

**ENVIRONMENTAL SCOPING DOCUMENT**

<b>PROPOSAL NAME:</b>	<b>KOOMBANA BAY MARINE STRUCTURES</b>
<b>ASSESSMENT NUMBER:</b>	<b>2049</b>
<b>LOCATION:</b>	<b>KOOMBANA BAY, BUNBURY</b>
<b>LOCAL GOVERNMENT AREA:</b>	<b>CITY OF BUNBURY</b>
<b>PROPONENT:</b>	<b>SOUTH WEST DEVELOPMENT COMMISSION</b>
<b>PUBLIC REVIEW PERIOD:</b>	<b>6 WEEKS</b>

## **1. Introduction**

This Environmental Scoping Document (ESD) sets out the form, content and timing of the Environmental Review for the above Strategic Proposal.

The *Environmental Protection Act 1986* (EP Act) sets out that where a proposal is considered to have a significant environmental impact it will be subject to an assessment by the Environmental Protection Authority (EPA) under section 38 of the EP Act. The EP Act also provides for the assessment of a strategic proposal, which is a future proposal (or a number of future proposals implemented together) that may singularly or in combination have a significant effect on the environment.

The desired objective of assessing a strategic proposal is to identify all potentially significant environmental impacts and management as early as possible. It also provides for greater certainty to local communities and proponents over future development, improved capacity to address cumulative impacts and flexible timeframes for consideration of environmental issues.

If it is agreed that a strategic proposal may be implemented, a Ministerial Statement for the strategic proposal is published. Future Proposals will be managed in accordance with Section 11 of the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2012* (Administrative Procedures).

This strategic proposal is being assessed by the EPA at the level of Public Environmental Review (PER). The purpose of an ESD is to:

- provide proposal-specific guidelines to direct the proponent on the preliminary key environmental factors or issues that are to be addressed during the environmental review and preparation of the environmental review report;
- identify the required work that needs to be carried out; and
- confirm the timing of the environmental review.

The proponent must conduct the environmental review in accordance with this ESD and then report to the EPA in an environmental review report (PER document). As well as the proposal-specific requirements for the environmental review identified in this ESD, the PER document must also address the generic information requirements listed in section 10.2.4 of the EPA's Administrative Procedures. When the EPA is satisfied that the PER document adequately addresses both of these requirements, the proponent will be required to release the document for a public review period of 6 weeks.

This ESD has been prepared by the EPA in consultation with the proponent, decision-making authorities and interested agencies consistent with EPA Environmental Assessment Guideline (EAG) 10 – *Scoping a proposal*. ESDs prepared by the EPA are not subject to public review. The ESD will be available on the EPA website ([www.epa.wa.gov.au](http://www.epa.wa.gov.au)) upon endorsement and must be appended to the PER document.

## **2. The strategic proposal**

The subject of this ESD is the South West Development Commission's (the proponent) Koombana Bay Marine Structures proposal. The proponent is proposing to upgrade the marine structures in Koombana Bay in order to meet existing demand and future requirements for small craft maritime infrastructure. The proposal includes new mooring facilities for commercial and recreational vessels, floating jetties, a boat servicing facility, improved public ablution facilities and upgraded boat launching and storage facilities. The regional location of the proposal is shown in Figure 1.

### **2.1 Future proposals**

Subject to the outcomes of this assessment, future proposals are expected to be developed in stages. At this stage the proponent has identified the following future proposals:

- Redevelopment of the Dolphin Discovery Centre – includes a T or L shaped finger jetty and potentially a boat ramp;
- Koombana Sailing Club Marina – includes dredging, breakwaters reclamation, boat pens, internal jetties and associated terrestrial facilities; and
- Casuarina Harbour Development – includes dredging, breakwaters, reclamation, boat pens and internal jetties.

The development envelope encompassing the physical elements of the overall strategic proposal is delineated in Figure 2.

The scope of the future proposals and the key characteristics (including their respective development envelopes) will be defined through the assessment process and outlined in the PER, in accordance with EAG 1 – *Defining the key characteristics of a proposal*. It is expected the proponent will describe the strategic proposal including the identification of future proposals within the PER document, in accordance with Environmental Protection Bulletin No. 17 *Strategic and derived proposals*.

### 3. Preliminary key environmental factors and scope of work

The information provided by the proponent has informed the identification of the preliminary key environmental factors for the proposal, in accordance with EAG 8 – *Environmental principles, factors and objectives*. The preliminary key environmental factors for this proposal and the EPA’s objective for each of those factors are identified in Table 1.

