

James Point Stage One Port, Kwinana

James Point Pty Ltd

**Report and recommendations
of the Environmental Protection Authority**

**Direction from the Minister for the Environment
under Section 101 (1)(b)(ii) of the *Environmental
Protection Act 1986* for further assessment**

**Environmental Protection Authority
Perth, Western Australia
Bulletin 1141
June 2004**

ISBN. 0 7307 6777 9
ISSN. 1030 - 0120
Assessment No. 1523

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1. Introduction and background

The Environmental Protection Authority (EPA) has been required by the Minister for the Environment to provide further assessment on the proposal by James Point Pty Ltd (JPPL) to construct and operate a private container and general cargo Port (hereafter referred to as the Stage 1 Port) to the north of James Point in Cockburn Sound.

The EPA reported on the Stage 1 Port proposal in Bulletin 1076 in November 2002. Appeals received against EPA Bulletin 1076 have been considered by the Minister for the Environment who determined that *‘while the proposal can be managed in an environmentally acceptable manner, a more robust and prescriptive set of conditions needs to be applied to the implementation of the proposal’*. On this basis, the Minister has required the EPA to provide further assessment of the proposal pursuant with Section 101, (1)(b) (ii) of the *Environmental Protection Act (1986)* with a view to providing further advice in relation to the conditions to be applied to the implementation of the proposal.

This report provides the EPA’s further assessment and advice to the Minister for the Environment on the conditions to be applied to the implementation of the proposal in order to address the matters raised in the Minister’s appeal determination.

Further details of the Minister’s appeal determination are presented in Section 1.2 and Appendix 1 contains a copy of the Minister’s request to the Chairman of the EPA. Section 2 provides a brief description of the proposal. Section 3 presents the EPA’s advice with respect to the matters contained in the Minister’s appeal determination. The Conditions and Commitments to which the proposal should be subject, if the Minister determines that it may be implemented, are described in Section 4 and set out in Appendix 2. Section 5 presents the EPA’s conclusions and Section 6, the EPA’s Recommendations.

1.1 History

EPA Bulletin 1076

JPPL referred a proposal for its Stage 1 Port to the EPA in December 1999. The EPA determined that the proposal should be assessed at the level of Public Environmental Review (PER). During the public review phase, the EPA received a large number of submissions from a broad spectrum of the community including Government agencies, industry, concerned public groups and individuals.

The EPA reported on the proposal in November 2002 in Bulletin 1076 and identified that the environmental factors relevant to the proposal that required detailed evaluation in the report were: marine biota and habitats; coastal processes; odour; noise; marine water and sediment quality; and coastal access and coastal activities. In Bulletin 1076 the EPA recommended that it is unlikely that the EPA’s objectives would be compromised provided there is satisfactory implementation by the proponent of the recommended conditions and commitments. Due to the number of relevant factors affected by the proposal the recommended conditions at the time required the preparation and implementation of a relatively large number of

Environmental Management Plans/Programmes (EMPs) to manage the potential environmental impacts of the proposal.

Appeals were lodged against the EPA's report and recommendations to the Minister for the Environment.

1.2 Minister's Appeal Determination

The Minister has written to the Chairman of the EPA in relation to her appeal determination. The Minister's letter outlines the matters requiring further assessment and is presented in Appendix 1. A copy of the Acting Appeal Convenor's report which provides further detail on the basis of this determination is available on the Appeal Convenor's Office website at: www.wa.gov.au/appeals.

The Minister has considered the appeals and determined '*that while the proposal can be managed in an environmentally acceptable manner, a more robust and prescriptive set of conditions needs to be applied to the implementation of the proposal*'. On this basis the Minister has allowed the appeals to the extent that:

1. *the EPA be required to provide further assessment pursuant with Section 101, (1)(b)(ii) of the Environmental Protection Act (1986) with a view to providing further advice in relation to the conditions to be applied to the implementation of the proposal. This further assessment should focus on the following matters:*
 - a. *processes and procedures for the provision of input from the community and key stakeholders such as the Town of Kwinana and Cockburn Sound Management Council into the development of the various management plans and programs required;*
 - b. *the overall specificity and enforceability of the conditions and commitments generally, particularly those which involve the preparation and implementation of management plans and programs;*
 - c. *the minimum standards and procedures to be adopted and the conditions which are required to be applied to:*
 - i. *dredging associated with the proposal (including the minimisation of impacts on dolphins);*
 - ii. *the detailed design of the proposed breakwater;*
 - iii. *the management of odour associated with the import or export of livestock from the port;*
 - iv. *the management of noise from port operations; and*
 - v. *the mitigation for loss of beach access for recreational use.*
 - d. *the specific outcomes required in terms of marine habitat restoration, particularly in the context of the Guidelines for Developments Affecting the Shoreline and Seabed outlined in the Interim Environmental Management Plan for Cockburn Sound and its Catchment.*
2. *the further advice required in (1) above should be provided within 90 days of the appeal determination.*

In addition to the above appeal matters, the Minister has also requested the EPA to provide strategic advice pursuant to Section 16 of the *Environmental Protection Act (1986)* in relation to the management of the impacts of likely future maritime proposals within the Cockburn Sound. The Minister has indicated that this advice should be based on the recent work undertaken for the EPA by JPPL and Fremantle Ports, along with other relevant information. This should include the evaluation of the issues associated with the cumulative loss of benthic habitat in Cockburn Sound.

This EPA report only includes the EPA’s advice to the Minister on the environmental conditions to apply to the Stage 1 Port proposal, if it were to be implemented. In relation to the impacts of future maritime proposals, the EPA will be interacting with various agencies including the Department of Planning and Infrastructure and Fremantle Port Authority in preparing its strategic advice pursuant to Section 16 of the *Environmental Protection Act 1986*, by way of a separate publicly available EPA report.

2. The proposal

The main characteristics of the Stage 1 Port were summarised in Table 1 and Section 2 of EPA Bulletin 1076. A detailed description of the proposal is provided in Section 3 of the PER (JPPL, 2001).

Table 1: Summary of key proposal characteristics

Element	Quantities/Description
Reclamation	<p>Approximately 172,000 square metres of filled land and seabed to create a 600 metre long land-backed wharf.</p> <p>Of this area, approximately 151,000 square metres will be reclaimed below low water mark, including approximately 82,000 square metres of seabed which is currently less than 10 metres deep.</p>
Dredging	<p>Dredging of approximately 1,274,700 cubic metres of marine sediments to create a berthing pocket dredged to minus 13 metres Chart Datum (CD) immediately west of the reclaimed land-backed wharf, an entrance channel dredged to approximately minus 12.2 metres CD, and an increase in the depth and width of the Stirling Channel approach to minus 12.2 metres CD with a final width of approximately 175 metres.</p> <p>This dredging will occur over an area of approximately 800,000 square metres, including approximately 90,000 square metres of seabed that is currently less than 10 metres deep.</p>

Element	Quantities/Description
Offshore breakwater	<p>Approximately 800 metres long in 10 metre deep water extending from approximately 200 metres off-shore in an arc to approximately 500 metres off-shore.</p> <p>Breakwater construction requiring approximately 574,000 cubic metres of imported limestone core and armour material.</p>
Target trades	<p>Exports may include:</p> <ul style="list-style-type: none"> • Livestock—sheep, cattle, fodder <ul style="list-style-type: none"> ○ Up to 3,000,000 sheep per year; and ○ Up to 100,000 cattle per year • Bulk trades—silica sand, mineral sand • Scrap steel • General cargo—containers, bulka bags, project cargoes. <p>Imports may include:</p> <ul style="list-style-type: none"> • Bulk trades—fertiliser products, grain, cement clinker • General cargo—steel products, project cargo.
Transport	<p>Construction:</p> <p>Transport of rock armour, core material and fill requiring approximately 56,000 truck movements over a period of approximately 9 months.</p> <p>Operations:</p> <p>Transport of livestock from farms and existing holding facilities at Mundijong and Wellard on an on-going basis. Livestock transport will result in an increase of heavy vehicle traffic on Anketell Road west of the Kwinana Freeway, and on Rockingham Road and Beard Street, Kwinana.</p>

The EPA is aware of a Stage 2 Port proposal at James Point. However, this Stage 2 proposal has not been referred to the EPA. The EPA understands that any proposal to progress to Stage 2 would need to be assessed by the EPA and approved by Government

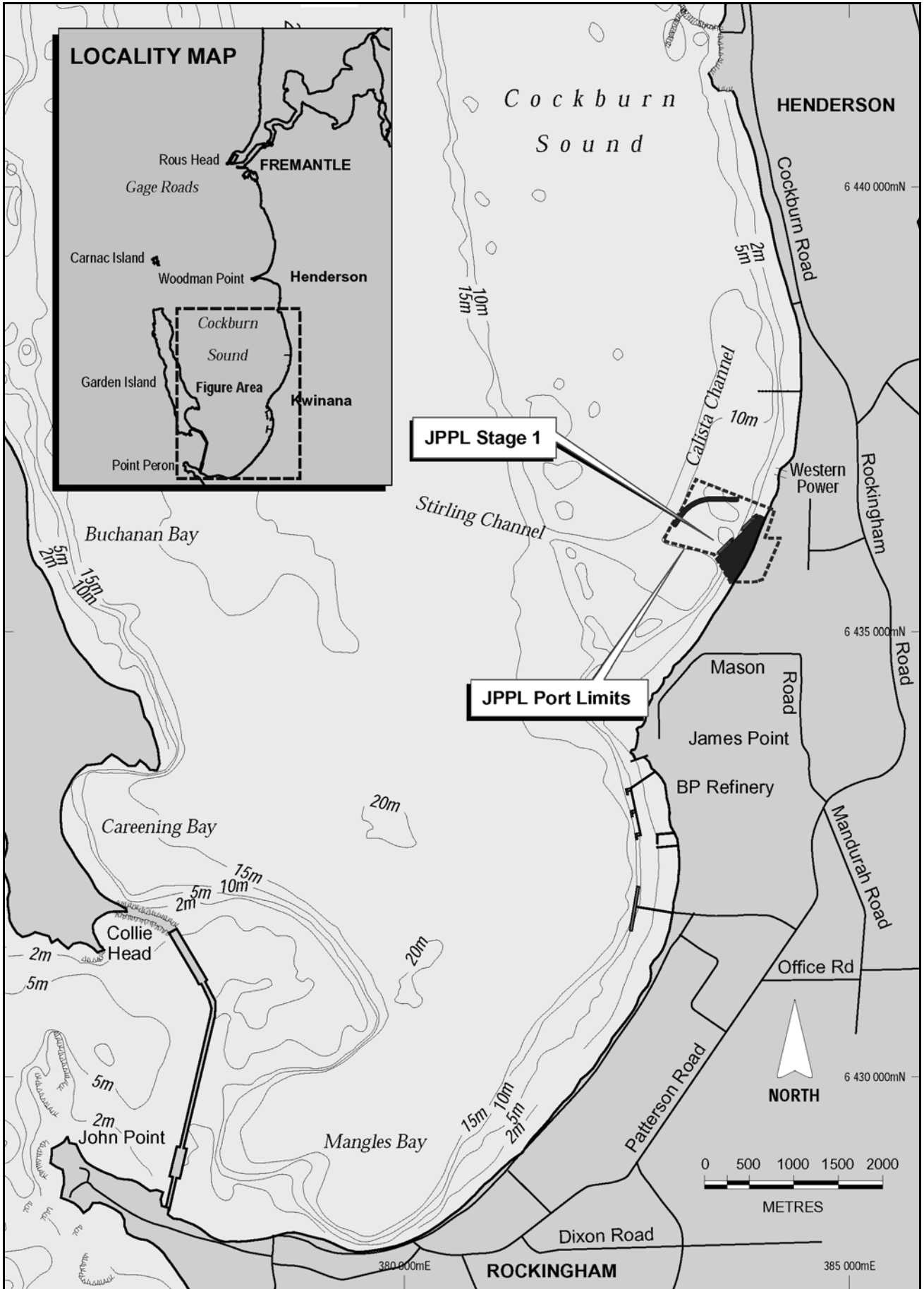


Figure 1 Location Map

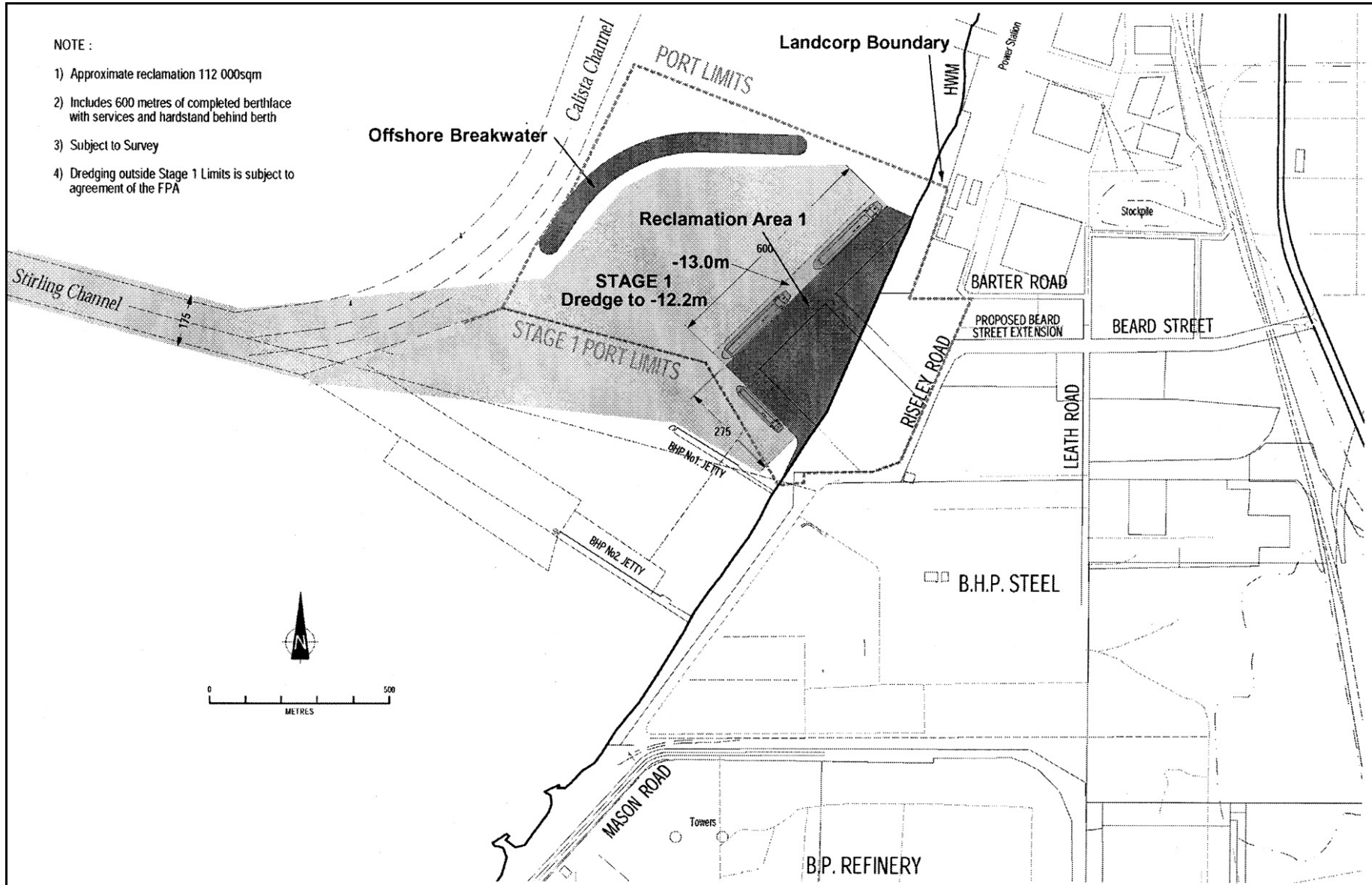


Figure 2 Stage 1 Port layout.

3. EPA's Advice and Recommendations on appeal matters

The EPA's advice and recommendations are presented below under the respective appeal matters derived from the Minister's requirement for further assessment of matters.

3.1 Community consultation

Minister's appeal determination

In relation to the issue of community consultation, the Minister has determined the appeals to require processes and procedures for the provision of input from the community and key stakeholders such as the Town of Kwinana and Cockburn Sound Management Council into the development of the various management plans and programs required.

EPA's advice and Recommended Conditions

The EPA has prepared new Recommended Conditions 6-1, 6-2 and 6-3 (see Appendix 2) to provide new opportunities for local community and stakeholder participation during the development of the various Environmental Management Plans and Programs (EMPs) required by the Recommended Conditions.

Recommended Condition 6-1 requires the proponent to undertake consultation and implement a public review process in a manner consistent with the steps and procedures described in Schedule 3 of the draft Ministerial Statement, during the preparation of the various required EMPs.

Schedule 3 specifies a number of the steps in relation to the public review of EMPs, including requirements for:

- draft EMPs to be subject to an advertising and public review/comment period of 4 weeks (not more than three EMPs to be advertised at a time);
- copies of the draft EMPs to be supplied and distributed during the public review period to key stakeholders (as listed in Schedule 3); and
- project open days to be held during the public review period to engage input into the draft EMPs.

Recommended Condition 6-2 requires the proponent to modify the various EMPs following the public review process to ensure that valid environmental concerns raised during the public review process are incorporated into the final EMPs prior to its approval.

The EPA considers that the draft EMPs may be modified if a submission was made during the public review process that:

- provides additional information that is of direct relevance to environmental management of the Stage 1 Port Proposal:

- proposes alternative management measures that would better achieve the EPA's environmental objectives;
- provides further information on latest Government legislation, policies etc.; and
- indicates omissions, inaccuracies or a lack of clarity.

Due to the potential timeframes involved in undertaking the required public review processes, the number of EMPs required by the Draft Statement and the need to finalise and have the various EMPs approved prior to the commencement of construction, the EPA considers that in order for the public review process to be meaningful and effective the proponent should commence the public review process for draft EMPs, at least 6 months prior to the anticipated start date for construction. Where possible, the normal approvals process for EMPs, which routinely involves reviews by relevant State and local Government agencies, should be undertaken in parallel with the above mentioned public review process. The proponent should also consider the level of resources and support required to ensure the public review process does not impact or impose administrative burdens on the functions of the various stakeholders including community groups and State and local Government agencies.

