows. 1. It will reduce public land by privatising Bush Forever and local open space in Rockingham Lakes Regional Park. This land is of special value to the public because of its location at such an interesting site as Cape Peron, its coastal dune formations and ecology, and its proximity to Lake Richmond, which is also a Bush Forever site. (100)	Refer to section 3.1 regarding Bush Forever.
Project opposition	I object to the proposal marina development at mangles Bay. (100)	Noted.

Topic	Submission (verbatim)	Response
Project opposition	We have the Australian Heritage listed Lake Richmond with the Thrombolites, the Rockingham Lakes Regional Park and the troubled seagrass beds along with Bush Forever. So why is the City Council persisting with great expense to the rate payer on this proposal in an area already known to be not viable. Why not look at another area with deep water for the marina, the area where the planned shuttle bus from the rail station will service and already highrise apartments and facilities are being built. I am against a Marina development in Mangles Bay. (112)	Refer to section 3.14 regarding alternative sites.
Project opposition	I am totally opposed to a Marina. (113)	Noted.
Project opposition No development on Cape Peron	Having lived in the Rockingham / Safety Bay area since migrating from England as a child, I am appalled to think that the government can even think about a marina in the Point Peron area. This area should be left alone and preserved for every generation to come, and an alternative site for a marina chosen. There are many sites along the coastline that I am sure would be a better option. (114)	Refer to sections 3.13 and 3.14.
No development on Cape Peron For the rich	I am very concerned that this development gives little consideration to resources we will not be able to replace ie the bush and its biodiversity. I have enjoyed the natural beauty of this area for the past 10 years with my children and dog. Your idea of development and progress is misguided. Only the few who can afford will enjoy this proposed development. How many places can I go with my children that doesn't COST. The idea of more coffee outlets disgusts me. Please find a different site for the marina. (115)	The project will include a significant rehabilitation and offsets package as well as improved recreational facilities on the rest of Cape Peron including cycleways, walk trails, lookouts and an Aboriginal interpretive site. These facilities will be free to all. Refer to section 3.13 and section 3.14.
Project opposition	This is an important project for the City of Rockingham, which should improve the amenity of the Mangles Bay area and open it up for the benefit of the whole community, not just boat users. I feel a marina is a must for Rockingham as it will boost business opportunities, education of our young and most importantly employment prospects for everyone. However, I feel that you have not responsibly planned this project. After considering the proposal and all options I am concerned that you are carving into the countryside too much. Surely there must be a solution whereas Rockingham gets its marina, but you don't have to sacrifice so much land in process. I will give my vote to a marina for Rockingham, but I will not give this project my vote in its current state. (34)	Noted.
Project opposition Already a tourist destination	I am very concerned about the proposed redevelopment of Cape Peron into a tourist precinct. It is a tourist attraction in its own right as marine and bush wilderness, being a Bush Forever Site, and also part of Rockingham Lakes Regional Park. It attracts many visitors each year to watch the dolphins who frequent the area, and on any given weekend there are many divers and snorkelers who visit the area as the reef is easily accessible. It is one of the few areas that disabled persons are able to access and still enjoy some form if 'wilderness'. (116)	The Cape Peron/Rockingham area is certainly a popular tourist destination. The demand for recreational and boating facilities is a driver for this project. The development aims to provide more recreational facilities and to better manage the increasing human pressure on the environment. Disabled access will be included in the project and a disabled fishing platform has been incorporated into the design.

Topic	Submission (verbatim)	Response
Leave Cape Peron as is Find alternative site	Lord Forrest had the foresight to save Kings Park from developers, for the good of the community. He saw past the need to make more money through development. Rockingham City Council need to look past destroying the valuable environment there is at Cape/Point Peron, and by all means, build a world class marina in the heart of Rockingham, but please have the foresight to see that Cape Peron is a valued recreational area for locals, holiday makers, diving and fishing enthusiasts, and international visitors. As one travels from Perth to Mandurah and beyond, there is a constant stream of sterile housing developments and marinas that all look the same. Rockingham has the opportunity to make a difference and leave Cape/Point Peron to be a jewel of wilderness and adventure for our children. Look to the future, not to your bank balances. Build the Marina elsewhere but do not build it at Point/Cape Peron. (116)	Refer to section 3.13.
Unique ecosystem	What about the unique ecosystem in point peron? (120)	The environmental values of Cape Peron are addressed in the SER.
Against the coastal development	Our coastline seems to be the prime target for housing developments, high rise buildings, marinas, even industries without due care being given to the ecological marine impacts. Our communities take great pride in being fortunate enough to have dolphins that can be viewed from the beach, why should it be lost because of a select few. In the Mediterranean they have world class facilities, that do not use a canal housing development. (121)	There will be public access to Mangles Bay and there is no reason for the dolphins to stop visiting the area. Dolphins are regular visitors to other marinas in the state.
Marina opposition	We wish to register our total opposition to any marina/canal development in the point peron area. There is environmentally to much impact on the area to justify the spending of hugh sums of money for facilitites for a few. Keep point peron natural. (122)	Refer to section 3.13.
No development on Cape Peron	Point Peron has been a much loved community recreational and nature-study resource for more than 60 years under a succession of State Governments. It is open to all and far-removed from the elitist development proposed. Teachers, Naturalist Club members, university scientists, scout groups and a whole range of interested nature lovers will lose one of the last marine eco-systems parks available for their pleasure and education. A vital eco-tourist area will be lost forever. Point Peron nurtured the development of such noted Western Australian naturalists and scientists as Vin & Dom Serventy, Harry Butler and Joe Gentilli who educated two generations of naturalists in this precinct. Let's not deprive future generations of Western Australians, and in fact all Australians, of this heritage of leadership. (129)	Refer to section 3.13.
Project opposition	I am very concerned about the proposed development planned for Cape Peron into a tourist precinct. I am a long time rate payer in Rockingham and appalled at the proposal to develop that which has been our family beach for generations (130)	Refer to section 3.13.
No development on Cape Peron	I feel this will set a dangerous precedent for other large developments along the coast, which will completely alter Rockingham's appeal from a fantastic place to have regular family holidays, to a place that looks and feels like everywhere else. We have many international visitors come to visit us, and we frequently take them down to our residence in Rockingham. They all say what a wonderful place it is for its accessibility to the beach for EVERYONE, its relaxed feel, and for the easily accessible recreational opportunities that are available, such as fishing, diving and snorkelling. I am totally appalled at the proposal to develop this wonderful place - Rockingham City Council need to take a step up from this, and preserve it for the wonderful place it is for our future generations to grow up, not turn it into some development that raises more revenue. (130)	Refer to section 3.13.

Topic	Submission (verbatim)	Response
Project opposition	There is a strong feeling in the local community, and more generally among Western Australians who know the area, that the proposed development should not go ahead. The threat to the environment is too great to allow it. (133)	Noted.
Project opponents are using misinformation	2. Opposition to this project seems to have been mainly orchestrated by a group led by the Naragebup Rockingham Regional Environment Centre which I consider has promoted its own vested interests to the detriment of the project's betterment for the overall local community & visitors to the region. It seems to me that this group & its relatively small, but strident number of supporters has fed much misinformation to the public through a co-ordinated campaign to prevent the project from proceeding. (134)	Noted.
Project opposition	We have read the report prepared by Strategen Consultants for the Project Steering Committee and members of our group have attended several briefings on the proposal by the proponents. After carefully considering the proposal we have formed the view that this proposal in inappropriate for this site and cannot be made sustainable for the reasons outlined below. (135)	Noted.
Unacceptable proposal	We therefore request the EPA to reject this proposal on the grounds that it is not consistent with the basic requirements for ecologically sustainable development. The proponent has failed to provide a proposal that is compatible with the values of this site. The proponent should be told to look for another site that is more suited to this type of development and there are certainly several of them available. (135)	Noted.
	Attachment was enclosed with above submission. (135)	
Project opposition	This is my submission in response to the SER regarding this proposal for a "Tourist Precinct" at Cape Peron. This is a proposal to construct canals, to clear extensive coastal bushland and to privatize a large amount of public coastal land. My family and I have lived in Rockingham Beach for a number of years. My children go to school here. We go to Point Peron (Cape Peron) a great deal – at least one of us goes there nearly every day. This proposal should be categorically rejected by the government at the earliest opportunity. It is an extremely undesirable proposal which should be rejected on environmental, economic, social and cultural grounds. From an environmental point of view the proposal is fatally flawed and should be rejected for numerous reasons: (137)	Noted.
No development on Cape Peron	The Cape Peron area is currently an enormous asset to Rockingham and to WA generally due to its marvelous natural values and its accessibility to all people. It is enjoyed and respected not only by many Rockingham people but by countless people who visit from many parts of the State and elsewhere. This project would greatly and permanently harm these natural values. (137)	Refer to section 3.13.
Urge EPA to reject project	This project is being promoted by some elements of business and local and state government but is not supported by the general community. From an environmental point of view the proposal is very negative and it is of concern that it has already received substantial financial and other assistance from government. It is to be hoped that the EPA will conduct a genuinely independent and objective analysis and make its recommendations without fear or favour. I sincerely urge the EPA to recommend that the project not proceed. (137)	Noted.

Topic	Submission (verbatim)	Response
Long term decision	Preamble: It is very hard, if not impossible, for a group of people or an individual to argue the technical aspects of a Strategic Environmental Review compiled by experts but it has to asked “Are there any experts with respect to the predicted effects of a development on our environment and just what level of development is the right level?” Sure we can try to mitigate any changes by a best guess but we have to keep in mind that if we make any errors of judgement it won’t be our generation that bears the loss it will be those that come after us. (139)	The environmental impact assessment process in Western Australia is that the onus is on the proponent and its consultants to provide information regarding the project and its impacts. This information and the project are then assessed by government with community input. Therefore, it is not the ‘experts’ that prepared the SER that will make the decision regarding the acceptability of the project.
No development on Cape Peron	Cape Peron is one of the unique coastal environments in the metropolitan area that managed correctly will provide a wonderful parkland environment for low impact recreational use that people can use without spending a lot of money. To argue that the Cape is degraded which is true, the reason being that over the years it has been in limbo by Governments not having any idea what to do with it, is a “furphy” as with a bit of effort the Cape could be turned into an area similar to King’s Park. (139)	The management of Cape Peron currently rests with CALM. CALM have recently made significant improvements to the carpark and walking trail facilities at Point Peron. Significant amounts of further investment in facilities in the area from CALM are unlikely in the next few years.
Environmental effects	There has never been an ‘off-set’ study to see what effect losing so much of Cape Peron would be. This should form part of any triple bottom line assessment and should be carried out to ensure all aspects of this proposal are considered. At the very least the negative impacts on the environment should form part of a TBL. (139)	The SER has discussed all known negative impacts of the project on the environment and has detailed what further work will be done to address any outstanding issues.
Project opposition	Conclusion: The SER for the Cape Peron marina, despite having thousands of dollars spent in developing it presents no compelling evidence for destroying parts of Cape Peron for a canal development/marina. The environmental issues from previous proposals remain and there are question marks over the public consultation for this proposal, the delayed presentation of the alternative marina locations study, ingress of saltwater to Lake Richmond, seagrass rehabilitation, the loss of up to 50% of an important and unique metropolitan recreation area, the feasibility and viability of the project and what is the net effect on the future use of the Cape as a low impact, no cost recreation area. In closing I oppose this canal development/marina as the need has not been sufficiently demonstrated. The proposal is a result of a few stupid boat owners ignoring heavy weather warnings and not checking their moorings or heading for shelter. Rockingham as a regional boating location needs to enhance it’s boating facilities to cater for future growth but to dig big holes in Cape Peron an important regional asset is not the way ahead. With respect to their form letter you should be made aware that the Southcoast Regional Chamber of Commerce represents less than 9% of Rockingham's small businesses (139)	Noted. There is currently no shelter available in the area for boats during severe north west storms.

Topic	Submission (verbatim)	Response
Project opposition Alternative sites	The people I know and my friends in Rockingham are, in the majority, apposed to the tourist precinct project. Point Peron is one of our very few pieces of coast-line that has not been spoilt by developers. There appears to be little regard about the effect on local flora and Fauna, the Rockingham lakes regional park or indeed the whole look of Point Peron. The local sound and bays are already under considerable pressure from previous dredging, industry and the causeway construction, not to mention the sewerage outfall pipe. Further dredging and pumping will further decrease the sea grass in such an important fish nursery. Why are developers so eager to fast track this development at Point Peron? There must be many other places it could be built where the people of Rockingham would welcome it, including myself. Build it but not at Point Peron. (140)	Refer to section 3.14.
No development on Cape Peron	8 Point Peron is a tourist attraction in it self where loads of divers are attracted to the easily accessible reefs. Dolphin watch boats attracts hundreds of tourist to watch the dolphins. Keep this area for our children and grandchildrens future (143)	Refer to section 3.13.
No development on Cape Peron	Pt Peron – one of the States and Rockingham's natural 'icons', which has been declared "bush forever site", and well managed by Dept. of Conservation and Land Management has again been under the microscope to develop expensive luxury housing complexes, hotels, canals, shops and a marina. This site was originally brought by the State Government for the benefit of all citizens for light recreational use and camping etc. Many of the people of Western Australia and other states have fond memories of this place, for their first taste of the environment lessons, the freedom of living in the bush, swimming, snorkling, fishing, sand dunes, all things that young people with a sense of adventure value. I have spoken to many a person, who do not live now in this area, but have had the experience of staying in the camps etc., (one I spoke to was a politician), and I told them what the plans were, and they stated "but they can't do that", it is a natural beauty spot and an icon. I know that times have past and times have changed, but we must also keep the values of the past and the past values should be introduced to the young. (144)	Refer to section 3.13.
Lifestyle concerns	I have lived in this area here for 30 years across the road from Pt Peron, and I have often think that how lucky I am that I live in this location of freedom of walking in the bush, where you are able to have a breath of fresh air. My children have grown up as having Pt Peron as part of their lives, and I have taken my grand-children along for walks as well, and many of my dogs have loved the freedom as well. If this project goes ahead, the negative side for me is that I will no longer be able to ride my bike, walk my dog, take my grand-children for nature walks, and enjoy the beauty of Pt Peron. Also I would have a four lane highway and round about in front of my home, and would not I am sure be able to sell this house, as on top of that the rates would be considerable. (144)	The project would reduce the amount of bush in the Cape Peron area. However, the majority would remain and be improved with rehabilitation, weed management, public toilet facilities, cycle ways and nature trails. Unnecessary tracks would be blocked and rehabilitated. The headland itself is not within the development area. The full range of recreational uses mentioned would remain in the area and additional facilities for walking and cycling provided. The increased traffic flows that would be associated with the project have been modelled and they are within the current capacity of the existing main roads in the area. Housing demand, values and rates are likely to go up as the area becomes more popular. It would be unlikely for the rates to increase and the value of the house to go down.

Topic	Submission (verbatim)	Response
Project opposition	• My family history is from the original settlers, my ancestor was the first non-government doctor in Western Australia, and the family eventually used to come down to Rockingham and also Pt Peron in the 1800's. I have been told that my great-grandmother used to drive a horse and cart with the small children from Guildford and it would take her two days. My grandfather and his brothers and father would sail a yacht down, and anchor in Palm Beach. My grandfather later built a house in Palm Beach, not far from Pt Peron, and it is in the old limestone, and my family still own this property, so Rockingham/Pt Peron has been part of my family lives since the early settler days. • I often think as my ancestor was an early settler, and if our forefathers had thought the same of Kings Park –(who would not want to live there), that we would not have that place where we can wander free in this day and age. I consider that my children's children will thank me for my stand against the marina and canals, large housing estates, hotel complexes, large concrete car parks etc., and I will continue to work with other residents in this town and across the state and Australia, to protect the places we love. (144)	Noted.
Project opposition	My wife and I are totally against the Marina being sited at Point Peron, our main concerns are for seagrass disturbance and the effect it would have on the local flora and fauna. The area is a bush forever sight and the work could affect the Thrombolites in Lake Richmond, which is Australian Heritage Listed. We are not against a Marina and cannot see what was wrong with the original plans for one at Wanliss St.(which already has most of the infrastructure in place) (145)	Refer to section 3.5 regarding seagrass, section 3.1 regarding Bush Forever and section 3.3 regarding Lake Richmond.
No development on Cape Peron	A Regional Park is for the use of the whole community, not selected private developers and their customers. Destruction of the coastal environment is forever - protect it, don't desecrate it. Canal developments are so destructive that that they are now totally banned in some other states Does "Bush Forever" just mean until it is financially appealing to destroy it? The need for places like Point Peron as it now exists is increasing with the increase in population. (147)	Refer to section 3.10. The project will increase public access to the area.
No development on Cape Peron Marina for the rich	The environmental destruction of native vegetation & the displacement of fauna within what is probably one of a few natural areas within the suburban coastal plains would be sacrilege. The effects on the wildlife, such as penguins and other rare wildlife would be devasting. The money spent on preserving seagrass over the years would now be just a waste as this development would ensure that the seagrass is wiped from the Rockingham coast forever. I feel strongly that it is imperative that we leave this heritage to our children and grandchildren. I feel this marina will only benefit a few within our community, most of which are money hungry opportunists who do not have any regard for the environment what so ever. (148)	Refer to section 3.10 and 3.5. There are no penguins near the project area. The direct and indirect impact of the project on seagrass will be less than 10% of the existing seagrass in Mangles Bay. All seagrass losses will be offset.
No development	Use of regional park and the interference to the lake environment. Already the wetlands available to wildlife are at a premium due to the greed of the state's so called protection.Will no decent areas be left to allow future generations some smattering of what life once populated the land and it wasn't all mechanical or human. (149)	Refer to section 3.3. No adverse impact on Lake Richmond is acceptable.