To provide context to the preliminary key environmental factors, Table 1 also identifies the aspects of the proposal that cause the factors to be key factors, and the potential impacts and risks likely to be relevant to the assessment. All of this in turn has informed the work required to be conducted in the environmental review.

Finally, Table 1 identifies the policy documents that establish how the EPA expects the environmental factors to be addressed in the environmental review and the PER document that follows. Impacts associated with proposals are to be considered at a local and regional scale, including evaluation of cumulative impacts, and provide details of proposed management/mitigation measures. This includes whether environmental offsets are required by application of the mitigation hierarchy, consistent with the WA Environmental Offsets Guidelines.

In addition to the preliminary key environmental factors, the PER is to address the environmental principles in EAG 8.

**Table 1: Preliminary key environmental factors and required work**

Marine Environmental Quality	
<b>EPA objective</b>	To maintain the quality of water, sediment and biota so that the environmental values, both ecological and social, are protected.
<b>Relevant aspects</b>	Dredging; construction and operation of coastal infrastructure including the breakwaters and marina/harbour waterbodies.
<b>Potential impacts and risks</b>	<p>The proposal may have the following effects:</p> <ul style="list-style-type: none"> <li>• Removal of existing marine infrastructure may temporarily affect water quality due to increased turbidity and the release of any nutrients and contaminants in sediments.</li> <li>• Dredging to allow for the construction and maintenance of the marina and harbour waterbodies may temporarily affect water quality in Koombana Bay, adjacent marine waters outside Koombana Bay, Leschenault Inlet and Leschenault Estuary due to increased turbidity and the release of any nutrients and contaminants in dredged sediments.</li> <li>• Seepage of return water from land reclamations areas may temporarily impact marine environmental quality due to increased turbidity and the release of any nutrients and contaminants in dredged sediments.</li> <li>• Placement of limestone for the marina and harbour breakwaters and leaching of fines from the limestone may cause temporary turbidity during and after the limestone is placed.</li> <li>• Surface and stormwater drainage into the marina and harbour waterbodies</li> </ul>

	<p>may affect water and sediment quality.</p> <ul style="list-style-type: none"> <li>• Outflow of marina and harbour waters into adjacent marine and estuarine waters during operation may result in changes in turbidity, nutrient and/or contaminant loads and concentrations which may adversely affect marine ecology and function, particularly within the Leschenault Inlet.</li> <li>• Increased boat numbers increases the potential for pollution within marinas, including from antifouling paints, anti-corrosion anodes, increased risk of accidental discharges (e.g. fuel spills, oils and greases) and sillage.</li> </ul>
<b>Required work</b>	<ol style="list-style-type: none"> <li>1. Conduct monitoring as necessary to characterise the existing marine environmental quality (baseline water and sediment quality) in the area potentially affected by the proposal. The characterisation needs to capture spatial variability in sediment quality and spatial and seasonal variation in relevant water quality parameters as informed by an assessment of threats and pressures to marine environmental values, both ecological and social. The characterisation is to inform dredge spoil management and the environmental quality monitoring and management plans required in 7a and 7b.</li> <li>2. Provide an Environmental Quality Plan (EQP)<sup>1</sup> that spatially defines the Environmental Values (EVs), Environmental Quality Objectives (EQOs) and Levels of Ecological Protection (LEPs) that currently apply to the area. The EQP is to be developed consistent with EAG 15 <i>Protecting the Quality of Western Australia's Marine Environment</i>.</li> <li>3. Characterise the hydrogeology of the groundwater system and the quality, quantity, and seasonal and spatial variability of the groundwater flows into the proposal and surrounding areas based on contemporary monitoring data from the catchment.</li> <li>4. Identify elements of each of the future proposals which may potentially affect marine environmental quality, including both direct and indirect impacts, and for both construction and operation. Detail is required for the proposed dredging and spoil placement methods.</li> <li>5. Develop an accurate and validated three dimensional model which considers circulation in the existing boat harbour and the surrounding hydrodynamics to understand dispersion, deposition and accumulation of sediments and contaminants from marine-based construction and maintenance activities and outflow from the marina and harbour waterbodies. Hydrodynamic and particle transport modelling should take into account factors such as tides, meteorological and seasonal ocean conditions and ground and surface water inputs (as identified in 3 above). It should also be linked to ecological modelling as necessary to predict the ecological responses where specific proposal elements may affect marine environmental quality (as identified in 4 above). The modelling is to consider the staging of the future proposals and include the Leschenault Inlet and Estuary in order to determine the potential effects of the proposal singularly and in combination.</li> <li>6. Predict the residual impacts from each of the future proposals, both direct and indirect, after outlining any avoidance and mitigation options that will be applied. Impact predictions are to consider the staging of the future proposals and include, but not be limited to:</li> </ol>

<sup>1</sup> The EPA recognises that a draft Environmental Quality Plan has already been developed by the Southern Ports Authority for the Koombana Bay area. The EPA therefore expects that this proposal will use this existing draft EQP as the basis for predicting changes to the Environmental Values, Environmental Quality Objectives and Levels of Ecological Protection.

