GUIDELINES

For the preparation of an

ENVIRONMENTAL IMPACT STATEMENT

For the

PORT BONYTHON BULK EXPORT PORT FACILITY

By Flinders Ports South Australia on behalf of Spencer Gulf Ports Link (SGPL)

August 2012

Development
Assessment Commission

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1 INTRODUCTION

On 1 March 2012, the Minister for Planning ('the Minister') made a declaration in the Government Gazette for the 'Port Bonython Bulk Export Port Facility' proposal to be assessed as a Major Development under the provisions of Section 46 of the *Development Act 1993*.

The proposed development is for a location named Port Bonython on Eyre Peninsula. The proposal comprises:

- Iron ore storage facilities
- Ore unloading facilities
- A new rail line connecting the storage facility to the existing Port Augusta/Whyalla rail line
- Ancillary amenities and infrastructure
- A new jetty structure (approx. 3km long, accessing 20m depth of water)
- Ship loading wharves (for Cape size vessels)
- Conveying and ship loader equipment to export approx. 50MT of ore per annum

The Development Assessment Commission (DAC) is the independent statutory authority that has the task of determining the appropriate form of assessment for a Major Development, namely an Environmental Impact Statement (EIS); a Public Environmental Report (PER) or a Development Report (DR); and setting Guidelines.

The proposed development is located within the Upper Spencer Gulf Marine Park which requires the Minister for Planning to consult with the Minister responsible for Marine Parks (pursuant to section 10A of the *Development Act 1993*) to appoint a Specialist DAC member. Professor Anthony Cheshire was so appointed on 6 June 2012.

Following consideration of the potential implications of the proposal, the DAC has determined the proposal will be subject to the processes and procedures of an Environmental Impact Statement (EIS), as set out in Section 46C of the *Development Act 1993*. An EIS was considered appropriate due to wide range of issues to be investigated, including:

- Potential impact on the marine environment
- The level of conformity with existing Development Plan provisions within the Development Plan.
- The establishment of a large shipping terminal in a rural coastal location.
- Traffic generation and implications for the existing road network.
- Location within the Upper Spencer Gulf Marine Park
- Potential economic benefits to the region or strategic provision of port facilities
- Visual and community impacts (especially recreational and tourism use of the area).
- Climate change

- Greenhouse gas emissions.
- Construction impacts (including noise, dust, odour and vibration).
- Infrastructure requirements.

It should be noted the *Development Act 1993* requires an EIS to be publicly exhibited for a period of at least 30 business days, and for a public meeting to be held during this period.

The DAC has now prepared Guidelines for the proposed Port Bonython Bulk Export Facility, based on the significant issues relating to the proposed development. The EIS should be prepared in accordance with these Guidelines and should describe what the proponent wants to do, what the environmental effects will be and how the proponent plans to manage the project.

The EIS should be prepared to cover both the construction and ongoing operation of the development and where possible should outline opportunities to incorporate best practice design and management.

For the purposes of environmental impact assessment under the *Development Act 1993*, the meaning of 'environment' is taken to include an assessment of environmental (biological and physical), social and economic effects associated with the development and the means by which those effects can be managed.

An opportunity for public comment will occur when the completed EIS is released for public exhibition. At that time, an advertisement will be placed in *The Advertiser* and local newspapers to indicate where the EIS is available and the length of the public exhibition period. During the exhibition period, written submissions on the proposal can be made to the Minister for Planning.

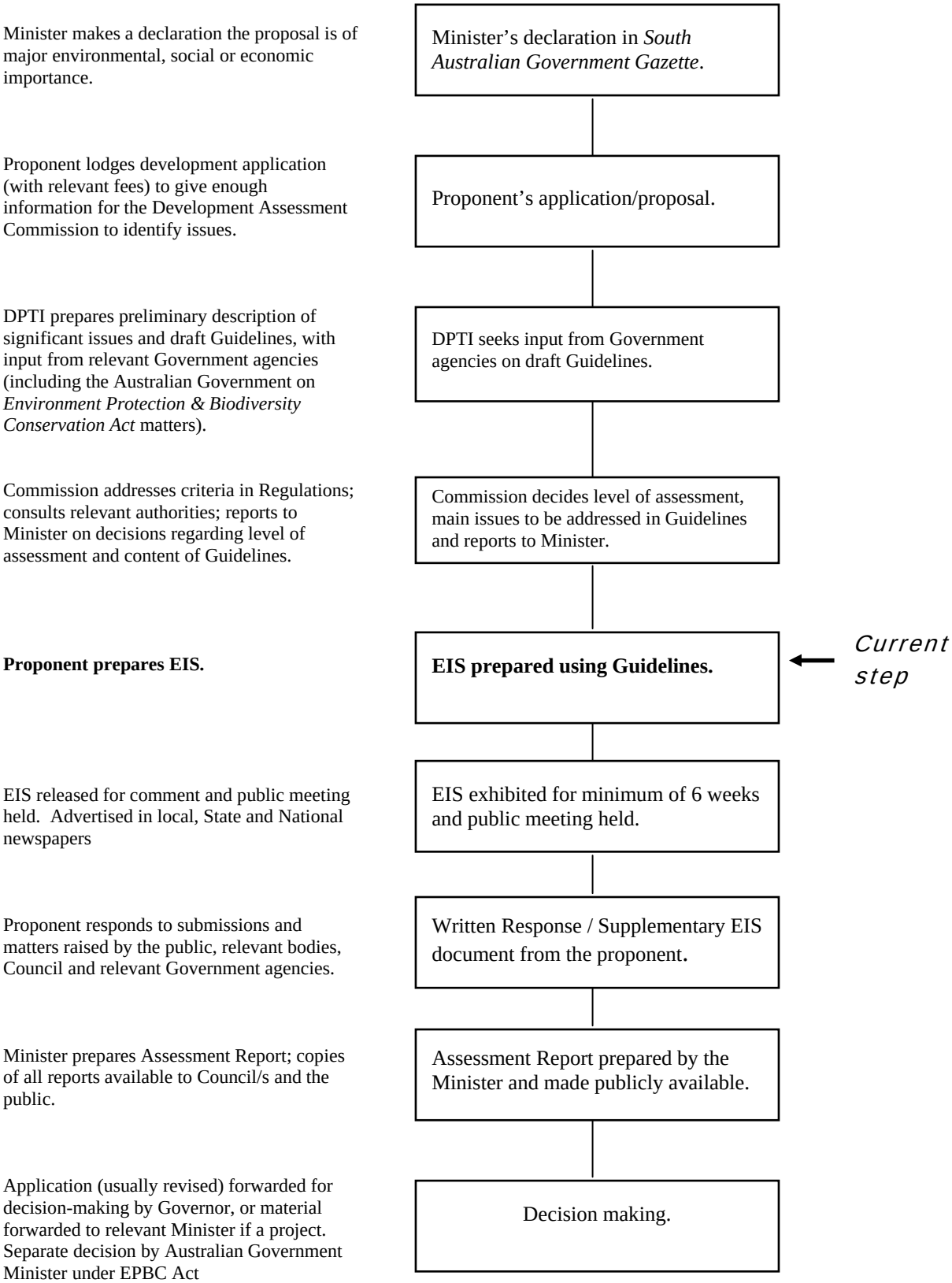
The DAC's role in the assessment process is now fulfilled. The Minister will continue with the assessment process under Section 46 of the *Development Act 1993* from this point. The object of Section 46 is to ensure that matters affecting the environment, the community or the economy to a significant extent are fully examined and taken into account in the assessment of this proposal.