Topic	Submission (verbatim)	Response
SER information	I have read the proponents report and found it very plausible. I did not however find the attention to probable or possible difficulties and problems so persuasive. Responses to difficulties were not well supported and at the risk of sounding dismissive I thought the undertakings were shallow. (156)	An SER presents an overview of the likely significant environmental effects of the project at a strategic level. It is not intended to be a detailed impact assessment.
No development on Cape Peron	I also have some difficulty in coming to terms with the parameters of the environment. It is clear that any development on Cape Peron involves a change in marine and terrestrial structures and the reduction of natural flora and fauna. If it is reasonable to consider man made structures and activities as part of the environment then the notion of a gaggle of buildings, car parks, canals and hard stands seems inappropriate at Cape Peron. We can see such developments at many places and the proposed development is in some ways playing catch up to the Mandurah developments. I do not hanker after such a change from the current situation at Cape Peron. (156)	Refer to section 3.13.
Project opposition	I responded to the survey in August 2005 and was one of the majority opposed to the proposal. The response was to change the options, not drop the proposal. (157)	The project design was amended in response to community feedback. The decision as to whether the project is to proceed or not is beyond the project team and rests with Cabinet.
No development on Cape Peron	Cape Peron and Lake Richmond are very special whereas the marina etc is just another development. If this development is resisted it will probably not be raised again as I believe we are becoming more environmentally aware and will see that keeping Point Peron as a natural wonder is best for Rockingham and the state economically and socially. Let us work to return it to natural bush and keep it accessible. (157)	Refer to section 3.13.
No development on Cape Peron	Point Peron is a very special place for me and my children - it is where we go and "have an adventure". It is the only place where we can go and have a truely 'wild' experience without having to travel hundreds of kilometres. The destruction of this natural environment is horrific to myself and my kids. I realise that money is a very potent lure for some people, but I really think our society is becoming more and more aware that 'money isn't everything'. I also believe we are also becoming more and more aware of how valuable the natural environment is now. We in Rockingham are not generally happy with the rate all of our native bush and environs are being stripped for the development of thousands of houses, but realise people have to live somewhere. It would be nice if we had more natural bush areas left to look at and enjoy the ambience of instead of manicured parks and lakes that are popping up everywhere. We do not, however, accept that a truely unique small area of coastline should be destroyed for any reason at all. IT IS NOT NECESSARY!! Why doesn't the government understand that this area will be priceless in it's existance for future generations to come? Once it is gone IT CAN NOT BE REPLACED. It would be a total desecration to have Point Peron 'developed' in any sense at all. (160)	Refer to section 3.13. The project drivers are social, environmental and economic outcomes not profit. The project will help improve the vegetation condition in the area through weed management and rehabilitation that will help protect the environmental and aesthetic values of the bush.

Topic	Submission (verbatim)	Response
Project opposition Cape Peron – Rockingham's King's Park	Because of Environmental and Other Concerns, I am NOT in favour of the Proposed Marina Development taking place at Cape Peron. Please give your consideration to the following proposal:-- I would like to see Cape Peron become the "King's Park" of Rockingham. • We all know that King's Park is a West Australian Icon which is visited by thousands of tourists each year, and Cape Peron could do the same for Rockingham. • In 1890 the Premier of Western Australia, Sir John Forrest said about King's Park "This will enable the children, a thousand years hence, to see what the bush was like when Stirling came here to found a city". I want my descendants to be able to see Rockingham just the way that nature made it. • As the only remaining Natural Bushland close to the heart of Rockingham, Cape Peron is ideally situated for such a project. • Such a Natural Bushland Park is in keeping with the "Bush Forever Protection Policy" status of the area. • Unlike a Marina, a Natural Bushland Park would not be environmentally detrimental to Lake Richmond, especially in the possible rare event of a Tsunami Tidal Surge. • A Natural Bushland Park is a treasure that can be used by people of all socio-economic groups, unlike a Marina which is only affordable to the wealthy. Rockingham is not a wealthy area and local residents would not be able to afford the Marina Fees. • Everything possible should be done to protect the habitat of our Flora and Fauna, and a Natural Bushland Park at Cape Peron would be a good start. I have just returned from a 2-week trip to Tasmania and during that time I saw more Black Swans in Tasmania than I have seen in Western Australia for many years. Where is our State Emblem? I would be pleased if you could pass these suggestions on to any other relevant department. (163)	Noted. Kings Park is a balance of recreation and conservation. The marina will be open to all socio-economic groups. For example the affordable family holiday chalet park(s) will provide low-income families with a holiday opportunity they currently cannot have at Cape Peron.
No development on Cape Peron	I have spent most of the summer holidays as a child growing up in Rockingham (Palm Beach) and have since spent time each year at our family beach house. I am 36 years old and so have been able to explore and enjoy the wilderness landscapes of Cape Peron and associated marine life and bird life etc.for many years. In my opnion; and in the opinion of all the international and Australian visitors to whom we have taken to enjoy the natural features of the subject area; all of these features of the region are vital in establishing and maintaining a connection and understanding of the natural landscape. Any proposal which will have a negative impact on the these areas/features is not considered acceptable in my opinion. I have obtained comments/opinions re the proposal from the staff at the Rockingham Environment Centre and agree with their thoughts on the matter. As a result I would like to re-iterate the following comments: (164)	Refer to section 3.13. The concepts will need some land from the Regional Park but will also improve the vegetation of the balance of Cape Peron and provide visitor facilities.
Precedent	2. It sets a dangerous precedent for private developers (ie – the rest of the coastline is at risk of being packed full of marinas, privately owned, and no where to go swimming, fishing, diving etc). (164)	Each project is subject to a separate environmental assessment. This marina will not be privately owned and will provide additional facilities for water-based recreation including boat ramps, fishing platforms and swimming beaches.
Already a tourist destination	8. Point Peron is a tourist attraction in itself where loads of divers are attracted to the easily accessible reefs, dolphin watch boat attracts hundreds of tourists there to watch the dolphins. (164)	The marina facilities will be complimentary to these activities and provide facilities to support the recreational and charter boats.

Topic	Submission (verbatim)	Response
Project opposition	I urge the EPA to allow new developments to proceed where there is already environmental impact from other development activities and preserve the areas of highest conservation value for the wildlife to live and the community to enjoy and interact with in a passive way. As an environmental scientist and mother of 3 children I cannot convey my feelings on this matter more strongly. Australia has the opportunity to preserve wilderness where other countries have not through poor planning (or planning decisions based on economic growth only). The social and environmental ramifications of losing these natural features are immeasurable. (164)	Noted.
No development on Cape Peron	I wish to express my dismay at the proposal for Point Peron. Having lived in the area for almost 24 years, we know and love Point Peron for what it is, beautiful natural bushland in a picturesque setting. We always thought Point Peron really would be a permanent Bush For Ever site. Apparently not, if the proponents of this so called progressive development get their way. Proposed canals, hotels and luxury housing would destroy a designated Bush Forever site. (168)	Refer to section 3.13.
Project opposition	Point Peron has been enjoyed by all people of WA, discovering coastal natural wonders via education and holiday camps, passive recreation, show place for visitors, photography, fishing, snorkeling, swimming and diving. Our son used to say Point Peron was Western Australia's best kept secret from a diving viewpoint. I would just like the proponents to ponder on an old Red Indian saying which I came across some time ago relating to the way we look after the environment: We did not inherit this earth from our ancestors - we borrowed it from our children Well I have had my say, I will sleep with a clear conscience - will you? (168)	Noted. All these recreational opportunities will continue to be available on Cape Peron.
No canals	It should be noted that the NSW Government prohibits the development of canal estates along the coast “in recognition of the fact that they can pose serious water quality problems, threaten the integrity of coastal wetlands and fisheries habitats, exacerbate flooding problems and disturb potential acid sulphate soils”. A wise Government should follow the NSW example and look at a sustainable long term approach to the vulnerable coastal areas, rather than immediate short term financial developments. (177)	Noted.
No development on Cape Peron	Point peron is one of the few natural attractions left in the metropolitan area. Please preserve it for the benefit of all, not just those that want a modern comfortable lifestyle, that can be built anywhere.	Refer to section 3.13.
Project opposition	I strongly object to this proposal. The proposal is not harmonious with the area and would be detrimental to the environment. Some of the issues are: (179)	Noted.
No development on Cape Peron	(2) Cape Peron is a unique coastal limestone headland environment which should be preserved as a protectable peninsular separated from development, to provide a haven and/or sanctuary to native vegetation, birdlife, sealife and land fauna. The proposal would encroach out this peninsular, jeopardising the value of the remainder of the peninsular. (179)	Refer to section 3.13. The headland is outside the project area. It will benefit from the proposed rehabilitation works.
No canals	(9) Canal developments are causing extremely serious environmental problems on the east coast and killing species of sealife and vegetation, so much so that new canal developments are now banned in some areas. This proposal appears to blindly ignore the lessons learnt elsewhere in this country. (179)	Noted.

Topic	Submission (verbatim)	Response
No development on Cape Peron Visual amenity Natural history	(10) The peacefulness of the place will be lost forever with this development. Peacefulness is essential not only for habitat of native fauna and flora, birdlife and sealife, but also essential to humans.	Refer to section 3.13.
	(11) This proposal would remove the last available getaway in 30km radius for people to escape the pressures of society and development for a few hours. Society needs some escape where you can walk in peace and nature to restore balance of health and mind. This proposal would put an end to one of the only coastal escapes left in the metropolitan area, which has otherwise suffered development right through from the northern edge of the metropolitan area and soon to Mandurah and beyond. It is essential to leave some natural strip to future generations.	
	(12) The proposal would have a significant adverse impact to the adjacent marine park, through physical pollution, and visual pollution. Shoalwater Marine Park is currently a world away from the city. This proposal would result in an eye-catching visual blot to enjoying the islands off Shoalwater.	
	(13) The proposal would decrease public amenity, convrting an area that should be preserved for recreation and preservation for the benefit of all the community, not closed off for the enjoyment of an elite few.	The project will improve public access to an area already restricted to the public by private leases and a lack of facilities.
	(14) The proposal is detrimental to preserving the historical context of seeing what the first maritime explorers saw when they discovered the west coastline off Perth.	
	(15) The proposal would destroy the sense of place and low key holiday atmosphere of this end of Rockingham. (179)	
Marina opposition	I object to the development in its entirety	
	Marina is in the wrong place-try Wanliss St Jetty instead	Refer to section 3.14.
	Area is a Bush Forever site no part of which should be cleared	Refer to section 3.1.
	The project would affect the Heritage listed and Threatened Ecological Community of the thrombolites in Lake Richmond	Refer to section 3.3.
	We need to retain coastal bushland and Regional Parks for public not private use, and as examples of what we once had. We are rapidly losing our coastal bushland e.g. Alkimos, Neerabup National Park, Quinns Rock (181)	

Topic	Submission (verbatim)	Response
Summary	The Key Environmental Issues in this Strategic Environmental Review (SER) are the same issues that have been presented in previous proposals. These "fatal flaws" apply to this tactical proposal and should prevent the process progressing to the next stage, the Environmental Impact Assessment. There is no plausible solution that would avoid, minimise or offset any adverse impact to the environment! Empirical evidence has shown, the Environmental Impact Assessment itself has a serious detrimental impact on these "critical assets", (Dr AS. Morrison-Saunders, Murdoch University) The key Environmental Issues: 1). Seagrass in Mangles Bay. 2). The "Bush-forever" site. 3). The Rockingham Lakes Regional Park. 4). The Australian Heritage Listed Lake Richmond and its critically endangered ecological community of Thrombolites. These issues will be discussed on this submission with the conclusion being rejection of the proposal. (183)	Environmental offsets are recognised as one of the tools available to achieve environmentally beneficial outcomes from projects (EPA Environmental Offsets Position Statement).
Fatally flawed project	The environment has historically been compromised through development and the halting or reversal of this decline of the environment is now a priority (EPA 2000). All the key environmental factors: seagrass in Mangles Bay, the Bush Forever site, The Rockingham Lakes Regional Park, The Australian Heritage Listed Lake Richmond and it's critically endangered, ecological community of Thrombolites are threatened. There is no plausible solution that would avoid, minimise or offset any adverse impact to the environment! As shown, the proposal is "fatally flawed" on these points in accordance with the applicable EPA objectives, State and Commonwealth Regulations. Rejection is therefore the only ethical decision. Note: It could also be said, the only interest of the proponents is the land north of Point Peron Rd! Why, rejection, which it could be said the proponents are anticipating, will lead to the alternate aim, acquisition of the land north of Point Peron road for high-density, high cost accommodation and privatisation of the Mangles Bay Beach. (183)	Noted.
1. The Context Of The Strategic Environmental Review (SER) Project opposition	The project in the main would create privately-owned and operated activities, notably a commercial marina, long- term boat pens, closed club areas, chalets, a hotel, accommodation, restaurants, cafes, and shops. As a whole the project would constitute complete destruction of the existing landform and its replacement with an entirely artificial high-impact set of activities. The project in the main would occupy and destroy a large part of Bush Forever Protection Area 355 and areas currently occupied by relatively quiet, low-impact activities utilising historically stable foreshore and beaches completely accessible to the public. The project would be located at the butt end of Mangles Bay, itself the butt end of Cockbum Sound. As the EPA is thoroughly aware, Cockbum Sound is a marine embayment that has suffered considerable degradation and is highly susceptible to further threats. (185)	The marina, pens, chalets and other accommodation will all be open to the public. Mangles Bay is currently not easily accessible. The private leases prevent direct access and the boat ramp and jetties are barriers to people walking along the beach.
Public values	4. public values of recreation, sense of place, and serenity will be lost. (188)	All current recreational activities at Cape Peron will continue to be available.

Topic	Submission (verbatim)	Response
Canal	6. canal estates are now banned in several eastern states due to the long term environmental and health problems they create. I am not convinced this one will be different. Also, is there an acid sulphate soil risk? (188)	Refer to section 3.3.
High rise	10. high rise will impact the visual amentiy and shadows from buildings etc and changed microclimates will negatively impact habitat. (188)	The development will adhere to the planning policy on coastal developments (generally no more that 5 storeys).
Project opposition	It is a very bad idea to put a marina at Cape Peron. The following are among the reasons: 1. It is a unique and prominant coastal limetone feature along a predominantly sandy coastal line. Over development has already claimed most of the coast, the prominant features should at very the least be left in their natural state. The East coast of Australia (NSW to Qld) is already spoiled - even the headlands are all developed. 2. It is a Bush Forever site and development therefore contravenes State Govt Policy 3. Fragile Lake Richmond will be vulnerable to pollutants in runoff 4. Aboriginal, WWII and French exploratory heritage all apply to this site 5. It is an ecologically unique environment (see point 1 also) 6. Its proximity to Shoalwater Marine park with resident populations of Sealions and penguins suggest that increased boating in the vicinity should be prevented at all costs. 7.A marina restricts areas of use to an elite few whereas it is currently available to all sensitve public users, not just those with big boats and money. 8. WA's coastal wilderness is fast disappearing. My children will not be able to enjoy the childhood that I did. Doesn't anyone care? (189)	1. The prominent Point Peron headland is outside the project area. 2. Refer to section 3.1. 3. Refer to section 3.3. 4. Close liaison and consultation with local Aboriginal representatives was maintained throughout the development design and in the consideration of appropriate mitigation measures. This consultation will be ongoing. The battery complex with WWII heritage values is outside the project area but will be restored.. 5. The ecological values of Cape Peron and the potential impacts of the project on those values have been described in the SER. 6. The number of boats in the area is increasingly independent of any marina facilities in the area. The amount of unregulated boat activity in the area, is one of the drivers of this project. 7. The Mangles Bay foreshore and the marina facilities will be available to the general public.
Project opposition Seagrass	"A study commenced in mid 2005 to develop concept plans for a marina-based tourist precinct development which achieves a strong balance of social, economic and environmental outcomes for the Rockingham area." I fail to see how the marina precinct achieves a strong balance of environmental outcomes when it will: Require dredging and pump flushing into Mangles Bay destroying sea grass beds. (191)	Refer to section 3.5
No development on Cape Peron	This area is environmentally sensitive. It already has had detrimental exposure to effluent from heavy industry on the Kwinana strip, and stagnation from the Garden Island Causeway. Soon this will be compounded by the byproducts from the Desalination Plant. How much can this area handle and still have thriving ecosystems? It does not need a Marina too. Where else in the Metropolitan area are there still truly wild places? My family visit Cape Peron very regularly and enjoy its beauty and creatures, I want to see it kept for future generations. I don't want it spoiled for short term monetary gain. There are other places for a marina - but no other Cape Peron. I am not against a Marina in the Rockingham area. But I am against a Marina at Cape Peron. The current proposal is also designed to cater for very wealthy people. I want Cape Peron to be available to everybody, regardless of their socioeconomic circumstances. (191)	Refer to section 3.13

Topic	Submission (verbatim)	Response
Project opposition No development on Cape Peron	Our group is totally opposed to the Proposed development. The area has recorded history in the land formations is important to marine and land based fauna. Any attempts to develop one interfere with this delicate eco system will be devastating (193)	Refer to section 3.13.
No development on Cape Peron	We are a community in which four generations have enjoyed the unique environment our location provides. We have been witness to the environmental degradation in the Sound over the past few decades. … is not opposed to the development of a Marina for Rockingham. However the current proposal is located in such an environmentally sensitive site we would question the process used in coming to the decision that Mangles bay and its hinterland were remotely appropriate to be considered for dredging and canal development .without proper consideration of other sites. (196)	Noted. The location provides at least as many constraints and more opportunities than others when considered against social, environmental and economic criteria.
Project opposition	For this reason alone we believe that the proposal should receive no further consideration. A vision for Cockburn Sound, taking into account its long-term future is essential if we are to preserve and protect our heritage. It would seem that the very nature of a marine/tourist/commercial development is at odds with the higher level objectives of environmental protection. (196)	Noted.
Footprint too large	Generally The footprint of the project, right from the conceptual stage, has been and continues to be too big. Too much of the Cape Peron Peninsular is given over to the project leaving too little for public recreation and preservation of the natural environment. (200)	Refer to section 3.13.

Topic	Submission (verbatim)	Response
Project opposition	I submit my response to the report prepared by Strategen. Firstly I enclose a copy of my submission to the Editor of a local paper in response to an article (copy enclosed) in the edition of 10th. March on the Mangles Bay marina. Spacewise it was clearly excessive in size and I had to halve its content. However, it allows you to register early the fact that I am impacably opposed to the Mangles Bay/Point Peron proposal. I made a mistake in the article by suggesting that there were 250 – 300 boat pens not 500 as suggested by the Mayor arising from the fact that I registered only one boat per area not the two in the plan). So that you know where I'm coming from a potted version of my background includes:- (a) a 41 year career in the Commonwealth Public Service, 30 years of which were in the Dept. of Civil Aviation (b) an association with sailing by crewing in a 16 foot skiff on the Swan River for years from postwar to the late 50's. Concurrently I was Secretary of the Mounts Bay Sailing Club for 4 years of this period. My only deepwater sailing includes crewing a 40ft. ketch from Adelaide to Esperance and crewing of a 50ft. ocean racing yacht on the first Fremantle to Bali race. (c) Membership of the A.I.W Recreation Centre at Point Peron since its inception in the late 50's to date. My fishing and crabbing activities are carried out in Cockburn Sound from my 12' 6" homebuilt timber dinghy. I have also spent 4 months a year for the past 20 years in Broome having a 12'6" aluminium dinghy to use for deep sea fishing. I put forward the foregoing merely to indicate that I have an association with water based activities but have no wish to be seen as an expert, scientific or otherwise in matters such as acid soils and stromatolites. Rather my following comments are based on my life's experience and I hope, an ability to analyse reports and comments objectively on them. (205)	Noted.