	<ol style="list-style-type: none"><li>a. The likely extent, severity and duration of direct and indirect marine-based construction impacts on marine environmental quality and EVs. These impacts should be justified and defined spatially as an overlay on the existing EQP showing where the EVs (both ecological and social), EQOs and the spatially defined LEPs will not be achieved during construction of each of the future proposals and the duration of any non-achievement.</li><li>b. The likely extent, severity and duration of direct and indirect operational impacts. These impacts should be justified and defined spatially as an overlay on the existing EQP showing where the EVs (both ecological and social), EQOs and the spatially defined LEPs will not be achieved during the operational life of each of the future proposals.</li><li>c. A revised EQP should be proposed that takes into account unavoidable construction and operational impacts, including maintenance dredging, on marine environmental quality and spatially maps the EQOs/LEPs that will be achieved in the long term.</li><li>d. Impacts to biodiversity; abundance and biomass; water, sediment and biota quality, and ecosystem processes including nutrient cycling. An adequate understanding of the natural rates and types of ecological processes operating in the area must be demonstrated in order to evaluate the possible extent and severity of any changes to the types and/or rates of processes.</li><li>e. Predictions of impacts to marine environmental quality for both construction and operation are to include the most likely scenario and the best and worst case scenarios that are most likely to occur. They are to also consider and assess the cumulative effects of each of the future proposals both singularly and in combination to the effects of other adjacent approved proposals and proposals currently being assessed by the EPA. These other proposals include stormwater drains, other approved marine infrastructure and the Southern Ports Authority Inner Harbour Structure Plan proposal.</li></ol> <ol style="list-style-type: none"><li>7. Identify management and mitigation measures for each of the future proposals to demonstrate that the EPA's objectives for marine environmental quality can be met and to ensure residual impacts are not greater than predicted. The PER is to include:<ol style="list-style-type: none"><li>a. A Marine Construction Monitoring and Management Plan (MCMMP) that includes the protocols and procedures for monitoring (e.g. turbidity, light attenuation coefficient, visual records etc.) and management (e.g. silt curtains, pre-washing of limestone rock for breakwater etc.) to ensure that the construction of each of the future proposals achieves the proposed EQOs/LEPs defined in the revised EQP required by 6c.</li><li>b. A Marina Environmental Quality Management Plan (MEQMP) that includes monitoring and management to ensure that the construction and operation of each of the future proposals achieves the proposed EQOs/LEPs defined in the revised EQP required by 5c. The MEQMP should be based on the EPA's EAG 15 <i>Protecting the Quality of Western Australia's Marine Environment</i>. The MEQMP is to define the EVs to be protected, identify the environmental concerns or threats and establish the EQOs and LEPs to be achieved. It is also to include and detail the management and mitigation measures to ensure that the EVs and EQOs are achieved. The MEQMP is to consider the staging the identified future proposals to ensure that both future proposals will meet the EPA's objectives in the long term.</li></ol></li><li>8. Outline the agency responsible for the management of marine environmental quality, maintenance dredging and ongoing wrack management for each of</li></ol>
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	the future proposals.
<b>Relevant policy</b>	<p>ANZECC and ARMCANZ, 2000 <i>Australian and New Zealand Guidelines for Fresh and Marine Water Quality</i>, National Water Quality Management Strategy No. 4.</p> <p>Australian Government, 2009 <i>National Assessment Guidelines for Dredging</i></p> <p>EPA Environmental Assessment Guideline No. 7 <i>Marine Dredging Proposals</i></p> <p>EPA Environmental Assessment Guideline No. 15 <i>Protecting the Quality of Western Australia's Marine Environment</i></p> <p>EPA Position Statement 2000 <i>Perth's Coastal Waters: Environmental Values and Objectives</i></p> <p>Government of WA, 2004 <i>State Water Quality Management Strategy Document No.6</i></p> <p>McAlpine, KW Wenziker, KJ Apte, SC and Masini, RJ 2005 <i>Background quality for coastal marine waters of Perth, Western Australia</i>, Department of Environment, Perth, Western Australia.</p>
<b>Benthic Communities and Habitat</b>	
<b>EPA objective</b>	To maintain the structure, function, diversity, distribution and viability of benthic communities and habitats at local and regional scales.
<b>Relevant aspects</b>	Dredging; construction and operation of coastal infrastructure including the breakwaters and marina/harbour waterbodies.
<b>Potential impacts and risks</b>	<p>The proposal may have the following effects:</p> <ul style="list-style-type: none"> <li>• Direct removal of benthic communities and habitat as a result of the construction of the marina/harbour waterbodies and breakwaters.</li> <li>• Indirect impacts to benthic communities and habitats, including from altered sediment and water movement and flows caused by breakwaters and other coastal infrastructure, including within the Leschenault Inlet and the Leschenault Estuary.</li> <li>• Reduction in marine environmental quality that supports healthy benthic communities and habitat during construction and operation of the marina/harbour, including within the Leschenault Inlet and the Leschenault Estuary.</li> <li>• Alteration of the natural benthic communities in the area caused by the introduction of marine pest species.</li> </ul>
<b>Required work</b>	<ol style="list-style-type: none"> <li>1. Characterise the environment by designing and conducting a benthic communities and habitat survey (as necessary) to accurately map the spatial extent of benthic habitats. Based on the findings of the surveys, produce geo-referenced maps showing the extent and distribution of the different benthic communities and habitats and present these at the appropriate scale. Mapping is to extend to the outer boundary of the area where both reversible and irreversible effects of biota are predicted to occur and into the zone of influence and for appropriate reference sites. Surveys should be conducted to a standard such that the results can be used as a baseline for future monitoring both during construction and operation of the proposal.</li> <li>2. Assess the values and significance of benthic communities and habitats within the future proposal area, and adjacent areas, and describe these values in a local and regional context.</li> <li>3. Identify elements of each of the future proposals which may potentially affect</li> </ol>