The documentation and the analyses from the assessment process will then be used by the Governor in the decision-making process, under Section 48 of the *Development Act 1993*, to decide whether the proposal can be approved, and the conditions that will apply.

The key stages in the assessment process under the Major Developments or Projects provisions of the *Development Act 1993* are shown in Figure 1.

FIGURE 1

MAJOR DEVELOPMENTS - ASSESSMENT PROCESS AND DECISION-MAKING



2 BACKGROUND

The proponent of the proposed Port Bonython Bulk Export Facility is Flinders Ports South Australia on behalf of Spencer Gulf Port Link (SGPL)

SGPL proposes the construction of an iron ore facility at Stony Point, near Port Bonython on the Eyre Peninsula, South Australia. It consists of a 17.5km railway spur from the existing Whyalla to Port Augusta rail line, an onshore bulk ore handling and storage facility and 3km long jetty.

Refer to Appendix B for a copy of the relevant plans of the proposal.

The proponent has been advised by the Minister for Planning that a Environmental Impact Statement (EIS) is required to assist the Government in assessing the environmental, social and economic impacts of the proposal.

The DAC has prepared these Guidelines for the proponent based on the significant issues relating to the proposed development. These Guidelines identify the issues associated with the proposal that must be addressed in the EIS.

3 THE ENVIRONMENTAL IMPACT STATEMENT PROCESS

An EIS, as defined in Section 46B of the *Development Act 1993*, includes a description and analysis of issues relevant to the development and the means by which those issues can be addressed.

The EIS should detail the expected environmental, social and economic effects of the development. The EIS must consider the extent to which the expected effects of the development are consistent with the provisions of any Development Plan, the Planning Strategy and any matter prescribed by the Regulations under the Act. The EIS should also state the proponent's commitments to meet conditions (if any) placed on any approval that may be given to avoid, mitigate or satisfactorily control and manage any potential adverse impacts of the development on the environment. Further to this, any other information required by the Minister must be considered.

In preparing the EIS, the proponent should bear in mind the following aims of the EIS and public review process:

3.1.1 To provide a source of information from which interested individuals and groups may gain an understanding of the proposal, the need for the proposal, the alternatives, the environment that will be affected, the impacts that may occur and the measures to be taken to minimise these impacts.

3.1.2 To provide a forum for public consultation and informed comment on the proposal.

3.1.3 To provide a framework in which decision-makers may consider the environmental aspects of the proposal in parallel with social, economic, technical and other factors.

Following the release of the Guidelines adopted by the DAC:

3.1.4 The EIS must be prepared by the proponent in accordance with these Guidelines.

3.1.5 The EIS is referred to the District Council of Whyalla and to any prescribed authority or body, and to other relevant authorities or bodies for comment.

3.1.6 Public exhibition of the EIS document by advertisement is undertaken for a least 30 business days. Written submissions are invited.

3.1.7 A public meeting is held in the locality by the Department of Planning, Transport and Infrastructure during the period for making submissions, in order to provide information on the development or project, to explain the EIS document and processes, and to assist interested persons to make submissions under the Act.

3.1.8 Copies of the submissions from the public, Council and other relevant agencies will be given to the proponent (SGPL) soon after closing of the public comment period.

3.1.9 The proponent must then prepare a written response in a 'Response Document' to the matters raised by a Minister, Council, any prescribed or specified authority or body and the public. The proponent is nominally given two months to provide this to the Minister.

3.1.10 The Minister then prepares an Assessment Report, taking into account any submissions and the proponent's response to them. Comments from any other authority or body may be considered as the Minister thinks fit.

3.1.11 The Assessment Report and the Response Document are to be kept available for inspection and purchase at a place and period determined by the Minister. Availability of each of these documents will be notified by advertisements in the *Advertiser* newspaper and local press.

3.1.12 Copies of the EIS, the Response Document and the Assessment Report will be given to the District Council of Whyalla for distribution purposes.

3.1.13 The Governor is the relevant decision maker under Section 48 of the Act, when a development application is subject to the EIS process.

3.1.14 In arriving at a decision, the Governor must have regard to:

- The provisions of the appropriate Development Plan and Regulations.
- If relevant, the Building Rules.
- The Planning Strategy.
- The EIS, Response document and Assessment Report.
- If relevant, the *Environment Protection Act 1993*.
- If relevant, the objects of the *River Murray Act 2003* and any obligations under the Murray-Darling Basin Agreement.
- If relevant, the objects of the *Adelaide Dolphin Sanctuary Act 2005.*
- If relevant, the objects of the *Marine Parks Act 2007.*

The Governor can at any time, and prior to completion of the assessment process, determine that the development will not be granted authorisation. This may occur if it is clear that the development is inappropriate or can not be managed properly. This is commonly referred to as an "early no".

4 THE ENVIRONMENTAL IMPACT STATEMENT DOCUMENT

The Guidelines set out the major issues associated with the proposal and their degree of significance, as determined by the Development Assessment Commission. It describes each issue and then outlines the way that these issues should be dealt with in the Environmental Impact Statement.

In these Guidelines the terms "description" and other similar terminology should be taken to include both quantitative and qualitative materials as practicable and meaningful. Similarly, adverse and beneficial effects should be presented in quantitative and/or qualitative terms as appropriate.