The EPA has also recommended a condition (Recommended Condition 6-3) which requires the proponent to establish a James Point Port Stakeholder Reference Group to assist in providing advice on the environmental aspects of the construction and operation of the proposal generally and to provide feedback into the preparation and implementation of the EMPs. It is recommended that the terms of reference and membership of the Group be approved by the Minister.

Such a group could also provide a focus for people to raise concerns about whether the Ministerial Conditions are being complied with. As such, the terms of reference for the James Point Port Stakeholder Reference Group should also relate to the ongoing environmental management of the proposal, which could include participation in periodic third-party, or community environmental audits of Port operations.

Summary

The EPA has provided Recommended Conditions 6-1, 6-2 and 6-3 to address the Minister's appeal determination in relation to community consultation. The new recommended conditions provide for new opportunities for the community to provide input and comments during the preparation and implementation of the various EMPs required by the Recommended Conditions.

Recommended Condition 6-3 requires the establishment of the James Point Port Stakeholder Reference Group to ensure ongoing interactions between the proponent and the community and affected stakeholders. Such a group should also provide a focus for people to raise concerns about whether the Ministerial Conditions are being complied with.

3.2 Specificity and enforceability of the conditions and commitments

Minister's appeal determination

In item 1. b) of the Minister's appeal determination, the Minister requested further advice on the overall specificity and enforceability of the conditions and commitments generally, particularly those which involve the preparation and implementation of management plans and programs.

EPA's Advice and Recommended Conditions

The Recommended Conditions in Appendix 2 are substantially revised compared to the previous Recommended Conditions in Bulletin 1076.

In formulating the new set of Recommended Conditions to improve the specificity and enforceability of conditions the EPA considers the following to be relevant:

- the Recommended Conditions have in most cases been formulated to require performance criteria, specific management measures and/or environmental outcomes to be met where it is considered necessary for the achievement of acceptable environmental outcomes. For example, Recommended Condition 10-1 pertaining to drainage management requires the proponent to prevent the discharge of potentially contaminated stormwater from the proposal into the marine waters of Cockburn Sound. Recommended Condition 10-2 specifies the measures to be taken to achieve the outcome (i.e. ensure wharf is sealed and all potentially contaminated stormwater is conveyed to and collected in impervious detention tanks and removed offsite);
- in general terms, the new Recommended Conditions specify more than just the preparation and implementation of EMPs as previously required in the Recommended Conditions in EPA Bulletin 1076. The development of EMPs can sometimes provide for downstream negotiation of environmental outcomes and management measures, which may not be desirable. In addition, proponent's EMPs are, in some cases, not written in a manner that is intended to be legally binding. Therefore, it may be appropriate to frame the performance criteria, required environmental outcomes and/or management measures in stand-alone conditions themselves rather than being deferred for inclusion in subsequent EMPs. The EPA expects that EMPs would still be required to specify the details of 'how' (eg. responsibilities, timing, resources etc.) the performance criteria, environmental outcomes and management measures will be achieved and undertaken by the proponent; and
- legal advice was sought on the approach taken to drafting the Recommended Conditions pertaining to noise, dredging and odour.

Summary

The EPA considers that the specificity and enforceability of the new Recommended Conditions have been improved by taking into account the above general considerations in the formulation of conditions, particularly for the Recommended Conditions that relate to the critical environmental issues relevant to the Stage 1 Port proposal.

3.3 Dredging

Minister's appeal determination

In item 1.c) i) of the appeal determination, the Minister has requested minimum standards and procedures to be adopted and the conditions which are required to be applied to dredging associated with the proposal (including the minimisation of impacts on dolphins).

EPA's advice and Recommended Conditions

Dredging, land reclamation and breakwater construction will cause turbidity plumes consisting mainly of suspended sediments. Plumes are likely to reduce the amount of light reaching the seafloor. As benthic producers such as seagrass and algae, convert sunlight to energy by photosynthesis, a reduction in the amount of light at the seafloor could affect the ability of benthic primary producers to carry out photosynthesis, thus affecting production, growth and potentially survival. The EPA has previously indicated in Bulletin 1076 that rigorous management of turbidity will be required to ensure the ecological value of seagrass is protected from the effects of dredging activities.

The proponent has provided further technical information following the Minister's appeal determination and prepared a detailed framework for the management and monitoring of dredging in relation to the proposal with a focus on the protection of seagrass. The proponent's management framework for dredging was prepared in consultation with the EPA Service Unit and is considered to be logical and based on appropriate science. The framework is discussed below under the three broad issues of dredging management, monitoring and minimising impacts on dolphins.

Dredging Management

The proponent has put forward a series of dredging management measures that, if satisfactorily implemented, would minimise turbidity generation during the course of dredging operations. The dredging management measures, which have been secured through the Recommended Condition 17-7, are as follows:

- the use of a cutter suction type dredge. Based on anecdotal evidence from the 'Southern Harbour' dredging project in Jervis Bay, this type of dredge tends to produce less turbidity than other methods such as trailer hopper dredges;
- dredging will only be undertaken during the winter/autumn period (over three months during the five month period between 1st of May to 30th September). This is a time when benthic primary productivity and water based recreational use of Cockburn Sound is likely to be at their lowest;
- the dredged material will be pumped directly on-shore via a floating pipeline to a bunded reclamation area. This would prevent 'double-handling' of dredged material and avoids the use of hopper barges to transport the dredged material to shore. The use of hopper barges is considered to be an additional source of turbidity;

- installation of silt curtains around the point at which return water is discharged from the reclamation area into Cockburn Sound; and
- the requirement to cease dredging in the event that monitoring shows that predetermined environmental standards for underwater light levels in Recommended Conditions 17-4 and 17-5 over areas containing seagrass have been exceeded.

Monitoring during dredging

Consistent with the EPA's previous advice that the key environmental attribute requiring protection from the effects of turbidity is seagrass, the proponent's proposed framework for monitoring focuses on monitoring underwater light for determining light attenuation coefficients, and seagrass health at impact and reference sites. Light attenuation coefficient in the water column (being inversely related to light reaching benthic plant communities) is considered to be an ecologically significant parameter in monitoring the potential risks of dredging operations on seagrass.

The EPA has endorsed the proponent's framework for monitoring underwater light and incorporated the key elements of its approach to monitoring into Recommended Conditions 17-1 to 17-6.

Recommended Condition 17-1 requires the proponent to establish logging underwater light meters at impact sites (where seagrass is found and where water clarity has the potential to be affected by dredging) and reference sites (where seagrass is found and where water clarity does not have the potential to be affected by dredging operations).

Recommended Conditions 17-2 and 17-3 set out the requirements in relation to the operation of the light meters, frequency of monitoring, the recording of underwater light intensity, comparing the results of monitoring from impact sites to reference sites, calculations for determining the instantaneous light attenuation coefficient and weekly reporting requirements. The logging light meters will record light at 15 minute intervals during daylight hours with monitoring results downloaded from the logger every week.

Recommended Conditions 17-4 and 17-5 specifies the 'Light Standards', which, if exceeded, would require the proponent to cease dredging operations. Recommended Condition 17-4 requires that where the median of the light attenuation coefficient for any impacts sites is greater than 'Light Standard A' for four consecutive weeks the proponent will be required to cease dredging operations. Light Standard A is defined as:

- the light attenuation coefficient at which 10% of surface photosynthetically active radiation at any monitoring site will reach the seabed at that monitoring site; or
- the calculated 80th percentile of all light attenuation coefficients for all reference monitoring sites during that period, whichever is greater.

The proponent shall not recommence dredging until the median of the light attenuation coefficient for all impact sites, calculated over a day, is less than Light Standard A, for seven consecutive days.

Similarly, Recommended Condition 17-5 requires that where the median of the light attenuation coefficient for any impact sites is greater than 'Light Standard B' for two consecutive weeks, the proponent will be required to cease dredging operations. Light Standard B is defined as:

- the light attenuation coefficient at which 5% of surface photosynthetically active radiation at any monitoring site will reach the seabed at that monitoring site; or
- the calculated 95th percentile of all light attenuation coefficients for all reference monitoring sites during that period, whichever is greater.

The formulation of Light Standard A is based on technical information provided by the proponent, information from previous studies on the light requirements for seagrass photosynthesis, as part of the *Southern Metropolitan Coastal Waters Study* (1991-1994) (DEP, 1996), and the recommended approach outlined in the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality* (ANZECC & ARMCANZ, 2000). The requirements to compare monitoring results to reference sites recognise the importance of considering natural processes (eg. river discharges, storms etc.) when monitoring light attenuation.

Light Standard B is similar to A and is developed to protect seagrass from the impacts of more severe shading.

Seagrass Monitoring Program

In addition to requiring the proponent to monitor underwater light, as the key environmental parameter of concern, the EPA has also included requirements for the monitoring of the seagrass itself.

The EPA has recommended Condition 17-10, which requires the proponent to prepare a Seagrass Monitoring Program in order to monitor the effects of dredging operations on the health of seagrass. The monitoring programme will require the proponent to establish a program of fortnightly seagrass health monitoring involving the measurement of seagrass shoot and leaf density from permanent quadrats at impact and reference sites and evaluate the results against predetermined seagrass health criteria. In the event seagrass health criteria are not met during the dredging program, the proponent will be required to undertake management responses. The EPA considers that management responses could include adjustments to the dredging operations or the reestablishment of seagrass shoot density in the affected area.

Minimising impacts on dolphins

In relation to the issue of minimising impacts on dolphins, the proponent commissioned a review by Dr M Calver, P Waterson and H Finn of Murdoch University (Calver, 2001) which identified the need to minimise impacts from dredging on small seagrass patches along the edge of the Jervoise Shelf within a 1-2 km radius of the proposal area which is used by dolphins for foraging, along with

managing the timing of dredging operations as key factors in mitigating or reducing the potential impacts of the proposal on dolphins.

The EPA's Recommended Conditions focus on managing and monitoring the impacts of dredging on areas containing seagrass in the vicinity of the proposed development. These areas have been identified by Calver *et al* (2001) as being important for dolphin foraging. In relation to the timing of dredging operations, Calver's report indicates that, from research undertaken to date, dolphins use the area near the proposed development most intensively during the spring period. The proponent's proposed framework for dredging proposes that dredging take place during a three-month period, between 1st May to 30th September, which largely avoids the spring period. The restriction on timing of dredging is provided for in Recommended Condition 17-7.

Notwithstanding the incorporation of Calver's recommendations in the Recommended Conditions, it is possible that dolphins and related dolphin eco-tourism operations (currently undertaken from Rockingham) could still be temporarily affected by dredging impacts.

Summary

The technical information and proposed dredging framework put forward by the proponent in relation to dredging management, monitoring and impacts on dolphins, combined with the EPA's recent experiences with large scale dredging projects (eg. Geraldton Port, Southern Harbour and Dampier Port etc.), has enabled the EPA to recommend a series of dredging related conditions which includes performance criteria, new management actions and a greater level of prescription for monitoring than previously specified, to ensure that the ecological value of seagrass can be protected with a high level of certainty.

It is the EPA's opinion that Recommended Conditions 17-1 to 17-12 satisfactorily addresses the Minister's appeal request with respect to the minimum standards and procedures to apply to conditions for dredging impacts.

3.4 Coastal Processes

Minister's appeal determination

The Minister has requested further assessment on the minimum standards and procedures to be adopted and the conditions which are required to be applied to the detailed design of the proposed breakwater. The Minister has also requested that the further modelling to be carried out to determine the final design of the proposed breakwater should be subject to review by relevant expert stakeholders and be made publicly available.

EPA's advice and Recommended Conditions

This appeal matter relates to the construction of the offshore breakwater and its potential impacts on coastal processes. The offshore breakwater has the potential to cause reflected waves to reach the shoreline up to 1700 metres north of the proposal. The EPA noted during the previous assessment that, while near-shore coastal areas within 1700 metres north of the proposal had largely been developed for industry,

Challenger Beach is located immediately north of the Alcoa Jetty and is an important recreational asset. On this basis, the EPA considered that it is important that both existing maritime infrastructure and the recreational amenity of Challenger Beach be protected from potential impacts of the proposal, particularly from the offshore breakwater.

The proponent advised during the EPA's previous assessment that the offshore breakwater presented in the Public Environmental Review document was conceptual and indicative because the land tenure and operational requirements associated with the proposal were yet to be finalised. The proponent also advised that detailed modelling of wave reflection and refraction associated with the offshore breakwater had not been undertaken because any slight changes in plan shape and alignment of the breakwater could have a significant effect on the result of wave reflection modelling. It should also be noted that the proponent has not made a final decision as to whether the offshore breakwater as described in the proposal will in fact be constructed.

In the event the proponent determines the need to implement the offshore breakwater and the land tenure and final design parameters for the breakwater are established, the proponent has provided a commitment to undertake detailed wave reflection modelling to refine the shape of the offshore breakwater such that significant wave energy is not reflected onto the coast.

Accordingly, Recommended Condition 15-2 has been drafted to require the proponent to demonstrate through detailed assessment and numerical wave modelling that:

- waves reflected from the offshore breakwater (design) will be substantially directed away from the coast;
- both existing maritime infrastructure and the recreational amenity of Challenger Beach are protected from potential impacts of the offshore breakwater; and
- the (final) design of the offshore breakwater will not have an adverse effect on coastal processes and stability of beaches and dunes on the eastern shores of Cockburn Sound.

The EPA considers that appropriate verification and modelling methodology for determining reasonable worst-case impact predictions, particularly during storm events, should be used.

Recommended Condition 15-2 also requires the review referred to above to be made publicly available. In line with the Minister's appeal determinations, Recommended Condition 15-3 will require the assessment and detailed modelling to be subject to peer review by 'expert stakeholders' to the requirements of the Minister, prior to finalisation of breakwater design.

The EPA notes that the proposed offshore breakwater is not the only aspect of the proposal which has the potential to have impacts on coastal processes. In addition to the offshore breakwater, the reclamation pad, proposed dredged basins and shipping channels are also likely to impact on coastal processes and sediment transport to some

degree. As such, conditions requiring the proponent to undertake ongoing monitoring and management of coastal impacts will be required.

To provide ongoing safeguards, Recommended Conditions 15-4 and 15-5 require the proponent to prepare and implement a Coastal Monitoring and Management Program in order to protect the recreational amenity of local beaches and to monitor and manage the impacts of the Port on local coastal processes. The Program to be prepared by the proponent should provide for ongoing shoreline monitoring up to 2 kilometres on either side of the proposal and include annual:

- examination and comparisons of historical and post-construction aerial photographs to detect changes to shoreline positions;
- measurements of beach profiles and widths; and
- monitoring of beach dunes.

In the event that erosion or changes to shoreline positions are detected that are inconsistent with the existing shoreline shape (localised pockets of erosion) or with the historical range of shoreline positions, then Recommended Condition 15-6 requires the proponent to undertake contingency measures in consultation with the Department of Planning and Infrastructure, Cockburn Sound Management Council and the Town of Kwinana.

Summary

The EPA considers that Recommended Conditions 15-2 and 15-3 which broadly define the environmental standards to be met for the final design of offshore breakwater and the requirement for the wave modelling work to be subject to peer review respectively, would ensure careful scrutiny of the breakwater's design prior to the proponent receiving approvals for constructing the offshore breakwater.

It is the EPA's view that Recommended Conditions 15-2 and 15-3 satisfactorily address the Minister's appeal determination with respect to providing minimum standards and procedures for the detailed design of the breakwater.

3.5 Odour

Minister's appeal determination

In item 1.c) iii) of the Minister's appeal determination, the Minister requested further assessment on the minimum standards and procedures to be adopted and the conditions which are required to be applied to the management of odour associated with the import and export of livestock from the port. The Appeal Convenor's report suggests that conditions applied to the management of odour should be stringent and based on specific management actions which ensure that adverse impacts do not occur.

EPA's advice and Recommended Conditions

The proponent has provided further information in the form of an Odour Management Plan Overview (OMPO) which includes the management measures it intends on undertaking during the implementation of the proposal to manage odour. It is

understood that the OMPO is based, in most parts, on recent advice obtained by the proponent from by Dr Ian Wallis (from Consulting Environmental Engineers). Dr Wallis was previously engaged by the EPA to provide an independent review of the proponent's odour investigations in assessing the potential odour emissions from the proposal.

The proponent has advised that the procedures in the OMPO have been designed to reflect best practice in sheep and cattle exports in Australia. The proponent has also put forward a view that the procedures outlined in the OMPO will be superior to those operating in Fremantle Port.

The EPA has prepared recommended Conditions 8-2, 8-3, 8-4, 8-5 and 8-6 that takes into account the proponent's OMPO, the information from the EPA's previous assessment, and advice from the Department of Environmental Protection (DEP). The requirements of the Recommended Conditions for odour are predicated on minimising the duration of the odour sources. The Recommended Conditions therefore focus on minimising the duration livestock and livestock ships with livestock are in port and the frequent clean-up of wastes generated by livestock. The Recommended Conditions for odour include requirements for:

- no livestock be held in the Stage 1 Port. Livestock that are transported to the port shall be loaded onto races and ramps for immediate loading onto ships;
- livestock ships to depart the port within 3 hours of completion of livestock loading and livestock ships that enter the port area, partially loaded with livestock, shall load and depart from the port within 24 hours of the ship berthing;
- a Livestock Loading Plan and Schedule to be prepared at least 48 hours prior to the loading of livestock in order to coordinate truck movements and loading of ships to maximise loading rates and minimise duration of livestock loading. It is envisaged that minimising the loading time would have an effect on the duration of the odour source;
- implementation of routine maintenance and house-keeping practices to ensure no accumulation of livestock liquid and solid wastes in and around the Port occurs. This shall include procedures for the daily removal of accumulated livestock wastes from the port for recycling or removal to a licensed facility;
- the preparation and implementation of an Odour Management Plan with the dual objectives of ensuring that the amenity, health, welfare and comfort of residents and workers in the Kwinana Industrial Area are protected from unreasonable odour levels and to detail 'best practice' design and operation for the facility, based on national and international benchmarking; and
- odour sampling of livestock operations having regard for worst case conditions. The purpose of the odour sampling is to determine whether modifications to the Odour Management Plan are required in the context of adaptive management.

In relation to the imposition of numerical odour criteria in the Ministerial Conditions, it should be noted that EPA Guidance Statement No. 47 “*Assessment of Odour Impacts from New Proposals*” specifies that criteria in the Guidance Statement are not intended to be used for the setting of licence conditions or for the investigation of odour complaints.