	<p>benthic communities and habitat, including both direct and indirect impacts and for both construction and operation.</p> <p>4. Predict the residual impacts from each of the future proposals, both direct and indirect, on benthic communities and habitat after outlining any avoidance and mitigation options that will be applied. Impact predictions are to:</p> <ol style="list-style-type: none"> <li>a. Include the likely extent, severity and duration of direct and indirect impacts of each of the future proposals on benthic communities and habitats. This is to be done through spatially defining the zones of high and moderate impact and the zone of influence and is to include management targets based on the lower end of the range of likely impacts, consistent with EAG 7 <i>Marine Dredging Proposals</i>. Predictions for each of these zones, for both construction and operational impacts, are to include the most likely scenario and the best and worst case scenarios that are most likely to occur.</li> <li>b. Address any irreversible loss of, or serious damage to, benthic primary producer habitat, in the context of EAG 3 <i>Protection of Benthic Primary Producer Habitats in Western Australia's Marine Environment</i> including an appropriately defined local assessment unit and an assessment of any loss against EAG 3's cumulative loss guidelines.</li> <li>c. Consider the staging of the future proposals.</li> <li>d. In the context of 4(b) above, consider and assess the cumulative effects of each of the future proposals both singularly and in combination to the effects of adjacent approved proposals and proposals currently being assessed by the EPA. These other proposals include stormwater drains, other approved marine infrastructure and the Southern Ports Authority Inner Harbour Structure Plan proposal.</li> </ol> <p>5. Include in the MCMMP details of the monitoring and management to occur during and after construction for each of the future proposals to demonstrate and ensure that the EPA's objectives for benthic communities and habitats can be met and that residual impacts are not greater than predicted. The MCMMP is to include the protocols and procedure for mapping turbidity plumes and reporting the realised extent of the zones of impact and influence defined for each of the future proposals.</p>
<b>Relevant policy</b>	<p>EPA Environmental Assessment Guideline No. 3 <i>Protection of Benthic Primary Producer Habitat in Western Australia's Marine Environment</i></p> <p>EPA Environmental Assessment Guideline No. 7 <i>Marine Dredging Proposals</i></p>
<b>Marine Fauna</b>	
<b>EPA objective</b>	To maintain the diversity, geographic distribution and viability of fauna at the species and population levels.
<b>Relevant aspects</b>	Dredging; construction and operation of coastal infrastructure, including the breakwaters and marina/harbour waterbodies
<b>Potential impacts and risks</b>	<p>The proposal may have the following effects:</p> <ul style="list-style-type: none"> <li>• Construction activities may cause temporary displacement of marine fauna due to elevated underwater noise, vessel operations, dredging and the construction of breakwaters and death or injury from vessel strikes and entanglement and/or entrainment.</li> <li>• Changes in marine environmental quality during construction and operation, physical impediments to fauna movement, and changes in coastal processes during operation, may potentially affect locally significant marine fauna such as dolphins, blue swimmer crabs, other fishery important species and sea and</li> </ul>