The main text of the EIS should be clear and precise and presented in terms that are readily understood by the general reader. Technical details should be included in the appendices so that the EIS forms a self-contained entity.

The document should give priority to the major issues associated with the proposal. Matters of lesser concern should be dealt with only to the extent required to demonstrate that they have been considered to assist in focussing on the major issues.

The following should be included in the EIS:

4.1.1 SUMMARY

The EIS should include a concise summary of the matters set out in section 46B of the *Development Act 1993* and include all aspects covered under the headings set out in the Guidelines below, in order for the reader to obtain a quick but thorough understanding of the proposal and the resulting environmental impacts.

4.1.2 INTRODUCTION

The introduction to the EIS should briefly cover the following:

- Background to, and objectives of, the proposed development.
- Details of the proponent.
- Staging and timing of the proposal, including expected dates for construction and operation.
- Relevant legislative requirements and approval processes.
- Purpose and description of the EIS process.

4.1.3 NEED FOR THE PROPOSAL

- The specific objectives that the proposal is intended to meet, including market requirements.
- Arrangements for other users to gain access to port facilities and/or to establish additional facilities on site (including port management).

- Expected local, regional and state benefits and costs, including those that cannot be adequately described in monetary or physical terms (e.g. effects on aesthetic amenity).
- A summary of environmental, economic and social arguments to support the proposal, including the consequences of not proceeding with the proposal.

4.1.4 DESCRIPTION OF THE PROPOSAL

The description of the proposal should include the following information:

- The nature of the proposal and location.
- A project plan to outline objectives, constraints, key activity schedule and quality assurance.
- Site layout plans (including an indicative land division plan if relevant).
- The construction and commissioning timeframes (including staging).
- A description of the existing environment (including the immediate and broader location).
- Details on all buildings and structures associated with the proposed development.
- Any other infrastructure requirements and availability.
- Details on the operation of the proposed development.
- The relevant Development Plan zones.
- A risk analysis that maps key activities associated with construction and operation of the facility against the ecological assets of the region, identifies sensitive receptors that would be impacted by the construction or operational activities and outlines how these impacts will be managed and, where necessary, associated mitigation or rehabilitation procedures.
- Management arrangements for the construction and operational phases (including Environmental Management and Monitoring Plans).

The EIS must include the following:

4.1.5 ASSESSMENT OF EXPECTED ENVIRONMENTAL, SOCIAL AND ECONOMIC EFFECTS

The assessment of effects should include all issues identified in Section 5 of these Guidelines and cross referenced to supporting technical references.

4.1.6 CONSISTENCY WITH GOVERNMENT POLICY

The *Development Act 1993* requires the EIS to state the consistency of the expected effects of the proposed development with the relevant Development Plan and Planning Strategy.

4.1.7 AVOIDANCE, MITIGATION, MANAGEMENT AND CONTROL OF ADVERSE EFFECTS

The proponent's commitment to meet conditions proposed to avoid, mitigate, satisfactorily manage and/or control any potentially adverse impacts of the development on the physical, social or economic environment, must be clearly stated as part of the EIS.

The design of the proposal should be flexible enough to incorporate changes to minimise any impacts highlighted by this evaluation or by post-operation monitoring programs.

The EIS should also provide the following additional information:

4.1.8 SOURCES OF INFORMATION

The sources of information (e.g. reference documents, literature services, research projects, authorities consulted) should be fully referenced, and reference should be made to any uncertainties in knowledge. Where judgments are made, or opinions given, these will need to be clearly identified as such, and the basis on which these judgments or opinions are made will need to be justified. The expertise of those making the judgments including the qualifications of consultants and authorities should also be provided.

4.1.9 APPENDICES

Technical and additional information relevant to the EIS that is not included in the text should be included in the appendices (maps, graphs, tables, photographs, reports etc). A glossary may also be appropriate.

4.1.10 OTHER

Appropriate plans, drawings and elevations are needed for a decision to be made. As much information as possible is required of the design and layout of the proposal.

5 THE MAIN ISSUES

PLANNING AND ENVIRONMENTAL LEGISLATION AND POLICIES

5.1.1 Describe the proposal's consistency with and variance from the relevant Development Plan and State Planning Strategy.

5.1.2 Describe changes that the proponent believes will need to be made to the zoning of the site to facilitate the ongoing use.

5.1.3 Describe the relevant requirements of the *Environment Protection Act 1993* and associated policies and guidelines, and how these will be complied with.

5.1.4 Consider relevant protocols, agreements and strategies including: 'Tackling Climate Change, SA's Greenhouse Strategy 2007 – 2020, the *Climate* Change *and Greenhouse Emissions Reduction Act 2007* and the *National Greenhouse and Energy Reporting Act 2007*.

5.1.5 Describe the proposal's consistency with State and Commonwealth legislation and initiatives relating to conservation or protection of the biological environment and heritage items, including the *Marine Parks Act 2007*.

5.1.6 Detail any other relevant plans or studies that relate to the area.

5.1.7 Identify legislative requirements and the range of approvals needed to complete the proposed development.

NEED FOR THE PROPOSAL

5.1.8 Justify the rationale for the proposal from an environmental, economic, and social and sustainability perspective, including the reasons for its proposed location, scale and staging.

5.1.9 Justify the selection of the proposed location from an environmental and economic perspective in comparison with other existing or approved alternative sites on Eyre Peninsula.

5.1.10 Outline current and predicted demand for the facility.

ENVIRONMENTAL ISSUES

Coastal and Marine

5.1.11 Undertake a comprehensive risk analysis that identifies the key ecological assets of the site, including communities and species of conservation significance. This should be followed by a detailed description of the major aspects of the construction and operational processes, followed by an analysis of how each element of the construction and operational phases might impact upon the sensitive

receptors (ecological assets). Outline direct mitigation strategies associated with the process and identify residual risks that will need to be managed through more explicit interventions.

This needs to include an identification of key biological communities and threatened, endangered and protected species (TEPS) that are found in the area, supported by an analysis of how the construction and operation will potentially impact ecological systems in the region. There should be an investigation of the potential impacts on water quality on hydrodynamic regimes (how water flows and behaves in the marine environment) and direct physical disturbance of ecologically important systems during construction (e.g. impacts from dispersed sediment plumes) and changes in the hydrodynamic regime, including interruption or changes to flow regimes in the immediate environment.