The EPA notes the advice of the DEP that the current methods in odour measurement are still hampered by a lack of direct and continuous reading instrumentation. The odour measurement process relies on the collection of odorous air samples and assembly of a panel of people for dynamic olfactometry to determine the number of odour units in the collected sample. This process is time consuming with slow turn-around times and may be difficult to undertake outside normal business hours. In view of the uncertainty in measuring odour levels, the practical application of odour criteria for odour management, monitoring and enforcement purposes may be inappropriate.

For this proposal, and in the absence of appropriate numerical odour criteria, the EPA has prepared Recommended Condition 8-1, which requires the proponent ensure that odour emitted from the implementation of the proposal does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not within the boundaries of the Stage 1 Port.

Summary

To address the Minister’s request for minimum standards and procedures on odour, the EPA has recommended a series of conditions (Recommended Conditions 8-2, 8-3, 8-4 and 8-5) which focus on minimising the duration livestock and livestock ships are in the Stage 1 Port area and the frequent clean-up of livestock wastes.

In addition to the above, the EPA has also provided Recommended Condition 8-1 which requires the proponent to ensure that odour emitted from the Port does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not within the boundaries of the Stage 1 Port.

3.6 Noise

Minister’s appeal determination

In relation to the issue of noise, the Minister has required further assessment on the minimum standards and procedures to be adopted and the conditions which are required to be applied to the management of noise from port operations. More specifically, the Minister has upheld the proponent’s appeal to the extent that the EPA is required to take into account the matters raised in the proponent’s appeal in relation to noise from livestock ships.

EPA’s advice and Recommended Conditions

The EPA understands that this appeal matter primarily relates to noise from livestock ships and the proponent’s appeal against the EPA’s previous recommended conditions in relation to the imposition of noise limits on livestock ships. The Minister has upheld the proponent’s appeal on the basis that it was considered appropriate that the recommended condition be reviewed to provide for more flexibility in terms of port operations, while ensuring the same outcome is required in terms of noise emissions.

During the previous EPA assessment, the proponent provided information to show that if two vessels are in the Port concurrently and each vessel is operating with a sound power level no greater than 118 dB(A) (or a total sound power level of 121 dB(A) from two ships), then noise from the proposed shipping activities could meet statutory criteria at the boundary and at the nearest areas zoned residential. Hence, the EPA's previous recommended condition (recommended conditions 11-4 and 11-5 in Bulletin 1076) specified that a maximum sound power level of 118 dB(A) be met for each livestock ship, when no more than two ships are in port simultaneously.

The proponent has provided further information and indicated in its appeal that whilst the recommended condition permits two ships to operate simultaneously at 118dB(A), the recommended condition would preclude a single ship of 121 dB(A), or two ships of 117 and 119 dB(A), or 120 and 114 dB(A), even though the combined sound power level (i.e. 121 dB(A)) is the same and predicted to comply with the *Environmental Protection (Noise) Regulation 1997*.

The EPA has previously provided advice on the proponent's appeal and indicated that while the proponent's appeal is technically correct, the increased flexibility sought may cause an increased level of management and monitoring from a compliance perspective. The EPA considered that the conditions would be far easier to implement if a single noise limit was applied equally to all ships.

Summary

In line with the Minister's appeal determination, the EPA has modified the original Recommended Condition in relation to noise from livestock ships. The new Recommended Condition 7-4 takes into account the information presented in the proponent's appeal by requiring a total sound power level of 121 dB(A) to apply to one or a combination of two livestock ships. Recommended Condition 7-4 ensures the same environmental outcome is achieved while providing increased flexibility for the proposed port operations. The requirements of the other noise related conditions have undergone some variations, including the inclusion of technical definitions where applicable and an additional requirement on the proponent to ensure that noise emitted from the Port does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Port (Recommended Condition 7-7). However, the overall intent of the original noise conditions have remained unchanged.

3.7 Coastal access

Minister's appeal determination

In item 1.c) v) of the Minister's appeal determination, the Minister requested further assessment of the minimum standards and procedures to be adopted and the conditions which are required to be applied to the mitigation for loss of beach access for recreational use. The Appeals Convenor's Report expands on the issue of mitigating the loss of coastal access, and indicated in the report that the Cockburn Sound Management Council (CSMC) be consulted, with particular emphasis on assisting with the development of alternative facilities and opportunities for the exercising of horses.

EPA's advice and Recommended Conditions

The CSMC, Town of Kwinana and City of Rockingham have provided advice to the EPA in relation to offsets for the loss of beach access. The common overarching view held by the three agencies is that the proponent should be required to demonstrate that all reasonable efforts to avoid and minimise impacts resulting from the proposal have been undertaken in the first instance, prior to the consideration of options for offset.

Prior to arriving at this view, discussions between representatives from the CSMC, the Town of Kwinana, City of Rockingham and the proponent, identified a number of options which could be considered as offsets. The key offsets that were raised and considered include either one or a combination of the following:

1. that the proponent be required to prepare and implement a Conservation and Recreation Enhancement Plan to ensure existing uses of Barter Road Beach are continued to be provided for within the locality (i.e. from Challenger Beach south to CBH Jetty). The Plan would address horse exercising, recreational and commercial fishing, dolphin viewing, general public access boating uses and coastal restoration and enhancement of Wells Park, Barter Road and Challenger Beach;
2. improving access and enhancing facilities on the remaining, northern portion of Barter Road Beach. This option could include the construction of adequate car parks to accommodate the loading and unloading of horses and parking of horse floats to enable the horse fraternity to continue to use the remaining portion of Barter Road Beach; and
3. examining alternative beaches for the provision or enhancement of facilities to cater for the horse fraternity. This includes the extension or provision of car parks (similar to the Barter Road Beach Option) and beach restoration works at beaches which currently provide for horse riding activities such as near the CBH grain terminal at Kwinana Beach.

In relation to item 2 above, it should be noted that the EPA has previously provided advice on the issue of non-industrial use of the land/beach to the north of the proposed Port which is zoned Industrial under the Metropolitan Region Scheme. The EPA reiterates its previous advice that '*Access for non-industrial users should only occur if detailed operational risk assessment indicates that cumulative and societal risk levels at the beach would be acceptable*' (EPA, 2002). The EPA also notes that LandCorp, as the current owner of the land, has expressed concerns regarding public safety and subsequent liability issues of allowing non-industrial use of Barter Road Beach. Furthermore, it remains uncertain whether the remaining beach to the north of the proposal would fall within the ownership and control of the proponent.

In relation to the option in item 3 above, on the development of facilities at other beaches including Kwinana Beach, this raises several issues including the potential recreational conflicts that can arise as animal exercising is not always compatible with other recreational uses and conflicts could result with increasing pressure from more horses, to new areas. Greater levels of policing by local government rangers may be required to address new pressures on existing beaches. It is also uncertain whether the

gradient and incline of Kwinana Beach (as two important requirements for horse exercising on beaches) are comparable to Barter Road Beach.

While Kwinana Beach currently caters for horse exercising activities, it is understood that this beach has recently experienced severe erosion damage. The Department of Planning and Infrastructure has recently recommended the construction of a series of groynes to stabilise the affected beach which, if endorsed by the Local Council (town of Kwinana), could affect the suitability of this beach for horse exercising activities.

Based on the above, it is likely that the requirement for the proponent to examine offsets with a focus on horse exercising activities within the local area creates limitations in terms of the area available for any beach access/horse exercising offset project.

In determining whether minimum standards and procedures for the loss of coastal access (with a focus on horse exercising facilities) could be imposed as part of the environmental conditions, several considerations are relevant. These are as follows:

- the practicability of any mitigation options would depend on consensus being reached between the relevant agencies, stakeholders, and the proponent, which at this stage has not occurred within the time frames specified in the Minister's appeal request. It is likely that a considerable level of negotiation may be required between the local and relevant authorities, proponent and affected stakeholders before consensus is reached on a final mitigation project. As such it would be premature to define the minimum standards and procedures, at this early stage;
- determining the final location and the minimum standards and procedures to apply to mitigation for horse exercising activities will most likely involve strategic and local land use planning decisions which have not yet occurred and which will be beyond the control of the proponent;
- the ongoing management of mitigation measures/projects that involve the construction of alternative horse exercising facilities are unlikely to be achieved by the proponent due to land ownership, tenure and jurisdictional issues; and
- the matter of defining minimum standards and procedures on the development of alternative facilities and opportunities for the exercising of horses is a matter that extends beyond the EPA's normal role and needs to involve relevant authorities and stakeholders.

The EPA considers that securing mitigation and offsets for loss of beach access will require considerable negotiation between various agencies and this negotiation is most appropriately pursued through the local and regional planning approval processes. This can be demonstrated by the recent decision in relation to the Port Coogee Marina proposal (subject of formal assessment by the EPA in 2002) where the issue of coastal access was the subject of negotiation between the developers, the Minister for Planning and the City of Cockburn during the planning approval process.

In response to the various options, JPPL has previously advised that it would be more appropriate to fund the preparation of a Conservation and Recreation Enhancement Plan (as previously suggested by the CSMC), as JPPL understands that this is a role of the local authority having jurisdiction over a particular area. JPPL also advised that it will consider funding the implementation of specific measures with respect to Barter Road or Challenger Beach as a means of providing an offset. If the proponent's approach for the provision of funds for implementing offset/s was adopted, then the process to agree on the 'on ground' outcomes, amounts of funding to deliver on the agreed outcomes and the method of administering the funds are likely to be issues to consider through the planning process.

In conclusion, the EPA considers that the negotiations that may be required to determine suitable minimum standards and procedures for loss of coastal access should occur between the relevant State and local Government authorities and affected stakeholders through the statutory planning approvals process.

Summary

The overarching advice of the CSMC, Town of Kwinana and the City of Rockingham is that the proponent should be required to demonstrate all reasonable efforts have been undertaken to minimise impacts in the first instance. It would be appropriate that the above advice is given due consideration by the proponent.

Notwithstanding the above, the EPA holds the view that this is a matter that should be addressed through the planning process. Therefore, it is considered that the imposition of minimum standards and procedures through environmental conditions set under Part IV of the *Environmental Protection Act* is not an appropriate means of addressing mitigation for loss of beach access, particularly for horse exercising activities. Accordingly, no conditions to address the issue of loss of beach access have been recommended by the EPA.

Taking into account all of the above issues, the EPA recommends that a review mechanism be established through the planning approval process to ensure that suitable requirements are placed on the proponent at the appropriate time and for the appropriate amount of resources to contribute to the mitigation for loss of beach access associated with the proposal.

3.8 Marine habitat restoration

Minister's appeal determination

Item 1.d) of the Minister's determination requests further assessment on the specific outcomes required in terms of marine habitat restoration, particularly in the context of the guidelines for the *Developments Affecting the Shoreline and Seabed* outlined in the *Interim Environmental Management Plan for Cockburn Sound and its Catchment*.

EPA's advice and Recommended Conditions

The EPA has assessed the impacts of the Stage 1 Port on marine habitat in EPA Bulletin 1076. In Bulletin 1076, the EPA did not consider that the incremental impact of this proposal on shallow sandy habitat would significantly compromise the EPA's objectives for the factor of Marine Biota and Habitat.

In view of the significant areas of sandy shallow habitat that have been modified by the development of industry along the shores of Cockburn Sound, the EPA *'expects that the proponent should contribute to the maintenance and protection of the broader environmental values of marine habitats in Cockburn Sound. The EPA acknowledges that offsets may not be achievable in the local area of the development, but there are opportunities to implement management actions to achieve the maintenance or improvement of the ecological and/or social values of the broader Cockburn Sound'* (EPA, 2002). Accordingly, the EPA previously recommended a Condition (Recommended Condition 9 in Bulletin 1076) to achieve this outcome.

As a result of appeals against the EPA's report and recommendations, the Minister has requested further advice on the 'specific outcomes required in terms of marine habitat restoration, particularly in the context of the *Guidelines for Developments Affecting the Shoreline and Seabed* (here after referred to as the 'Development Guidelines', presented in Appendix 4) outlined in the *Interim Environmental Management Plan for Cockburn Sound and its Catchment.*' The Appeal Convenor's Report specified that this should occur in close consultation with the CSMC.

It should be noted that the Development Guidelines in the *Interim Environmental Management Plan* referred to above was finalised and released in December 2002, following the release of EPA Bulletin 1076 in November 2002.

The proponent has consulted with the CSMC, and put forward various types of offsets in the general areas of groundwater remediation within the catchment of Cockburn Sound, funding of a detailed habitat base map of Cockburn Sound and research into the significance of shallow sandy habitat on the lifecycle of fish. These offsets are similar to the offsets put forward by the proponent during the appeals process.

Based on the consideration of various types of offsets including the offsets put forward by the proponent, the CSMC has provided advice to the EPA on the Stage 1 Port in relation to offsets and the Development Guidelines. The CSMC's advice to the EPA is included in Appendix 5 and the key excerpts from the CSMC advice are as follows:

"After much debate, CSMC members agreed that the proponent needs to clearly demonstrate to the community that they have taken all reasonable efforts to avoid and minimise the environmental impacts resulting from the proposal, prior to the considering mitigation options.

CSMC members expressed strong views that none of the mitigations options proposed for the loss of near-shore marine habitat satisfactorily addresses the Council's Guidelines for Development Affecting the Shoreline and Seabed contained in the Interim Environmental Management Plan for Cockburn Sound.

As the proposed mitigation options do not closely match the Council's objectives for offsets to be appropriately located, enduring or targeted, members felt that the design of the project needed to be carefully examined to identify ways of avoiding and minimising the proposed impact on the near shore habitat and shoreline."

The Town of Kwinana has provided advice on the above matter and expressed similar views. The CSMC also reiterated its previous concerns regarding the cumulative loss of the shoreline and the near-shore marine habitat of Cockburn Sound.

Whilst the CSMC also provided advice on some potential offsets as an attachment, this advice was provided on the clear understanding that they were considered by CSMC members to be the '*least unsatisfactory offsets*'. Accordingly, the EPA has not considered these offsets further.

The EPA makes the observation that if the various offsets considered to date have not satisfactorily addressed the CSMC's requirements then it remains uncertain as to whether a suitable offset for loss of near shore marine habitat can be developed for the Stage 1 Port proposal in the context of the Development Guidelines.

Having noted the CSMC's advice, the EPA believes that there are a number of options for the development of offsets. One option is to require the proponent to demonstrate (to the satisfaction of the CSMC) that it has examined the design of the proposal and identified ways of avoiding and minimising the impacts of the proposal on the near shore marine habitat, in the first instance. It should be noted that there would be residual impacts associated with the Stage 1 Port that will still require the development of offsets. The development of offsets for the residual impacts should occur in close consultation with the CSMC, the relevant local authorities and stakeholders to the satisfaction of the Minister.

In relation to the issue of re-examining the design of proposal, the Minister should note that the design concept of the Stage 1 Port proposal that has been assessed by the EPA is included in the agreement between the Government of the day and the proponent in December 2000 for the provision of the private port facilities north of James Point, Kwinana. However, this agreement is conditional on, among other things, JPPL gaining relevant approvals including environmental and planning approvals. In addition, the examination of alternative designs and consequent modifications to the proposal's 'footprint' could of course give rise to a new or revised proposal.

Other options may include opportunities for the proponent to implement or contribute resources towards management actions to achieve the maintenance or improvement of the broader ecological and/or social values of the Cockburn Sound. However, further consultation with the CSMC and relevant stakeholders will be required on the options available.

Summary

The EPA recommends that the Minister, in making a decision on the proposal, take into account the following options in relation to the development of offsets:

- the requirement for the proponent to consult with the CSMC and examine the design of the proposal to identify ways of avoiding and minimising the impacts of the proposal on the near shore marine habitat and shoreline in the first instance;

- if the above is undertaken, note that there will be residual impacts that should be mitigated by offsets which are appropriately located, enduring and targeted as specified in the Development Guidelines. At the appropriate time, a package of offsets should be prepared by the proponent in consultation with the relevant agencies and stakeholders, to the requirements of the Minister for the Environment; and
- the adoption of other offset options such as opportunities for the proponent to implement or contribute resources towards management actions to achieve the maintenance or improvement of the broader ecological and/or social values of the Cockburn Sound. However, consultation with the CSMC and relevant stakeholders will be required.

4. Conditions and Commitments

4.1 Recommended conditions

Having considered the Minister's appeal determination including the information presented in the Appeal Convenor's Report and the additional information provided by the proponent, the EPA has developed a set of conditions that the EPA recommends be imposed if the proposal by JPPL to construct and operate Stage 1 of a private container and general cargo Port, is approved for implementation.

These Recommended Conditions are presented in Appendix 2. The important matters addressed in the conditions include the following:

- (a) that the proponent shall fulfil the commitments in the Statement set out as Schedule 2 to the Recommended Conditions in Appendix 1 (Recommended Condition 2);
- (b) the requirement to undertake public reviews of the various Environmental Management Plans/Programs required by the Recommended Conditions prior to the finalisation and approval of the Plans/Programs (Recommended Condition 6-1);
- (c) the requirement to establish a James Point Stakeholder Reference Group to facilitate ongoing interactions between the proponent and the community and reviews of Plans/Programs required by the conditions (Recommended Condition 6-3);
- (d) the management of noise emissions from the operation of the Stage 1 Port, including noise from livestock ships (Recommended Condition 7);
- (e) the management of odour associated with the proposed trade in livestock at the Stage 1 Port (Recommended Condition 8);
- (f) the management of shipping activities (Recommended Condition 9);
- (g) the prevention of discharges of potentially contaminated stormwater to Cockburn Sound (Recommended Condition 10);
- (h) the requirement to undertake soil and groundwater contamination surveys to determine the need for remediation (Recommended Condition 11);

- (i) the requirement to prepare and implement a Environmental Management System (Recommended Condition 12);
- (j) requirements in relation to introduced marine species and ballast water in dredging equipment (Recommended Condition 13);
- (k) the requirement to monitor and manage marine water and sediment quality within and adjacent to the Port area (Recommended Condition 14);
- (l) the requirement to undertake further modelling to ensure waves reflected from the proposed offshore breakwater are substantially directed away from the coastline and important beaches (Recommended Condition 15);
- (m) the environmental management of decommissioning in the event maritime infrastructure including the proposed offshore breakwater is required to be removed (Recommended Condition 16); and
- (n) the management of dredging and reclamation activities required for construction (Recommended Condition 17).