Topic	Submission (verbatim)	Response
Page (i) Executive Summary Introduction	The report states (a) "focus for the development of a concept plan for a marina – based tourist precinct". My assessment is it "is a major land-based precinct development comprising residences, 5 storey hotel, shops, restaurants etc., and a marina which therefore necessitates the total development having ocean frontage. Dealing with the tourist aspect, questions which come to mind are:- 1. What does the proposed development present as an attraction? – the residences, the hotels, restaurants etc., or the canal waterways with boats in it. 2. Is it the sort of development attractive enough for, say a tour bus operator in Perth to carry tourists, hopefully interstate and overseas types, on the 50km each way trip to Rockingham? 3. A survey conducted of 100 visitors on each of several days at, say Mandurah's marina might provide an insight where tourist have travelled from. My persuasion/estimate is that:- 3.1 A %age (probably the largest) are from the local population i.e within a 10 km radius merely sampling what's available at the "marina" in comparison to other Mandurah locations. 3.2 3.2 A %age are the "let's take a drive to Madurah" type and come from Metropolitan area locations principally at weekends. 3.3 A %age are from out of state (very small) but including overseas visitors. 4. It is inappropriate in my view for the developers to use areas outside those in the main project which they promise to make "prettier" as part of their tourist attraction plug. "Tourist already visit Cape Peron in its present "unprettied" state and are likely to be the type sho are more interested in the natural setting than bricks and mortar and an island waterway. (205)	The management measures proposed outside of the development are focussed on conservation and recreation. Conservation measures include plantings, dune stabilisation and weed management. Recreation facilities include cycleways, nature trails, lookouts and public toilets designed to both enhance passive recreation opportunities and to protect the environment from human pressure by providing the appropriate facilities.

Topic	Submission (verbatim)	Response
Conclusion	Finally I have to say that during my long assocation in the society of Rockingham (not all of it) I have been puzzled by the attitude of so many of its residents talking in my hearing of “poor begger me”. For instance “we haven’t got a railway (we have now but it is in the wrong place) we haven’t got any decent high buildings?, we haven’t got a dive wreck, we haven’t got a marina and a great many “others” that may get press publicity. Such an attitude really manifested itself after the last State election when a failed candidate interviewed by a press journalist said ”people should have voted for the ? party and don’t blame me if Joondalup and Mandurah get everything and Rockingham gets nothing”. However, from letters to the editor and other sources there appears to be a wide acceptance that, yes, Rockingham is “entitled” to a marina but Cape Peron/Mangles Bay is not the place for it. So it’s over to you and good luck. P.S I have just been given a copy of the latest newspaper article on the marina subject. See copy “Canberra lends an ear” attached. Here was I naïve enough to think that the Causeway re-alignment was all part of the development activity. Thirty million dollars on top of that already committed on yet to be found 500 owners of big boats, seems a tad excessive to me. (205)	Noted.
RSL	A passionate letter was received raising concerns that the lease for the RSL site be continued. It raised the importance of the efforts of the returned soldiers in ensuring that Rockingham is what it is today and concern that this was not given sufficient importance in the SER document. The values of the area providing a quiet place for reflection and recreational boating was also raised.	Noted.
Project opposition	I would like to comment on the proposed Cape Peron Tourist Precinct Project. The Cape Peron area has long been a favourite place for passive recreation. A place for people to wonder and enjoy the scenery. I believe the proposed project is not in keeping with the present use of the area. I hope the EPA will reject the project in its current form. (210)	Noted.

Topic	Submission (verbatim)	Response
Project opposition No development on Cape Peron	I wish to submit my submission against this. I recently ran into a member of the “Preserve Point Peron” group whilst at my dentists. I stopped her and asked how I could help. She gave me their handout with the following point on it:- • Damage to sea grass that is already under attack. • Precedence for private development on other Bush Forever and regional park sites • Heightened risk of environmental accident from Navy hazardous goods transport through proposed Marina • Australian Heritage listed Lake Richmond an its critically Endanger, Ecological Community of Thrombolites • We need a Marina but… why not at Wanliss Street Jetty?? I agree with all of these points, and I am not against a marina per se. But no matter the precautions taken human error and criminality will prevail, i.e the death of the dolphins at Whitfords Marina. We have a unique area at Point Peron – with a fragile bit of coastline surrounded by human habitat and high industry. Tourists love it and remark on its pristine beauty that is the uniqueness it has, and within an hours drive from Perth. I am a volunteer at penguin Island, and can say most tourist prefer it as it is. Natural! Now here are walkways there, people are kept to a degree off the vegetation and the vegetation is starting to regrow. Restore the gun towers and it could be a noteworthy Tourist Attraction, and not destroy the sea grass, thrombolites, and endanger penguins. I also volunteer elsewhere and know many people who would agree with me, but do not have the confidence in their oral and written skills to present a submission against the development. I also understand that those that do have these skills, also have the “University degrees” to support their arguments. Naturally the developers have their own experts. But it all boils down to money versus nature. Please do not be swayed by corporate avarice, but by the natural beauty and diversity and ecological needs of this tine little point of land. 1 hr from Perth. Don’t let it be commercialised. (212)	Noted. Refer to section 3.13.
Project opposition	I wish to object to the proposed changes to Point Peron. It would certainly not be an improvement quite the opposite. We should all be proud to have such a natural rugged beauty in our area. Surely, there are enough high rise and luxury apartments in the area as it is. Why not improve it as a natural park area for everyone to enjoy not just as a business venture. A marine would be a good idea but not at the cost of losing the natural area of Point Peron. (213)	Noted
Project opposition	I object to the land grab of practically half of Point Peron. That could be a disaster and cost the people of Rockingham millions of dollars, ongoing expenses and the loss of our heritage of natural ’bush forever’, so close to our beachfront precinct. (214)	Noted.

Topic	Submission (verbatim)	Response
No development on Cape Peron	In conclusion there will be too many people and too much proposed development in an area designated Rockingham Lakes Regional Park. The loss of this area of environmentally sensitive land is unacceptable to me. (214)	Refer to section 3.13
Project opposition	The area of Cape Peron, as part of the Rockingham Lakes Regional Park, belongs to the people of Western Australia and to excise a very large portion for development is a crime against the community. The area is part of the BUSH FOREVER project. When people are being stripped of the use of wetlands, despite holding legal title, how can it be proper to remove such a large area of bushland for any purpose, let alone a commercial canal development? To live in such a development is beyond the means of most people and it would be occupied by the very rich in our society. The establishment of a marina in Rockingham has run hot and cold for years. I have no objections to a marina in an appropriate place, however I am in complete opposition to the development of the proposed Cape Peron Tourist Precinct Project. (215)	Noted.
Project opposition	Herewith my submission in relation to the Cape Peron Tourist Precinct Project. I oppose the project and give some of my reasons below. I have lived in Rockingham for 25 years and cannot afford to own or run a boat. I believe ordinary Rockingham residents are important and numerous stakeholders. (216)	Noted.
No development on Cape Peron	Page 16, point 3.1.3 — Conservation Areas - Cape Peron in its present form is a huge asset for Rockingham. It will become an even bigger asset in years to come. Everything does not have to be covered in concrete right now, leave an area for our children. Cape Peron has traditionally been in the l900s an outstanding natural attraction drawing people from all over Western Australia for passive recreation and education. In years to come people will look back on this and say. 'thank you for the vision' just as they do for King's Park. Rockingham Council seeks to identify and retain corridors of remnant bushland at the same time it is seeking to destroy between 40 to 53 hectares of remnant bushland in the one location. Building such a project in a Regional Park and Bush Forever area sets a precedent. If this area can be so used then why not every other park and bush area. I don't agree with the transfer of a public asset which everyone can use into private ownership for a few people. If the canals and bay become polluted who will pay for the clean up, the private owners or all the ratepayers? (216)	Refer to section 3.13
Objectives	Page 22, point 4.2 — Site and Development Concept Option Assessment - Table 2. Examples - many of these are contradictory. For example a 'place for everybody' and' community ownership' is not possible on commercial development, residential accommodation and marine industry activity sites. When flora and fauna is to be removed how is it then possible to 'retain and protect' something that doesn't any longer exist. Economic activity and job creation can take place in many areas, it isn't necessary to wreck the coastline to provide it. (216)	These are the project objectives.

Topic	Submission (verbatim)	Response
No development on Cape Peron	Option 2.4 - By clearing the Regional Park and Bush Forever, of course there will be no need for weed control and vegetation rehabilitation - the bushland will be gone for ever under bricks and mortar. Recent plantings in Rockingham have consisted of palms from the Pilbarra and deciduous trees. People from overseas and the Eastern States really do appreciate the natural flora of the south-west of this State. Also they want to see what makes Rockingham different and unique not a copy of Mandurah or any other place. I would hate to see Cape Peron end up looking like Rockingham Beach, the 'waterfront village' or Mandurah with canals, boardwalks, public 'art' and all manner of clutter and wasted public money. (216)	The weed management and vegetation rehabilitation are proposed for the majority of Cape Peron that is outside the development area. Refer to section 3.13.
Landscape	Page 72, point 5.4.3 — Landscape - The change in landscape values is likely to be detrimental and lead to the area looking like all the other coastal areas which have been subject to 'development' and 're-contouring'. (216)	Noted. The development would lead to a change in visual amenity in the area.
Project opposition	To summarise some of my objections - Public comment should be allowed on other locations such as Wanlis Street for a marina I am not convinced the destruction of Cape Peron as we know it is necessary for the building of a marina This sets a precedent for the loss of other Regional Parks and Bush Forever sites. Regional Parkiand and Bush Forever sites should not have areas excised for self-interest groups. Information on such loss should be made more public. Public land which can be used by 'average persons' should not be turned over to privately owned 'upmarket housing and boating' thus setting a precedent for the loss of other parklands. People bring pollution When old growth flora is removed it is impossible to rehabilitate it in one person's lifetime. The risk to Lake Richmond and the Shoalwater Islands Marine Park The clutter and ugliness of commercial activity should not be on the shoreline The loss of a wonderful opportunity to leave something unique for our children and the people of Western Australia The loss of a wonderful opportunity to have a unique Cape Peron of views, passive recreation and fauna and flora reserve The loss of opportunity to be different from other coastal areas. The loss to the Rockingham community and tourism if the project fails to attract the large numbers of people needed to sustain it. (216)	Noted.
No development on Cape Peron	Have the land of Cape Peron become part of the regional parks and wetlands, lakes and ocean areas systems like Lake Richmond and the Shoalwater Marine Park and become one of the great parks of the world right on the doorstep of the capital city of the State. Let people enjoy the fragile unique limestone formations, cliffs, views, flora and fauna reserve, maybe an arts or performing arts centre, photographic opportunities, passive and leisure pursuits, historical and educational aspects. It could provide some extra employment, extra monitoring and rangers would be needed. Please leave Cape Person for the people of Western Australia, a marker in place and time, of how earlier settlers saw it. The brief comments I have made above should be sufficiently representative of my views for you to know that I believe the Project to be so flawed that it should not go on to further assessment. (216)	Refer to section 3.13.

Topic	Submission (verbatim)	Response
No development on Cape Peron	Thank you for accepting this submission against the above proposal: outlining our many reasons for doing so. We regularly visit Cape Peron to enjoy its many values, as we have done for over 40 years: to walk through the wattle shrub-land, the lovely beaches and covers and island observations for our birds and wildflower hobby. Cape Peron is a highly valued Regional Park that we all enjoy for its coastal wildflowers and remnant tuart and coastal shrubs (well discussed in Bush Forever site 355). An area we have always taken for granted to be publicly accessible forever-and so it should remain. It is the only coastal, naturally vegetated area of that type we have, besides Woodman Point, that has survived in the southern metro area-a suit of plants and Tuart trees; very much endangered now. (218)	Refer to section 3.13.
No development on Cape Peron	We have a lovely piece of coastal reserve – Point Peron – which our council is trying to get the go ahead to destroy to build a marina and other buildings such as 5 star motels etc. This area is the only piece of natural bushland of any size left here in Rockingham and is home to many birds and little lizards. Also there are flowering native shrubs with clematis covering them with aromatic blossoms in the spring. To destroy this area would be an environmental disaster. There are other sites available for a marina. Point Peron is unique. Can you please consider the Rockingham community, as we take visitors around this as part of our scenic drive and walk through there ourselves. I am 83 yrs old and fear for the loss of so much heritage for future generations. (221)	Refer to section 3.13.
No development on Cape Peron	I am writing to express my opinion and request that Point Peron is left in/as it natural environment. I oppose any development to be done. I have heard that apparently the council has had extensive communication with the local community residents. I am a Safety Bay/Shoalwater resident and have not heard anything from or been approached by the council. So once again I do not agree with the development of Point Peron, leave it alone. (222)	Refer to section 3.13.
Conservation Council submission	This start of this submission is identical to submission 184 from the Conservation Council. (226)	Refer to responses to submission 184.
Project opposition	The “little people” of Rockingham, those without the backing of the Council, by business, Chamber of Commerce etc, feel desperate and helpless in the face of plans threatening to destroy Point Peron. We went to Point Peron as children, to swim and learn about the wonders of marine. We returned as adults to its peace, beauty and uniqueness. I take my grandchildren there. To us in Rockingham, it’s as important as King’s Park is to Perth – and that was also nearly destroyed in earlier years!. The Council, the Rockingham Development Officer, want to dig canals which will be smelly in summer like the Mandurah ones, salinate Lake Richmond and destroy sea grasses in Mangles Bay. We are not against a marina – but not in Point Peron. Although this is supposedly a democracy, the voice of the ordinary people is being ignored to favour the almighty dollar so called “progress and development”. PLEASE HELP PRESEVE POINT PERON FOR THE ORDINARY PEOPLE. (227)	Noted. Flushing modelling indicates that the marina will flush well so will not become stagnant. Any adverse impact on Lake Richmond, including salt water intrusion, is considered unacceptable. All seagrass area lost will be replaced on at least one for one basis.

Topic	Submission (verbatim)	Response
Project opposition	Please consider Aboriginal heritage, white bait stocks, fairly penguins, water salinity, and water contamination from sewerage and oil, anti-fouling, boat paint from 500 boats. Not local boat owners, fees to high for locals so let city fat cats stay at Perth Swan Clubs. Fat Cats “High Income Recipiants” vote for the opposition. So please no to new developments in Rockingham WA. (231)	Noted. An Aboriginal meeting place and interpretive site is being proposed to recognise and celebrate Aboriginal Heritage. Sewerage, oil, anti-fouling and boat paint are all present now in Mangles Bay and the hard-stand leases. A marina will ensure these activities are managed and do not pollute Cockburn Sound.
Project opposition	We are writing to inform you of some of serious concerns for this proposed project.	Noted.

6.13 GENERAL SUPPORT

Topic	Submission (verbatim)	Response
Land Use	For almost 20 years I have supported the view that Cape Peron requires better management. The coastal forms and sea around the Cape offers the promise of some of the best water sports, recreation and simple enjoyment of the natural environment within 50 kilometres north or south of Perth; let alone near to the developing communities of Rockingham and Kwinana. Access to much of the Cape, (3.1.4) is limited to the members of the various clubs and associations which hold leases and thus preclude entry to the land they use or the beaches adjacent to the land they use. That was acceptable 50 years ago and maybe even 10 years ago; but surely the growing population of Rockingham and the broader region are entitled to use the Cape more freely than they can now. I believe a tourism project at Cape Peron as presented in any of the proposals will encourage more people to visit the Cape and will provide better access whilst allowing for better management. (4)	The support for improved and better managed public and tourism access to Cape Peron is noted.
Summary	I have read the SER and attended the Stake Holder meetings. I have listened to learned people tell me that sea grass can be rehabilitated and fauna and flora protected or re-established. I know that CALM does not have the resources to rehabilitate the terrestrial environment on Cape Peron. Given that responsibility, about all they will be able to do is put a fence around it. I read a report recently in our local news paper that said Kwinana has the highest rate of unemployment in WA and there are terrible social consequences because of that. If the Tourism Precinct Project is approved and does proceed, it will have an impact on the natural environment; but that is in a mess already. If it proceeds, the various mitigation proposals could actually lead to a healthier and better general environment on the Cape and in the waters around it. There is no doubt such a project will make a valuable contribution to the regional economy for the benefit of one of the fastest growing population centres in the State. Surely, when all the positive impacts are taken into consideration, it just makes sense to establish the tourism precinct at Cape Peron. I urge the EPA to recommend to Cabinet that they approve the next stage of the environmental review process with a view to supporting the construction of a Tourism Precinct and Marina at Cape Peron. (4)	The support for the project is noted.
Support in favour of this project.	I was delighted to see such a positive support for this project which was outlined in detail to about 120 persons at the Rockingham yacht club yesterday evening 15/3. (6)	The project team presented to the South Coast Chamber of Commerce on the 15 March at the Chamber's request.
Southern corridor growth.	The area surrounding Rockingham could see a growth of 50K-70K in the next 10 year. This area urgently requires a safe marina. (6)	Noted.
Design:	The in principal design and layout of this project has something for all; residential, marina, accommodation, training and retail, with additional spinoffs which will enhance beautifying the surrounding areas of Cape Peron. (6)	Noted.