There is a need to consider the impact of the development on the full seasonal cycle of the Australian Giant Cuttlefish and other migratory species, and those that make transient use of the area including accounting for the sensitivities of different life history stages of species and life forms.

5.1.12 Investigate and outline the potential effect of the development on the coastal and marine environment, including cumulative impacts associated with the proposed development both on and around the site, (including water quality) and the Australian Giant Cuttlefish aggregation area and offshore marine habitats when considered in conjunction with:

- The current Santos liquids fractionation plant at Port Bonython
- The existing Port Bonython jetty and associated shipping facility
- The approved Port Bonython diesel fuels storage facility
- Expansion or addition to the Whyalla port facility
- The approved BHPB desalination plant and return water discharge into the marine environment off Point Lowly.

5.1.13 Describe the impacts of jetty construction on the foreshore, intertidal, seabed and benthic communities (especially nursery/spawning areas) and nursery/spawning areas, including information on the timing of jetty construction to minimise impacts on the Australian Giant Cuttlefish (*Sepia apama*) during the spawning/ aggregation season and during larval hatching and dispersal.

5.1.14 Describe the coastal engineering requirements for the location, orientation and type of jetty structure (including any dredging activities).

5.1.15 Describe the impacts of blasting activities, pile driving or screw piling activities on marine communities, especially turbidity/disturbance, vibration and underwater noise on vulnerable or sensitive receptors

(including marine mammals) and any mitigation methods that may be used.

5.1.16 Describe the design and operational measures to prevent stormwater and other run-off from the site affecting the coastal and marine environment, during both construction and operation.

5.1.17 Describe how ship loading operations minimise incidental ore spillage and dust emissions (point source and fugitive) during loading operations to avoid plankton or algal blooms causing harm to marine or coastal flora or fauna species.

5.1.18 Describe the impact of incidental ore spillage and dust emissions (point source and fugitive) during ship loading operations on the marine environment, especially water quality.

5.1.19 Detail measures for managing solid waste, black water and grey water from ships.

5.1.20 Describe the potential impacts of increased shipping traffic and activities in the Upper Spencer Gulf including effects on commercial and recreational fishing and aquaculture.

5.1.21 Describe the potential impacts of increased shipping traffic and activities in the Upper Spencer Gulf, including from offshore anchoring, transhipment or pilotage (especially on marine fauna such as cetaceans, Australian Giant Cuttlefish, water quality, recreational activities and amenity).

5.1.22 Outline strategies to prevent the introduction of marine pests including an assessment of ballast water management options. Detail the response procedure that will be followed in the event of a new pest record.

5.1.23 Investigate the sedimentary profiles in the area of construction and associated ship docking/manoeuvring areas, to determine if there are risks from the exposure of fine sediments or clays that would impact adversely on water quality (turbidity) and contribute to the production of sediment plumes in the region.

5.1.24 Outline measures to protect water quality and the marine environment from shipping activities, especially turbulence during docking and manoeuvring. Include turbidity impacts on shell fish and other filter feeders and on macroalgal habitats particularly in relation to impacts on recruitment and the maintenance of extant communities that play a key role in the provision of habitat (e.g. for Australian Giant Cuttlefish).

5.1.25 Detail measures to ensure that shipping activities will be conducted in an environmentally sustainable manner. In particular, the control of pollution sources and the establishment of buffer distances (especially

from populations of any threatened, endangered or protected species or species of conservation significance) and the relevant management requirements of the Upper Spencer Gulf Marine Park Management Plan

5.1.26 Detail measures to protect nearby beach and rocky foreshore areas during and after construction, including potential marine and terrestrial protection areas or associated buffers.

5.1.27 Describe existing sand movement and water flow characteristics through and around the jetty structure area, to identify any possible changes to beach profiles or sedimentation on reef habitats. Modelling should be undertaken, especially to determine whether sand deposits will obstruct ship manoeuvring when entering or exiting the proposed facility. Modelling the results should be considered in the context of the likely impact on sensitive receptors.

5.1.28 Describe the potential impacts (including from ship movements) on aquaculture zones and activities, and any mitigation methods that may be used.

Climate Change

5.1.29 Outline the potential effects of climate change from a risk management perspective, including adaptive management strategies. Consider the potential for cumulative impacts on species that are already living in a marginal environment and therefore have an increased sensitivity to climate change.

Sustainability

5.1.30 Describe measures to minimise, reduce and ameliorate greenhouse gas emissions, particularly the use of alternative or renewable energy sources and off-sets, and identify barriers to implementation.

5.1.31 Identify all sources and levels of greenhouse gas emissions that will be generated and climate change implications, including those from transport and the operation of infrastructure.

5.1.32 Outline measures to minimise or reduce materials and construction resources used during the construction and operational phases.

5.1.33 Describe the provision of an adequate power supply for the proposed development and include information on the amount of power required.

5.1.34 Identify ways in which power use can be minimised or supplemented, especially using alternative energy sources, energy efficiency measures and energy conservation.

5.1.35 Describe the measures proposed for the collection and disposal of excavated material and construction waste. In the marine context consideration of the impact of sediment plumes and the potential generation of erosion scarps on the seabed needs to be investigated. The latter requires an assessment of the sediment profiles to determine the existence of risks from exposure of fine clays and muds in the substratum

5.1.36 Describe how the State Waste Strategy will be implemented at all stages of the development (with particular focus on the avoiding, reducing and reusing resources sections of the waste management hierarchy and the ability of existing infrastructure to deal with waste and recycling streams.

5.1.37 Describe the ecologically sustainable objectives of the proposal and the approach and methodology used to achieve these objectives.

5.1.38 Describe design guidelines that will be adopted to ensure sustainability.

5.1.39 Detail the arrangements to be implemented to control and manage activities, particularly to ensure that the proposed development is environmentally sustainable during construction and in the long-term.

5.1.40 Describe the means by which the sustainability of the proposal will be audited.

Native Vegetation (Terrestrial and Marine)

5.1.41 Quantify and detail the extent, condition and significance of native vegetation (individual species and communities) that currently exist on site.

5.1.42 Quantify and detail the extent, condition and significance of native vegetation (individual species and communities) that may need to be cleared or disturbed during construction and the ability of communities or individual species to recover, regenerate or be rehabilitated.