It should be noted that other regulatory mechanisms relevant to the proposal are:

- any trade of 100 tonnes or more per day requiring the loading or unloading of bulk materials is prescribed under Part V of the Environmental Protection Act 1986 and therefore requires a Works Approval and Licence from the Department of Environmental Protection.

4.2 Proponent's commitments

The proponent's original environmental management commitments as set out in the PER and EPA Bulletin 1076 have been reviewed and consequently the proponent's environmental management commitments which would be given effect through Recommended Condition 2 have undergone rationalisation.

The proponent's commitments that are either duplicated by the new Recommended Conditions, handled under other legislation or approval processes and do not directly relate to protecting the environment, have been separated and included in Appendix 3 – 'Proponent's Management Strategies'. Whilst the Proponent's Management Strategies intend to supplement the proponent's environmental management commitments, they will not be incorporated in the final Ministerial Conditions by way of Recommended Condition 2. While the proponent is duty bound to fulfil all the commitments made during the course of Public Environmental Review process, it will not be necessary for the proponent to report on compliance with the Management Strategies to the DEP.

5. Conclusions

Having considered the Minister's appeal determination including the information presented in the Appeal Convenor's Report and the additional information provided by the proponent, the EPA has developed a set of Recommended Conditions that the EPA recommends be imposed if the proposal by JPPL to construct and operate Stage 1 of a private container and general cargo Port, is approved for implementation.

The EPA is of the view that the Recommended Conditions in Appendix 2 satisfactorily addresses the matters raised in the Minister's appeal determination, by providing revised and new Recommended Conditions in relation to community consultation, dredging, design of proposed breakwater, odour and noise. In addition to the matters specified in the Minister's appeal determination, the EPA has also improved the specificity of conditions in relation to marine management during operations and noise management, and provided new Recommended Conditions in relation to the management of loading and unloading of vessels, drainage management, contamination investigations for soil, groundwater and sediments, environmental management system, introduced marine species for dredging equipment, and decommissioning.

In relation to loss of beach access, the EPA considers that determining the location and securing mitigation for loss of beach access is a matter that will require negotiation between various agencies and this negotiation is most appropriately pursued through the local and regional planning approval processes. The EPA therefore recommends that a review mechanism be established during the planning approval process to ensure that suitable requirements are placed on the proponent at the appropriate time and for the appropriate amount of resources to contribute to the mitigation for loss of beach access associated with the proposal.

In relation to the issue of providing specific outcomes for marine habitat restoration, the EPA recommends that the Minister, in making a decision on the proposal, take into account the following options:

- the possibility of requiring the proponent to consult with the CSMC and examine the design of the proposal to identify ways of avoiding and minimising the impacts of the proposal on the near shore marine habitat and shoreline;
- if the above is undertaken, note that there will be residual impacts that should be mitigated by offsets which are appropriately located, enduring and targeted as specified in the Development Guidelines. At the appropriate time, a package of offsets should be prepared by the proponent in consultation with the relevant agencies and stakeholders, to the requirements of the Minister for the Environment; and
- the adoption of other offset options such as opportunities for the proponent to implement or contribute resources towards management actions to achieve the maintenance or improvement of the ecological an/or social values of the broader Cockburn Sound. However, consultation with the CSMC and relevant stakeholders will be required.

Through the appeals process the Minister has also requested the EPA to provide strategic advice pursuant to Section 16 of the Environmental Protection Act (1986) in relation to the impacts and management of likely future maritime proposals in Cockburn sound. However, this EPA report only addresses the Minister's appeal determination with respect to the James Point Stage 1 Port proposal and the specific request for further assessment on aspects of that proposal.

The EPA is interacting with the relevant agencies including the Western Australian Planning Commission, the Department for Planning and Infrastructure and the Fremantle Port Authority (FPA) in relation to FPA's interest in developing a 'Strategic Assessment Framework' for a proposed outer harbour development in Cockburn Sound prior to preparing the strategic advice, as requested by the Minister.

6. Recommendations

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

1. that the Minister notes that the information presented in this report intends to address the further assessment requested by the Minister in November 2003;
2. that the Minister notes that the EPA has prepared a revised set of Recommended Conditions, as set out in Appendix 2 of this report, in relation to the matters of noise and odour and, new Recommended Conditions in relation to community consultation, dredging and coastal processes to address the matters specified in the Minister's appeal determination;
3. that the Minister notes that in addition to providing Recommended Conditions for the matters specified in the appeal determination, the EPA has improved the specificity of the Recommended Conditions for Marine and Noise Management, and provided new Recommended Conditions for the management of loading and unloading of vessels, drainage management, contamination investigations for soil, groundwater and sediment, environmental management system, introduced marine species for dredging equipment, and decommissioning;
4. in relation to loss of beach access, the EPA recommends that a review mechanism be established during the planning process to ensure that suitable requirements are placed on the proponent at the appropriate time and for the appropriate amount of resources to contribute to the mitigation for loss of beach access associated with the proposal;
5. in relation to the issue of providing specific outcomes for marine habitat restoration, the EPA recommends that the Minister, in making a decision on the proposal, take into account the following options:
 - the possibility of requiring the proponent to consult with the CSMC and examine the design of the proposal to identify ways of avoiding and minimising the impacts of the proposal on the near shore marine habitat and shoreline;
 - if the above is undertaken, note that there will be residual impacts that should be mitigated by offsets which are appropriately located, enduring and targeted as specified in the Development Guidelines. At the appropriate time, a package of offsets should be prepared by the proponent in consultation with the relevant agencies and stakeholders, to the requirements of the Minister for the Environment; and

- the adoption of other offset options such as opportunities for the proponent to implement or contribute resources towards management actions to achieve the maintenance or improvement of the ecological an/or social values of the broader Cockburn Sound. However, consultation with the CSMC and relevant stakeholders will be required,
6. that in the event the proposal is approved for implementation, the Minister imposes the Recommended Conditions as set out in Appendix 2 of this report;
 7. that the Minister notes that the EPA is interacting with the relevant agencies including the Western Australian Planning Commission, the Department for Planning and Infrastructure and the Fremantle Port Authority (FPA) in relation to FPA's interest in developing a 'Strategic Assessment Framework' for a proposed outer harbour development in Cockburn Sound prior to preparing the strategic advice, as requested by the Minister.

References

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Appendix 1

Minister for the Environment's letter to the Chairman of the EPA



MINISTER FOR THE ENVIRONMENT

CHAIRMAN
ENVIRONMENTAL PROTECTION AUTHORITY

BULLETIN 1076: JAMES POINT STAGE 1 PORT, KWINANA

As you will be aware, I received 33 appeals in relation to the Environmental Protection Authority's Report and Recommendations on the above proposal.

I have considered appeals and determined that while the proposal can be managed in an environmentally acceptable manner, a more robust and prescriptive set of conditions needs to be applied to the implementation of the proposal. On this basis, I have allowed appeals to the extent that:

1. the EPA be required to provide further assessment pursuant with Section 101, (1)(b) (ii) of the *Environmental Protection Act* with a view to providing further advice in relation to the conditions to be applied to the implementation of the proposal. This further assessment should focus on the following matters:
 - a. processes and procedures for the provision of input from the community and key stakeholders such as the Town of Kwinana and the Cockburn Sound Management Council into the development of the various management plans and programs required;
 - b. the overall specificity and enforceability of the conditions and commitments generally, particularly those which involve the preparation and implementation of management plans and programs;
 - c. the minimum standards and procedures to be adopted and the conditions which are required to be applied to:
 - i. dredging associated with the proposal (including the minimisation of impacts on dolphins);
 - ii. the detailed design of the proposed breakwater;
 - iii. the management of odour associated with the import or export of livestock from the port;
 - iv. the management of noise from port operations; and,
 - v. the mitigation for loss of beach access for recreational use.
 - d. the specific outcomes required in terms of marine habitat restoration, particularly in the context of the *Guidelines for Developments Affecting the Shoreline and Seabed* outlined in the *Interim Environmental Management Plan for Cockburn Sound and its Catchment*.

This correspondence represents my formal remittal of the proposal for further assessment in accordance with Section 101 (1)(b)(ii) of the *Environmental Protection Act (1986)*. The further advice required by this remittal is required to be provided within 90 days of the date of this letter unless otherwise notified.

I have enclosed a copy of the report of the Acting Appeals Convenor and my appeal decision summary which provides further detail on the basis of this determination.

Through the appeals process, I have also considered that it would be beneficial for the EPA to provide strategic advice pursuant to Section 16 of the *Environmental Protection Act (1986)* in relation to the impacts and management of likely future maritime proposals within Cockburn Sound.

It is noted that the EPA has received documentation relating to the cumulative impacts of the potential future stages of the James Point Port and the Fremantle Outer Harbour concept. The EPA's advice in relation to cumulative impacts based on this information would be appreciated. This evaluation should include consideration of the issues associated with the cumulative loss of benthic habitat in Cockburn Sound.

While I do not require that this advice is provided within a specific timeframe, it would be useful if it could be undertaken as soon as possible so as to provide guidance for the planning of future maritime proposals in Cockburn Sound.



Dr Judy Edwards MLA
MINISTER FOR THE ENVIRONMENT

27 NOV 2003

Appendix 2

Recommended Conditions and Proponent's Commitments

**STATEMENT THAT A PROPOSAL MAY BE IMPLEMENTED
(PURSUANT TO THE PROVISIONS OF THE
ENVIRONMENTAL PROTECTION ACT 1986)**

JAMES POINT STAGE 1 PORT, COCKBURN SOUND, KWINANA

Proposal: The proposal is to construct and operate Stage 1 of a container and general cargo port, consisting of dredged channels, turning basin and berthing pocket, a cargo wharf on reclaimed land, an off-shore breakwater and associated cargo handling facilities, to the north of James Point in Cockburn Sound, as documented in Schedule 1 of this Statement.

The land area to be developed is located in the Kwinana Industrial Area within the Town of Kwinana. It is envisaged that the port will handle a range of cargoes, notably livestock, though other material currently traded through port facilities in the Perth Metropolitan Area may also be handled in the future. The proposal also includes the transport of materials along designated heavy vehicle transport routes to and from the Stage 1 Port during the construction and operations phases.

The boundaries of Stage 1 Port (the "Port") are shown on the plans in Figures 1 and 2 to Schedule 1 to this Statement.

Proponent: James Point Pty Ltd

Proponent Address: PO Box 39, FREMANTLE WA 6959

Assessment Numbers: 1353 & 1523

Reports of the Environmental Protection Authority: Bulletins 1076 and 1141

The proposal referred to above may be implemented by the proponent subject to the following conditions and procedures:

1 Implementation

1-1 The proponent shall implement the proposal as documented in schedule 1 of this statement subject to the conditions of this Statement.

2 Proponent Commitments

2-1 The proponent shall implement the environmental management commitments documented in schedule 2 of this Statement.

3 Proponent Nomination and Contact Details

3-1 The proponent for the time being nominated by the Minister for the Environment under section 38(6) or (7) of the *Environmental Protection Act 1986* is responsible for the implementation of the proposal until such time as the Minister for the Environment has

exercised the Minister's power under section 38(7) of the Act to revoke the nomination of that proponent and nominate another person as the proponent for the proposal.

- 3-2 If the proponent wishes to relinquish the nomination, the proponent shall apply for the transfer of proponent and provide a letter with a copy of this statement endorsed by the proposed replacement proponent that the proposal will be carried out in accordance with this statement. Contact details and appropriate documentation on the capability of the proposed replacement proponent to carry out the proposal shall also be provided.
- 3-3 The nominated proponent shall notify the Department of Environmental Protection of any change of contact name and address within 60 days of such change.

4 Commencement and Time Limit of Approval

- 4-1 The proponent shall substantially commence the proposal within five years of the date of this statement or the approval granted in this statement shall lapse and be void.

Note: The Minister for the Environment will determine any dispute as to whether the proposal has been substantially commenced.

- 4-2 The proponent shall make application for any extension of approval for the substantial commencement of the proposal beyond five years from the date of this statement to the Minister for the Environment, prior to the expiration of the five-year period referred to in condition 4-1.

The application shall demonstrate that:

1. the environmental factors of the proposal have not changed significantly;
2. new, significant, environmental issues have not arisen; and
3. all relevant government authorities have been consulted.

Note: The Minister for the Environment may consider the grant of an extension of the time limit of approval not exceeding five years for the substantial commencement of the proposal.

5 Compliance Audit and Performance Review

- 5-1 The proponent shall prepare an audit program and submit compliance reports to the Department of Environmental Protection which address:
1. the status of implementation of the proposal as defined in schedule 1 of this statement;
 2. evidence of compliance with the conditions and commitments; and
 3. the performance of the environmental management plans and programs.

Note: Under sections 48(1) and 47(2) of the *Environmental Protection Act 1986*, the Chief Executive Officer of the Department of Environmental Protection is empowered to audit the compliance of the proponent with the statement and should directly receive the compliance documentation, including environmental management plans, related to the conditions, procedures and commitments contained in this statement.

5-2 The proponent shall submit a performance review report every five years after the start of operations, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority, which addresses:

1. the major environmental issues associated with the project; the targets for those issues; the methodologies used to achieve these; and the key indicators of environmental performance measured against those targets;
2. the level of progress in the achievement of sound environmental performance, including industry benchmarking, and the use of best available technology where practicable;
3. significant improvements gained in environmental management, including the use of external peer reviews;
4. stakeholder and community consultation about environmental performance and the outcomes of that consultation, including a report of any on-going concerns being expressed; and
5. the proposed environmental targets over the next five years, including improvements in technology and management processes.

5-3 The proponent shall submit a report prepared by an auditor approved by the Department of Environmental Protection under the “Compliance Auditor Accreditation Scheme” to the Chief Executive Office of the Department of Environmental Protection on each condition and commitment of this statement which requires the preparation of a management plan, programme, strategy or system, stating that the requirements of each condition and commitment have been fulfilled within the timeframe stated within each condition and commitment.

6 Consultation on Environmental Management Plans and Programs

6-1 Prior to the finalisation of the various Environmental Management Plans and Programs required by this Statement, the proponent shall conduct public reviews and interact with the community and stakeholders during the preparation of each Plan and Program in a manner which is consistent with Schedule 3, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

6-2 Following the public reviews of the various Environmental Management Plans and Programs required by condition 6-1, and in the event that the Environmental Protection Authority determines that modifications to the Plans and Programs are desirable to address the pertinent environmental issues raised during the public reviews, the proponent shall amend the Plans and Programs accordingly, to the requirements of the Minister for the Environment.

6-3 The proponent shall establish a James Point Port Stakeholder Reference Group within six months following the formal authority issued to the decision-making authorities under section 45(7) of the *Environmental Protection Act 1986*, with membership and Terms of Reference meeting the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Terms of Reference of the Group shall relate to:

- provision of advice to the Minister for the Environment on the environmental aspects of the construction and operation of the proposal generally;

- provision of feedback and input into the preparation and standard of implementation of the Environmental Management Plans and Programs;
- provision of advice and input into the mitigation for loss of coastal access, as a consequence of the proposal; and
- provision of advice on the proponent's environmental performance.

Note 1: An independent person will chair the Group and the proponent is responsible for the reasonable resourcing of the operations of the Group.

7 Noise Management

Management of Noise from Livestock Ships and Fodder Loading Equipment

- 7-1 The proponent shall ensure that, on the first occasion on which a livestock ship enters the Port, a Noise Assessment Report relating to that ship is prepared by a suitably qualified acoustic specialist and submitted to the Department of Environmental Protection within 30 days following entry of that ship into the Port.
- 7-2 The proponent shall ensure that, prior to the operation of any fodder loading equipment at the Port, a Noise Assessment Report relating to that fodder loading equipment is prepared by a suitably qualified acoustic specialist, as referred to in Condition 7-1, to be engaged by the proponent and submitted to the Department of Environmental Protection.
- 7-3 A Noise Assessment Report referred to in Conditions 7-1 and 7-2 shall identify:
- (a) the name and acoustic qualifications of the author of the report;
 - (b) measurements of noise taken for the purposes of the report; and
 - (c) the single point sound power level for the livestock ship or the sound power level of the fodder loading equipment.

For the purposes of these conditions the single point sound power level of a livestock ship and the single point sound power level of a fodder loading equipment is to be calculated and determined according to a methodology to be agreed in the Noise Management Plan required by Condition 7-8.

- 7-4 Subject to condition 7-5, the proponent shall ensure that:
- (a) no single livestock ship with an individual single point sound power level exceeding 121 dB(A);
 - (b) no combination of two or more livestock ships with a combined single point sound power level exceeding 121 dB(A); and
 - (c) no fodder loading equipment with a sound power level exceeding 115 dB(A),

(as calculated in a Noise Assessment Report or Reports) enter the boundaries of the Port as shown on the plans in Figures 1 and 2 to Schedule 1 of this Statement.

- 7-5 Condition 7-4 does not apply to a livestock ship on the first occasion on which it enters the Port.

Noise Regulations

7-6 The proponent shall ensure that noise emitted from the Port, when received at other premises that are located within "Area B" defined in clause 3(2)(b) of the *Environmental Protection (Kwinana)(Atmospheric Wastes) Policy 1999*, does not cause, or significantly contribute to, a level of noise which exceeds the assigned level in respect of noise received at premises of that kind, determined by reference to the table to reg 8 of the *Environmental Protection (Noise) Regulations 1997*, and its updates.

Note:

1. The *Environmental Protection (Kwinana)(Atmospheric Wastes) Policy 1999* is published in the Government Gazette of 21 December 1999 at pages 6395-6403.

7-7 The proponent shall ensure that noise emitted from the Port does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Port.

Noise Management Plan

7-8 Prior to the commencement of construction of the Port, the proponent shall develop a Noise Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The objectives of the Plan are:

- to ensure that the amenity, health, welfare and comfort of residents in surrounding areas are protected; and
- to ensure that the requirements of conditions 7-1, 7-2, 7-3, 7-4, 7-5, 7-6 and 7-7 are met.