	<p>shore birds (including little penguins), including effects to food quality and quantity, spawning and breeding.</p> <ul style="list-style-type: none"> <li>• Loss or degradation of important feeding, nursery and/or resting areas for marine fauna and sea and shore birds.</li> <li>• Increased public access resulting in increased interactions between humans and marine fauna.</li> <li>• Increased boat numbers with consequential increases in potential boat strike and fishing pressure.</li> <li>• Increased risk of introduced marine species due to increased numbers of vessels berthing in the marina.</li> </ul>
<b>Required work</b>	<ol style="list-style-type: none"> <li>1. Conduct a desktop study of available information to provide a comprehensive listing of marine fauna known or likely to occur within, or regularly pass through, the Koombana Bay area and Leschenault Inlet and Estuary and document any known uses of the area by them (e.g. foraging, migrating, calving, nursing, spawning, roosting and nesting etc). The study is to identify any critical windows of environmental sensitivity for marine fauna in the proximity of the proposal area, including for marine mammals, blue swimmer crabs, finfish and sea and shorebirds. The study is to also identify any significant gaps in knowledge for marine fauna and assess the importance and/or significance of those gaps with respect to meeting the EPA's objectives, and where required conduct surveys to address these critical knowledge gaps. The listing should include the identification of both locally significant marine fauna species (including dolphins), marine species important to fisheries (both commercial and recreational) and sea and shorebirds that are likely to occur in the area.</li> <li>2. Design and conduct a baseline survey in consultation with the Department of Fisheries and in accordance with the guidelines provided by the Australian National System for the Prevention of Marine Pest Incursions (DAFF 2009) to identify if there are any introduced marine pests in the existing Casuarina Boat Harbour and Koombana Bay Sailing Club Marina and/or adjacent waters.</li> <li>3. Assess the values and significance of marine fauna in areas likely to be impacted by the proposed developments and describe these values in a local, regional and State context.</li> <li>4. Identify elements of each of the future proposals which may potentially affect marine fauna and sea and shorebirds, including both direct and indirect impacts and for both construction and operation. This is to include the risks posed by introduced marine organisms from construction and ongoing operations.</li> <li>5. Undertake underwater noise modelling to determine the potential impacts from construction and staging of each of the future proposals, including from pile driving, on marine fauna. Modelling is to delineate the areas within which physical injurious impacts (including permanent and temporary threshold hearing shift), and behavioural impacts (including avoidance behaviours) may occur. Modelling is to outline the extent, magnitude and duration of potential impacts from underwater noise and should estimate overall noise levels.</li> <li>6. Predict the residual impacts from each of the future proposals, both direct and indirect, after outlining any avoidance and mitigation options that will be applied. Impact predictions: <ol style="list-style-type: none"> <li>a. Are to include both short and long-term impacts and are to consider the staging of the future proposals.</li> <li>b. Are to consider how the proposal may change marine fauna and sea and shorebird patterns of use e.g ongoing viability of feeding, roosting,</li> </ol> </li> </ol>

	<p>nesting, migratory patterns, spawning and nursery areas and any impacts resulting from changes to water quality during construction and operation and physical barriers to marine fauna movement.</p> <p>c. For underwater noise, modelling results should inform the design and management of construction activities to ensure that the impacts of underwater noise on marine fauna, including little penguins, are minimised.</p> <p>d. Are to consider and assess the cumulative effects of each of the future proposals both singularly and in combination to the effects of adjacent approved proposals or reasonably foreseeable and proposals currently being assessed by the EPA. These other proposals include stormwater drains, other approved marine infrastructure and the Southern Ports Authority Inner Harbour Structure Plan proposal.</p> <p>7. Identify management and mitigation measures for each of the future proposals to demonstrate that the EPA's objectives for marine fauna can be met and to ensure residual impacts are not greater than predicted. This is to include management and monitoring protocols for introduced marine organisms during construction and operation and protocols to reduce the impacts to marine fauna during construction and operation.</p> <p>8. Include a Marine Fauna Management Plan which details the monitoring and management that will apply during and after construction to demonstrate and ensure that residual impacts to marine fauna are not greater than predicted.</p>
<b>Relevant policy</b>	<p>Commonwealth of Australia, 2009 <i>National Biofouling Management Guidance for Non-trading Vessels</i></p> <p><i>Wildlife Conservation Act 1950</i> and associated schedules of specially protected fauna</p>
<b>Coastal Processes</b>	
<b>EPA objective</b>	To maintain the morphology of the subtidal, intertidal and supratidal zones and the local geophysical processes that shape them.
<b>Relevant aspects</b>	Construction and operation of coastal infrastructure, including the breakwaters and marina/harbour waterbodies
<b>Potential impacts and risks</b>	<p>The proposal may have the following effects:</p> <ul style="list-style-type: none"> <li>• Construction of the breakwaters and enclosed waterbodies may alter wave dynamics, interrupt longshore sediment transport and change erosion and depositional patterns.</li> <li>• Construction of the breakwaters may trap algae and seagrass wrack both inside and adjacent to the waterbodies.</li> <li>• The construction of the breakwaters may interrupt tidal flow and exchange between Koombana Bay and the Leschenault Inlet and impact benthic communities and habitats and associated marine fauna.</li> </ul>
<b>Required work</b>	<p>1. Characterise the environment by describing the current coastal processes in the proximity of each of the future proposals. This is to include, but not be limited to,</p> <ul style="list-style-type: none"> <li>a. modelling the local current and wave climate;</li> <li>b. conducting a detailed analysis of existing long-shore sediment movements to estimate erosional and depositional patterns including for cross-shore processes;</li> </ul>