5.1.43 Calculate the level of clearance for individual community types that will be required for the whole site (including ancillary clearance for infrastructure).

5.1.44 Describe measures to deliver any significant environmental benefit that is required by the *Native Vegetation Act 1991*. Identify measures to minimise and mitigate vegetation clearance, including incorporating any remnant stands in the layout design, and to compensate for any loss of native vegetation and habitat.

5.1.45 Identify impact avoidance, minimisation and mitigation measures and their effectiveness.

Native Fauna (Terrestrial and Marine)

5.1.46 Quantify and detail the abundance, condition and significance of native fauna populations that currently exist on site. Identify sensitive receptors (i.e. species or life-history stages with particular sensitivity to construction or operational processes) and appropriate mitigation strategies (e.g. avoid construction during cuttlefish aggregations and/or hatching seasons).

5.1.47 Describe the extent of fauna and/or habitat loss or disturbance during the construction and operation phases (both on and around site) and the ability of communities and individual species to recover, especially for resident or migratory shore birds and TEPS under the Commonwealth *Environment Protection & Biodiversity Conservation Act 1999* and *National Parks & Wildlife Act 1972 and the iconic Australian Giant Cuttlefish*).

5.1.48 Describe the impacts of introduced species, especially vermin and nuisance species that can be attracted to port facilities.

5.1.49 Detail appropriate buffer distances that will be required between the proposed development and TEPS or the iconic Australian Giant cuttlefish species, including feeding areas, nesting sites and roosting sites.

5.1.50 Outline the effect of noise emissions and vibrations on TEPS (including those listed under the EPBC and NPW Acts or the iconic Australian Giant Cuttlefish species) and how these will be managed.

5.1.51 Outline the potential light pollution on terrestrial, coastal and marine fauna (e.g. Australian Giant cuttlefish), including impacts on nocturnal species.

5.1.52 Identify impact avoidance, minimisation and mitigation measures and their effectiveness.

Geology and Soils

5.1.53 Describe the underlying geology and the nature of the soils with special reference to coastal landforms.

5.1.54 Outline the interaction between surface erosion processes and the proposed development.

5.1.55 Investigate changes to seabed profiles and risks associated with erosion and/or sediment plumes.

5.1.56 Investigate, describe and illustrate the impact of the proposal on the landscape quality of the coastal environment and on any significant geological features (including the nearby pebble dune).

Groundwater and Surface Water

5.1.57 Describe the known existing groundwater and surface water related environmental conditions, including consideration of any existing site contamination.

5.1.58 Describe any potential changes to hydrology (with reference to drainage patterns and groundwater characteristics).

5.1.59 Detail the measures to be taken to manage and monitor any groundwater or surface water resources.

5.1.60 Identify impact avoidance, minimisation and mitigation measures and their effectiveness (for any polluting activities).

Reticulated Water

5.1.61 Describe the provision of an adequate water supply for the proposed development and include information on the quantity of potable and other water required.

5.1.62 Describe the approach to water sustainability, including ways in which water use can be minimised or supplemented (including the use of rainwater) and opportunities for reducing water use and for recycling water, particularly stormwater.

5.1.63 Describe Water Sensitive Urban Design (WSUD) measures and uses of wastewater that will be adopted, include a description of how recycled water will be treated as part of any water sustainability measures.

5.1.64 Outline the measures proposed to manage stormwater runoff from hard surfaces which are not being used for harvesting water supply, especially access roads. Include measures to treat stormwater and ensure that pre-development volumes will be maintained. Ensure removal of any toxicants and nutrients and prevent increases in sediments with associated turbidity in near shore environments.

Recreation and Tourism

5.1.65 Describe the impacts on the tourism and conservation values of the area due to increased human activity and disturbance.

5.1.66 Describe any net benefits or opportunities provided by the proposal to the regional and local environment.

Air Quality and Noise

5.1.67 Detail the expected levels of environmental noise associated with the operation of the development, identifying all potential noise sources, and describe the impact upon the immediate and wider locality.

5.1.68 Detail the extent to which noise emissions can be reduced and contained (such as via building design/materials, noise barriers and buffers) to minimise impacts upon the immediate and wider locality, including the effects from increased transport.

5.1.69 Describe how all potential sources of air pollution (especially dust and particulates from transport, unloading, storage and ship loading) will be controlled and monitored, including measures for their reduction or elimination.

Management and Monitoring

5.1.70 Outline measures to minimise, manage, monitor and rehabilitate impacts on the terrestrial, coastal and marine environment.

5.1.71 Describe how the spread of pest plants and animals within and around the development will be avoided, minimised and managed.

5.1.72 Describe the risk across the inventory of ecological assets and identification/management of sensitive receptors of causing or exacerbating any environmental problems in the locality, and describe mitigation measures and their expected effectiveness during all stages of construction and post construction.

5.1.73 Describe all of the monitoring measures, reporting regimes and audits for flora, fauna (especially TEPS or significant species), water (surface water and groundwater), energy, waste, soil erosion and introduced species and reporting requirements of the Upper Spencer Gulf Marine Park Management Plan which will be included in a Management Plan.

5.1.74 Undertake baseline data collection (for a minimum of 12 months) for identifying impacts from incidental spillage and dust emissions (point source and fugitive), such as using Diffusive Gradients in Thin-films (DGT) to detect background levels of soluble iron ore and a monitoring program for in-situ chlorophyll-a.

5.2 BUILT FORM ENVIRONMENT AND DESIGN

5.2.1 Provide details of construction materials, colours and landscaping for all buildings and structures

5.2.2 Describe how the design and construction of all buildings and structures will be controlled to ensure environmental sustainability and cohesive visual amenity.

5.2.3 Provide details of the shelter, shading and screening treatments for car parking areas.

5.3 TRAFFIC AND TRANSPORT

5.3.1 Identify the traffic impacts on the surrounding arterial road network, such as the Lincoln Highway/Port Bonython Road intersection, during both construction and operation. A Traffic Impact Assessment should be undertaken, taking into consideration existing traffic data, accident statistics and predicted traffic volumes (including vehicle types, numbers/frequencies and traffic peaks)

5.3.2 Detail any infrastructure improvements that will be required to provide safe and efficient access (including any potential turning lanes along the Lincoln Highway).

5.3.3 Describe access and parking arrangements for commercial and over-dimensional vehicles during construction.

5.3.4 Detail approvals required for over-dimensional vehicles and design standards for access roads to be suitable for these vehicles.