This Plan shall:

1. identify all sources of noise emissions from the proposal;
2. include noise monitoring and management measures for the management of noise emissions during construction, particularly from pile driving and the transport of construction materials to the Port;
3. include contractual agreements with livestock ship operators to limit noise emissions from ships;
4. show revised noise modelling contours based on operations since commencement of operations;
5. include details of the reference positions and procedures for the measurement and monitoring of noise levels;
6. use results from item 4 to identify reference positions for the measurement and monitoring of noise levels;
7. set out the methodology to be used to calculate and determine the single point sound power level for the livestock ships and fodder loading equipment required by Condition 7-3;
8. set out procedures for the implementation of operational restrictions for livestock vessels identified in the Noise Assessment Reports required by Condition 7-3;
9. include procurement strategies and policies to avoid potentially noisy port equipment;
10. set out procedures to restrict the operation of fodder loading equipment at night (2200 hours to 0700 hours);

11. identify noise control measures required to minimise and/or reduce noise emissions from the Port as far as practicable and reasonable;
12. include a complaints register;
13. set out procedures for response to and reporting of noise complaints;
14. include procedures for review and continual improvement of the Noise Management Plan; and
15. set out reporting procedures.

Note: In preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following parties will be obtained:

- the Livestock Export Environmental Management Consultative Committee (see commitment 7);
- the Town of Kwinana;
- James Point Port Stakeholder Reference Group;
- the City of Rockingham; and
- the City of Cockburn.

7-9 The proponent shall implement the Noise Management Plan.

7-10 The proponent shall make the Noise Management Plan required by Condition 7-8, including the results of any noise modelling, publicly available, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

8 Odour Management

8-1 The proponent shall ensure that odour emitted from the Port does not unreasonably interfere with the health, welfare, convenience, comfort or amenity of any person who is not on the Port.

8-2 The proponent shall ensure that:

- (a) livestock unloaded from trucks at the Port are immediately directed onto races/ramps for loading onto livestock ships;
- (b) no livestock are held in livestock holding pens in the Port, apart from those livestock considered unfit for export;
- (c) livestock considered unfit for export are removed from temporary livestock holding pens and transported from the Port within three hours of the livestock entering those pens;
- (d) each livestock truck leaves the Port within one hour following the completion of the unloading of that truck;
- (e) each livestock truck is thoroughly cleaned and washed after unloading livestock and prior to leaving the Port;
- (f) there is no discharge of contaminated wash waters from truck wash down bays into the environment;

- (g) the following areas are cleaned (using dry methods such as including mechanical sweepers and vacuums), immediately following the completion of livestock vessel loading:
- livestock unloading bays;
 - temporary holding pens for unfit livestock;
 - livestock truck wash down areas; and
 - livestock loading ramps and races.
- (h) all solid and liquid wastes generated from actions required by paragraphs (e), (f) and (g) are collected, transported from the Port in enclosed systems and containers and disposed to a facility licensed to receive those wastes;
- (i) livestock ships leave the Port within three hours following completion of livestock loading; and
- (j) livestock ships that enter the port partially loaded with livestock shall leave the Port within 24 hours of berthing of livestock ship.
- 8-3 The proponent shall establish procedures for the daily removal of accumulated livestock wastes from the Port for recycling or removal to a facility licensed to receive those waste.
- 8-4 The proponent shall ensure that no livestock truck enters the port unless a Livestock Loading Plan and Schedule relating to the livestock carried by that truck has been prepared at least 48 hours prior to the arrival of the truck, and that Loading Plan and Schedule:
- (a) includes procedures to coordinate truck movements and livestock loading to maximise loading rates and minimise duration of livestock loading;
- (b) has been agreed with the livestock ship operator, livestock supplier, fodder supplier, transport operator, and stevedore; and
- (c) specifies the docking time, number and type of stock to be loaded, delivery loading times and rates and estimated time of completion of loading and vessel departure.
- 8-5 The proponent shall investigate and respond to all odour complaints received and shall maintain a Register of Complaints which is accessible at all times, to the requirements of the Minister for the Environment. The Register of Complaints shall include the following details:
- the source of complaints and time;
 - actions taken to address and resolve complaints;
 - responses provided to complainants; and
 - loading conditions, livestock and truck numbers, name of livestock ship, wind speed and direction at the time of the complaint.
- 8-6 Prior to the commencement of port operations, the proponent shall prepare an Odour Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The objectives of this Plan are:

- to ensure that the amenity, health, welfare and comfort of residents and workers in the Kwinana Industrial Area are protected from unreasonable odour levels; and

- to detail ‘best practice’ design and operation for the facility, based on national and international benchmarking.

This Plan shall include:

1. procedures to minimise the time required for livestock ship loading;
2. provision, operation and maintenance of measures to minimise the generation of odours;
3. consultation with the James Point Port Stakeholder Reference Group (see condition 6-3);
4. the establishment and maintenance of logs to record livestock loading circumstances (including meteorological conditions, time of day, loading rate, duration of loading, vessel name, whether vessels are partly loaded and systems and equipment failures) during livestock transport and exporting activities;
5. allocation of roles and responsibilities for implementation of the Plan;
6. procedures for the training and education on the Plan;
7. the review of procedures for continual improvement of odour management;
8. procedures for monitoring, auditing and reporting; and
9. annual independent odour audits of the implementation of the Plan and Schedule referred to in Condition 8-4, and the proponent’s complaint responses.

Note: In the preparation of advice to the Minister for the Environment, the Environmental Protection Authority expects that the advice of the following parties will be obtained:

- the Livestock Export Environmental Management Consultative Committee required by commitment 7;
- the Cockburn Sound Management Council;
- the Town of Kwinana;
- the City of Rockingham; and
- the City of Cockburn.

8-7 The proponent shall implement the Odour Management Plan.

8-8 The proponent shall undertake annual odour sampling of livestock exporting operations, having regard for worst-case conditions, and shall determine the odour levels in the samples collected, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority. The first odour sampling exercise shall be undertaken within 6 months following the commencement of livestock operations.

In assessing the odour levels in the samples collected, the proponent shall use ‘dynamic olfactometry methods’ and appropriate modelling to determine the extent of odour concentration equivalent to an intensity level of ‘distinct’, averaged over three minutes, 99.5th percentile in relation to odour-sensitive premises.

8-9 The proponent shall provide the Odour Management Plan required by condition 8-6 and the results arising from Condition 8-8 to the Environmental Protection Authority for

review, within 8 months following the commencement of livestock operations, to the requirements of the Minister for the Environment.

Note: This review shall be repeated after a further three years of livestock export operations, and subsequently as determined by the Environmental Protection Authority.

- 8-10 Following the review of odour management referred to in Condition 8-9, and in the event that the Environmental Protection Authority determines that modifications to odour management are desirable, the proponent shall modify the Odour Management Plan (required by Condition 8-6) accordingly, to the requirements of the Minister for the Environment.
- 8-11 The proponent shall make the Odour Management Plan required by Condition 8-6, including any modification required by Condition 8-10, and the odour level determinations arising from Condition 8-8, publicly available to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

9 Management of Loading and Unloading

- 9-1 The proponent shall ensure that no materials, including livestock and livestock waste, are discharged into the waters within the boundaries of the Port as shown in Figures 1 and 2 to Schedule 1 of this Statement during the loading and unloading of ships.
- 9-2 Prior to the commencement of livestock exporting operations, the proponent shall ensure that the wharf at the Port is bunded and sealed to contain any material, including livestock and livestock wastes, spilt during loading and unloading operations, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 9-3 The proponent shall ensure that ships in waters within the boundaries of the Port shown in Figures 1 and 2 to Schedule 1 of this Statement, do not discharge any solid or liquid wastes, including hydrocarbons, livestock and livestock wastes into marine waters.

10 Drainage Management

- 10-1 The proponent shall ensure that there is no discharge of contaminated waters from the Port to the (marine) waters of Cockburn Sound or the groundwater.
- 10-2 In order to meet the requirements of condition 10-1, the proponent shall:
1. provide detailed calculations of volumes of potentially contaminated water runoff likely to be generated by the operations of the Port and dimensions of detention basin/s that are required to be constructed, to the Department of Environmental Protection, prior to the commencement of construction;
 2. ensure that the livestock loading and temporary holding areas, vehicle wash down bays and areas where oily or solvent wastes are present are sealed with appropriate material and graded to collection points to contain potentially contaminated surface water runoff;
 3. ensure that all potentially contaminated stormwater and wash down waters are collected in impervious and enclosed detention tanks for;
 - a. discharge to sewer; or
 - b. removal offsite (in enclosed containers or sealed tanker trucks to a facility licensed to receive that waste).

4. equip the enclosed detention tanks with level alarm devices to detect (potential) overflows;
5. have in place a system of regular inspections and maintenance to ensure effective use and operation of the detention tanks and contaminated surface water collection system; and
6. prepare and implement a water quality monitoring program to determine the effectiveness of the structures to prevent discharge of contaminated waters to the (marine) waters of Cockburn Sound.

11 Contamination – Soil, Groundwater and Sediments

- 11-1 Prior to any ground-disturbing activity, the proponent shall undertake soil and groundwater investigations to determine the extent and nature of any contamination within the Port area which is consistent with the Department of Environmental Protection's Contaminated Sites Management Series (2003) and its revisions, to the requirements of the Minister for the Environment.
- 11-2 If as a result of the investigations required by Condition 11-1, the soil or groundwater within the boundaries of the proposal is found to be contaminated, the proponent shall undertake further investigations to determine whether the contamination is posing or may pose a risk to either human health or the environment, including the water and sediment quality of Cockburn Sound, to the requirements of the Minister for the Environment.
- 11-3 In the event that the investigations required by Conditions 11-1 and 11-2 demonstrate that the contamination within the boundaries of the proposal is posing or may pose a risk to either human health or the environment, including the water and sediment quality of Cockburn Sound, the proponent shall undertake remediation of the site for soil and/or groundwater, to the requirements of the Minister for the Environment.
- 11-4 In the event that soil and/or groundwater remediation is required, as referred to in Condition 11-3, the proponent shall prepare a Site (Soil and Groundwater) Remediation Plan and Validation Report which is consistent with the Department of Environmental Protection's Contaminated Sites Management Series (2003) and its revisions, and is designed to facilitate meeting the requirements of Condition 11-3, to the requirements of the Minister for the Environment.

Note: In the preparation of advice to the Minister, the Environmental Protection Authority expects that the advice of the following agencies will be obtained:

- James Point Port Stakeholder Reference Group (see Condition 6-3);
- Cockburn Sound Management Council;
- Department of Health; and
- Town of Kwinana.

- 11-5 In the event that remediation is required, the proponent shall implement the Site (Soil and Groundwater) Remediation Plan and Validation Report required by Condition 11-4, to the requirements of the Minister for the Environment.

Sediment contamination

- 11-6 Prior to the commencement of dredging, the proponent shall undertake sediment investigations in areas to be dredged, consistent with the *National Ocean Disposal Guidelines for Dredged Material, Commonwealth of Australia* (2002), and its revisions, to determine the extent and nature of any contamination in sediments to be used as reclamation fill material, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 11-7 If as a result of the investigations required by Condition 11-6 the sediments are found to be contaminated, the proponent shall undertake further investigations to determine whether the sediments to be used as reclamation fill material may pose a risk to either human health or the environment, in order to determine the suitability of the reclamation fill material for the purpose of land reclamation, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.
- 11-8 In the event that the investigations required by Conditions 11-6 and 11-7 demonstrates that the sediments to be used as reclamation fill material may pose a risk to either human health or the environment, the proponent shall undertake management strategies, including alternative containment and disposal options, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

Note: In preparation of advice of the Minister for the Environment, the Environmental Protection Authority expects that advice of the following agencies will be obtained:

- Department of Health; and
- Cockburn Sound Management Council.

12 Environmental Management System

- 12-1 In order to manage the environmental impacts of the project, and to fulfil the requirements of the conditions and procedures in this statement, prior to the commencement of operations, the proponent shall demonstrate to the requirements of the Minister for the Environment that there is in place an Environmental Management System which includes the following elements:
- 1 An environmental policy and corporate commitment to it;
 - 2 Mechanisms and processes to ensure:
 - (a) planning to meet environmental requirements;
 - (b) implementation and operation of actions to meet environmental requirements;
 - (c) measurement and evaluation of environmental performance; and
 - 3 Review and improvement of environmental outcomes.
- 12-2 The proponent shall implement the Environmental Management System required by condition 12-1 to the requirements of the Minister for the Environment.

12-3 The proponent shall make the Environmental Management System required by condition 12-1, including any of its revisions, publicly available to the requirements of the Minister for the Environment.

12-4 The proponent shall cause the Environmental Management System referred to in condition 12-1 to be audited by a suitably qualified external auditor within the first six months following the commencement of port operations and subsequently audited according to a schedule to be agreed with the Department of Environmental Protection.

13 Introduced Marine Species and Ballast Water for Dredging Equipment

13-1 Prior to allowing dredging plant to enter the State Waters, the proponent shall arrange for an inspection by an appropriately qualified expert to ensure that:

- there is no sediment on the dredging equipment;
- ballast water (if any) has been managed according to the Australian Quarantine Inspection Service ballast water requirements; and
- any fouling organisms on the dredging equipment do not present a risk to the ecosystem integrity of the marine waters of Cockburn Sound,

to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

Note: In preparation of advice of the Minister for the Environment, the Environmental Protection Authority expects that advice of the following agencies will be obtained:

- Department of Fisheries; and
- Australian Quarantine Inspection Service.

13-2 The proponent shall manage any sediment or fouling organism found as a consequence of the inspection required by Condition 13-1, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

Note: In preparation of advice of the Minister for the Environment, the Environmental Protection Authority expects that advice of the following agencies will be obtained:

- Department of Fisheries; and
- Australian Quarantine Inspection Service.

14 Marine Water, Sediment and Biota Quality Management - Operations

14-1 During the operation of the Port, the proponent shall monitor water, sediment and biota quality in the marine areas within and adjacent to the boundaries of the Port, as shown in Figures 1 and 2 to Schedule 1 of this Statement, in accordance with the protocols and procedures set out in the *Revised Manual of Standard Operating Procedures for Environmental Monitoring against the Cockburn Sound Environmental Quality Criteria*, (March 2004) or its most recent update, to assess whether the quality of waters, sediments and biota in areas shown in Figures 1 and 2 meet the relevant “environmental quality standard(s)” specified in:

- tables 1, 2 and 3, under “Moderate protection”, to ensure marine ecosystem protection from the effects of physical and chemical stressors, toxicants in marine waters and sediment pore waters and toxicants in sediments;
- table 4, to ensure that seafood is safe for human consumption;
- table 6, to ensure that waters are safe for primary contact recreation; and
- table 8, to ensure that waters are free from surface films of oil and petrochemicals, floating debris, dust and other objectionable matter including substances that cause foaming and tainting of seafood,

in the *Revised Environmental Quality Criteria Reference Document (Cockburn Sound)* (November 2002) or its most recent update, by using the corresponding decision schemes set out in that document.

- 14-2 If an ‘environmental quality standard(s)’ referred to in Condition 14-1 is not met, the proponent shall determine the cause and shall initiate a management response(s), and remedy the matter, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Cockburn Sound Management Council, the Department of Health and the Department of Fisheries.

For the purposes of this condition, the proponent shall seek the advice of:

- the Cockburn Sound Management Council and the Department of Environmental Protection for all failures to meet environmental quality standards relating to chemical and physical stressors and contaminants in water and sediment pore water and sediment, seafood which is safe for human consumption and primary contact recreation;
- the Department of Health for all failures to meet environmental quality standards relating to seafood which is safe for human consumption and primary contact recreation; and
- the Department of Fisheries for all failures to meet environmental quality standards relating to seafood which is safe for human consumption.

- 14-3 Prior to the commencement of operations, the proponent shall prepare a Marine Water, Sediment and Biota Quality Monitoring and Management Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The objective of this Plan is to ensure that the requirements of Conditions 14-1 and 14-2 are met.

The Plan shall:

1. include the protocols and procedures for monitoring and evaluating the quality of water, sediment and biota in marine areas within and adjacent to the boundaries of the Port that are consistent with the *Revised Manual of Standard Operating Procedures for Environmental Monitoring against the Cockburn Sound Environmental Quality Criteria* (March 2004), and its most recent update(s);
2. include the protocols and procedures for comparing monitoring data against the relevant “environmental quality guidelines” and “environmental quality standards” specified in the *Revised Environmental Quality Criteria Reference Document (Cockburn Sound)*, November 2002 or its most recent update, in such a way so as to demonstrate that the protocols and procedures are consistent with the decision

schemes specified in that document and the methods described in the *Revised Manual of Standard Operating Procedures for Environmental Monitoring against the Cockburn Sound Environmental Quality Criteria* (March 2004), or its most recent update;

3. include a program of investigation and consultation to be undertaken in the event that an 'environmental quality guideline' referred to in item 2) above is not met;
4. establish the framework for development of management actions to be undertaken by the proponent in the event any environmental quality standard referred to in Condition 14-1 is not met;
5. include the water, sediment and biota environmental quality indicators to be monitored, as agreed with the Environmental Protection Authority;
6. specify the numbers of samples to be taken for each environmental quality indicator;
7. specify the timing and frequency of sampling for each environmental quality indicator;
8. show the location of monitoring sites for the purposes of monitoring each water, sediment and biota quality indicator identified above;
9. include a map showing the boundary of the "defined area", for the purpose of comparing monitoring data for physical and chemical stressors against the relevant environmental quality guidelines and environmental quality standards specified in the *Revised Environmental Quality Criteria Reference Document (Cockburn Sound)*, November 2002;
10. present the location of appropriate reference sites where necessary;
11. set out the procedures for seeking advice from relevant Government agencies in relation to monitoring and analysis as well as in response to any failure to meet environmental quality standards as required by condition 14-2 above;
12. establish the reporting procedures, including the format, timing, and frequency for the reporting of monitoring data, the comparisons of monitoring data against the relevant environmental quality guidelines and environmental quality standards and management actions undertaken by the proponent; and
13. set out contingency measures to be given effect by the proponent in the event that monitoring is unable to be carried out for whatever reason.

Note: In preparation of advice to the Minister, the Environmental Protection Authority expects that advice of the following will be obtained:

- Cockburn Sound Management Council;
- Town of Kwinana;
- Water Corporation;
- Western Power;
- Fremantle Port Authority;
- Department of Fisheries; and
- Department of Health.

14-4 The proponent shall implement the Marine Water and Sediment Quality Monitoring and Management Plan required by Condition 14-3.