	<p>c. determining beach profiles;</p> <p>d. determining the tidal flows and exchanges between Koombana Bay and the Leschenault Inlet; and</p> <p>e. determining coastal vulnerability and the potential impacts as a result of climate change, including through using multiple tide gauge records in the Bunbury Region to determine local sea level rise.</p> <p>The characterisation is to consider all temporal scales, including seasonal and inter-annual, and the spatial scale must be adequate to address all coastal processes and patterns likely to be affected as a result of the proposal. The characterisation should spatially define the limit of where impacts are expected to occur.</p> <p>2. Identify elements of each of the future proposals which may potentially affect coastal processes, including both direct and indirect impacts and for both construction and operation.</p> <p>3. Predict the residual impacts from the proposal, both direct and indirect, after outlining any avoidance and mitigation options that will be applied. Impact predictions are to:</p> <p>a. Be provided at a sufficient scale to allow all impacts resulting from each of the future proposals to both up and down coast processes as well as onshore-offshore processes to be assessed.</p> <p>b. Be informed by monitoring previously undertaken at local harbours, ports and marinas.</p> <p>c. Determine changes to local current and wave climate, long-shore sediment movements and the erosional and deposition patterns (including to cross-shore processes), and beach profiles resulting from each of the future proposals, including within Leschenault Inlet.</p> <p>d. Consider and assess the cumulative effects of each of the future proposals both singularly and in combination to the effects of adjacent approved proposals and proposals currently being assessed by the EPA. These other proposals include stormwater drains, other marinas and the Southern Ports Authority Inner Harbour Structure Plan proposal.</p> <p>e. Be for both the short and long-term (100 year planning horizon); be provided for best, most likely and worst case scenarios; and consider the likely impacts of climate change.</p> <p>f. Examine the need (if any) for coastal structures to mitigate the impacts of wave shadows that would be caused by each of the future proposals.</p> <p>g. Address the frequency, volume and potential environmental impacts of wrack and maintenance dredging within and adjacent to each of the future proposals.</p> <p>h. Address the requirements of State Planning Policy 2.6, particularly with regard to setback and coastal risk management.</p> <p>4. Identify management and mitigation measures for each of the future proposals to demonstrate that the EPA's objectives for coastal processes can be met and to ensure residual impacts are not greater than predicted. This is to include the identification of areas of land and sea within the harbour/marina boundary to allow for management works and buffer areas to manage sand and/or wrack accumulations. Management and mitigation measures are to have regard for existing coastal management plans, including the <i>Bunbury Coastal Protection, Part A – Koombana Bay Coastal Erosion and Design Report</i> (Seashore Engineering 2013).</p> <p>5. Outline the agency responsible for the management of coastal processes including the roles and responsibilities for wrack management and</p>
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	<p>maintenance dredging.</p> <p>6. Include a Coastal Processes Management Plan which details the monitoring and management that will apply during and after construction to demonstrate and ensure that residual impacts to coastal processes are not greater than predicted.</p>
<b>Peer review</b>	Commission, in consultation with the OEPA, and include in the PER, a peer review of the coastal process modelling and the predicted impacts to coastal process (scopes 1 and 3).
<b>Relevant policy</b>	<p>Department of Transport (2010) Sea Level Change in Western Australia – Application of Coastal Planning</p> <p>Seashore Engineering (2013) <i>Bunbury Coastal Protection, Part A – Koombana Beach Coastal Erosion and Design Report</i>. Report SE001-01-Rev0.</p> <p>Western Australian Planning Commission (2013) State of Planning Policy No. 2.6 <i>State Coastal Planning Policy</i></p> <p>Western Australian Planning Commission (2013) <i>State Coastal Planning Policy Guidelines</i></p> <p>Western Australian Planning Commission (2014) <i>Coastal Hazard Risk Management And Adaptation Planning Guidelines</i></p>

#### 4. Stakeholder consultation

The EPA expects that the proponent will consult with stakeholders who are interested in, or affected by, the proposal. This includes decision-making authorities (DMAs), other relevant State government departments and local government authorities, environmental non-government organisations and the local community.