5.3.5 Describe the location of any construction camp and associated traffic impacts.

5.3.6 Describe car parking provisions for staff and visitors.

5.3.7 Describe the requirements for the future rail operations and the impacts on existing and proposed grade separated or other crossings (including safety implications) at the Port Bonython Road interface and identify any design issues that need to be addressed.

5.3.8 Describe the impact of the proposed rail loop on the existing rail network.

5.4 ECONOMIC DEVELOPMENT

5.4.1 Provide a full economic analysis of the proposal including the long term economic viability of the development.

5.4.2 Outline the financial strategies to be employed to ensure the relevant infrastructure is in place for each stage of the development.

5.4.3 Identify employment and investment opportunities, including the “multiplier effect”.

5.4.4 Outline the opportunity for further investment in the area arising from the proposal including alternate and additional port facilities.

5.4.5 Identify the economic effect the construction and on-going workforce will have locally and regionally**,** including preparing a South Australian Industry Participation Plan.

5.4.6 Describe any potential costs and/or savings to State and Local Government of infrastructure expansion with regard to transport networks, electricity supply, water supply, sewerage, coastal management and community services (especially emergency services).

5.4.7 Describe the land tenure arrangements during and after construction.

5.5 RISK/HAZARD MANAGEMENT

5.5.1 Identify any risks and their management on the proposed development associated with the operation of the nearby Santos facility (including the existing jetty and potential users of the jetty e.g. Port Bonython fuels) and the approved Olympic Dam desalination plant at Point Lowly (i.e. hazard contours or emergency procedures).

5.5.2 Detail procedures to be adopted to confirm whether site contamination exists (such as site history, site audit and site contamination reporting) and any remedial measures proposed, including potential acid sulphate soils.

5.5.3 Detail management measures that will be required during construction and operation to prevent site contamination.

5.5.4 Describe how the introduction of pest or nuisance marine organisms will be avoided or managed, including ballast water controls.

5.5.5 Describe procedures and strategies to prevent, manage and mitigate ship oil spills, pollution spills or sewage leaks (both at the port and in the Spencer Gulf).

5.5.6 Detail measures and strategies for the management of hazardous, flammable or explosive materials, including risk contours

5.5.7 Outline the proposal for bunding of hazardous materials storage areas.

5.5.8 Identify the flooding risk to the site from seawater inundation and extreme rainfall events.

5.5.9 Describe strategies for controlling wind and water and coastal erosion.

5.5.10 Describe procedures and strategies to manage and monitor invasive weed species to protect coastal and marine vegetation.

5.5.11 Describe how introduced terrestrial, coastal and marine species and pathogens will be managed.

5.5.12 Detail fire management processes and measures to reduce bushfire risk.

5.5.13 Describe strategies for ensuring public safety during construction.

5.5.14 Describe the emergency response plan in the event of an emergency at Santos (include details of consultation with Santos)

5.6 EFFECTS ON COMMUNITIES

5.6.1 Outline the likely size and composition of the construction workforce and other employees, how accommodation requirements will be met and employment opportunities for the local community.

5.6.2 Detail opportunities for local aboriginal vocational training and employment.

5.6.3 Describe the impact on the amenity and lifestyle of existing residents of Whyalla who use the area for recreation.

5.6.4 Describe the impact on the amenity or lifestyle of the residents of the adjoining shack area at Point Lowly.

5.6.5 Describe the impact on local and regional land uses, including traffic impacts at peak periods (particularly to recreational users or tourists).

5.6.6 Describe the impact on neighbouring land uses, such as primary production, commercial fishing and aquaculture, including the need for adequate separation distances from adjoining land uses.

5.6.7 Describe the potential impacts of lighting on the amenity of the local environment, especially light spill and ‘glow haze’.

5.6.8 Describe and illustrate the visual effect of the proposed development on the locality when viewed from important viewing points, including from the land and sea.

5.6.9 Describe the effect on visual amenity, especially the effects of the built form of structures (including earthworks and infrastructure).

5.6.10 Describe the rationale for the major design elements of the proposed development and measures to mitigate their visual impact.

5.6.11 Describe the impacts on local and regional marine uses, such as commercial and recreational fishing, aquaculture and charter boat operations, including any effects of access loss due to increased shipping traffic and anchorages.

5.6.12 Describe the consultation strategy adopted in the preparation of the EIS.

5.6.13 Describe the impact on public access (pedestrian, swimming, vehicles and watercraft) in the vicinity of the jetty including access along the foreshore and across intertidal areas and adjacent coastal waters.

5.6.14 Describe the use of amenity/landscape plantings and potential broad scale revegetation, including the opportunities for the use of locally endemic species.

5.6.15 Describe the extent the proposed development will have on the creation of mosquito breeding habitats and how potential breeding sites will be minimised.

5.7 NATIVE TITLE

5.7.1 This development site is contained within the area defined by the Barngarla Native Title Claim SC96/4, SAD6011/98. The area may also have significance and interest to the Nukunu, Kokatha and Adnyamathanha Native Title groups (identified in the Development Application of 30 March by the proponent). Identify any requirements of the *Native Title Act 1993* (Commonwealth) and the *Native Title Act 1994* (South Australia) in relation to these (or any other) aboriginal groups.

5.7.2 Describe the impact on Native Title Claimants (as determined by the Minister for Aboriginal Affairs and Reconciliation) and the consequent impact on the potential ongoing enjoyment of native title rights, if any, by native title holders.

5.7.3 Outline any consultation which has already occurred with relevant aboriginal groups or is proposed to occur.

5.8 CULTURAL HERITAGE

5.8.1 Identify the effect on any aboriginal sites of archaeological, anthropological or other significance under the *Aboriginal Heritage Act 1988*, including any sites listed in the Register of the National Estate and the SA Register of Aboriginal Sites and Objects, or identified after consultation with Aboriginal Councils or groups.

5.8.2 Detail measures to ensure compliance with the *Aboriginal Heritage Act 1988.*

5.8.3 Outline any known cultural significance of the site to aboriginal people, including any stories or myths.

5.8.4 Detail consultation undertaken with the local aboriginal people during the development of the EIS.

5.8.5 Identify the impact on the heritage significance of any known non-aboriginal heritage places on or adjacent the site, including State or local heritage places entered on the South Australian Heritage Register, or identified after consultation with the Department of Environment and Natural Resources, the District Council of Whyalla or community groups.