Conclusion:	I totally support this development living in this district for 50 years often wondering as I would drive past the land in question what a unsightly state it was in. This may now be our chance to have a world class marina and tourist attraction something not only Rockingham needs but will be a benefit for the state. (We may rid the term DULLSVILLE) Rockingham will see the tourists when the rail system is completed, lets make their trip worthwhile. With the correct studies and procedures carried out nothing is impossible. I support this project. (6)	Support noted.
Support for the project	In order for Rockingham to be a vibrant and economical community in the future developments such as this project are the integral components. I believe that due diligence has been shown in addressing the environmental issues and providing solutions to degradation of seagrass and maintaining Lake Richmond. The employment that will be generated is vital to the economic future and social well being. I therefore support the concept plans and look forward to a marina that provides a healthy community long into the future. (7)	Support noted.
Support for the project	The proposal has my support. The educational opportunities for the students of Rockingham SHS and districts are unlimited. The location and facilities provided within the marina, would compliment and provide increased opportunities for teaching and learning within the community. Our schools Specialist Maritime Studies Program would be further enhanced by this type of facility providing students with access to the water and surrounds through an educational precinct within the marina. Swimming, diving, boating, research, Work experience, casual and full time employment and training as well as new partnerships are all aspect of the work that we do with students that would be greatly enhanced by this proposed facility. (8)	Support noted.
Support for the project subject to the protection of Lake Richmond	I fully support the proposal and the environmental trade-offs being suggested for the Point Peron location, however the it would seem clear that to safe guard Lake Richmond, engineering solutions need to be found in the successful option/model; with my preferred model being Option 2.4. The Marina at Rockingham is long overdue and will be an absolute "boon" for the local community in areas such as tourism, apprenticeships, local jobs and many other economic spin offs. I also fully support the educational facility as it is one of the highlights of the whole Marina concept and will ensure the future generations will safeguard the environment. (10)	Support noted. The potential impacts on Lake Richmond will be investigated in detail in a formal environmental assessment. No adverse impact on Lake Richmond will be acceptable. If required, engineering solutions (such as canal linings) may be considered to achieve that outcome.
Support for the project	I would like to conclude by reinforcing my personal support for the findings of the report which are thorough and balanced in their presentation. As such, and in spite of the worse case outcomes presented in many research scenarios, via the "precautionary principle" ask that I be recorded on the public record as giving my wholehearted support to the proposal for a Tourism Precinct at Mangles Bay. (11)	Noted.

Support for the project	I am a long term resident of Rockingham (35 years) and support the proposal to develop this project. After considering the options in the Strategic Environmental Review, I believe Option 2.4 to be the preferred option as it addresses all concerns about this project. It is important for the future development of Rockingham that this project is approved and proceeds as quickly as it can. Point Peron is extremely underdeveloped and an eye sore to this community. It should be opened up for the enjoyment of all. I believe this project, apart from providing safe mooring to sailors, will provide employment in an area of high youth unemployment. It will not only develop passive recreation facilities, the project will improve the amenity of the area, and improve the traffic flow that at present can be quite dangerous during peak periods of movement to and from Garden Island. The plan will improve the public enjoyment of Point Peron and put Rockingham on the tourist map once and for all. (12)	Support noted
Cape Peron needs improved management	At the moment the Cape Peron area is a mess, and for everyone's benefit needs to be upgraded, we snorkel and dive at the Cape, it is a magnificent area and proposal 2.4 would only add to it a ambience. With improved management, the Mangles Bay area will become a much needed and attractive part of Rockingham and attract visitors to the Cape, it can with proposal 2.4 become an attractive recreational part of the country, without causing ecological damage to the area. (15)	Noted.
Support for the project Current lack of access.	In my opinion the 2.4 is the most appropriate option and appears based on sound scientific research with an acceptable environmental off-set that will be of benefit to everyone. This project will be of a great benefit to the people in City of Rockingham and surrounding districts. It will be ideal safe mooring for local and visiting boating people. Something not available now. A majority of Point Peron is only available to a select few at present, and the only place of note is the sewage transfer system. (16)	Support noted.
Support for option 2.4	This is an important project for the City of Rockingham, which will improve the amenity of the Mangles Bay area and open up it up for the benefit of the whole community, not just boat users. After considering the proposal and all options I consider 2.4 to be based on sound scientific research and indicates that acceptable environmental off-sets will ensure an eco-friendly development. It is a responsibly planned tourism project, which will boost business opportunities, education of our young and most importantly employment prospects for everyone. (18,19, 20,21, 22,30, 32,33, 41-51, 102-111, 138, 141, 142, 154, 167, 173-175, 220)	Support noted
Support for the project	Having lived in Rockingham for 40 years I am fully in support of the Marina. (24)	Support noted.
Support for the project	I presume we are discussing the development at Mangles Bay. If this is the case I believe this will be a huge step forward for Rockingham. If this development is not allowed to proceed maybe some thought will be needed as to whether the desalination plant was allowed. (25)	Support noted

Project support	As residents of Rockingham we support the development of a Marina at Pt Peron. (28)	Support noted
Project support	We have lived in Rockingham for the past 13 years and would like to show our support for the proposed Marina at Point Peron. It would be fantastic to have a Marina, which would help bring our city into the 21st century. We have seen our close by town, Mandurah have continuous tourism growth, while Rockingham has just stayed the same as it was 20 yrs ago. We do not we own a boat personally, but a lot of boats are washed up every year in the winter storms, and something needs to be done about it. It would also be great if some sort of holiday accommodation is included in this project as the high rises on Rockingham foreshore, much to our disappointment, did not do include this. There is basically nowhere for tourists to stay nor many tourist attractions. Rockingham has not the greatest reputation around, while other neighbour coastal towns and cities are thriving. A project like this would bring more employment, tourism and general uplifting of Rockingham's general well being. (29)	Noted
Project support Traffic improvements	I think that having the marina would improve the area and be good for tourism. Also it would improve the traffic flow by having a direct route out to Garden Island as at the moment there is much congestion in many of the surrounding roads. Rockingham is a popular place for families and fishing boats and this would be another way of encouraging tourism in our area. (36)	Noted.
Limit residential area Project support	Residential sites to be kept to a minimum, single storey only along the Marina's channel. We consider a Marina to be essential for the development of Rockingham as an aquatic playground and the Mangles Bay site seems to be the most suitable. (37)	Noted.
Project support	As a homeowner and boatowner in the area I would be in full support of the project which will only enhance the lifesytle we lead in this area. Hillarys and Mandurah have both become huge tourist drawcards, we need that to happen in our area also (38)	Noted.
Project support	Economic progress of the area.[ie :in favour of] (39)	Noted.
Project support	I am in full support of the above project and would like to see more positive publicity to counteract the somewhat misleading negative press. (40)	Noted.
Project support from Rockingham Marina Action Group (RMAG)	I wish to respond to the Point Peron tourist Precinct Concept on behalf of the RMAG. RMAG is a group of local citizens from the Rockingham district who are committed to the provision of a world class eco-friendly marina at Mangles Bay. We represent a wide cross section of the community with respect to age, gender, vocations, politics and beliefs but are united in our vision that Rockingham has, for far too long, suffered environmentally, economically and socially because of our inability to capitalize on our most urgent infrastructure needs — a marina at Point Peron. (53)	Noted.
SER fair and balanced	The SER prepared by Stratagen for the Rockingham Tourist Precinct Steering Committee is, in our view, a fair and balanced account of the issues identified through the community consultation process and provides excellent feedback on these matters with respect to those areas requiring further investigation. (53)	Noted.

Appeal to approve further investigation	To conclude, I urge the Chairman to recommend that any issues of concern with relation to this proposal be identified and addressed by recommending that further scientific appraisals be conducted to arrive at a more comprehensive understanding of this habitat. In short, it would be of enormous advantage to all parties, either for or against, to gather further information (scientific data), and as such, be in a more informed position to make a final determination -as to the merits or otherwise of this project The people of Rockingham have attempted for over thirty years to get a marina, therefore it would be disappointing d political expediency or other factors shipwrecked the hopes and dreams of so many locals at this point in the proceedings. To recommend that this project proceed to the next stage whereby further studies can be conducted, imbues all those elements of the precautionary principle, and -as such ensures that there is -an ongoing balance -and sense of assuredness in the EPA itself to conduct evaluative processes in a democratic and open manner. I am happy to expand upon any of the content herein at your request. (53)	Noted.
Project Support (21 Submissions)	Wish to express support for the Rockingham Marina Proposal at Mangles Bay (54-64, 71,73-75, 101, 123,127,131, 150, 151)	Noted.
Project support	As concerned residents of Rockingham, we would like to say that we are fully in favour of the proposed Marina at Mangles Bay. The area desperately needs cleaning up to remove the accumulation of shacks and debris that has been allowed to gather for the past 100 years. We look forward to an area that we can show off to our friends, rellies and tourists with pride. (65)	Noted.
Project support	I am in favour of the construction of the marina at Mangles Bay. I recall the negative comments made about the Hillarys Marina and how it would be detrimental to that area....it has in fact enhanced the area and is enjoyed by boat owners as well as the general public. It would be a pity if our area missed the chance of such a facility because of the noisy objection by a minority of negative "knockers". (68)	Noted.
Project support	I am in favour of the building of a marina at Mangles Bay, it would enhance the area and would benefit the whole community both leisure wise and create employment in the area. (69)	Noted.
Project support	The potential environmental impacts associated with the Cape Peron Tourism Precinct Project are clearly assessed as low risk. A well planned world class marina at the proposed Point Peron site will enhance both the local environment, public recreation facilities, boat safety and improve public access. Modern marina management practices greatly reduce the risk of polution and poor water quality. Marina operating procedures can be auditied with resulting prosecutions for non compliance. The existing system of swing moorings and unmanaged boat storage must be replaced as soon as possible. (76)	Noted.
Project support	I feel the shire council proposals are terrific and beneficial to the majority of residents, the minority against I can understand but they are a minority, the shire is trying to take us ino the twenty first century, if the eco-system was going to be destroyed it would have happened by now with the improvements to the area and Garden Island which has increased boating and other activities. For goodness sake lets us move ahead now. (78)	Noted.
Project support	I would like to register my support for the proposed Marina development in Mangles Bay. (79)	Noted.

Project support If environmentally sustainable Need the facilities Economic and safety benefits	I support the proposal to develop Cape Peron as a tourist precinct with a marina. I live in Carlilse and keep a trailer sailor at the hard stand in Mangles Bay, that is operated by the Cruising Yacht Club of WA (inc) where I am a member. I agree with the Club stand which is to support a marina in principal, if it is environmentally sustainable. I have had the privalige of travelling throughout the world and consider it shamefull that the people of Rockingham do not have a world class marine facility. Especially when I consider how beautiful the area is. It is obvious to me that such a facility is desperately needed that will enhance not only the local economy but contribute to the management and saftey of boating in this area. (80)	Noted.
Project support Current state of the environment Need a safe anchorage	I believe the marina project should go ahead as planned. The area of scrub intended for this project is not "virgin" and does not encompass any unique habitat. As for being public open space; this is true; but the area is unaccessable due to the density of the scrub, and, in summer the risk of snake bite is high. The local area has need of a safe anchorage, which at present it does not have. For those who say it will become an area soley for the rich would have little to say if with some forward planning, public areas of open space were allowed for. I'm sure that public boat/ boat ramp access would be part of the project. I strongly suggest that this project must go ahead for the future good of this area. (81)	Public open space has been incorporated into the concept plans and the entire water's edge of the main marina body and canals, and all the northern beach will be open to the public. Additional boat ramps are included in the project.
Project support	A lot of our dive work in Mandurah compared to the current state of our sound lends itself (from an underwater impact view) that the marina will be a fantastic improvement to the area. (82)	Noted.
Project support Economic, employment and recreational benefits	The mangles bay marina can only be for the good of the local area and community, it would give local people another avenue to explore in their leisure time, raise property values and bring in extra revenue for local businesses also create more employment in our area. (83)	Noted.
Project support Rockingham needs a marina	We are in desperate need of a Marina in this City. (Note "City") What City does not have a Marina, I ask you? This is so long overdue we have been missing out on enormous benefits to our City in both tourism and business, not to mention the benefits to existing long-term rate payers. I am sure those in charge of the building and maintenance of a marina would ensure it is eco-friendly as that is what everyone wants isn't it? I Please be positive and give us our marina! (84)	Noted.
Project support	We believe the marina would be beneficial to the Rockingham area and improve public access to Richmond Lake , Cape Peron and improve tourism to the area with little impact on the environment Increase employment availabilities and be a long awaited project for Rockingham (85)	Noted.
Project support Current state of the environment Community benefit	I am for the go ahead of the proposed Rockingham marina, I believe the marina would be a positive for the community. At the moment all the area is used for is a dumping ground for burnt out stolen cars and for hoons doing burn outs. The existing yacht club is an eyesaw with boats on hardstands that haven't moved for years. With the go ahead of the marina it would provide a further uplift of Rockingham giving people more opportunities for employment and another place for the people of Rockingham to enjoy. (87)	Noted.
Project support Yacht access	Happy with concept providing that high-mast yacht access to the marina is available from both North & South of the Garden Island causeway for safety reasons. (89)	There will continue to be access through the northern causeway opening. It has not yet been determined whether there will be yacht access through the southern opening.

Project support Community benefits Protect the environment	We support this project and believe that it will greatly benefit Rockingham and surrounding areas. Obviously we would want assurance that the best environmental practices would be utilised to preserve the ecosystems and quality of the beaches and reserves in the area. (90)	Noted.
Project support Community benefits	We would strongly support this development at Mangles Bay. It is great for the boating fraternity, local residents and Business. It will bring Rockingham a great recreational facility for young and old to enjoy. Look what happen at Hillary's. After all the hype and protests by a few, what a wonderful facility and asset this is to Western Australia. (91)	Noted
Project support Need boating facilities	I believe that we the people of Rockingham need this marina to be built as soon as possible as i have been a boat owner in this area for over the past 15 years or so and have seen the amount of people using the water ways around Rockingham increase ten fold thus leading to no end of trouble around the small amount of areas to launch their boats in most cases driving on the beaches to get so clear space to launch their boats so in the process getting the car or 4 wheel drive bogged just trying to retrive their boat, also we have been promised this marina for years only to see it fall over (e.g.) Port Kennedy. (92)	Noted
Project support Community benefits	Rockingham is a beautiful coastal resort but sadly it is lacking in facilities for visitors and locals. A Marina at Mangles Bay would be a start in the right direction and no doubt would increase land and house values and together bring in lots more revenue for the Rockingham City Council, enabling it to carry out further developments. (94)	Noted.
Project support	The marina would be one of the best things to happen in Rockingham in years. I have lived here for 36 years and my family for 50. Which consist of 45 members that all support a marina. (96)	Noted.
Project support Boating and community benefits	I have no issues to raise other than to indicate my support for the proposal, which I feel is in the best interests of the long term development of the area and it's residents. From the perpective of the boating community (of which I do not belong) secure anchorage is long overdue, and from a community point of view, this area is a real asset and needs to be developed so that more of the community can enjoy it's unique characteristics (98)	Noted.
Project support	I strongly support the proposed development. (119)	Noted.
Marina support	This email is to convey my total support for this proposed marina complex. The environmental, educational, economic and cultural benefits that this project will bring to Rockingham will be enormous. (124)	Noted.
Marina support	I am very much in favour of the marina going ahead after examining the revised concept. (125)	Noted.
Support for Option 2.4	We support the establishment of a marina, option 2.4. However, we would like to see the remaining area to Boundary road beautified and replenished with Tuart trees and more wildlife friendly vegetation. Lease road should only be a bike track and the whole area protected from vandals and hoons that are presently spoiling the area for everyone. (126)	Noted. The rehabilitation of the remaining area will be carried out with the species that would naturally occur in that habitat. Lease Rd is proposed to be converted into a cycleway and rehabilitated. Increased lighting and management presence will be funded to discourage anti-social behaviour.
Support for Option 2.4	After and reading the above we write to advise that we agree with the basic concepts as outlined in development concept option 2.4 with the exception of two areas. These areas are traffic and Lake Richmond facilities. (128)	Noted. Refer to section 6.17 and 6.3 for responses to these issues.

Project support Employment benefits	Firstly let me say I have retired and wish to support the development whole heartedly. The area designated for the marina would be realistically reclaiming the beach area that has built up with shell and sand over many years. The employment that would be created after completion is badly needed by the younger, up and coming workforce and would have many spin offs for the Rockingham community. (132)	Noted.
Project support	I recently obtained a copy of the above project's Strategic Environmental Review (SER) on CD-rom and have read the review in its entirety. As a local resident and long-time visitor to the Rockingham/Safety Bay region for many years I believe this project is needed for the overall benefit of the community and its implementation is long overdue. The following comments are provided in support of the Option 2.4 development concept: (134)	Noted.
Community in support	3. I am firmly of the view that the silent majority of citizens are supportive of the project. (134)	Noted.
Support for Option 2.4	8. Having considered the entire proposal (the pros & cons) and all the various options, I believe 2.4 is based on sound decisions & scientific research. It indicates that acceptable environmental off-sets will ensure an eco-friendly development for the entire community, not just for boaties. I also consider it to be a responsibly-planned tourism project that will increase business opportunities, boost education of young people and offer a variety of employment prospects for everyone. Locals & visitors will also benefit from the new cafes/restaurants, fishermans wharf and holiday accommodation area to be included. (134)	Noted.
Mangles Bay suitable	2. The North side ie Mangles Bay lends itself to being a perfect tourist precinct for short stay, tourists and locals along the lines of Port Douglas. (136)	Noted.
Project support	As the owner of a Red Witch 21 ft Yacht moored in Mangles Bay i believe i have a valid say. I have lost my boat 2 times in storms and believe that boat owners in Rockingham need and deserve a safe haven for their boats. As i am the father of two children, i believe proposal 2.4 will add to their quality of life. The first class facilities, job opportunities, tourism etc that this proposal will bring to Rockingham will only enhance mine and my families, and every other resident of Rockinghams life. (152)	Noted.
Project support	I would like to indicate my support for the revised marina concept. I believe it will lift the profile of Rockingham and provide more opportunities for employment and recreation. (153)	Noted.
Project support Demand for boating facilities	It is important to the residents of Rockingham that the marina goes ahead and soon. I personally keep a boat in a marina at Mandurah as there are facilities to protect the people and environment like re fuelling and to me most importantly the facility to empty my waste - It concerns me as the where the boats currently kept at Mangles Bay empty their waste. We live in walking distance to where the Marina will be and own businesses in Rockingham but spend a lot of our personal money in Mandurah as that is where the marina is - this is not only money on the boat & restaurants but places that employ the young like Bunnings, Dewsons and the cinemas. Rockingham has long been know as The Aquatic Playground but with out a marina we are quickly becoming a back water ! (155)	Noted.