The proponent must document the stakeholder consultation undertaken and the outcomes, including any adjustments to the proposal and any future plans for consultation. This is to be addressed in a specific section of the PER document and, in addition, key outcomes of consultation are to be reported against the preliminary key environmental factors as relevant.

It is expected that as a part of the consultation with DMA's there will be discussion around each agency's specific regulatory approvals, and a demonstration that other factors can be managed by another regulatory body.

#### 5. Other factors or matters

During assessment of proposals, other factors or matters will be identified as relevant to the proposal, but not of significance to warrant further assessment by the EPA, or impacts can be regulated by other statutory processes to meet the EPA's objectives.

These factors do not require further work as part of the environmental review, or detailed discussion and evaluation in the PER document, although they must be included in the PER document in a summarised, tabular format noting that the PER document will be subject to public review.

At this stage, the EPA has identified the following factors or matters that require addressing in the PER.

- Terrestrial Environmental Quality – with a particular focus on the disturbance of potentially contaminated soils around the Southern Port Authority Outer Harbour area.
- Amenity, particularly regarding the impacts of construction and operation noise, and vibration on surrounding residences.

However it is important that the proponent be aware that other factors or matters may be identified during the course of the environmental review that were not apparent at the time that this ESD was prepared. If this situation arises, the proponent must consult with the EPA to determine whether these factors and/or matters are to be addressed in the PER document, and if so, to what extent.

## 6. Agreed assessment timeline

Table 2 sets out the timeline for the assessment of the proposal agreed between the EPA and the proponent. Proponents are expected to meet the agreed timeline, and in doing so, provide adequate, quality information to inform the assessment.

**Table 2 Assessment Timeline**

Key Stages of Assessment	Agreed Completion Date
EPA approval of ESD	30 June 2015
Proponent submits first adequate draft PER document	4 April 2016
Office of the Environmental Protection Authority (OEPA) provides comment on first adequate draft PER document	13 May 2016 (6 weeks)
Proponent submits adequate revised draft PER document	3 June 2016
EPA authorises release of PER document for public review	17 June 2016 (2 weeks)
Proponent releases authorised PER document for public review	20 June 2016
Public review of PER document	1 August 2016 (6 weeks)
EPA provides Summary of Submissions	19 August 2016 (3 weeks)
Proponent provides Response to Submissions	16 September 2016
OEPA reviews the Response to Submissions	14 October 2016 (4 weeks)

Key Stages of Assessment	Agreed Completion Date
OEPA assesses proposal for consideration by EPA	2 December 2016 (7 weeks)
Preparation and finalisation of EPA assessment report (including two weeks consultation on draft conditions with proponent and key Government agencies)	20 January 2017 (5 weeks + 2 additional weeks due to the Christmas period)

If any stage in the agreed timeline is not met or inadequate information is submitted by the proponent, the timing for the completion of subsequent stages of the process will be revised. Equally, where the EPA is unable to meet an agreed completion date in the timeline, the proponent will be advised and the timeline revised.

The proponent should refer to EPA's EAG 6 – *Timelines for environmental assessment of proposals* for information regarding the responsibilities of proponents and the EPA for achieving timely and effective assessment of proposals.

## 7. Decision-making authorities

At this stage, the EPA has identified the authorities listed in Table 3 as DMAs for the proposal. Additional DMAs may be identified during the course of the assessment.

**Table 4 Decision-making authorities**

Decision-making authority	Relevant legislation
Minister for Planning	<i>Planning and Development Act 2005</i>
Minister for Lands	<i>Land Administration Act 1997</i>
Southern Ports Authority	<i>Port Authorities Regulations 2001</i>
Western Australian Planning Commission	<i>Planning and Development Act 2005</i>
City of Bunbury	<i>Planning and Development Act 2005</i>
Department of Transport	<i>Jetties Act 1926</i>
Department of Environment Regulation	<i>Environmental Protection Act 1986</i>

## 8. Parallel processing

Pursuant to section 40B of the EP Act, the provisions of the EP Act constraining decision-making authorities from making a decision which would cause or allow a proposal being assessed by the EPA to be implemented, do not apply in respect of a strategic proposal unless, and to the extent, that the strategic proposal is itself a significant proposal.