15 Coastal Processes (Offshore Breakwater)

15-1 The proponent shall not commence the construction of the offshore breakwater until:

1. the further investigations, numerical modelling and peer review referred to in condition 15-2 and 15-3 have been completed and the Minister for the Environment on advice of the Environmental Protection Authority is satisfied that implementation of the offshore breakwater will not have an adverse effect on coastal processes and stability of sandy beaches on the eastern shore of Cockburn Sound and that existing maritime infrastructure on the eastern shore of Cockburn Sound and recreational amenity of Challenger Beach are protected from potential impacts of the offshore breakwater;
2. a Breakwater Construction Management Plan has been prepared to manage the impacts of the breakwater construction on the marine environment of Cockburn Sound;
3. a Coastal Monitoring and Management Program referred to in condition 15-4, has been prepared; and
4. prior written advice of the Minister for the Environment has been received that construction of the offshore breakwater may occur consistent with the final design determined in accordance with Condition 15-2 or in a manner specified in the Minister's advice.

15-2 Following the finalisation of land tenure arrangements and operational requirements for the offshore breakwater and prior to finalising the detailed design of the offshore breakwater, the proponent shall undertake investigations and numerical modelling to examine wave reflection and refraction due to the offshore breakwater, to demonstrate the following:

- waves reflected from the offshore breakwater (design) will be substantially directed away from the coast;
- both existing maritime infrastructure on the eastern shore of Cockburn Sound and the recreational amenity of Challenger Beach are protected from potential impacts of the offshore breakwater; and
- the (final) design of the offshore breakwater will not have an adverse effect on coastal processes and stability of beaches and dunes on the eastern shores of Cockburn Sound, up to 2 kilometres north and south of the proposal,

to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The results of the investigations and modelling referred to above shall be made publicly available.

15-3 The proponent shall subject the investigations and numerical modelling referred to in condition 15-2 to peer review by a panel of experts and stakeholders to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The panel of experts and stakeholders shall include representatives from the following:

- Department for Planning and Infrastructure;
- Cockburn Sound Management Council;
- Water Corporation;
- Fremantle Port Authority;
- Western Power;

- James Point Port Stakeholder Reference Group;
- City of Cockburn;
- Town of Kwinana; and
- a suitably qualified coastal process expert (to be appointed on advice of the Environmental Protection Authority).

15-4 The proponent shall prepare the Coastal Monitoring and Management Program referred to in condition 15-1 to monitor and manage the impacts of the Port on local coastal processes and to protect the recreational amenity of local beaches to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The Program shall incorporate ongoing beach monitoring, with a focus on beaches up to 2 kilometres north and south of the proposal, and include:

- examination and comparisons of historical and post-construction aerial photographs to detect changes to shoreline positions;
- annual measurements of beach profiles and widths; and
- monitoring of beach dunes.

The Program shall also include contingency measures in the event that erosion or changes to shoreline positions which are inconsistent with the existing shoreline shape (localised pockets of erosion) or inconsistent with the historical range of shoreline positions, are detected.

Note: In preparation of advice to the Minister, the Environmental Protection Authority expects that advice of the following will be obtained:

- Cockburn Sound Management Council;
- Town of Kwinana;
- Water Corporation;
- Western Power;
- Fremantle Port Authority; and
- Department for Planning and Infrastructure.

15-5 The proponent shall implement the Coastal Monitoring and Management Program referred to in condition 15-4 to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

15-6 If erosion is detected as a result of the Coastal Monitoring and Management Program referred in condition 15-4, the proponent shall implement contingency measures in consultation with the relevant stakeholders for the management of the affected beach and maintain its stability to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

For the purpose of this condition, contingency measures for erosion may include beach sand replenishment, nourishment or modifications to the proposal, or a combination of any two measures or any other measures agreed with stakeholders.

16 Decommissioning

16-1 At least 12 months prior to decommissioning or prior to the removal of maritime infrastructure related to the proposal, including the offshore breakwater, the proponent shall prepare a Decommissioning and Removal of Maritime Infrastructure Management

Plan to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Fremantle Port Authority.

The objectives of this plan are:

- to return the marine area, as far as is practicable, to its pre-disturbance state, or to a state agreed to by the Environmental Protection Authority; and
- to minimise the environmental impacts caused by decommissioning and removal of maritime infrastructure.

The Plan shall address:

1. the removal of maritime infrastructure;
2. rehabilitation of disturbed areas;
3. preparation of a post-project Environmental Management Plan that identifies ongoing monitoring and management for at least five years following the decommissioning of the project and/or removal of infrastructure; and
4. completion criteria.

16-2 The proponent shall implement the Decommissioning and Removal of Maritime Infrastructure Management Plan required by condition 16-1 to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

16-3 The proponent shall make the Decommissioning and Removal of Maritime Infrastructure Management Plan required by condition 16-1 publicly available, to the requirements of the Minister for the Environment.

17 **Dredging**

17-1 The proponent shall, at least 7 days prior to the commencement of any dredging operations, establish pairs of logging underwater light meters, with at least two metres of vertical separation between the meter sensors, at:

- (a) impact monitoring sites at locations where seagrass is found and where water clarity has the potential to be affected by dredging operations; and
- (b) reference monitoring sites which are equivalent to each impact monitoring site in all respects including water depths and the presence of seagrass and where water clarity does not have the potential to be affected by dredging operations,

to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

17-2 The proponent shall operate the logging underwater light meters referred to in condition 17-1 to record the photosynthetically active radiation ("PAR") intensity at 15 minute intervals during daylight hours from a period beginning at least 7 days prior to the commencement of any dredging operations and ending at least 8 weeks after the completion of all dredging operations ("the Light Monitoring Period").

For the purposes of this condition "daylight hours" begin two hours after sunrise and end two hours before sunset.

17-3 On Wednesday of each week during the Light Monitoring Period the proponent shall report to the Chief Executive Officer of the Department of Environmental Protection:

- (a) all PAR intensity data recorded at each monitoring site during the week ending on the previous Monday;
- (b) the median of all LACs for each impact monitoring site taken during the week ending on the previous Monday, calculated from the data reported pursuant to paragraph (a); and
- (c) the 80th percentile of all LACs for all reference monitoring sites taken during the week ending on the previous Monday, calculated from the data reported pursuant to paragraph (a).

For the purpose of these conditions, an "LAC" is the instantaneous 15 minute vertical light attenuation coefficient calculated as follows:

$$\text{LAC (m}^{-1}\text{)} = \frac{\text{Log}_{10} \text{ A} - \text{Log}_{10} \text{ B}}{\text{Z}}$$

Where:

A is the instantaneous reading of the level of PAR recorded by the top light meter at a monitoring site, expressed in $\mu\text{moles/m}^2/\text{s}$;

B is the instantaneous reading of the level of PAR recorded by the bottom light meter at the same monitoring site, expressed in $\mu\text{moles/m}^2/\text{s}$;

Z is the vertical distance between the top and bottom light meter sensors at that monitoring site expressed in metres.

17-4 Subject to condition 17-6, where the median LAC for any of the impact monitoring sites, as calculated under condition 17-3(b), is greater than the Light Standard A for four consecutive weeks, the proponent shall ensure that all dredging operations cease immediately and do not recommence until the median of the LAC for all impact monitoring sites, calculated over a day, is less than the Light Standard A for seven consecutive days.

For the purposes of these conditions "Light Standard A", in relation to any period, means the greater of:

- (a) the light attenuation coefficient at which 10% of surface PAR at any monitoring site will reach the seabed at that monitoring site; or
- (b) the calculated 80th percentile of all LACs for all reference monitoring sites during that period.

17-5 Subject to condition 17-6, where the median of the LAC for any of the impact monitoring sites, as calculated under condition 17-3(b), is greater than the Light Standard B for two consecutive weeks, the proponent shall ensure that all dredging operations cease immediately and do not recommence until the median of the LAC for all impact monitoring sites, calculated over a day, is less than the Light Standard B for seven consecutive days.

For the purposes of these conditions, "Light Standard B", in relation to any period, means the greater of:

- (a) the light attenuation coefficient at which 5% of surface PAR at any monitoring site will reach the seabed at that monitoring site; or
- (b) the 95th percentile of all LACs for all reference monitoring sites during that period.

17-6 In any period during which a logging underwater light meter at any impact monitoring site fails to properly operate, the median LAC for that impact monitoring site shall be taken to be greater than Light Standard A and Light Standard B for that period for the purposes of conditions 17-4 and 17-5.

17-7 The proponent shall ensure that:

- (a) only a Cutter Suction Dredge is used to dredge the channels, turning basin and berthing pocket at the Port;
- (b) dredge material is pumped directly from the dredge to a bunded reclamation area onshore, within the Port;
- (c) at least one silt curtain is installed and properly maintained around the point at which return water is discharged from the reclamation area into Cockburn Sound until turbidity generating activities have ceased; and
- (d) no dredging takes place between 1 October and 30 April in any year.

Dredge Management Plan

17-8 At least two weeks prior to the commencement of any dredging operations, the proponent shall develop a Dredging Management Plan, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority.

The objective of the Plan is:

- to ensure the health of flora and fauna, including dolphins and seagrass, in Cockburn Sound are not adversely affected by dredging operations.

This Plan shall:

1. establish dredging procedures to ensure that the requirements of Condition 17-7 and the objective of the Plan are met;
2. establish protocols and procedures for monitoring LAC (as referred to in Conditions 17-2, 17-3 and 17-4);
3. show locations of appropriate impact monitoring and reference monitoring sites (as referred to in Condition 17-1) and confirm through turbidity modelling that water clarity at the reference monitoring sites does not have the potential to be affected by dredging operations;
4. include monitoring procedures to confirm (during dredging operations) that reference monitoring sites are not being affected by dredging operations;
5. identify alternative reference monitoring sites and the procedures for establishing alternative reference sites and gathering data from those sites in the event that the

procedures in item 4 demonstrates that the water clarity at reference monitoring sites is being affected by dredging operations;

6. procedures for the management and control of return water from the reclamation area, including the specification of relevant guideline 'trigger' values;
7. procedures for the management and control of turbidity generated by dredging equipment, including the specification of relevant guideline 'trigger' values;
8. include a program of monitoring for nutrients and contaminants in the plume against 'trigger' levels;
9. allow for regular notification and consultation to occur with relevant agencies including the Cockburn Sound Management Council and parties that are likely to be affected by the dredging operations;
10. establish a register of complaints and responses taken; and
11. audit and reporting procedures.

17-9 The proponent shall implement the Dredging Management Plan.

Seagrass Monitoring Program

17-10 At least two weeks prior to the commencement of any dredging operations, the proponent shall develop a Seagrass Monitoring Program, to the requirements of the Minister for the Environment on advice of the Environmental Protection Authority and the Cockburn Sound Management Council.

The objective of the Program is:

- to monitor the effects of dredging operations on the health of marine flora, including seagrass, in Cockburn Sound.

This Program shall:

1. establish a program of fortnightly seagrass health monitoring which involves:
 - a) the establishment of seagrass health impact monitoring sites coincident with the impact monitoring sites referred to in Condition 17-1 (a), where each site will contain at least 24 permanent relocatable quadrats measuring 20 centimetres wide and 20 centimetres long;
 - b) the establishment of seagrass health reference monitoring sites coincident with the reference monitoring sites referred to in Condition 17-1 (b), where each site will contain at least 24 permanent relocatable quadrats measuring 20 centimetres wide and 20 centimetres long;
 - c) the measurement and recording of seagrass shoot and leaf density in all quadrats established at each seagrass health impact monitoring site and each seagrass health reference monitoring site;
 - d) the commencement of the program of fortnightly seagrass health monitoring for four weeks prior to the commencement of dredging operations to determine 'pre-dredging' seagrass shoot and leaf density; and
 - e) ongoing seagrass health monitoring from seagrass health impact monitoring sites, at six monthly intervals, including undertaking monitoring during the annual summer seagrass health monitoring program for Cockburn Sound, following the completion of dredging operations, until it can be demonstrated that seagrass shoot and leaf density are comparable to pre-dredging levels,

2. establish protocols and procedures for seagrass health monitoring in accordance with the Environmental Protection Authority's *Manual of Standard Operating Procedures for Environmental Monitoring against the Cockburn Sound Environmental Quality Criteria* (March 2004);
3. include the pre-dredging seagrass shoot and leaf density data for each permanent relocatable quadrat established at all seagrass health impact monitoring sites and all seagrass health reference monitoring sites, including the:
 - a) calculated 5th percentile of pre-dredging seagrass shoot and leaf density for each seagrass health impact monitoring site;
 - b) calculated median of pre-dredging seagrass shoot and leaf density for each seagrass health impact monitoring site;
 - c) calculated 20th percentile of pre-dredging seagrass shoot and leaf density for the seagrass health reference monitoring sites; and
 - d) calculated median of pre-dredging seagrass shoot and leaf density for the seagrass health reference monitoring sites,
4. set out procedures for calculating each fortnight the median seagrass shoot and leaf density from counts of seagrass shoots and leaves in all permanent relocatable quadrats established at each seagrass health impact and reference monitoring site referred to in 1 a) and b) above;
5. establish management responses to be implemented, in the event that the seagrass health criteria in item 5 a) or b) below, are not met during dredging operations:
 - a) the median seagrass shoot and leaf density calculated each fortnight for each seagrass health impact monitoring site is greater than the 5th percentile of pre-dredging seagrass shoot and leaf density determined for each seagrass health impact monitoring site, as referred to in item 3 a) above; or
 if the median seagrass shoot and leaf density at the seagrass health reference monitoring sites is below the 20th percentile of pre-dredging seagrass shoot and leaf density determined for each seagrass health reference monitoring site, as referred to in item 3 c) above, and is due to the influence of natural regional-scale processes, then the following criteria in b) apply;
 - b) the median seagrass shoot and leaf density calculated each fortnight for each seagrass health impact monitoring site is greater than the 5th percentile of seagrass shoot and leaf density determined for seagrass health reference monitoring sites calculated following confirmation that seagrass shoot and leaf density has been reduced at reference sites due to regional processes other than dredging operations,
6. set out the management actions to be undertaken immediately in the event that the proponent is unable to undertake seagrass health monitoring for two consecutive fortnights during the dredging operations. The management actions shall include ceasing dredging operations and not recommencing until the proponent is able to undertake seagrass health monitoring to determine whether the seagrass health criteria in item 5 above have been met,
7. include audit and reporting procedures.

17-12 The proponent shall ensure that the dredging operations do not significantly impact on the health of seagrass outside the boundaries of the Port, as shown on the plans in Figures 1 and 2 to Schedule 1 to this Statement.

The Proposal (Assessment No. 1353)

The proposal is to construct and operate Stage 1 of a port facility consisting of dredged channels, turning basin and berthing pocket, a cargo wharf on reclaimed land, an off-shore breakwater and associated cargo handling facilities, to the north of James Point in Cockburn Sound.

The ultimate project may involve other stages.

The proposal comprises:

- creation of approximately 172,000 square metres of land-back wharfed area, of which approximately 151,000 square metres will be reclaimed below low water mark, to create 600 metres of land-backed wharf north of the existing BHP jetty No. 1;
- dredging of approximately 1,180,400 cubic metres of marine sediments to create a berthing pocket dredged to -13 metres Chart Datum (CD) immediately west of the reclaimed land-backed wharf, an entrance channel dredged to approximately -12.2 metres CD, and an increase in the depth and width of the Stirling Channel approach to -12.2 metres CD with a final width of approximately 175 metres. The dredging program is expected, as far as practicable, to balance the reclamation requirements;
- import of additional clean fill as required to complete the reclamation;
- an offshore breakwater approximately 850 metres long, with a gap of 200 metres between the land-backed wharf and the eastern end of the breakwater requiring the importation of approximately 574,000 cubic metres of core and armour material;
- road transport of armour materials to the port;
- anticipated exports including livestock, scrap metals and general bulk cargoes, including dangerous goods which are currently handled by other port facilities in the Perth Metropolitan area; and
- anticipated imports including general cargoes, product steel and bulk products, including dangerous goods which are currently handled by other port facilities in the Perth Metropolitan area.

The location of the proposal is shown in Figure 1. The constructed elements of the proposal are shown in Figure 2. The Key Proposal Characteristics are shown in Table 1 below.

Table 1 - Key Proposal Characteristics

Element	Quantities/Description
Reclamation	<p>Approximately 172,000 square metres of filled land and seabed to create a 600 metre long land-backed wharf.</p> <p>Of this area, approximately 151,000 square metres will be reclaimed below low water mark, including approximately 82,000 square metres of seabed which is currently less than 10 metres deep.</p>

Element	Quantities/Description
Dredging	<p>Dredging of approximately 1,274,700 cubic metres of marine sediments to create a berthing pocket dredged to minus 13 metres Chart Datum (CD) immediately west of the reclaimed land-backed wharf, an entrance channel dredged to approximately minus 12.2 metres CD, and an increase in the depth and width of the Stirling Channel approach to minus 12.2 metres CD with a final width of approximately 175 metres.</p> <p>This dredging will occur over an area of approximately 800,000 square metres, including approximately 90,000 square metres of seabed that is currently less than 10 metres deep.</p>
Offshore breakwater	<p>Approximately 800 metres long in 10 metre deep water extending from approximately 200 metres off-shore in an arc to approximately 500 metres off-shore.</p> <p>Breakwater construction requiring approximately 574,000 cubic metres of imported limestone core and armour material.</p>
Target trades	<p>Exports may include:</p> <ul style="list-style-type: none"> • Livestock—sheep, cattle, fodder <ul style="list-style-type: none"> ○ Up to 3,000,000 sheep per year; and ○ Up to 100,000 cattle per year • Bulk trades—silica sand, mineral sand • Scrap steel • General cargo—containers, bulka bags, project cargoes. <p>Imports may include:</p> <ul style="list-style-type: none"> • Bulk trades—fertiliser products, grain, cement clinker • General cargo—steel products, project cargo.
Transport	<p>Construction:</p> <p>Transport of rock armour, core material and fill requiring approximately 56,000 truck movements over a period of approximately 9 months.</p> <p>Operations:</p> <p>Transport of livestock from farms and existing holding facilities at Mundijong and Wellard on an on-going basis. Livestock transport will result in an increase of heavy vehicle traffic on Anketell Road west of the Kwinana Freeway, and on Rockingham Road and Beard Street, Kwinana.</p>

Figures (attached)

Figure 1: Location map, Stage 1 Port, Kwinana.

Figure 2: Conceptual layout showing land-backed wharf (including dimensions), dredging area and depths, offshore breakwater and port limits Stage 1 Port, Kwinana.