5.8.6 Identify measures to protect any historic shipwrecks within the area during construction, in accordance with the *Historic Shipwrecks Act 1981*.

5.9 EFFECTS ON INFRASTRUCTURE REQUIREMENTS

5.9.1 Outline the requirements for an adequate supply and the location of distribution networks for gas, electricity, water, sewerage, stormwater management, communications systems and roads.

5.9.2 Detail the impact of the proposed rail loop on the existing rail line connection from Whyalla to Port Augusta including any crossings/connections

5.9.3 Detail the extent to which the facility will generate the need for upgraded infrastructure beyond the site boundaries.

5.9.4 Outline opportunities to incorporate best practice infrastructure design.

5.9.5 Detail emergency services arrangements.

5.10 CONSTRUCTION AND OPERATIONAL EFFECTS

5.10.1 For each component, provide a site construction plan and outline strategies to minimise effects on the local environment.

5.10.2 Outline the timing of construction and the time of year it is likely to occur.

5.10.3 Identify, assess and resolve any impacts to the existing and future operations at the Port Bonython jetty, which includes but is not limited to the Harbors and Navigation Regulations 2009 (e.g. Schedule 5 – Restricted Areas (Port Bonython).

5.10.4 Assess the requirement for any hazardous exclusion zones around the proposed jetty during ship loading activities.

5.10.5 Describe the level of cut and fill required and the effect on the natural topography of the site, including the access corridor and the storage shed area.

5.10.6 Where possible, identify the source and origin of construction materials for buildings and infrastructure (such as road making) and the opportunity for the use of recycled materials.

5.10.7 Provide information about the transport and storage of construction materials to minimise effects on the local environment.

5.10.8 Outline proposed traffic mitigation and management measures for the construction and operational phases. Particularly address the impact on local and arterial roads in terms of road safety, traffic routes and hours of activity.

5.10.9 Identify measures to stabilise disturbed areas and areas susceptible to soil erosion.

5.10.10 Identify the measures for the control of dust, vibration, noise, stormwater and other emissions during construction and operation.

5.10.11 Describe the implementation of environmentally acceptable work practices and monitoring programs.

5.10.12 Detail the proposed monitoring of impacts during and after construction, including reporting and auditing measures.

5.10.13 Provide an environmental management plan, for both construction and operational activities, for all components of the development.

5.10.14 Describe the management agreements between the District Council of Whyalla and the proponent during and after construction.

5.10.15 Detail long-term management/maintenance arrangements for the operation and decommissioning of the facility, including the ownership of land and infrastructure, sand management and any coastal protection measures

6 AVAILABILITY OF GUIDELINES

Copies of the Guidelines will be made available at the following locations:

Department of Planning, Transport and Infrastructure
5th Floor Public Counter
136 North Terrace
Adelaide SA 5000

District Council of Whyalla
Darling Terrace
Whyalla SA 5600

Electronic copies can also be downloaded from the following web sites:

www.dac.sa.gov.au
www.sa.gov.au

APPENDIX A

Development Act, Section 46B:

EIS process—Specific provisions

(1) This section applies if an EIS must be prepared for a proposed development or project.

(2) The Minister will, after consultation with the proponent—

(a) require the proponent to prepare the EIS; or

(b) determine that the Minister will arrange for the preparation of the EIS.

(3) The EIS must be prepared in accordance with guidelines determined by the Development Assessment Commission under this Subdivision.

(4) The EIS must include a statement of—

(a) the expected environmental, social and economic effects of the development or project;

(b) the extent to which the expected effects of the development or project are consistent with the provisions of—

(i) any relevant Development Plan; and

(ii) the Planning Strategy; and

(iii) any matters prescribed by the regulations;

(c) if the development or project involves, or is for the purposes of, a prescribed activity of environmental significance as defined by the *Environment Protection Act 1993*, the extent to which the expected effects of the development or project are consistent with—

(i) the objects of the *Environment Protection Act 1993*; and

(ii) the general environmental duty under that Act; and

(iii) relevant environment protection policies under that Act;

(ca) if the development or project is to be undertaken within the Murray-Darling Basin, the extent to which the expected effects of the development or project are consistent with—

(i) the objects of the *River Murray Act 2003*; and

(ii) the *Objectives for a Healthy River Murray* under that Act; and

(iii) the general duty of care under that Act;

(cb) if the development or project is to be undertaken within, or is likely to have a direct impact on, the Adelaide Dolphin Sanctuary, the extent to which the expected effects of the development or project are consistent with—

(i) the objects and objectives of the *Adelaide Dolphin Sanctuary Act 2005*; and

(ii) the general duty of care under that Act;

(cc) if the development or project is to be undertaken within, or is likely to have a direct impact on, a marine park, the extent to which the expected effects of the development or project are consistent with –

(i) the prohibitions and restrictions applying within the marine park under the *Marine Parks Act 2007*; and

(ii) the general duty of care under that Act;

(d) the proponent's commitments to meet conditions (if any) that should be observed in order to avoid, mitigate or satisfactorily manage and control any potentially adverse effects of the development or project on the environment;

(e) other particulars in relation to the development or project required—

(i) by the regulations; or

(ii) by the Minister.

(5) After the EIS has been prepared, the Minister—

(a) —

(i) must, if the EIS relates to a development or project that involves, or is for the purposes of, a prescribed activity of environmental significance as defined by the *Environment Protection Act 1993*, refer the EIS to the Environment Protection Authority; and

(ia) must, if the EIS relates to a development or project that is to be undertaken within the Murray-Darling Basin, refer the EIS to the Minister for the River Murray; and

(ib) must, if the EIS relates to a development or project that is to be undertaken within, or is likely to have a direct impact on, the Adelaide Dolphin Sanctuary, refer the EIS to the Minister for the Adelaide Dolphin Sanctuary; and

(ic) must, if the EIS relates to a development or project that is to be undertaken within, or is likely to have a direct impact on, a marine park, refer the EIS to the Minister for Marine Parks;and

(ii) must refer the EIS to the relevant council (or councils), and to any prescribed authority or body; and

(iii) may refer the EIS to such other authorities or bodies as the Minister thinks fit,

for comment and report within the time prescribed by the regulations; and

(b) must ensure that copies of the EIS are available for public inspection and purchase (during normal office hours) for at least 30 business days at a place or places determined by the Minister and, by public advertisement, give notice of the availability of copies of the EIS and invite interested persons to make written submissions to the Minister on the EIS within the time determined by the Minister for the purposes of this paragraph.