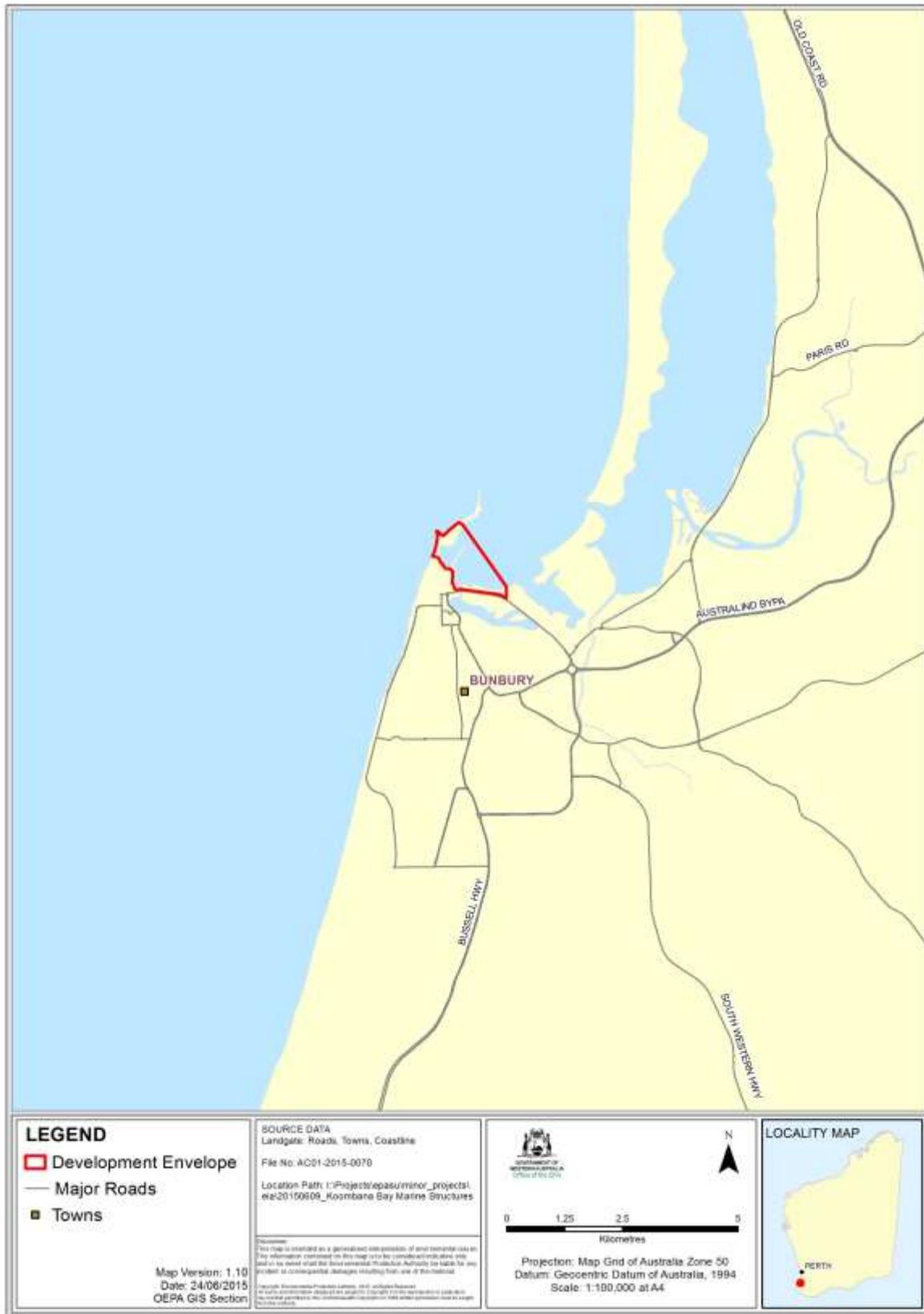
## 9. PER document

When the EPA is satisfied with the standard of the PER document (refer to section 4.4 of EAG 6) it will provide written authorisation for the release of the document for

public review. The proponent must not release the PER document for public review until this authorisation is provided.

The proponent is responsible for advertising the release and availability of the PER document in accordance with instructions that will be issued to the proponent by the EPA. The EPA must be consulted on the timing and details for advertising.

**Figure 1 – Regional location**



**Figure 2 – Development envelope and conceptual future proposal footprints**