Support for Option 2.4	I am writing to lodge my families strong support for Option 2.4, of the Cape Peron Tourist Precinct Project. I have been a long term resident of the region and have been an active recreational boat user in the locality for many years. I believe that the area badly needs development, so that it can opened up for the benefit of the whole community, not just boat users. I have followed the alternative proposals and believe that option 2.4 is based on strong scientific research which will ensure that the development is eco friendly and environmentally sound. This project is not only badly needed by the entire Rockingham community, but I believe the entire community of Western Australia. it is responsibly planned, and will boost business and employment opportunities. Mangles Bay is the ideal location for safe moorings, the need for which is now bigger than ever. At present this whole area is an eyesore, and I don't think adds anything to the eco friendliness of the region. Point Peron should be promoted and developed for the wonder that it is, and could become a strong WA icon, if developed properly. Furthermore, I believe that the traffic improvement plan will overcome the clog which exists at peak times from Garden Island. In summary, I strongly support option 2.4 of the project, and encourage the EPA to finalise this decision making process quickly. (158)	Noted.
Project support Marine environment protection	I would like to strongly support the Mangles Bay Marina proposal. As an environmental scientist and regular participant in marine activities in and around Point Peron I believe the proposed marina represents a significant opportunity to protect the marine environment and for the future of the region. As a scuba diving instructor I have taught many people to dive in Mangles bay and around Point Peron over the past 20 years and can clearly confirm the ongoing level of damage to sea grass and the general marine environment continues as there are no physical facilities that can assist in the management and control of the many thousands of boats that regularly use the area. In addition to direct marine protection the proposed facility has the potential to significantly enhance education which if correctly pitched can result in much greater community awareness and therefore an intergenerational desire to protect an unparralleled asset for our community. Finally the enhanced level tourism this facility would produce would be of significant benefit to the local community and provide the ongoing funding for long term sustainable management of this environment. I am only too happy to discuss this matter in person should such a request be forthcoming. (161)	Noted.
Project support	1: I am in favour of the development proceeding to the next stage. (162)	Noted.
Project support	With regard to your advertisement, please add the following people who are pro marina. We have only live in this area for the past 3 yrs but feel that the Marina who bring this area back to life, we feel that the Rockingham area is currently the "place that time forgot" I think the locals are worried that if it goes ahead it will end up like the Gold Coast which is ridiculous. Bring on progress!! (165)	Noted.

Project support Support for option 2.3	Congratulations to the Committee and Strategen on the quality production of the Strategic Environmental Review. I prefer development option 2.3, as I believe as much as possible should be undertaken as part of the initial project to avoid duplications in the approval process in the future. This development is long overdue and as a long term resident (19 years), I believe this to be the opportunity to turn a "degraded dump" into a first class, international standard facility for both residents and visitors alike. The concept of a retired naval warship becoming a "floating museum" in conjunction with this development would be the "cream on the cake". (166)	Noted. This is not currently proposed.
Project would improve the area	I wish to state that having seen the Point Peron area generally degrade over the past 50 years, to the state it is now in (even with the so called environmental protection group now operating from the Naragebup centre). And having followed the evolution & comprise of the thorough precinct planning process, through to the current edition plan & conditions, I believe the Point Peron area would be vastly improved in all aspects by this development. I believe it is our best hope of at least regaining some of the original splender of the natural environment of the area. (182)	Noted.
Project support	I would just like to register my support for the proposed development in the Point Peron region. The area is an eyesore and is a know hot spot for crime in the Rockingham area due to its isolated and uninhabited nature. There is also a distinct lack in the facilities for boat owners in the Rockingham area. For persons who have boats above the legal trailerable size, it necessitates having to pen the boats either in Mandurah or Fremantle. A trip of over 30 minutes each way. The sooner this development is underway, the better it will be for the whole of the Rockingham community. Thank you. (186)	Noted.
Project support	Rockingham needs a marina and boat pens badly. It has a high percentage of boat owners, some of whom cannot even get insurance for moorings in Mangles Bay. I fail to see the argument regarding sea grasses when Garden Island has vast quantities of sea grass all along the beaches, and there is heaps of sea grass everywhere in Cockburn Sound. When we have the industrial strip of Kwinana constantly expanding and the desalination plant happening, the comparison of a marina causing pollution is ridiculous. Point Peron will not be spoiled as the far end will remain as is in its natural state. The eyesore of the caravans and shacks should be removed and a marina will provide more access to the public to enjoy the facilities Point Peron has to offer. (187)	Noted.

Project support	I have reviewed the Strategic Environmental Review (SER) in relation to the proposed Cape Peron Marina. I fully support the redevelopment of the Cape Peron area for the purposes of a marina and associated housing and recreational land. I grew up in Shoalwater. My parents bought land in Shoalwater in 1958, and my father has lived in the area since 1956. I bought a house in the area in 2005. All of my family have spent a lot of time walking and playing among the trails and tracks at Point Peron. We continue to go swimming and snorkeling around the reefs. As children, we would ride our bikes through the tracks at Lake Richmond, which until relatively recently, was a dumping ground for wrecked car bodies. I also own a boat that is in the hardstand at The Cruising Yacht Club (TCYC); I go sailing in a surfcat in Cockburn Sound and the Shoalwater Bay; and I live close to Lake Richmond. I was also a community representative on the Stakeholder Reference Group (SRG) for the Cape Peron Marina. (195)	Noted.
Community support	I believe the proposed marina development is a fantastic opportunity for the City of Rockingham. Many proposed developments have been put forward in Rockingham and then taken away as the local residents and businesses were not interested. I do not believe this is the case for this marina proposal. I believe, from my discussions with neighbours, those at the SRG and other people throughout the community in Rockingham, and in more distant suburbs, that the vast majority of people would like to see this currently neglected area redeveloped. (195)	Noted.
Environmental benefits	Also, on the topic of environmental concerns, I can see that the proposed redevelopment would provide funding to address these concerns. Doing nothing would lead to further neglect of the area and the environmental concerns for it. I look forward to experts in the field of environmental management reviewing the proposal in detail providing comment. I think the review of experts will be infinitely more helpful to the development process than the continued scare tactics being employed by local amateur environmental groups. (195)	Noted.
Summary.	I believe the proposed marina redevelopment of Point Peron and the associated wider precinct plan and rehabilitation of bushland and sea grass would open up the Point Peron area for the enjoyment of the people, being both local residents and visitors. It would bring life to parcel of land that has been abused and neglected for too many years. I hope that the proposed marina at Point Peron goes ahead and I wish its advocates well. (195)	Noted.
Project support	Rockingham needs marina desperately with the right care Lake Richmond would not be environmentally damaged. (198)	Noted.
Project support	I wish to support the proposed development on the basis of its social and economic benefits. I urge those making a final decision on this project to ensure environmental concerns are seriously addressed. (199)	Noted.
Project support	I am writing to express my support for the City of Rockingham, and their proposal to develop the Cape Peron Tourist Precinct Project, which in my view will be positive economic and recreational asset for Rockingham. (208)	Noted.

Project support	Thank you for the opportunity to comment on the environmental review. I am a long-term resident of Rockingham and a current boat owner who uses the waters of Cockburn Sound on a regular basis. I have read your environmental review with interest. I have long been a supporter of better facilities for boat owners in the area and have been keen to see a proposal for the development in the Rockingham area. I am particularly interested in the establishment of a marina and improvements to the Point Peron area for the general public. The area of Point Peron is seen by myself and the public as being much underused and significantly degraded with the establishment of fibro holiday shacks, the clearance of bush for a football oval (now unused), the military emplacements established during WWII and , the clearance of bush for an environmental centre. In addition it is known that the land now occupied by The Cruising Yacht Club for boat storage, and is now to be part of the new marina, will be cleaned up in the development process. Previously the site of the current boat yard was a Catholic convent but before that it was a plant for turtle farming and processing. Who knows what level and types of contaminants are in the soil as a result of this industry that will now be removed? Though there are some concerns about the development of the marina precinct among a few of Rockingham's residents I am pleased to note that the environmental review indicates that there are no areas of concern serious enough to prevent the project from proceeding given good planning and due care during the construction phase. I believe that the precinct will have economic and social benefits to Rockingham and improve the amenity of Point Peron both to local residents and to the increasing number tourists that visit the area as well as restoring Point Peron closer to its original state. (211)	Noted.
Project support	Having been boating and fishing in the Rockingham area since before WW2 I've seen Rockingham slip backwards as far as boating facilities and Jetties are concerned, what we have got now are a disgrace to any Council. The causeway is causing the shoreline to recede opposite Wanliss St. we no longer have a nice curved shoreline from Kwinana Jetty to Rockingham Jetty, ant it will get worse in years to come. We need another opening in the centre of the Causeway. I fully concur with your attempt to establish the marina and your plans so far, my major concern is. The Marina is of no use for boats of the medium size unless it has access to the open sea your plans show the small bridges is to be extended some 30 metres in length but my No 1 Priority is to also so raise the height of this bridge to at least 4 metres at the centre curve to allow the majority of boats to use this passage way to the open sea, instead of the long haul under the Bigger Bridge. I congratulate you on your project so far, and good luck for its implementation. (217)	Noted. Only yachts and very large power boats will not be able to access the ocean through the western marina entrance.
Project support	Regarding the Point Peron Precinct Project. We whole heartedly endorse the project. Should the only thing outstanding at Point Peron at present is the sewerage facility which process hugh amounts of processed and partly processed sewerage into the Rockingham environment. The option 2 is first preference, option 3 is next. We have been waiting for some sort of progress for 30 of the 35 years we have lived here. This overall project can only enhance our City of Rockingham. (223)	Noted.

Project support	I think that the P.P.P.P will bring • Economic benefit • Create jobs for young people in the high youth unemployment area • Clean/tidy up the presently much abused unpleasing area • Bring more tourism into the area • Provide better access and good walkways to the area • Have little impact on the opposing side of the peninsular • I do have concerns about the env impact on an enclosed area of Cockburn sound. (224)	Noted.
Project support	I see wonderful opportunities for attracting high value tourism and subsequently helping alleviate unemployment in the region. In light of recent news regarding the social disfunction, especially in Kwinana, that unemployment leads to surely that is a significant benefits. Tourists will demand services and accommodation that do not exist now, thus creating even more choices for unemployment and or talented people. the boating community in the region also deserves consideration they need facilities, they also need better management. The marina concert within the tourism precinct will help there to. This proposal has all of my support. (225)	Noted.
Project support	I'm writing to voice my support of the Point Peron/Mangles Bay project. I attended a meeting at Rockingham CCI meeting and was very happy with the information about this project. I think it will have a lot of Education, Employment and Social advantages and opportunities, a lot of consideration has gone into the environmental impact which I feel is very important. This will be great for families and for the youth of Rockingham. I hope this proposal goes ahead and I look forward to Rockingham being a destination and not a suburb the new train will pass through. (228)	Noted.
Project support Recreation, education and employment benefits Not at the expense of the environment	I would like to express my support for the Cape Peron project proposed for Rockingham. I attended an information night at the Chamber of Commerce and Industry meeting last week and was very impressed with this new and exciting addition to our town. I was equally excited by the low impact this will have on the environment, but moreover the wonderful Educational, Recreational and Employment opportunities this will provide for our community. When I have visited Point Peron I have been disgusted with the condition and it seems to be used as a dumping ground. This project will not only beautify this area, but will give our community a sense of pride and will be a very useful facility for families, boating and fishing enthusiasts, school children and the youth of our community. Currently Rockingham boating people are paying to keep their boats moored in Mandurah as we do not have marina facilities here in Rockingham. It makes sense to have our own marina and recreational area here where we can all enjoy it. Please consider the wonderful asset this will be to our City of Rockingham and to the people who choose to reside here. (229)	Noted.

Project support for option 2.4	I believe that this is an important project for the City of Rockingham. It will improve the amenity of the Mangles Bay area and open it up for the benefit of the whole community, not just boat users. I attended the meeting on March 15th and I consider 2.4 to be based on sound scientific research and indicates that acceptable environmental off-sets will ensure an eco-friendly development. I have traveled extensively overseas and have seen how the Rockingham area SHOULD be. As a Mandurah resident, I can attest to how a marina and the attendant facilities enhance the lifestyle for both residents and visitors. in 2003 I had visitors from Texas stay with me for June/July. I took pride in showing them around the Peel region and Rockingham and Perth environs. They were stunned that Rockingham, which they stated to have a waterfront precinct comparable with most along the Gulf Coast, did not have a marina or docking area other than the off shore moorings. Mandurah they held in high esteem for this very reason. This is a responsibly planned tourism project which will boost business opportunities, assist in education of our young and most importantly employment prospects for everyone. (230)	Noted.
Support for option 2.4	We would like to make the following points in respect of this matter: 1. The studies conducted by the various consultancies with respect to this proposal show that there is an acceptable off set between the environment and the economic and social progress that such a facility will provide. Model 2.4 being the most appropriate because of its lessened impact on the surrounding bushland and minimal risk to salt water intrusion of Lake Richmond. (233)	Noted.
Project support	6. After 30 year of successive unsuccessful efforts to acquire a marina as a safe haven for boaters, as a place where business opportunities can spring forth, as a catalyst for employment, as a place that all people can visit and be accommodated irrespective of wealth, as a place where the next generation can learn and be trained, as an icon for all of the marine related beauty of the area, it is disappointing that a small group of dissenters seek to hold this project to ransom because of there incapacity to find a middle ground with the majority of the Rockingham people. In summation, perhaps we could quote from Kahil Gibran: “Life goes not backwards, nor tarries with yesterday” Thank you for the opportunity to respond to the SER at this juncture in time. (233)	Noted.

6.14 ECONOMIC, SOCIAL AND RECREATION CONSIDERATIONS

Topic	Submission (verbatim)	Response
Education Centre Afloat	For more that ten years, Rockingham Senior High School has been seeking a vessel that can be used as a floating class room for their Marine Studies Programme. It appears one has been found and funding is being sought to prepare it for use. IF the school gets its boat, it will have nowhere to keep it. I have been told that some 3000 students have completed the RSHS programme since it was introduced but few of them work in the marine industry in our region, because there is not a base to work from! I believe that the proposed Marina will grant the children from our region an opportunity to study and work in our region.(I have no objection to our kids seeking work away from Rockingham and their families but I do not like it when they have no choice.) (4)	Noted.
Recreation:	This area once developed will increase recreation activities to Cape Peon and therefore deter the unsavoury element that frequent this area at present causing soil erosion, pollution and without toilet facilities deposits behind bushes and on the beach!!!! (6)	Noted.
Economic benefits	At present Rockingham misses out on a great deal of economic benefits because people drive and sail by our municipality. Much has been achieved in recent years to provide quality waterfront accommodation but this is not enough if it is not balanced with a world class marina facility (11)	Noted.
Education	There is a dire need to facilitate the education of local people in RST and other maritime related education; for instance, safe dive procedures for the West Coast Dive Park and in fish for the future in terms of recreational impacts on local fish stocks. The idea of an educational facility involving marine biology in this marina complex is an excellent concept as there are so few places where this might now occur along the metropolitan coastline. The local population needs such programs not to mention the state. There is a real skills shortage in the maritime related sector and such a facility as part of a joint Rockingham SHS's, TAFE and Murdoch partnership could be world class in nature. Eco-tourism could form an important element in this complex and should be encouraged to do so. (11)	Noted.
School camp	6) The other evening my partner and rode past the camp school with memories flooding back as school group gathered for dinner at the canteen. The place is an excellent school camp where they do not have to travel far to get to and importantly they can go on camp to a simple place of basic accommodation and not pass materialistic development such as a marina. (14)	The camp school is outside of the project area. Mangles Bay is already heavily utilised for boating activities and the marina aims to provide facilities for this use in addition to other social and commercial opportunities. The project also aims to provide educational opportunities in a marine research/training facility.
Cycle ways	8) Can we link the paths to the Rockingham foreshore whereby we have a bike/footpath that is of sufficient length and beauty to make a statement that we are serious about the environment and human well being. (14)	The project aims to have a cycleway/footpath that links Rockingham to the marina, to Point Peron and then via Lease Road to Shoalwater.
Employment	Increase employment opportunities for locals. (28)	Noted
Economic benefits	Benefit the local economy. (28)	Noted
Recreation benefits	These new proposals should allow anyone to use the area be it for swimming, boating, eating and socialising in this unique protected north facing shoreline. (79)	Noted.

Topic	Submission (verbatim)	Response
Decrease anti-social behaviour	The Point Peron lookouts and areas could remain, with a Marina close by and more people around I would hope that the constant drag races, burnouts, smashed glass, rubbish and car break ins would cease in this area. (82)	Noted.
Tourism and employment benefits	I come from a place in Europe where there are 46 full scale marinas along the Dalmatian coast, some with as many as 1200 slips. Rockingham needs the marina to lift its reputation and to put it on the international map to attract tourism which in turn will provide many more jobs. (125)	Noted.
1.3.1 Social and economic benefits of the project	• Contrary to claims by proponents, the project will NOT appreciably • Improve public access to Shoalwater Bay and Mangles Bay. • Improve local traffic management • Improve provision of low cost family holiday accommodation (Luxury housing is proposed) (129)	Along Point Peron Rd, much of the land to the north is fenced off and is not open to the general public. The project provides for full public access to the Mangles Bay foreshore. The improvements to traffic management will be where the navy traffic currently backs up in the mornings. It will be a priority in the design of the new causeway entrance and changes to Memorial Drive to make sure that traffic flow is improved and interferes less with local traffic.
Improved facilities for all	1. I strongly believe that this important project for the City of Rockingham will improve the facilities and amenities of the Cape Peron/Mangle Bay area and open it up for the use & benefit of the entire community, not just for boat owners/users. (134)	Noted.
Improved visual amenity	6. The existing caravan park, Cruising Yacht Club annexe & Mangles Bay Fishing Club are certainly in need of upgrading and "beautification". They currently do not present well from Pt Peron Road…they look run down & untidy; quite frankly an eyesore that can be greatly rectified & improved with the proposed tourist precinct project. (134)	Noted.
Recreational asset while protecting the environment	10. With improved management the Mangles Bay/Cape Peron area will become a source of pride to the people of Rockingham & attract visitors & income to the district. At present much of Cape Peron is an undeveloped, under-utilised & untidy mess. It should be open for all to enjoy, not just those few lucky enough to have access to the closed camps. With sympathetic development through the Option 2.4 it can be an attractive & useful recreational asset for many people, for present & future generations, while at the same time helping to protect our marine environment. (134)	Noted.
Boost for Rockingham	5. Socially I believe Rockingham badly needs an upmarket development to improve its image and while all these sort of changes bring opposition, they are the same people who frequent, all the new facilities they previously opposed. Rockingham has made a start and embraced change on the foreshore and in order to maintain and keep improving and not be left behind this Cape Peron Tourist facility should go ahead. (136)	Noted.
Not economically viable?	I also find comparisons between the marina at Mandurah and this proposal somewhat flawed due to Mandurah's special place in the metropolitan area and the support it gets and has had from government and the public of Perth. Without a Cape Peron specific economic impact study this marina might not even be feasible never mind viable. (139)	Professional property advice is clear the project will be feasible and viable.
Section 1.3.1 Economic benefits	Option 2.3 would seem to generate the largest flow-on economic benefit and I would encourage the EPA to support this option based on: - increased distance to Lake Richmond. - TEC retained, additional area for residential development will provide additional funding from sale of land (162)	Noted.