(6) The Minister must appoint a suitable person to conduct a public meeting during the period that applies under subsection (5)(b) in accordance with the requirements of the regulations.

(7) The Minister must, after the expiration of the time period that applies under subsection (5)(b), give to the proponent copies of all submissions made within time under that subsection.

(8) The proponent must then prepare a written response to—

(a) matters raised by a Minister, the Environment Protection Authority, any council or any prescribed or specified authority or body, for consideration by the proponent; and

(b) all submissions referred to the proponent under subsection (7),

and provide a copy of that response to the Minister.

(9) The Minister must then prepare a report (an ***Assessment Report***) that sets out or includes—

(a) the Minister's assessment of the development or project; and

(b) the Minister's comments (if any) on—

(i) the EIS; and

(ii) any submissions made under subsection (5); and

(iii) the proponent's response under subsection (8); and

(c) comments provided by the Environment Protection Authority, a council or other authority or body for inclusion in the report; and

(d) other comments or matter as the Minister thinks fit.

(10) The Minister must—

(a) notify a person who made a written submission under subsection (5) of the availability of the Assessment Report in the manner prescribed by the regulations; and

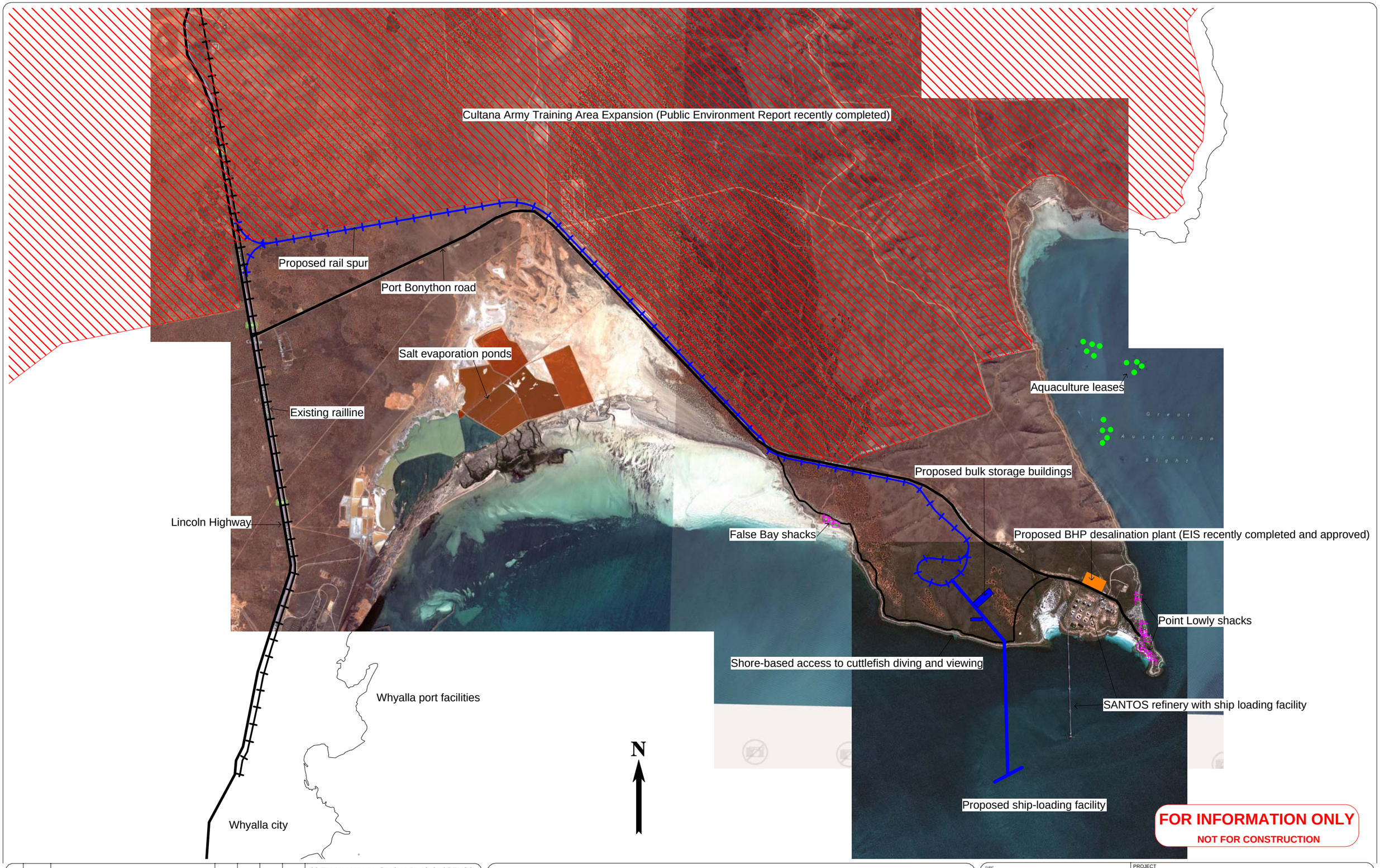
(b) by public advertisement, give notice of the place or places at which copies of the Assessment Report are available for inspection and purchase.

(11) Copies of the EIS, the proponent's response under subsection (8), and the Assessment Report must be kept available for inspection and purchase at a place determined by the Minister for a period determined by the Minister.

(12) If a proposed development or project to which an EIS relates will, if the development or project proceeds, be situated wholly or partly within the area of a council, the Minister must give a copy of the EIS, the proponent's response under subsection (8), and the Assessment Report to the council.

APPENDIX B

Relevant Plans of the Proposal



FOR INFORMATION ONLY

NOT FOR CONSTRUCTION

REV	DATE	DESCRIPTION	DRAWN	CHECK	DESIGN	VERIFY
A	21.3.12	LAND USE IN PROJECT AREA	BI	PM		

SCALES

0 2 4 6

Kilometres

Scale: 1:75,000

Eco Management Services Pty Ltd

CLIENT

ARUP

Flinders Ports SOUTH AUSTRALIA

PROJECT

PORT BONYTHON BULK EXPORT FACILITY

LANDUSE IN PROJECT AREA

PROJECT No.

REV. A

Image courtesy of ARUP