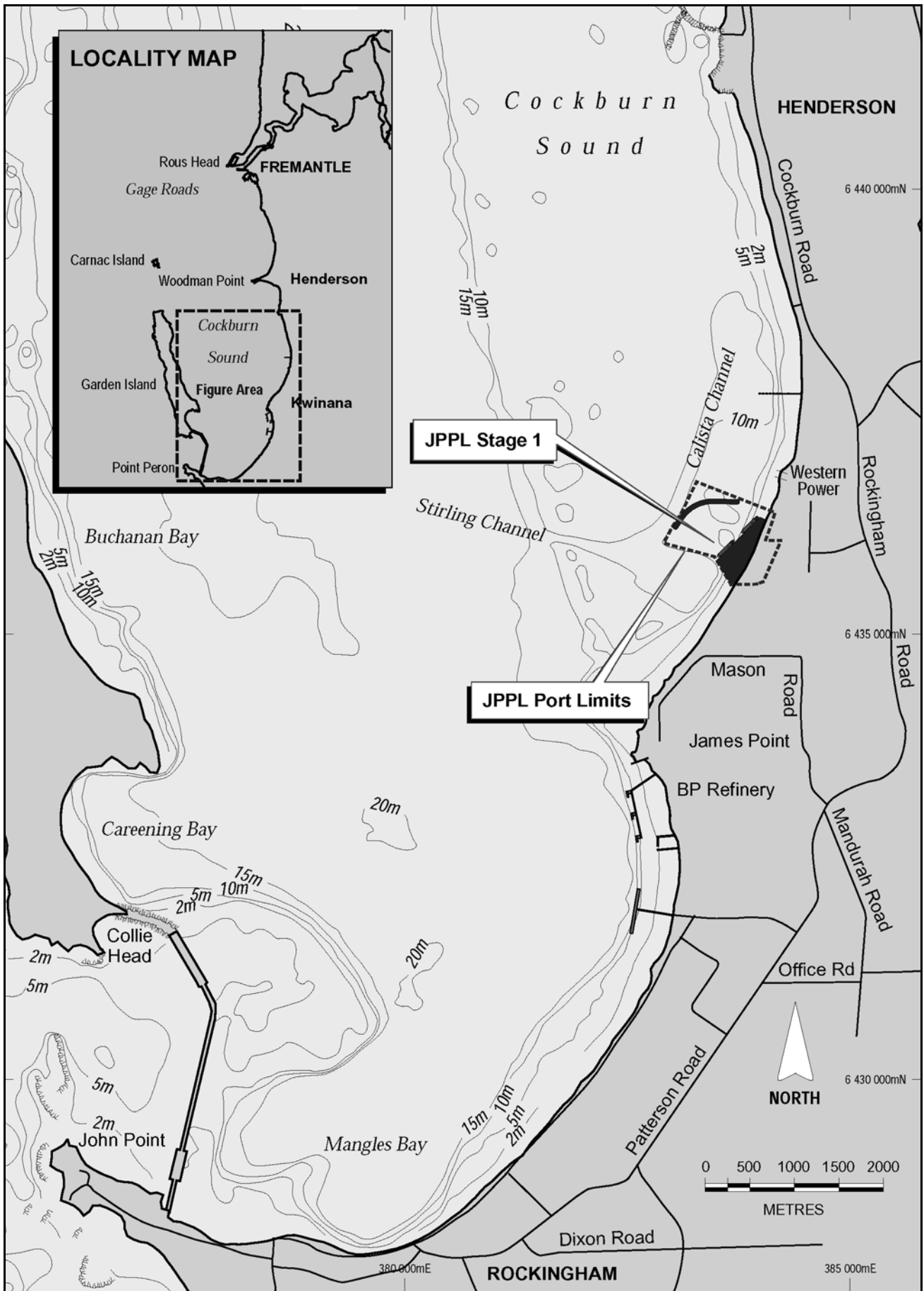


Figure 1: Location map, Stage 1 Port, Kwinana

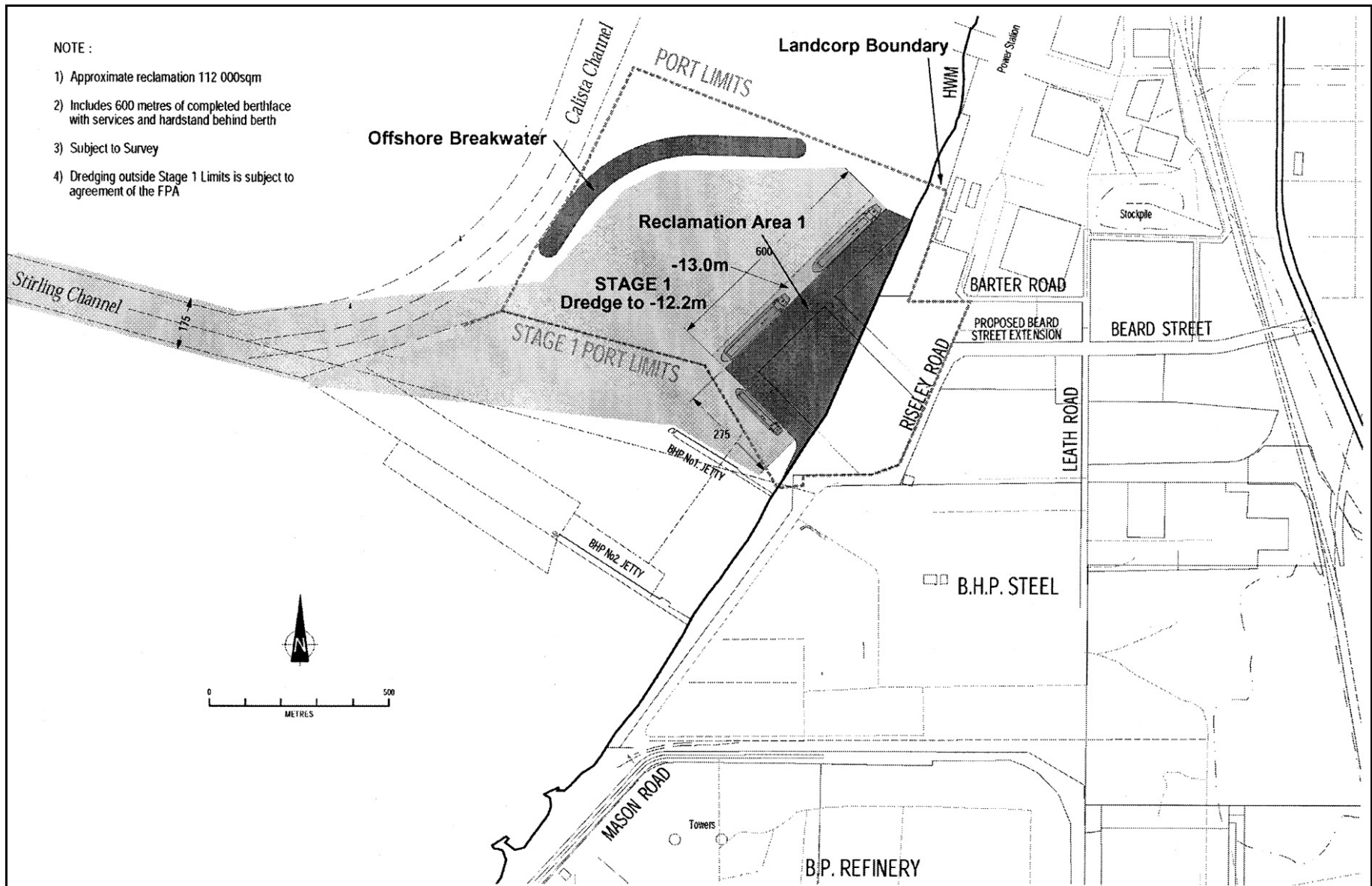


Figure 2: Conceptual layout showing land-backed wharf (including dimensions), dredging area and depths, offshore breakwater and port limits Stage 1 Port, Kwinana

Proponent's Environmental Management Commitments

April 2004

James Point Port, Stage 1
Cockburn Sound, Kwinana

(Assessment Nos. 1353 & 1523)

James Point Pty Ltd

Stage One Development of Port Facilities at James Point, Kwinana (Assessment Nos. 1353 and 1523)
 Proponent's Environmental Management Commitments – 14 April 2004

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
1	Dust Management Plan	Prepare Dust Management Plan which will address: 1. Dust control on trucks; 2. Procedures for dust control on site; 3. Procedures for dust monitoring; and 4. Contingencies plans/strategies.	Protect the surrounding land users such that dust and particulate emissions will not adversely impact upon their welfare and amenity or cause health problems by meeting the Guidelines for the Prevention of Dust and Smoke Pollution from Land Development Sites in WA and the <i>Environmental Protection (Kwinana)(Atmospheric Wastes) Policy 1999</i> . Minimise impacts of construction activities on dust levels away from the site.	Prior to commencement of construction	Local Government Authorities
2	Dust Management Plan	Implement Dust Management Plan	As per 1	During construction	Local Government Authorities
3	Maintenance Dredging Management Plan	Prepare a Maintenance Dredging Management Plan which addresses: 1. Onshore disposal of spoil arising from maintenance dredging; and 2. Protection of the marine environment during dredging.	To ensure that maintenance dredging is undertaken in an environmentally appropriate manner.	Prior to undertaking any maintenance dredging	FPA, DPI
4	Maintenance Dredging Management Plan	Implement Maintenance Dredging Management Plan.	As per 3	During maintenance dredging	FPA, DPI
5	Introduced Species Management Plan	Prepare an Introduced Species Management Plan which addresses: 1. the monitoring and management of introduced species (including phytoplankton);and 2. contingency plans for the event that previously unrecorded targeted species are found in port waters.	Protect coastal waters by taking early action in the event of the detection of new exotic species.	Prior to commencement of operations	CSIRO, AQIS, Department of Fisheries
6	Introduced Species Management Plan	Implement Introduced Species Management Plan.	As per 5	Prior to commencement of operations	CSIRO, AQIS, Department of Fisheries

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
7	Livestock Export Environmental Management Consultative Committee	<p>Convene a Livestock Export Environmental Management Consultative Committee with membership and chair elected from the following parties:</p> <ul style="list-style-type: none"> • relevant community groups from the Kwinana area; • Kwinana industry (e.g. Kwinana Industries Council, unions); • LiveCorp • Livestock Transporters' Association of WA (Inc); • the proponent; • relevant local government authorities; • Cockburn Sound Management Council; • Department of Environmental Protection (involvement as and when required); and • Department for Planning and Infrastructure. <p>The Terms-of-Reference of this Committee will be as follows:</p> <ol style="list-style-type: none"> 1. to provide advice and recommendations to the proponent on management of noise associated with livestock export activities, including transport and shipping of livestock to and from the port; 2. to provide advice and recommendations to the proponent on management of odour associated with livestock export activities, including transport and shipping of livestock to and from the port; and 3. to provide advice to the proponent on other issues relevant to environmental management of livestock export activities. 	To provide opportunities for community and industry feedback on the effectiveness of environmental management, particularly noise and odour associated with the trade in livestock through the Stage 1 Port.	Prior to exporting of livestock	
8	Livestock Export Environmental Management Consultative Committee	<p>The proponent will have regard for the advice and recommendations of the Livestock Export Environmental Management Consultative Committee and will advise the following parties of management actions taken to address the findings and recommendations of the Committee:</p> <ol style="list-style-type: none"> 1. livestock owners/agents of livestock shipping lines; 2. livestock holding yard operators; and 3. livestock transport companies/contractors. 	As per 7	Ongoing	Relevant Local Government Authorities, including the Town of Kwinana

Abbreviations

FPA–Fremantle Ports (formerly Fremantle Port Authority)

AQIS–Australian Quarantine Inspection Service

CoR–City of Rockingham

CSIRO–Commonwealth Scientific and Industrial Research Organisation

CSMC –Cockburn Sound Management Council

ToK–Town of Kwinan

DPI–Department for Planning and Infrastructure

CoC–City of Cockburn

Schedule 3

Processes and Procedures for Public Review of Environmental Management Plans and Programs (April 2004)

- Submit drafts of the Environmental Management Plans and Programs to the Department of Environmental Protection for review.
- The Department of Environmental Protection will determine whether the draft Plans and Programs are suitable for public review by considering the following:
 - a) the relevant Environmental Protection Authority objectives as described in Environmental Protection Authority Bulletin 1076 have been adequately addressed;
 - b) the document/s are technically sound;
 - c) the document/s are understandable; and
 - d) the document's format, content and style are appropriate.
- Commence the public review period, for not more than three Plans and/or Programs at a time, upon receiving written advice from the Department of Environmental Protection that the draft Plans and Programs are suitable for public review.
- Advertise the availability of the draft Plans and Programs in the news section of the main local newspaper and a state-wide daily newspaper in a form and content agreed by the Department of Environmental Protection.
- Ensure the draft Plans and Programs are available to the community and key stakeholders including the James Point Port Community Reference Group (see Condition 6-3) throughout the public review period.
- Invite comments and input from the key stakeholders by supplying copies of the draft Plans and Programs during the commencement of the public review period, at no cost to the following groups, as appropriate:
 - a. Cockburn Sound Management Council;
 - b. Town of Kwinana;
 - c. City of Rockingham;
 - d. City of Cockburn;
 - e. Conservation Council;
 - f. Kwinana Progress Association;
 - g. Kwinana Watchdog Group;
 - h. Fremantle Port Authority;
 - i. Department for Planning and Infrastructure;
 - j. Local public libraries (Cockburn, Kwinana and Rockingham); and
 - k. James Point Port Community Reference Group (see Condition 6-3).
- Hold project open days and/or forums during the public review period to engage stakeholder and community input into the draft Plans and Programs.
- Summarise the environmental issues raised and respond to the comments and issues and provide a copy of the summary of the issues raised, the proponent's responses and the modified Plans and Programs, where necessary, to the Environmental Protection Authority.

Appendix 3

Proponent's Management Strategies

Stage One Development of Port Facilities at James Point, Kwinana Proponent's Environmental Management Strategies – 14 April 2004

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
1	Coastal processes	Undertake detailed wave and sediment transport study to derive optimum Stage 1 port configuration with respect to minimising impacts on coastal processes. The final configuration will be presented to the EPA, FPA, CSMC and Western Power for review.	To minimise the impact of the port and offshore breakwater on adjacent beaches and the Western Power cooling water outfall. Additional objectives set out in correspondence from the proponent dated 8 October 2002, include: <ul style="list-style-type: none"> To maximise water circulation in and through the area of the proposed port; and To get the best design for the offshore breakwater that will optimise the operational conditions of the Stage 1 Port. 	Prior to finalisation of the Construction EMP.	FPA, Western Power, CSMC
2	Construction Environmental Management Programme (EMP)	Prepare an EMP for construction phase of the project which includes management plans for: <ol style="list-style-type: none"> Dredging and reclamation activities; Extraction and transport of limestone and fill; Minimising construction noise; Minimising dust associated with construction; Minimising impacts on dunes and vegetation and rehabilitation of same; Risk; Public safety; Aboriginal Heritage; and Groundwater quality. 	To provide an effective framework for environmental management of the construction phase of the project, such that: <ul style="list-style-type: none"> DEP can audit commitments to environmental management; Detailed management plans for each commitment can be reviewed and approved by DEP prior to implementation; Any adverse impacts can be revealed in a timely manner; and Provide contingency plans to deal with any adverse impacts. 	Prior to commencement of construction.	Local Government Authorities: <ul style="list-style-type: none"> ToK CoR CoC
3	Construction Environmental Management Programme (EMP)	Implement Construction Environmental Management Programme.	As per 2.	During construction	Local Government Authorities <ul style="list-style-type: none"> ToK CoR CoC
4	Construction EMP: Rock Armour and Fill Extraction and Transport Plan.	Prepare Rock Armour and Fill Extraction and Transport Plan which addresses: <ol style="list-style-type: none"> Transport route(s); Duration of trucking activities; Hours of transport; and Suitability of source of fill and armour. 	Minimise the impact on noise-sensitive premises of increased traffic movement. Minimise impacts of transport activities on local residents. Ensure additional fill required for reclamation works is of acceptable standard, compatible with intended end use and surrounding environment, and consistent with DEP criteria.	Prior to commencement of construction.	Local Government Authorities
5	Construction EMP: Rock Armour and Fill Extraction and Transport Plan.	Implement Rock Armour and Fill Extraction and Transport Plan.	As per 4.	During construction	Local Government Authorities

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
6	Construction EMP: Noise Management Plan	Prepare Noise Management Plan which will include the following: <ol style="list-style-type: none"> 1. Qualitative noise assessments to be conducted near closest noise-sensitive premises during construction. If considered unduly intrusive, quantitative noise measurement will be conducted; 2. Management response to unacceptable noise levels will include restrictions on times of day or wind directions under which pile driving is conducted; 3. Management of construction traffic such that the requirements of the EPA Preliminary Draft Guidance Statement #14 "Road and Rail Transport Noise" are met; and 4. Establishment of a complaints mechanism to record and respond to any noise complaints from neighbours or the public. 	Ensure noise impacts emanating from construction activities comply with statutory requirements and acceptable (and appropriate) standards. Minimise impacts of construction activities on nearby noise-sensitive locations.	Prior to commencement of construction.	Local Government Authorities
7	Construction EMP: Noise Management Plan	Implement Noise Management Plan	As per 6.	During construction	Local Government Authorities
8	Construction EMP: Dune and Vegetation Management Plan.	Prepare a Dune and Vegetation Management Plan which addresses: <ol style="list-style-type: none"> 1. Construction impact on dunes (minimised beyond that required for reclamation); and 2. Construction impact on vegetation (minimised beyond that required for reclamation). 	Keep loss of terrestrial vegetation and dunes to the minimum required to construct the port. Retain and protect remaining vegetation.	Prior to commencement of construction	Local Government Authorities
9	Construction EMP: Dune and Vegetation Management Plan.	Implement Dune and Vegetation Management Plan.	As per 8	During construction.	
10	Construction EMP: Construction Risk Management Plan.	Prepare Construction Risk Management Plan which: <ol style="list-style-type: none"> 1. Identifies hazards; 2. Includes a safety management system; 3. Includes an emergency management system; 4. Includes an induction process, and 5. Procedures for auditing the plan. Present the plan to Kwinana Industries Mutual Aid committee and regulators for approval.	Ensure that the site is operated in a safe manner and that risks from neighbouring hazardous facilities in the Kwinana Industrial Area are allowed for during construction.	Prior to construction.	DMPR
11	Construction EMP: Construction Risk Management Plan.	Implement Construction Risk Management Plan.	As per 10	During construction.	
12	Construction EMP: Public Safety Plan	Prepare Public Safety Plan which addresses: <ol style="list-style-type: none"> 1. Restriction of public access to the construction site; 2. Marine equipment complies with relevant regulations; and 3. Public notification of any restrictions. 	Maintain public safety during construction.	Prior to commencement of construction	Local Government Authorities DPI