Topic	Submission (verbatim)	Response
Recreational benefits	Relating to the topic of the marina development is the plan for the wider precinct. I think that the plan for the wider precinct is fantastic. Closing off Lease Road to be a bicycles path with access paths to the Shoalwater bay beaches is an excellent proposal. Restoring the land currently occupied by the leaseholders to bushland with walk trails is also a great idea and would return this land to the public and to the native flora and fauna. The proposed marina would also bring some order to a massive boating population that will only get bigger. The associated cafes, restaurants and accommodation would also be a great attraction, particularly in light of the new liquor licensing laws that will soon come into force in WA. (195)	Noted. The Southern leaseholders are outside the project area.
Support for low-cost accommodation	The proposed low-cost accommodation would enable many people that have in recent times been priced out of a holiday in Rockingham or Shoalwater, to be able to stay in the area for short breaks. Currently, only those permitted by the leaseholders in the Point Peron area can enjoy such holidays. Low cost accommodation would enable more backpackers and family-touring groups to stay in this area. Currently, such tourists can only day trips from Fremantle, as the current caravan and camping arrangements in Rockingham are sub-standard. (195)	Noted.
Social benefits	I would welcome this development because I am a frequent user of this area as I run along the bitumen roads on a weekly basis. During these runs I despair at the poor and unsightly mess I am surrounded by. This area is currently not people friendly. There is no where for me to walk/run or cycle safely. I would not consider taking my daughters on a bike ride for fear of being run over by speeding cars The road is narrow, there are no footpaths, and it in parts it is quite isolated. I would not run, walk or cycle anywhere along this area by myself. It is definitely not safe regardless of the time of day! (199)	Noted
Economic benefits	I have observed the development at Mandurah Marina and Hillary boats harbour and it would appear that such developments if well considered promote economic growth in the tourist industry. This creates employment opportunities for a large number of people. (199)	Noted
Economic benefits	The project will increase the number of visitors, providing additional commercial opportunities and making investment in local businesses more attractive. The development will be a unique attraction that will complement existing and future commercial developments. The project also takes advantage of the potential of the City of Rockingham as a centre for maritime activities. In addition, the project provides the necessary commercial viability to enable connection of the Rockingham Transit System to Cape Peron, enhancing the availability and appeal of public transport and also provide a more protected environment for boating and marine activities, allowing new businesses to emerge, and existing businesses to grow. The development of this precinct has the potential to stimulate the growth of cafes, shops and tourism-related business resulting in sustainable employment within the local area, helping to fund long term infrastructure requirements and I believe that the project has undoubted economic and social benefits. I am happy to commit my support to the City of Rockingham in the development of this project. (208)	Noted.

Topic	Submission (verbatim)	Response
Social benefits proposed	The proposal to establish a Marine Science Training facility on a man made drain would also seem to me to be rather fanciful, when there is all that ocean out there. I am sure it would be more practical to be situated on it — like the Waterman Marine Research Laboratory. The suggestion that there was a 'possible reduction of sewerage/pump station operations' is also fanciful. With the current population explosion in the district, current sewer mains are not coping and a new temporary main is planned. Reduction?— where will it all go. (215)	The incorporation of an education facility was suggested in the consultation process. The education facility will have direct access to the marine environment via the marina. The SER does not state that there is a possible reduction in sewerage/pump station operations.
Population growth	2. The population growth of this region is now so great that a marina is an essential piece of community infrastructure which will ensure that those locals who seek to interact on and in the sea can achieve this in a much safer and manageable manner. (233)	Noted
Economic benefits	4. The trickle down effect of marina in the local economy will be immense as estimated in the earlier section on economic impact (approx $515 mil with Option 2.4). Everybody in Rockingham will benefit from this facility as it will not merely create some 600 plus full time jobs but enable opportunities for ongoing training (apprenticeships and traineeships) in the hospitality and marine related industries. Business growth arising from this infrastructure will be substantial and ironically, even the Environment Centre, which has steadfastly opposed this development proposal, will be in a position to repay the Rockingham ratepayer some $270,000 of debt it owes local council. (233)	Noted.
Eco-tourism opportunities	5. The reputation of Rockingham will at last improve and it will have an international standing as a place to experience the environment; eg. Dolphin tours, etc. there is little doubt that there is still much to be done in relation to the eco-tourism potential of this region and especially in regard to the relatively pristine and safe waters which lay along its coast. (233)	Noted.

6.15 BOATING DEMAND

Topic	Submission (verbatim)	Response
Boating Requirements	In about 1997/98, the Court Government instigated a study of the needs of the boating public in Rockingham. I was told then that on a per capita basis, Rockingham residents owned more boats than any other community in Australia, yet access to the water by way of boat ramps and marinas limited people to owning vessels of about four to six metres. Despite that, a casual observer will notice that people are installing more moorings in Mangles Bay and near Rockingham Beach where they are keeping larger and more valuable vessels on the water. Aside from the risks associated with leaving private property so exposed to the elements, thieves and vandals, those owners have nowhere to refuel or deal with sullage. Their use of the water way is basically unmanaged. I believe that the tourism project and associated Marina will lead to better control of the water way in the southern portion of Cockburn Sound and better management of some of the hazards associated with boating such as fuel spills and waste management, let alone safety. (4)	Noted.
Positive Financial Impact	The SER does not say much about this. Whilst I am not an expert, I know from experience that tourism projects and marinas turn places into destinations. The economy of Rockingham still relies on heavy industry and to a reasonable extent, the Royal Australian Navy to support it. Along with my colleagues on the Chamber of Commerce and Economic Development Committees, I have advocated the need to diversify our economy to protect the community against downturns in industrial activity or even changes in Defence priorities. Development of our tourism based business opportunities will help achieve that goal. The region needs to develop its tourism base. Rockingham Dolphin Tours for example, a winner of many National and State awards for excellence in Environmental Tourism, keep their boats on moorings near Val Street, Rockingham. They embark their guests from a ramshackle jetty; cannot offer them showers or the use of toilets when they return to the beach; must drive their vessels up the coast to refuel and get them serviced in Fremantle. They cannot encourage their guests to stay over in Rockingham to enjoy the other attraction the region has to offer such as wine tours, visits to sights within the Regional Park or games of golf BECAUSE there are no facilities. If the tourism precinct does proceed, it will lead to the establishment of a whole range of new businesses and employment opportunities that will enrich the people who do, or want to live here. (4)	Noted. The SER is not intended to present a detailed economic analysis.
Demand for boating facilities	Recreational boating is a major force driving people to live in this region where there is affordable housing close to the ocean. It is at present in a shambles because of the inadequate infrastructure available to hand the sheer volume of boaters. A marina will enable far better management of the current situation and relieve some of the pressures from boat ramps in the region. The notion of 77,451 boats in Cockburn Sound and 99,421 vessels being launched in Warnbro Sound without adequate facilities, such as marina provides, in the near future is alarming. (S.6.2., p.98). (11)	Noted.

Topic	Submission (verbatim)	Response
Current lack of boating facilities	We have recently started a business in the area, Rockingham Cruises, and I amongst others are frustrated by the lack of fueling and jetty facilities, this project would enhance the area, have minimal effect on the Sea Grass, and no effect upon Lake Richmond, it would also make it far safer for our passengers to embark and disembark the vessel. The people of Rockingham and surrounding districts need, and indeed, deserve a safe haven for their boats, the moorings at Mangles Bay in the winter months can be unsafe and dangerous. (15)	Support noted.
Safe mooring (37 submissions)	This is an ideal location for safe mooring, a problem that has seen a significant drop in the number of boats visiting this area in the past 20 years with a consequent affect to the tourist dollar. (18,19, 20,21, 22,30, 32,33, 41-51, 102-111, 138, 141, 142, 154, 167, 173-175, 220)	Noted
Boating facilities	Improved and safer facilities for boat owners. (28)	Noted
Demand for boating facilities	Finally, with Mandurah and Hillarys almost built out, the Rockingham area is the next logical place for development. The promotion of eco friendly tourism by way of a marina will protect the area for years to come. (132)	Noted.
Safe boating	9. From a boating perspective this is an ideal location for safe mooring, boat launching & retrieval. The safe mooring aspect has been a problem for yachts & other bigger vessels over many years with storms taking their toll on numerous craft. The increasing traffic of bigger vessels sailing between Mandurah and Fremantle/Rottnest also requires an additional marina location (such as Cape Peron) for repairs, refuelling, taking on supplies and passengers/crew. (134)	Noted.
Protection for boats	3. Having lived at Palm Beach for the last 8 years and seen the damage to boating during winter storms a Marina is the only way to provide year round protection. (136)	Noted.
Boat ramp demand	According to a 1996 study by the Department of Infrastructure there is going to be a huge increase in the use of every boat ramp in Rockingham, nearly 200% in most cases and every location proposed for a marina could be justified because of this alone. This use is not unique to the Cape Peron or Palm Beach boat ramps. The design considerations listed in the SER could also apply to every marina location although the links to locations would be slightly different. (139)	Noted.
Boating demand	Statements are made against the numbered paragraph in the SER 1.3 The perceived need for this project does not represent the broad community support, as defined by statistics compiled after the public forum meeting. Statistics suggesting a need for marina berths based on speculation prior to 1998 are not necessarily valid with marina pens becoming available in Coogee and Mandurah, and this statistic is out of date. Cockburn Sound attracts more boats using boat ramps for launching, and they far outnumber boats needing permanent deep water mooring. (159)	There is currently no statistically valid survey on the level of community support for the project. The community's understanding of the project is also likely to have changed in the last year of consultation and media attention so that all previous surveys would be out of date. It is apparent from submissions and letters that there is both strong support and strong opposition to the project. Statistics provided by the Department of Planning and Infrastructure indicate large boat ownership in the region. While most boats owned are traiierable there are easily sufficient large boats to fill this marina.
Boating demand	(18) The reason of safe anchorage and launching facilities being required is flawed. There are many large boats which have been moored off the beach securely which have not blown ashore. There are better and less damaging solutions than this proposal which have not been considered. (179)	A safe anchorage is only one of the project objectives.

Topic	Submission (verbatim)	Response
Lack of boating facilities	I have also observed when using the launching facilities at Mangles Bay that there are queues, lack of services such as taps etc. and the area is crowded with moorings making it unsafe when launching boats, boarding etc. (199)	Noted
Page (ix) Boating Requirements	No doubt your organisation could officially canvass the 261 owners of boats on swing moorings to establish how many would change to a berth in a marina. If letters to the editor of local newspaper over the years are to be a guide, I don't recall any that indicated a preference to switch. Clearly the cost o several thousand dollars per year per pen is a major cause of the antipathy towards a marina. It is true some boats break their moorings in storms, particularly as happened last year when N/W winds were at their severest and at the time of high tide. Only five or six boats came ashore but isn't that more to do with inadequate moorings? In respect to moorings I wonder why each of the 261 boats aren't required to have an approved sea grass environmentally friendly rated mooring now. Somewhere in this report, which I can't find now, indicated that boats would still be catered for on swing moorings after the marina was built. Also the developers were prepared before the end of 2006 to undertake some installation work of approved moorings. Extraordinary - perhaps its not there so I must have dreamt it!. If " the project's primary aim is to meet the high demand for boating facilities in the Rockingham area" then verifiable evidence of such demand should be produced particularly if it relates to boats of a size necessitating pen security. I am certainly aware of the strong complaints made to the Rockingham Council over the years for additional boat ramps. But those are obviously to cater for the owners of trailerable boats which clearly increasing in numbers. I expect your orgainisation has the facility to check new boat numbers registered with Planning and Infrastructure. Also it would be an interesting exercise to ascertain the date of first registration of larger boats and compare them with the completion dates of the Hillary's and Mandurah boat pens. in my view we, Government, shouldn't be spending taxpayers' money to encourage big boat ownership by helping to build a marina to house them. It's a marvellous opportunity in the case of Rockingham, for those with the wherewithal to do so, to put their name down to buy a residence or site to build one at the same time as they order a large cruiser to be housed on their doorstep. (205)	There is currently no local alternative to those boat owners that moor their boats in Mangles Bay. The project offers an alternative that is likely to be higher cost and offer safety, insurance and access benefits. Regulation of moorings is the responsibility of DPI. The project however does plan to subsidise the cost of installing seagrass friendly moorings.

Topic	Submission (verbatim)	Response
Page (v) Marina capacity	As far as boat numbers to be housed in the marina are concerned I earlier confessed to contradicting Mayor Sammels as to numbers to be catered for. However, I am still confused. In studying the plan(s) I note that item No. 7 is for Commercial marina of 250-300 boats adjacent to the small boat access. At item 1 in very small print under Aquatic Clubsis what appears to be the figure 200 pens with item 11 near by for large boat access. A sea rescue boat which could be very large gets a mention. Regardless of which is which if the 500 boat peens includes provision for say 200 boats operating commercially, we should all be very interested in how these figures are arrived at. Ones that come to mind in this category are crayfishing boats, dive boats and any (one at the moment) catering for tours of the Sound. Incidentally you will note that the “Point Peron is an eyesore” contributor the South Coast Regional Chamber of Commerce has upped the ante on boats to be marined to 600??. (205)	The area referred to as ‘7-commercial marina’ on page v refers to the marina area that is commercially open to the general public to lease individual pens for their boats. This does not refer to commercially operating boats such as crayfish boats. The marina only plans to cater for existing commercial boats using Cockburn Sound now. (e.g. Dolphin cruises, dive charter, general cruises, mussel farm, fin fish licensees)
Safe boating	This is an ideal location for safe mooring, a problem that has seen a significant drop in the number of boats visiting this area in the past 20 years with a consequent affect to the tourist dollar. I am aware of a number of Rockingham residents who have to use Mandurah facilities because of the lack of the same in Rockingham. (230)	Noted.

6.16 CURRENT STATE OF THE ENVIRONMENT

Topic	Submission (verbatim)	Response
Mangles Bay area currently an eyesore (38 submissions)	With improved management, the Mangles Bay area will become a source of pride to the people of Rockingham and attract visitors to the district, instead of the eyesore it is at present. Point Peron as a whole is undeveloped and under-utilised and should be open to all to enjoy. It can be an attractive recreational asset, which will protect our marine environment. (18,19, 20,21, 22,30, 32,33, 41-51, 102-111, 138, 141, 142, 154, 167, 173-175, 220)	Noted.
Area currently degraded	The area being considered is extremely degraded and an eyesore to the community. (24)	Noted
Current state of environment	The Point Peron area is currently made up from poorly resourced public beach access, underutilised poorly maintained and unsightly holiday camps and other private clubs and associations. There are large areas of conservation park that must be kept for public use and managed for it's conservation value. (76)	Noted.
Current state of environment Current lack of public access	The area is very run down and at present large areas of coastline are only accessable to particular organisations and not the general public. There is a collection of old beach shack accommodation for use by a select few whose only claim to the area is their long association with the lease holder. (79)	Noted.
Good information Current state of the environment	I feel that the information is good. This area is currently a tip and if we can develop it people of Rockingham will take better care of the area. Much of the original vegetation has long since disappeared and foxes have cleaned out most of the native fauna. (95)	Noted.
Current state of the environment	Cape Peron is already developed (with shacks and boat yards) but the present situtation is sub-standard from an environmental aspect. It is mostly an eyesore and an embarrassment to the community. The proposed development will tidy up the worst of the "refugee camp" and "boat breaking yard" appearance. (119)	Noted.
Current state of environment and facilities	5. As a regular & frequent visitor to Cape Peron (often 2-3 times weekly), I regard large sections of the adjacent bushland & some of the existing infrastructure along Pt Peron Road as an eyesore. Most of the bush is impenetrable & unattractive. Such dense, prickly & impassable vegetation is inaccessible & simply not conducive to walking or biking. It needs to be appropriately cleared & opened up so more people can enjoy the many marine and scenic wonders of Cape Peron. Current paths/trails at the western end are great; there just isn't enough public access throughout the entire area. Existing infrastructure such as toilets, boat ramps/jetties, parking & foreshore access is poor. (134)	Noted.
Current state of the environment	We would like to make the following comments in support of this project, having followed the studies, and comments from the outset. 1. The area is NOT pristine in any stretch of the imagination and will continue to be a target for rubbish dumpers, thieves and vandals until it is developed in some form, in a way everyone will benefit. (136)	Noted.

Topic	Submission (verbatim)	Response
Current state of the environment	At the present, the Mangles Bay area is a mess. There is restricted access to a lot of the area due to shanty style accommodation that is unavailable to most locals. The bush area is littered with broken down cars, rubbish, tyres and other junk and is in desperate need of attention. Proposal 2.4 is well away from the natural beauty of the Point Peron area and much further from Lake Richmond than a current housing estate. Proposal 2.4 is in an ideal location that will only enhance the area and add value to Rockingam in the form of life style, quality of life, convenience, safety, amenities etc... (152)	Noted.
Current state of the environment	I have walked through much of the area that is proposed to be developed to satisfy myself as to what I would be talking about in the SRG. I knew from past experience what the land was like, but needed to check if things had changed. They have not. There are still the footprints of use on the bushland from previous tenants. The old BMX track with old car tyres is still there. The drainage ditch is still there. The rubbish is still littered around the place. The area is a massive disappointment and remains a mess. I think the Point John area of Point Peron is great. I like taking my dogs for walks there. But the area surrounding it – the area the subject of the proposed marina – is an utter mess and embarrassment to the City. I believe it should be redeveloped for the betterment of the City of Rockingham and its residents. (195)	Noted.
Current state of the environment	The current yards filled with boats, yachts, dinghy's resembles a junk yard. Adding to this junk yard image is the piercing whistling sounds created by the ropes, plastic etc tied to the boats. The green areas to the left of the boat yards as one is heading towards Point Peron are impenetrable. (199)	Noted
Visual amenity	I think the South Coast Regional Chamber of Commerce is drawing a long bow when they label Point Peron an "eyesore" (see attached copy of their letter to the "Sound Telegraph of a few days ago). It seems to me that sample letter is their constituents to write to you to express their pride that Cape Peron will not be an eyesore when an extension of suburbia takes place. No doubt several new members to their union would be forthcoming from operators of business there (my words of course). (205)	Noted.
Current state of the environment	With improved management, the Mangles Bay area will become a source of pride to the people of Rockingham and attract visitors to the district, instead of the eyesore it is at present. Point Peron as a whole is underdeveloped and under-utilised and should be open to all to enjoy. It can be an attractive recreational asset, which will protect our marine environment. (230)	Noted.

6.17 TRAFFIC

Topic	Submission (verbatim)	Response
Traffic improvement (38 submissions)	The traffic improvement plan will address a dangerous situation, which exists at present during peak periods to and from Garden Island. Vehicles can be backed up along Hymus Street for long periods as traffic clears into Safety Bat Road and Parkin Street. (18,19, 20,21, 22,30, 32,33, 41-51, 102-111, 138, 141, 142, 154, 167, 173-175, 220)	Noted.
Lake St traffic	1. Traffic, Lake St. With the relocation of the junction of Memorial Drive and Safety Bay Rd to just south of were Lake St joins Safety Bay Rd as well as Memorial Drive becoming the major and only road to carry all the traffic on and off the tourist precinct and the Navalbase, Lake St is in extreme danger of becoming a major feeder for traffic to and from the whole project. Already Lake St has had a substance increase in traffic coming and going to the Naval base in the mornings and evenings from the new housing developments on the eastern end of Lake Richmond and, we believe cars short cutting from the main shopping centre down Swinstone St, Townsend Rd and Fisher St [south] to Lake St. With the relocation and up grading of Memorial Drive it is obvious that this traffic will only increase, as will traffic that is sure to filter and short cut from the major road Parkin St via Fisher St [north] and Bell St onto Lake St. Not only will the number of cars increase but also will > [a] Traffic noise for not only the residence human population, but the residence birds etc of Lake Richmond. Most of the local and migrant birds you will note feed and spend the majority of their time away from Safety bay Rd a major traffic route. [b] The risk of many more long necked Touortise will be run over as they cross the road to nest in the gardens on the northern side of Lake St. [c] The danger to children and people using your proposed walk and cycle way to be added to Lake St [figure 8]. Please study the affects carefully for us as we believe a simple Cul-du-sac at the western end of Lake St were it joins Safety Bay Rd would only inconvenience the local residences very marginally, but increase the safety and access to Lake Richmond for the locals and visitors [human and others] alike. (128)	The initial traffic study undertaken for the SER concluded that although traffic flows would increase on the major roads in the area, the flows would still be within the current capacity of the roads. Once the final design of the project is complete, a more detailed traffic study can be undertaken including recommendations for the management of increased flows. The increased traffic flows are likely to occur mainly on the major roads, which already cater for heavy traffic. However, all traffic management methods (such as a cul-de-sac) will be investigated to ensure that the increased traffic in the area is managed appropriately. The traffic study predicted Lake Street will get only an extra 4 cars using it each day.
Traffic improvements	11. Finally, the traffic improvement plan will address a dangerous situation which currently exists (and is worsening) during peak periods to and from the Naval Base at Garden Island. Vehicles can be backed up along Pt Peron Road & Hymus Street for long periods as traffic clears into Safety Bay Road and Parkin Street. This encourages motorists at the adjacent intersections to take potentially dangerous risks in trying to cut across the path of oncoming vehicles in endeavouring to make turns. As a resident of a nearby street I would certainly welcome this traffic management improvement. (134)	Noted.

Topic	Submission (verbatim)	Response
Increased traffic	The proposed tourist complex will generate additional road and sea traffic which will lead to requests for the Garden Island Freeway along the shore of Lake Richmond. The increased boat traffic will lead to more sea grass damage and the canals will need to be sprayed regularly to control Ross River virus. The net effect will be a devastation of the local marine and natural environment. (135)	The Garden Island highway next to Lake Richmond is not a part of this project. Traffic modelling indicates that the traffic generated by the project is within the capacity of the current major roads. There will be some modifications to ensure pedestrian safety and to ensure the traffic connections with the project are appropriate. The boat use in Cockburn Sound is already extensive and growing. The marina will not substantially increase the numbers of boats visiting the area but it will allow better regulation of the boating activity in the area. Saltwater mosquitoes require intertidal habitats (usually salt marsh) to breed; adults lay eggs on exposed habitat, and then the larvae hatch and grow when high tides leave pools of water behind. The canals will have no salt marsh, or areas where high tides can leave stagnant water behind, and so there is unlikely to be any breeding of mosquitoes in the area.
Traffic	9. the increased traffic (cars and boats) will cause negative impacts to the sense of place of the whole area, and to the environment. (188)	Noted.
Memorial Drive	Option 2.4 is not satisfactory, however, in respect of the result of moving the causeway to the West, in that the heavily trafficked road to Garden Island now comes very close to Shoalwater Bay at its closest point. The road over the existing causeway where it comes ashore further to the East is much less intrusive in this respect. This problem remains unresolved. Also, despite the issue being raised several times in the planning process, the upgraded, widened, dual carriage way which is to be Memorial Drive (as shown in Options 1.1, 2, 2.2, 2.3 and 2.4) is too close to the shore line of Shoalwater Bay. The distance between the existing Memorial Drive and the shore line of Shoalwater Bay is minimal now, when existing traffic is at a relatively low level. It will be totally inadequate in the future if Memorial Drive is redeveloped closer to Shoalwater Bay than it is at present, as is proposed in all of the Options. The land between Memorial Drive and Shoalwater Bay is planned for future public recreation and conservation and needs to be kept as wide as possible for this to be done properly. The proposals at present are to redevelop Memorial Drive into a dual carriage way with the second alignment being closer to Shoalwater Bay than the existing road and requiring the demolition of some of the existing cottages on current leases. It would also separate the recently constructed RSL Club by a dual carriage way from the rest of the RSL lease. It would be much better to build the new heavily trafficked roadway as a two-way road on the North-eastern side of the RSL Club (about 50 metres from the existing Memorial Drive). The existing Memorial Drive could then be left as a low traffic service road to the existing leases and to the future public recreation and conservation areas. This would leave a wider strip of land for future public purposes between the access road to Garden Island and the Shoalwater Bay shoreline, a welcome enhancement to current planning. This would also have the effect of reducing the footprint of the marina development which as presently proposed is too big! (200)	In the planning process, the benefits of the dual entrance marina for water quality and public access were recognised. An earlier dual entrance marina concept plan (Option 2.0) drawn up did not move Memorial Drive at all. This option required the direct loss of around 10 ha of seagrass. To reduce the seagrass loss, option 2.2 was developed to minimise the beach reclamation required and reduce seagrass loss. This involved shifting Memorial Drive slightly south.

Topic	Submission (verbatim)	Response
Page (xvi) Road Traffic	I presume the "re-alignment for the causeway to improve traffic management to H.M.A.S Stirling" is a matter for the Dept. of Navy to address. I find it difficult to establish from the small scale coloured option 2.4 how road access to the marina is to be achieved easily. However, the Strategen's re-assuring words in this section of the report don't re-assure me that real problems will not a rise in traffic management if this project goes ahead. Comments such as traffic flows within capacity of current roads (will) not pose additional significant traffic hazard, mechanisms to reduce loss of amenity to affected residents considered may include instalments of medians where pedestrians cross roads, traffic increase on minor residential not expected to be noticeable couldn't possibly be more vague on such a major social and environment issue. I find it an extraordinary circumstance that the proponents of the Cape Peron Tourist Precinct Project can dismiss so lightly what is clearly going to produce major problems not only in traffic handling but to residents along the routes to the Cape. It is idle to suggest that memorial Drive can cater for not only the naval personnel and those wishing to go further to the cape plus the "tourists" attracted to the development. My guess is like Mandurah rate payers Rockingham's will likewise be confronted, in the future, with increased taxes to pay for roadworks etc., because of traffic problems associated with a marina development. (205)	The project has not reached the detailed design stage, so detailed descriptions of traffic intersections are not available at this stage for inclusion in the SER. However, the Traffic and Transport Report commissioned as part of the project investigations, indicated that traffic could be managed acceptably in the area, and was not considered a potential fatal flaw.
Traffic	The Roads – The loss of Pt Peron Road will divert all traffic onto Memorial Drive making it a main throughfare for all traffic to the island. Plaques and trees honouring our fallen serviceman will be disturbed. (214)	The plaques will be retained and relocated in consultation with the RSL
Traffic improvement	The traffic improvement plan will address a dangerous situation, which exists at present during peak periods to and from Garden Island. Vehicles can be backed up along Hymus Street for long periods as traffic clears into Safety Bay Road and Parkin Street. (230)	Noted.
Traffic	Another consideration is the enormous traffic congestion that a project of this magnitude-5 storey hotel, 600 berth marina plus proposed private residential & commercial areas, in such an environmentally sensitive area. (232)	Initial traffic studies for the SER indicate that the increased traffic from the project will be within the capacity of the existing major roads.

6.18 OTHER COMMENTS

Topic	Submission (verbatim)	Response
Leaseholders	As part of the marina proposal I would strongly recommend all land currently leased for holiday and other private use be reviewed in accordance with the strategic direction for the restoration of Point Peron. Current lease holders must be prepared to upgrade facilities to meet current environmental and public standards for eco tourism. The leases are located in an important conservation area and must be revoked if organisations are not able to comply with the future direction of the Point Peron strategic plan. The seudo environmental centre should also be considered for relocation as it is inappropriately located in an area of high conservation. It has sub standard buildings and facilities, significant gardens of introduced species, limited educational value and is not required to comply with any authorised environmental authority or recognised educational instution. This privately run group distribute much of the public environmental 'misinformation' based on personal viewpoints, self interest and 'micro management' issues of the environment. (76)	The southern leaseholders are outside the proposed project area. They have been encouraged to consider relinquishing their leases in return for priority privileges in the chalet park(s). All have declined. The leases continue to be managed by CALM. The Environment Centre is outside the project area and relocation has not been considered.
Good information	The information associated with the marina proposal distributed by EPA, Department of Planning and Infrastructure, local government and other participating authorities have clearly demonstrated the benefits of a world class marina at Point Peron. Further delay of this proposal is clearly not in the interest of all stakeholders. (76)	Noted.
Environmental concerns allayed	I am encouraged to read in the report that minimal damage will be done to the seagrass and that Lake Richmond will not be effected by salt water(which was saline anyway before 1960)ref section 5.5.1 (79)	Noted.
Current users	Most of the complaints I have observed are from people who are worried about their free ride with moorings being over or not being able to use the beach shack areas. They leave these area in such a way after they have used them that would suggest that environmental impacts are not of a concern. (82)	Noted.
Garden Island Highway	I am concerned about the impact that the proposed extension of the Garden island highway may have on Lake Richmond and its wildlife. The plans show a dual lane highway running between Richmond Avenue and the lake. I consider this area although bushland to be part of the lake and home to its inhabitants. (99)	The Garden Island Highway alongside Lake Richmond is not part of this project. The project plans to improve traffic flow to the Garden Island Causeway along Memorial Drive. Memorial Drive would then connect with Safety Bay Road. The traffic modelling shows these traffic modifications will adequately cater for local and Navy traffic.
Parking	b. Mayor Sammels mentioned 500 boats, the report provides for 250 to 300. Parking would be a major worry for the local residents with 250 boats anchored. (112)	There is capacity for approximately 200 boats in the clubs area near the western entrance and another 300 boats in the main public marina area to the east. Adequate parking has been provided within the project area.
Precedent for development	2. dangerous precedent for private development of others (117)	Each development is environmentally assessed on its own merits and impacts. This project will set no precedent that has not occurred in other areas. The question is: what will the impacts of this project be, and can they be acceptably managed/mitigated?
Disrespect to veterans	The disrespect to veterans stationed at point peron? (120)	The project will recognise the history of the defence forces at Cape Peron.

Topic	Submission (verbatim)	Response
Previous studies	For reasons unknown to us the council neglected to mention the results of a study in the mid '80 for a marina. In the findings they found Cape Peron unsuitable for a marina due to the environmental impact it would have, Wanliss St was found to be the most suitable site due to the lack of seagrasses and the depth. The only problem would be in the cost of a sea wall. It was well documented in official State and Commonwealth reports, research was also performed by the WA University. It would be of interest to see proof on how they have reached the conclusion to dispute the previous study. (121)	The work mentioned was undertaken around twenty years ago and the environment, demand for facilities and regulatory framework for a marina project has changed in this time. The most up to date reports and policies were utilised when preparing the SER. The last marina proposal that was assessed was rejected due to large areas of seagrass loss (>30ha) and because seagrass rehabilitation was not considered feasible at that time.
Garden Island Highway	The major highway to Garden Island proposal running along the southern edge of Lake Richmond would wipe out approximately 17% of the total area of the Lake. No thought has been taken into account on the significant potential threats to the ecosystem or the microbial community. (121)	The Garden Island Highway alongside Lake Richmond is not part of this project. The project plans to improve traffic flow to the Garden Island Causeway along Memorial Drive. Memorial Drive would then connect with Safety Bay Rd. The traffic modelling indicates that these traffic modifications will adequately cater for local and Navy traffic.
1.1 Project Overview:	• The chairing of the Project Steering Committee by the Mayor of the City of Rockingham presents a conflict of interest. • Review of other potential sites was shallow and therefore inconclusive. • The project states its primary aim as "to meet the high demand for boating facilities in the Rockingham area" but actually results in dramatically less land allocation to accommodate existing clubs, and the number of pens created will primarily only serve residents of the canal component of the project. The proponents dismiss the impact of traffic and carparking despite that almost 7 hectares would be taken up with bitumen for these carparks causing even further impact through stormwater run-off. • Seagrass rehabilitation is still not a proven technology, thus the projected loss of X ha remains grounds to reject this proposal, as was the case concerning the 1992/93 proposal by the EPA. (129)	The funding from the Commonwealth, State and local government was to determine whether a marina and tourism facility was feasible at Mangles Bay. The Chairman of the Steering Committee is meant to facilitate the development of the best concept plan possible for the area. It is left to Cabinet to determine whether or not the project is acceptable. There will be 500 pens for club members and individual members of the community. Refer to section 3.14 regarding alternative sites. Stormwater runoff was not considered a potential fatal flaw for the project. Seagrass rehabilitation has been demonstrated to work in Cockburn Sound and the methodology has advanced considerably since 1993. The SER discusses the results of trials to date.
3.1.2 Land Tenure and zoning	• The main project area is under a Commonwealth 'caveat', a written agreement with the State during the sale process of the land at Point Peron. This agreement states that the land is sold subject to conditions including that the land will only be used for 'recreation and/or parklands'. • Local member Mark McGowan MLA has already written that there will be NO future road connection through Lake Richmond Reserve to the Garden Island Causeway. (129)	Commonwealth Government support for the project is expected. The Garden Island highway that has been previously proposed near Lake Richmond is not part of this project.
Do nothing scenario	Cape Peron can be assisted by some further environmentally sensitive support and it is inappropriate to present a negative case of "doing nothing" as the only counter point to the proponents preferred options. (156)	The "do nothing" scenario is presented as a hypothetical case for comparison. The "do nothing" scenario presented includes implementation of the improvements in the CALM Draft Management Plan.
SER report	I have read the long, complex and beautifully presented report by the Strategen Company and would like to raise some matters of concern to me. Strategen says they can only use the information they were given. This is clearly a very pro the development set of information from the people in favour of the project and of course the report is also pro the project. Issues are either dealt with very easily or it is stated they will be if concerns arise later. (157)	Strategen's disclaimer states that the report is based in part on "the information supplied by the Client (and its agents)." Strategen was the lead environmental consultant on this project and selected the environmental consultants that worked on the project. Each consultant is employed by the client but has its own professional integrity to protect.

Topic	Submission (verbatim)	Response
"Do nothing" scenario	The 'Summary of environmental assessments of different concept options against project environmental aspects' [p24, table 4] offends me. This table and discussion compares 'Doing Nothing' with options 2.2, 2.3 and 2.4. This ignores the option of continuing to preserve and rehabilitate the Cape Peron area as is happening under the Rockingham Lakes Regional Parks Plan. The early options listed are so bad we are supposed to feel better about the 'not quite so bad' options. I don't. (157)	The "do nothing" scenario includes the implementation of the Rockingham Lakes Draft Management Plan. The early options show the evolution of the planning process and how a single entrance marina was discarded.
Triple bottom line?	1.3.1 The chairman for the Proponents has been frequently quoted to justify his continued support for the RDO plan by quoting a "triple bottom line benefit" and this is repeated in the SER . The chairman has the role of representing the people of Rockingham, and an expectation that the expressions "Bush Forever", and "Regional Park" mean what they say. His "other half" promises economic prizes by turning this land over to private development. Which of these roles do we believe? Bali is a prime example of intensive development for tourism which is an economic failure for community members at this time. Their triple bottom line failed. The economic benefit is dependant on "at least one boutique hotel" which is completely contrary to community desires (see public forum analysis attached), and if this same hotel were built in an alternative location (in Rockingham) the same economic prize is available but with community support now. The SER is short on detail but tall in unlikely promises where an adverse consequence will be to this communities detriment, or will private industry pay? (159)	Noted. The same public forum supported the provision of short stay accommodation and cafes and restaurants which a "boutique' hotel (as opposed to a "5 star" hotel) will provide.
Car parks	5.1.4 This SER chooses not to elaborate on vast areas of this unique headland which will be sealed with bitumen and set aside for the parking of vehicles. Maybe this is a reality which would tend to "fatally flaw" this plan. Visit any marina/tourist destination and the car parking arrangements tend to obscure the flora and forna, and where is the mitigation when a bit more parking is needed.? (159)	Parking areas are included in the development footprint, and the impacts on flora and fauna have been outlined in terms of clearing. Any future development that was not included in the original development footprint would require a separate environmental approval. No future development outside the project area is envisaged.
3.1.4 Land Use	The details of current lease holders in the Point Peron area are not included in the document. Areas currently in use for rec camps and private holiday accommodation should be returned to their natural state at the end of current lease arrangements. People who claim long association with the area as a result of long lease arrangements should be gratefull they have been able to have exclusive rights to the land, beach and water, to the exclusion of the general public, for so long. No concessions should be made for these individuals, clubs and companies. (162)	Noted. The Southern leaseholders are outside the proposed project area. They have been encouraged to consider relinquishing their leases in return for priority privileges in the chalet park(s). All have declined. The leases continue to be managed by CALM.
Garden Island highway	(8) The proposal does not adequately address traffic demands and is likely to lead to demand for construction of new roads adjacent to Lake Richmond along the proposed Garden Island Highway alignment or similar. Such a road would seriously impair the value of Lake Richmond. (179)	The Garden Island Highway is not part of the proposal and hence not part of the key characteristics. Care has been taken in the project design to ensure that Memorial Drive will be able to cater for increases in traffic loads if required. A traffic modelling study confirms the Garden Island highway is not required for this project.