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
13	Construction EMP: Public Safety Plan	Implement Public Safety Plan.	As per 12	During construction	Local Government Authorities
14	Construction EMP: Aboriginal Heritage Management Plan	Prepare Aboriginal Heritage Management Plan which addresses: 1. Aboriginal heritage; 2. Uncovering of skeletal material; and 3. Uncovering of artefacts.	Ensure that the proposal complies with the requirements of the Aboriginal Heritage Act 1972; and Ensure that changes to the biological and physical environment resulting from the project do not adversely affect cultural associations with the area.	Prior to commencement of construction	Department of Indigenous Affairs
15	Construction EMP: Aboriginal Heritage Management Plan	Implement Aboriginal Heritage Management Plan.	As per 14	During construction	
16	Construction EMP: Contaminated Land Management Plan	Prepare a Contaminated Land Management Plan which addresses: 1. A survey to establish the level of any soil contamination within the port site; 2. the preparation of management plans in consultation with DEP in the event that contaminated soil is discovered; and 3. provision of certification to DEP that land meets appropriate contamination guidelines prior to construction.	Ensure that soil quality meets the appropriate guidelines.	Prior to commencement of construction	Local Government Authorities
17	Construction EMP: Contaminated Land Management Plan	Implement Contaminated Land Management Plan.	As per 16	Prior to commencement of construction	Local Government Authorities
18	Construction EMP: Groundwater Quality Management Plan	Prepare a Groundwater Quality Management Plan which addresses: 1. A survey to establish the groundwater quality within the port site; 2. Berth design; and 3. Management of any contaminated groundwater flowing within the port boundaries.	Protect quality of the groundwater and ensure that any existing contamination does not affect the construction of the port. Determine whether further sediment sampling may be required if significant groundwater contamination is detected. To ensure that groundwater flows and quality will not have an impact on the water quality in the port. Protect the agreed Environmental Quality Objectives for the port waters.	Prior to commencement of construction	WRC
19	Construction EMP: Groundwater Quality Management Plan	Implement Groundwater Quality Management Plan.	As per 18	During construction	

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
20	Port Operations EMP	<p>The proponent will prepare an Environmental Management Programme (EMP) for the operation phase which will address the following specific issues via separate management plans:</p> <ol style="list-style-type: none"> 1. Water and sediment quality; 2. Coastal stability; 3. Maintenance dredging; 4. Ballast water; 5. Introduced species; 6. Oil spill planning; 7. Surface water quality; 8. Waste; 9. Risk; 10. Air quality; 11. Livestock Export Environmental Management Consultative Committee; 12. Traffic; 13. Feral pigeons; 14. Landscaping; and 15. Community consultation. 	<p>Provide a framework for environmental management of the port, such that:</p> <ul style="list-style-type: none"> • DEP can audit commitments to environmental management; • Detailed management plans for each commitment can be reviewed and approved by DEP prior to implementation; • Any adverse impacts can be revealed in a timely manner; • Provide contingency plans to deal with any adverse impacts; and • The public may be kept informed of environmental management activity at the port. 	Prior to commencement of operations.	CSMC, CALM, Local Government Authorities
21	Port Operations EMP: Water and Sediment Quality Management Plan	<p>Prepare a Water and Sediment Quality Management Plan which addresses the following:</p> <ol style="list-style-type: none"> 1. Monitoring programmes for contaminants in the sediments, seafood and sessile fauna in the vicinity of the development; 2. Sediment and water quality monitoring programmes which have the ability to measure long-term changes in sediment and water quality, including changes in productivity and dissolved oxygen status; 3. Monitoring of phytoplankton species within the port; 4. Modelling the effect of the port on the dispersion of heat and contaminants from Western Power and BP; and 5. Reporting procedures. 	Maintain marine water and sediment quality consistent with agreed Environmental Quality Objectives and Environmental Quality Criteria.	Prior to commencement of operations	CSMC, Dept. of Health
22	Port Operations EMP: Water and Sediment Quality Management Plan	Implement Water and Sediment Quality Management Plan.	As per 21.	For five years after completion of construction, after which time the programme will be reviewed.	

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
23	Port Operations EMP: Coastal Stability Management Plan	Prepare a Coastal Stability Management Plan which addresses the effects of the port on the local coastal processes, including: <ol style="list-style-type: none"> Detailed design of the offshore breakwater such that reflected wave energy reaching the coast north of the development is minimised; A coastal monitoring programme to measure impacts of the development on local beaches; and Contingency plans in the event that impacts are unacceptable. 	To protect the recreational amenity of local beaches. To minimise and manage the impact of the port on local coastal processes.	Prior to construction.	CSMC, DPI, Local Government Authorities
24	Port Operations EMP: Coastal Stability Management Plan	Implement Coastal Stability Management Plan and contingency plans, if required.	As per 23	For five years after completion of construction, after which time the programme will be reviewed.	CSMC, DPI, Local Government Authorities
25	Port Operations EMP: Ballast Water Management Plan	Prepare a Ballast Water Management Plan based on the Australian Quarantine and Inspection Service (AQIS) Mandatory Ballast Water Arrangements, including implementing a Ballast Water Decision Support System.	To implement the International Maritime Organisation (IMO) and Commonwealth (AQIS and AMSA) arrangements for ballast water control.	Prior to commencement of operations	AMSA and AQIS
26	Port Operations EMP: Ballast Water Management Plan	Implement Ballast Water Management Plan.	As per 25	Prior to commencement of operations	AMSA and AQIS
27	Port Operations EMP: Introduced Species Management Plan	Prepare an Introduced Species Management Plan which addresses: <ol style="list-style-type: none"> the monitoring and management of introduced species (including phytoplankton);and contingency plans for the event that previously unrecorded targeted species are found in port waters. 	Protect coastal waters by taking early action in the event of the detection of new exotic species.	Prior to commencement of operations	CSIRO and AQIS
28	Port Operations EMP: Introduced Species Management Plan	Implement Introduced Species Management Plan.	As per 27	Prior to commencement of operations	CSIRO and AQIS
29	Port Operations EMP: Oil Spill Management Plan	Prepare an Oil Spill Management Plan which will: <ol style="list-style-type: none"> be aligned with the National Plan to Combat Pollution of the Sea by Oil and other Noxious and Hazardous Substances; be based on the Western Australian Marine Oil Pollution Emergency Management Plan; and will include agreements of mutual cooperation with relevant organisations. 	Minimise the impacts of fuel or oil spillage during port operations and efficiently manage their cleanup.	Prior to commencement of operations	FPA, DPI, AMSA and WA Mussel Producers' Association
30	Port Operations EMP: Oil Spill Management Plan	Implement Oil Spill Management Plan.	As per 29	Prior to commencement of operations	FPA, DPI AMSA, and WA Mussel Producers Association

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
31	Port Operations EMP: Surface Water Quality Management Plan	Prepare a Surface Water Quality Management Plan which includes procedures to: 1. Monitor quality and quantity of runoff entering Cockburn Sound; 2. Maintain effectiveness of drains; 3. Contain and clean-up spills; and 4. Minimise impact of surface drainage on port water quality.	Minimise and manage impact of surface water drainage on port and Cockburn Sound water quality.	Prior to commencement of operations	WRC, Local Government Authorities
32	Port Operations EMP: Surface Water Quality Management Plan	Implement Surface Water Quality Management Plan.	As per 31	Prior to commencement of operations	Local Government Authorities
33	Port Operations EMP: Waste Management Plan	Prepare a Waste Management Plan which includes: 1. Detail of the method(s) for the treatment and disposal of wastes; 2. Operating procedures associated with the on-site storage of waste; 3. Operating procedures for the transfer of waste off-site; and 4. Contingencies. Provide mobile pumping and sullage such that vessel waste is not discharged to port waters.	To ensure port wastes are stored, transported and disposed of in a manner consistent with best practice and statutory requirements. To minimise risk of spills and pollution.	Prior to commencement of operations	Local Government Authorities, Dept. of Health
34	Port Operations EMP: Waste Management Plan	Implement Waste Management Plan.	As per 33	Prior to commencement of operations	Local Government Authorities, Department of Health
35	Port Operations EMP: Operations Risk Management Plan	Prepare Operations Risk Management Plan which will include: 1. Detailed assessment of port operating risk; 2. Procedures for minimisation of risk; 3. Contingency procedures for emergency events; 4. Assessment of combined on-site and off-site risks; 5. Compliance with KICC, ADGC, IMO, AMSA, and DMPR procedures; 6. Service corridors so that cumulative risk is not increased; 7. Monitoring of dangerous goods and transport routes by destination; 8. Liaison with SES for residual risk; and 9. Procedures for review of quantitative risk assessment every two years.	Quantify and manage risks associated with port operations. Ensure that risk is assessed and managed to meet the EPA's criteria for individual fatality risk off-site and the DMPR's requirements in respect of public safety.	Prior to commencement of operations	AMSA, FESA, KICC and DMPR.
36	Port Operations EMP: Operations Risk Management Plan	Implement Operations Risk Management Plan.	As per 35	Prior to commencement of operations	AMSA, FESA, KICC and DMPR

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
37	Port Operations EMP: Air Quality Management Plan	Prepare Air Quality Management Plan which will include procedures to reduce the impact of the port operations on air quality. It will include the following: 1. Material conveying: to the extent practicable, 'Best Practice' materials handling systems will be adopted; 2. Dust collectors to be installed and maintained on handling systems for dusty materials; and 3. Good "house-keeping" procedures to be developed and applied to limit dust generation.	Protect the surrounding land users such that dust and particulate emissions will not adversely impact upon their welfare and amenity or cause health problems by meeting the Environmental Protection (Kwinana)(Atmospheric Wastes) Policy 1999.	Prior to commencement of operations	KICC
38	Port Operations EMP: Air Quality Management Plan	Implement Air Quality Management Plan.	As per 37	Prior to commencement of operations	KICC
39	Port Operations EMP: Traffic Management Plan	Prepare Traffic Management Plan which will: 1. Designate major road transport routes for the port within the Perth Metropolitan Area; 2. Detail the use of the truck wash-down facility at the port; 3. Provide for the conduct of regular inspections of Anketell Road west of the Kwinana Freeway; Rockingham Road and Beard Street to detect any spillages from livestock trucking and their causes; and 4. Provide for reporting of incidents and likely causes to the Livestock Export Environmental Management Consultative Committee.	Minimise traffic related impacts on noise-sensitive premises. Minimise port-related spillage along port transport routes.	Prior to commencement of operations	Relevant Local Government Authorities, MRWA
40	Port Operations EMP: Traffic Management Plan	Implement Traffic Management Plan.	As per 39	Prior to commencement of operations	Relevant Local Government Authorities
41	Port Operations EMP: Feral Pigeon Management Plan	Prepare Feral Pigeon Management Plan which addresses: 1. "housekeeping" measures to reduce potential food sources and 2. methods to prevent roosting or to destroy pigeons. The proponent will become an active participant in any local Feral Pigeon control measures.	Manage any increase in feral pigeon numbers in the Kwinana area. Protect the ecological values of Shoalwater Islands Marine Park.	Prior to commencement of operations	CALM Dept. of Health
42	Port Operations EMP: Feral Pigeon Management Plan	Implement Feral Pigeon Management Plan.	As per 41	Prior to commencement of operations	
43	Port Operations EMP: Landscape Management Plan	Prepare a Landscape Management Plan for the port which will include: 1. Bush regeneration; 2. Landscaping plans; and 3. Utilising local native species for areas not required for port facilities.	To maximise the visual appeal of the port area and compensate for the loss of the foredune area.		
44	Port Operations EMP: Landscape Management Plan	Implement Landscape Management Plan.	As per 43		

NO.	TOPIC	ACTION	OBJECTIVE/S	TIMING	ADVICE
45	Port Operations EMP: Community Consultation Plan	Prepare Community Consultation Plan to include: 1. The formation of a community consultation group or provision of additional support to an existing forum; and 2. Procedures for responding to and acting on public enquiries and complaints on a 24 hour a day basis.	To keep the local community well informed regarding the operations of the port. To obtain regular feedback on community concerns regarding the Port operations.	Prior to commencement of operations	Relevant Local Government Authorities
46	Port Operations EMP: Community Consultation Plan	Implement Community Consultation Plan.	As per 45	Prior to commencement of operations	Relevant Local Government Authorities
47	Offshore Breakwater Modification or Removal Plan	If any future development proposal demonstrates that a conflict will arise by the proposed breakwater remaining in place, then the proponent will commit to following the instructions of an independent inquiry which has the capacity to consider: legal, environmental, engineering, navigation and safety issues. Prior to removal or modification of any portion of the breakwater, the proponent will prepare an Offshore Breakwater Modification or Removal Plan.	To ensure the waters of the port remain safe and environmentally acceptable. To ensure that any subsequent modification or removal of the offshore breakwater is undertaken in an environmentally acceptable and safe manner.	If required.	DPI FPA
48	Offshore Breakwater Modification or Removal Plan	Implement Offshore Breakwater Modification or Removal Plan.	As per 47	If required.	DPI FPA OMP
49	Environmental Management System (EMS)	Prepare an EMS which is consistent with current international standards and which addresses the environmental management procedures required to operate the port. The EMS will be subject to regular audits and reviews to ensure that it remains up to date with operations and best practice.	To ensure that the port is operated in a manner consistent with current best practice.	Prior to commencement of operations.	
50	Environmental Management System (EMS)	Implement the EMS.	As per 49	Prior to commencement of operations.	

Abbreviations

ADGC–Australian Dangerous Goods Code
AMSAs–Australian Marine Safety Authority
AQIS–Australian Quarantine Inspection Service
CALM–Department of Conservation and Land Management
CoR–City of Rockingham
CSIRO–Commonwealth Scientific and Industrial Research Organisation
CSMC –Cockburn Sound Management Council
DEP–Department of Environmental Protection
DMPR–Department of Mineral and Petroleum Resources
DPI–Department for Planning and Infrastructure
Dept. of Health–Western Australian Department of Health

EMP–Environmental Management Plan
EMS– Environmental Management System
FPA–Fremantle Ports (formerly Fremantle Port Authority)
IMO–International Maritime Organisation
KICC–Kwinana Industries Coordinating Committee
MRWA–Main Roads Western Australia
FESA–Fire and Emergency Services Authority
Transport–formerly Department of Transport, now Department for Planning and Infrastructure
WRC–Water and Rivers Commission
ToK–Town of Kwinana
CoC–City of Cockburn
OMP–Office of Major Projects, Department of Mineral and Petroleum Resources

Appendix 4

Cockburn Sound Management Council's *Guidelines for Developments Affecting the Shoreline and Seabed* outlined in the *Interim Environmental Management Plan for Cockburn Sound and its Catchment*

COCKBURN SOUND MANAGEMENT COUNCIL
GUIDELINES FOR DEVELOPMENTS
AFFECTING THE SHORELINE AND SEABED

Guidelines that will be used by CSMC when providing advice on future developments :

1. Proponents should take all reasonable efforts to limit (minimise) the environmental impacts resulting from the proposed development.
2. 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.
3. 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 of 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.

Appendix 5

Cockburn Sound Management Council's advice to Chairman of the EPA



Department of Environmental Protection
Water and Rivers Commission

Amalgamating to form the Department of
Environment, Water and Catchment Protection

Cockburn Sound Management Council

Your ref:

ENVIRONMENTAL

Our ref:

CS38

PROTECTION AUTHORITY

Enquiries:

Anthony Sutton

DATE RECEIVED 15-3-04

EPA FILE NO 43-3a10

Direct tel:

9591 3837

CORRESPONDENCE

REF NO 113487

Dr Walter Cox
Chairman - Environmental Protection Authority
PO Box K822
PERTH WA 6842

DEPARTMENT OF ENVIRONMENTAL PROTECTION RECORDS SECTION	
15 MAR 2004	
FILE NO	_____
NAME	_____
FILE NO	_____
NAME	_____

Dear Dr Cox,

ADVICE TO THE EPA ON POTENTIAL MITIGATION OPTIONS FOR THE PROPOSED JAMES POINT STAGE ONE PORT, KWINANA – FINAL RESPONSE

Further to my letters dated 9 and 20 February 2004, the Cockburn Sound Management Council (CSMC) has now formally considered the above matter in terms of the interpretation of the CSMC's development guidelines, the options proposed, and the specific outcomes required.

After much debate, CSMC members agreed that the proponent needs to clearly demonstrate to the community that they have taken all reasonable efforts to avoid and minimise the environmental impacts resulting from the proposal, prior to considering mitigation options.

CSMC members expressed strong views that none of the mitigation options proposed for the loss of near-shore marine habitat satisfactorily address the Council's "Guidelines for Developments Affecting the Shoreline and Seabed" contained in the Interim Environmental Management Plan for Cockburn Sound.

As the proposed mitigation options do not closely match the Council's objectives for offsets to be appropriately located, enduring or targeted, members felt that the design of the project needed to be carefully examined to identify ways of avoiding and minimising the proposed impact on the near-shore marine habitat and shoreline.

Notwithstanding its concerns, and in accordance with the procedures laid out in its Guidelines, the Council did agree to provide advice on mitigation options on the clear understanding that these options were considered by members to be the least unsatisfactory offsets (attached). Additional advice is also provided on the other aspects of the proposal, such as noise, odour and community consultation.

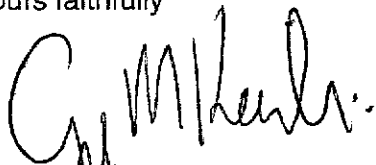
I would also like to take this opportunity to reiterate Council's concern expressed in my letter of 9 February 2004 regarding the cumulative loss of the shoreline and the near-shore marine

B. Sipre

habitat of Cockburn Sound. The Council's concerns in this regard extend beyond ecological matters to the impact on restricting opportunities in relation to recreational activities.

If you wish to discuss the Council's position, I can be contacted at Notre Dame University on 9433 0630. Alternatively, if you wish to clarify any matters surrounding the process the Council undertook in determining its position, please contact Anthony Sutton at the CSMC office on 9591 3837.

Yours faithfully

A handwritten signature in black ink, appearing to read 'G. Kailis', written in a cursive style.

Professor George Kailis
Chairman, Cockburn Sound Management Council

11 March 2004