Topic	Submission (verbatim)	Response
4. Attitude To The Mass Parking Of Water Vehicles	Mass parking of water vehicles (boats) should be seen as an ugly environmentally degrading activity, whether in a water-based marina or a land-based marina, equivalent to the mass parking of land vehicles (cars). That does not mean that no parking for boats should be provided anywhere, only that the attitudes to the parking of small and large boats on marine or foreshore landscapes should closely resemble the attitudes to the parking of cars and trucks on foreshores. The SER fails utterly to appreciate this issue when it states as follows. "Currently, boats larger than trailerable size are confined to moorings in Mangles Bay. The existing 261 swing moorings in Mangles Bay provide little protection to vessels from winter storms which approach from the northwest. Regular damage to vessels occurs during these storms, and currently there are no other options for these boat owners within the City of Rockingham. There are no opportunities for boat owners to secure mooring pen space within the vicinity of Rockingham and this problem will intensify as the population increases. The project's primary aim is to meet the high demand for boating facilities in the Rockingham area." The last sentence summarises the key issue perfectly. The aim of the project is to meet the high demand for boating facilities — to meet the demand of boat owners. Outrage would attend any proposal to radically destroy reserve and foreshore to provide a huge car park. Outrage should similarly attend this proposal to provide a huge boat park. However, there is absolutely nothing morally wrong with "the demand of boat owners", just the same as with "the demand for those who want to eat bananas" or "the demand of home owners" or "the demand of car owners". A boat is simply a commodity like a banana, a house or a car. The principle behind the sort of economy we have today is also simple. A boat owner should pay the full market cost for their boat and for the scarce excludable goods that they consume associated with owning a boat. That means the full opportunity cost of the land used for enabling the parking of a boat in a marina, and because of the negative environmental effects of parking boats in beautiful marine seascapes, it means having the government charge substantial fees for moorings. In the past many boat owners have been able to secure parking rights in beautiful marine seascapes or riverscapes at a cost far less than proper. Governments have worsened the situation by enabling parking of boats in situations where the views were priceless, such as by approving a multitude of orange mooring buoys in Matilda Bay off the UWA campus. The proposed land-based marina is nothing more and nothing less than a parking area for boats in what is largely Bush Forever Protection Area 355. It would be tragic if the proposal went ahead without the boat owners paying the full cost of the development including its offsets (net of proper payment by other commercial land users such as housing, hotel, shops...). Quite independently of the marina proposal, consideration should be given to the removal of the 261 swing moorings in Mangles Bay. They are causing scouring of the sea floor, they prevent other uses of the area, they are unsightly, and they are underpriced subsidised concessions. (185)	The ethics of the demand for boating facilities is beyond the scope of the SER.

Topic	Submission (verbatim)	Response
5. The Epa Should Use Ecosystem-Wide Rather Than Marginal Considerations	The EPA will, I feel sure, take an appropriately broad view of the project. That is, it will look at the project in the context of the whole of Cockbum Sound. The environment in and alongside Cockburn Sound has experienced deep trauma in the past and is being subjected to ongoing threats. A broad coordinated controlling policy is required. Cockbum Sound must not only be protected from the effects of pollutants, waste discharges and deposits, loss of amenity in use, and loss of visual amenity but its environmental values must be improved. It is easy to view Cockbum Sound incorrectly. It is particularly wrong to think of the Sound as part of the boundless open ocean, but many people act as if that were so. Technically Cockbum Sound is a marine environment, but it would be better if those interested in "development" thought of the southern part of the Sound as a lake with shallow connections to the sea. In such a relatively closed environment, any one man-made change should depend on the future of all the other man-made influences. It would be narrow thinking to consider any proposed development in isolation. That is, any more intensive use of the Cape Peron Precinct should be dependent on assurances that improvements are being effected in respect to many other influences on the southern end of the Sound. Without such assurances, there should be no "development" that affects the Sound. Most land-based activities around the Sound, and all marine-based activities, are interconnected with every detail of the future environmental quality of the Sound. One of the biggest possible mistakes that could be made is to look at some development of the Cape Peron Precinct based on the assumption that each other activity around and in the Sound can also be looked at separately. Thus the EPA might take issue with the logic behind the SER statement that "The desalination plant and the proposed marina are at some distance from one another and the potential impacts of each are not expected to be cumulative". At the same time as taking a broad view, the EPA must take a detailed view, because a "plus" in one part of the Sound is not necessarily equitable to a "minus" of the same magnitude in some other part of the Sound. For example, in Appendix 1 the SER records that "Planting of seagrass at other locations to mitigate the loss of seagrass at Mangles Bay is considered unacceptable by the Cockburn Sound Management Council (8)", but the only commented offered by the SER is "Noted. The Cockbum Sound Management Council has been involved in the consultation process and provided comment on the proposal during these meetings! discussions; SER Section 4.4." Neither this Appendix nor SER Section 4.4 provides analysis of the extent to which planting in one place substitutes for removal from another place, from a scientific environmental point of view. (185)	The hydrodynamic modelling that was undertaken for the SER included the wider Cockburn Sound. The modelling was based on bathymetry data (shape of the ocean floor) so that the "shallow connections" were included in the modelling. As suggested, cumulative effects on water quality will need to be considered if the project proceeds to the next phase of environmental assessment.
6. The Scientific In Contrast To The Constraining Assumptions	The science in the SER is useful, some looks possibly original. However, because of the vague or incorrect used of the concept of offsets or mitigation, and the constraining assumption that a large multipurpose commercial marina with a hotel etc is the required "vision", all the science becomes a papering-over of gross fundamental shortcomings of analysis and concept. Whatever "need" there is for safer parking of boats could probably be met by a less grandiose and therefore far less environmentally threatening development elsewhere. (185)	Noted. The vision has always been for a marina-based tourist precinct not just "safer parking for boats".

Topic	Submission (verbatim)	Response
7. Minor Observation On The Main Sewer	Water Corporation Proposal 1D22-0-I, authorised on 27th March 2006, is for the construction of 450 & 600mm diameter sewer pressure main up Hymus Street and then along Point Peron Road to the Point Peron Wastewater Treatment Plant. There already is a main leading to that Plant. Work is proposed to start in November 2006 and continue for six months. The proposed marina seems likely to require the existing main and the proposed main to be relocated to outside the southern boundary of the project "precinct". I enquire as to whether any necessary incursion of the relocated main into the Bush Forever Area or other reserves has been taken into account, and as to whether the boat owners would be paying for the costs. (185)	Water Corporation has been consulted and will continue to be consulted with regards to its infrastructure requirements in the area. The project team is aware of this proposal by the Water Corporation and future relocation has been provided for.

Topic	Submission (verbatim)	Response
Appendix	Subsequent summary of my original submission This submission deals predominantly with broad strategic issues. Many of the broad principles that should guide and limit any change in use of the Cape Peron Precinct are well documented in official State and Commonwealth reports, and research papers from the WA universities. Some of what follows is based on, or paraphrased from, or quoted from such reports. It must be government policy to improve the environmental qualities of Cockburn Sound not just to protect it from the effects of pollutants, waste discharges and deposits, loss of amenity in use, and loss of visual amenity. There should be no further decline in seagrass meadows. Technically Cockburn Sound is a marine environment, but it would be better if those interested in "development" thought of the southern part of the Sound as a lake with shallow connections to the sea In such a relatively closed environment, any one man-made change should depend on the future of all the other man-made influences. It would be narrow thinking to consider any proposed development in isolation. That is, any more intensive use of the Cape Peron Precinct should be dependent on assurances that improvements are being effected in respect to many other influences on the southern end of the Sound. Without such assurances, there should be no "development" that affects the Sound. Most land-based activities around the Sound, and all marine-based activities, are interconnected with every detail of the future environmental quality of the Sound. One of the biggest possible mistakes that could be made is to look at some development of the Cape Peron Precinct based on the assumption that each other activity around and in the Sound can also be looked at separately. Improvements made elsewhere in the Sound are not "offsets" that can be claimed specifically against the proposed marina development, any more than they can be so claimed against any one of the many other possible environmentally deleterious changes in use. Many prerequisite improvements should be made in the nearby areas of the Sound, before any development of the Cape Peron Precinct The seagrass within 200-400 meters of the shoreline of the Cape Peron Precinct is suffering increasing strains from epiphytic (slimy) growths Therefore claiming as an offset rehabilitation and revegetation of an area substantially further offshore is avoiding the issue of preventing further degradation inshore. Environmentally-sensitive behaviour is not maintained by many direct users of the Sound. The wide interconnectedness extends beyond Mangles Bay and the Cape Peron Precinct. Lake Richmond is part of local environmental interconnections. Effects of a proposed marina potentially could extend into Shoalwater Bay. No development of the Precinct should cause the least threat to Shoalwater Bay, for example by any channel or other access cut through the base of Point Peron from the Sound. Such a channel would be an ever-present interest to the owners of boats parked in the marina. (185)	This submission is included and responded to as Submission 10 in Appendix 1 of the SER. The project expects to improve the overall water quality within Mangles Bay as well as replacing any seagrass lost. No channel to Shoalwater Bay is proposed.

Topic	Submission (verbatim)	Response
	Mangles Bay has even poorer water circulation than much of the Sound. Therefore the marine environment of Mangles Bay is especially fragile. The major “vision” relevant to Mangles Bay and its shores therefore must be one of preserving its healthy and diverse marine environment, rather than anything related to “development” or “tourism”. Indeed, it is only the marine environment of Cockburn Sound that gives Rockingham and Kwinana any comparative advantage over any number of outer suburbs. If the delicate marine environment of Mangles Bay were degraded it would be exceptionally difficult to restore, or even impossible. The only development in the Mangles Bay area, especially for tourism (because tourists are in no sense the long- term custodians), therefore should be at minimal disturbance to the marine environment. There is valuable coastal bush on the dunes and in the swales beyond the south-west of the Precinct and this bush should be stringently preserved. That is, the Precinct should not be expanded in that direction. I suggest that the boundary of the Precinct should be withdrawn from the route of the Garden Island Freeway to the immediate western edge of the existing road. Mangles Bay is being used as a long-term “parking area” for various types of boats. Their moorings are clearly shown as the small white patches on the aerial photograph. Boats parked in a beautiful marine environment are no more attractive than a multitude of cars parked here and there around native trees in a national park, despite the fact that some boats like some individual cars are quite attractive. The future of Mangles Bay should see an end to it being used as a boat park. It is my view that Mangles Bay, because of its environmental fragility as described above, is particularly unsuitable for any intensification or increase of boating-based activities. The parking of boats both in the water of Mangles Bay and on the adjoining land is going to be thoroughly incompatible with the rapid suburbanisation of the Palm Beach area. Both the Bay and its foreshore are being used as a cheap boat dump, equivalent to a street resident having decrepit and rusting cars in their front yard. This was unnoticed or ignored or genuinely unimportant by and large in past decades, but is now utterly out of keeping with the future of the region. Existing boat-related uses of Mangles Bay are creating increasing environmental degradation. The documentation presents some unarguably acceptable motherhood statements: - Contributing positively to the marine environment - Long term viability of seagrass - No net loss of seagrass - Remedying already-existing water quality problems in Mangles Bay - Improving the land environment in the Precinct - Ensuring sound environmental management - Rehabilitating degraded marine and terrestrial environments. The key problem is that those excellent overarching values are often unarguably incompatible with some of the lower level objectives such as: - Improving marine facilities - Improving tourist facilities - Creating a commercial district (185)	As above
EPA	"Environmental Protection Authority!". Development does not represent the true meaning of this. (190)	Noted.

Topic	Submission (verbatim)	Response
Southern leaseholders	The development of Options 2.2, 2.3 and 2.4 (Figs 6, 7 and 8) show that the southern leases and adjacent land between Memorial Drive and Shoalwater Bay is planned to be used for: - proposed aboriginal meeting place; - improved management of public access; - retention or potential relocation of holiday homes, leasehold facilities; - proposed realignment and upgrade of Memorial Drive; - creation of Shoalwater foreshore nature trail; and - enhance the Lake Richmond/Cape Peron Regional Park Green Link. On page (vi) of the Executive Summary, one aspect of the proposed development concept is that there should be environmental and social improvements external to the development area, in particular that there should be rehabilitation and restoration of native vegetation outside of the immediate development footprint. On page (iii) of the Executive Summary, mention is made of groups with a long term affiliation with Cape Peron not wishing to see the area over developed. Also, mention is made of the wishes of the community to preserve the natural environment of Cape Peron. It is considered that leaseholders could assist in implementing the plans for this area and the creation of the Lake Richmond/Cape Peron Regional Park Green Link by: - continuing to maintain the foreshore sand dunes in their leases fringing Shoalwater Bay, as they have done for the last 40 years; - continuing to take part in the annual cleanups of Cape Peron as they have done for many years; - progressive planting of native vegetation in their leases; and - assisting CALM with the rehabilitation of adjacent areas. In this way the leaseholders as Friends of the Park could make a considerable contribution to the implementation of improvements to the area. (200)	The cooperation of the southern leaseholders in rehabilitation of the area is noted. If the project proceeds, the southern leaseholder groups will be considered a key stakeholder and will be further consulted regarding the appropriate management of the southern leasehold area.
Page ix 2nd Para. Evidence	begs the question – what evidence? As a Rockingham City resident we receive from Neighbourhood Watch/Police sources regular update statistics by suburb, of activities such as house breaking, vehicle theft etc. Shoalwater which I suspect includes Cape Peron has on most monthly figures, the lowest, or near so, of other suburbs such as Cooloongup, Waikiki, Safety Bay etc. Surely, if such criminal activity does exist on the Cape it is a Police matter and it will continue to be so after a marina is built but with more targets to break into. The A.I.W Centre is probably also included in the Shoalwater statistics and I can't recall the last time our caretaker couple reported an offence being committed. Over the years we have had an outboard motor stolen but vandalism, for instance has been non-existant. We maintain our own lighting to streets, communal toilets, laundry etc. (205)	This paragraph cites "informal paths and tracks through the vegetation, anchor drag scars in the seagrass of Mangles Bay, anecdotal evidence of sullage dumping and informal re-fuelling in Mangles Bay, and the common anti-social behaviour, including vandalism and car break-ins that occur on Cape Peron" as evidence of the imbalance between use and facilities/management that currently exists in the Cape Peron area. The information is recognised as anecdotal and the vandalism/theft in the area was noted in both previous submissions on the proposal (SER appendix 1) and in this round of submissions.

Topic	Submission (verbatim)	Response
Page (xviii) Summary Columns	The report has become, to me rather tiresome by continuing to refer to options 2.2, 2.3 and 2.4 as if there have been three separate organisations contributing plans for a marina at some location of their choice. In fact all three options are produced by one organisation and altered by the same organisation with 2.4 all at the same location. So the Summary page as far a I am concerned involves three columns:- 1. objectives 2. Do nothing 3. option 2.4 Column 1 "objectives of contributing positively to terrestrial and marine environments" are easily solved by allocation of money to those responsible for Crown land and the ocean next to it. I understand that between $5 & 600,000 has been allocated by State and Federal Governments to be spent on a marina proposal. That sort of money channelled into environmental issues on the Cape peninsular and marine locations would substantially solve some problems but those chosen by Strategen necessarily. However, to suggest that none of the activities in the "do nothing" column will be addressed unless a marina is built is patently absurd. How for instance does building a marina stop "boating numbers increasing" or "unmanaged boating activities from increasing"? – and why will there be "no further improvements to the CALM plan" if a marina isn't built. I've said before and I repeat that the sort of activities outlined in the "do nothing " column have absolutely nothing to do with building a marina. In any case when one looks at Column 2.4 one finds among other things profound observations like total clearing 40.1 hectares (that solves the weed problem under that area" and Lake Richmond is 350m from canal development. If that measurement is correct, then so be it, because Lake Richmond is not going anywhere. If a marina isn't built the lake will be various metric distances from all sorts of places. A study of the achievements of the Rockingham based Cockburn Sound Management Council in the areas of "seagrass rehabilitation" and "water quality improvements" give the lie to the "do nothing" column. The same applies to State Government's recent introduction of the licencing of boat owners suggest "managing of boating activities" is being addressed. Also isn't the role of the Coastal Planning and Co-ordinating Council in the Department of Planning and Infrastructure significant? I find it very difficult to accept that the developers, having signed off on the completion of the canals and building aspects of the development will continue to rehabilitate seagrass (marine) and rehabilitate vegetation and eradicate weeds (terrestrial) subsequently and for the number of years necessary to achieve a satisfactory outcome. (205)	The SER does not imply that the three options were designed by different companies. They all have similar key elements but with different footprints. The $5-600,000 has already been used in the concept design, stakeholder consultation, environmental studies and the preparation of the environmental review. The "do nothing" scenario is a useful hypothetical situation which allows broad comparisons of outcomes. It includes CALM's recent works so it represents a realistic scenario for the short to mid-term. If the project was eventually approved, these offsets would be likely to be included in the legally binding Ministerial Conditions.
Anti-social behaviour	page iii — It isn't necessary to visit Cape Peron to see this. The more walls there are the more graffiti, as in my suburb. There are burn out marks on the road in front of my house all the time. There are many reports of fights and bashings outside hotels and nightclubs. Having this Project on Cape Person will increase the opportunities for such behaviour. (216)	Noted.

Topic	Submission (verbatim)	Response
Land use	Page 16, point 3.14 — Land Use - Some of the camps on Cape Peron are a bit regrettable but in time they will reduce. No more should be allowed to start. Current land and water use and Aboriginal and European heritage sites could be enhanced. (216)	Noted. This project proposes to enhance and recognise European and Aboriginal Heritage of the area.
"Do nothing" scenario	Page 35, table 3 — Environmental, Social and Economic Assessment of Development Concept Options - 'Do nothing' option — Because the Regional Park and Bush Forever land is not cleared for canals, residential, hotel and commercial activity does not mean it is 'vacant' and of no use. It could be added to the Marine Park and Lake Richmond to provide 'eco tourism' opportunities. People really love Kings Park. Cape Peron has all the natural attributes — views and old growth bushland. Native bushland could be extended, a botanical style wildflower garden created, a small animal zoo and bird sanctuary installed, more historical and educational content added, a cafe and toilets. (216)	The "do nothing" scenario is a hypothetical situation that is useful for a general comparison of outcomes. The offsets provided through the project would allow for additional resources for the management of Cape Peron above that which is currently available.

7. SHORT TITLES AND ACRONYMS

Table 1 sets out the short titles and acronyms used in this report.

Table 1 Short titles and acronyms

Short title or acronym	Long title
CALM	The Department of Conservation and Land Management (now the Department of Environment and Conservation)
DEC	The Department of Environment and Conservation
DoE	The Department of Environment (now the Department of Environment and Conservation)
DoW	Department of Water
DPI	Department for Planning and Infrastructure
EPA	Environmental Protection Authority
SER	Strategic Environmental Review
TEC	Threatened Ecological Community
WAPC	Western Australian Planning Commission

8. REFERENCES

Cockburn Sound Management Council 2005, *Environmental management plan for Cockburn Sound and its catchment*, Department of Environment, Perth 2005.

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