

Mr Richard Sattler

Anderson Bay Sand Extraction Activity, Increase in Production and Offshore Sand Loading Facility

Development Proposal and Environmental Management Plan

Appendix A DPEMP Guidelines

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Version 1.

Development Proposal and
Environmental Management Plan
Project Specific Guidelines

for

Richard Sattler

**Anderson Bay Sand Extraction Activity
Increase in production at mining lease
1957P/M, pipeline, and offshore loading
facility**

Anderson Bay, east of Bridport

Board of the Environment
Protection Authority

4 November 2015



ENVIRONMENT PROTECTION AUTHORITY

General

This document identifies the key issues that must be addressed in the Development Proposal and Environmental Management Plan (DPEMP) for Richard Sattler's proposed increase in production, and construction and operation of an offshore loading facility and associated pipeline, at Anderson Bay.

This document should be read in conjunction with the *DPEMP General Guidelines* (<http://epa.tas.gov.au/assessment/guidance-documents>), which provides general information on preparing a DPEMP.

While the DPEMP should evaluate all potential effects of the proposal, the DPEMP should be principally focused on the key issues identified below. The level of detail provided on other issues should be appropriate to the level of significance of that issue for the proposal.

This document identifies the minimum survey requirements and studies required as part of the DPEMP in relation to the key issues.

This document should not be interpreted as excluding from consideration other matters deemed to be significant or matters that emerge as significant from environmental studies, public comments or otherwise during the course of the preparation of the DPEMP.

This document has been prepared on the basis of a Notice of Intent and advice from relevant agencies.

Key issues

The key issues that have been identified for consideration in relation to the proposal, and which should be the principal focus of the DPEMP, are as follows:

Key issues	
1	Impacts on terrestrial natural values from increased disturbance area (sand extraction, and areas associated with the construction and operation of the pipeline to the offshore loading facility).
2	Impacts on the marine environment and marine natural values from the construction and operation of the offshore loading facility and associated pipeline.
3	Impacts on Aboriginal heritage.

Survey and study requirements

The following surveys and studies will be required as part of the DPEMP in relation to the key issues. The relevant sections of the DPEMP General Guidelines are also identified.

Survey requirements for DPEMP	Relevant section of DPEMP General Guidelines
Any development beyond the area previously assessed for Aboriginal heritage (in the <i>Cultural Heritage Management Australia – Proposed Anderson Bay Sand Pit Project, North East Tasmania – Aboriginal Cultural Heritage Assessment</i> dated 5 December 2013) should be the focus of a new, separate, Aboriginal Heritage Assessment.	6.10
Any areas subject to additional or new impacts on natural values not previously addressed in the 2014 assessment should be surveyed in accordance with the <i>Guidelines for Natural Values Surveys – Terrestrial Development Proposals</i> .	6.7
Survey of the offshore development footprint in accordance with the <i>Guidelines for Natural Values Surveys – Estuarine and Marine Development Proposals</i> .	6.7, 6.8

Detailed requirements for the DPEMP

The following DPEMP requirements are in addition to the requirements of the DPEMP General Guidelines. These additional requirements are grouped under the relevant section number corresponding to the DPEMP General Guidelines.

1 INTRODUCTION

In addition to the matters stipulated in Section 1 of the DPEMP General Guidelines, the DPEMP must contain the following:

- A description of all applicable local, state, national, and international conventions, legislation, policies, guidelines, and codes of practice that are to apply to all aspects of the proposal, but in particular relating to the construction and operation of the offshore loading facility and associated pipeline.
- A clear statement as to whether the proposal is considered to have or likely to have impact on matters of national environmental significance, such as nationally listed threatened species or communities, nationally listed migratory species, or RAMSAR wetlands.

2. PROPOSAL DESCRIPTION

2.1 General

In addition to the matters stipulated in Section 2.1 of the DPEMP General Guidelines, the DPEMP must contain the following:

- Location, dimensions, volumes of water storage facilities, on the land.
- With respect to the offshore loading facility, the following information should be provided:
 - Location and dimensions of the offshore loading facility, and any particular features relating to pollution control and/or marine safety;
 - Detailed construction plans/diagrams for the facility;
 - Details of how the facility will be anchored to the seabed in a manner which ensures its safety and stability, particularly during times of extreme weather events and tides;

- Details of how and where dewatering of the sand slurry will take place;
- Energy requirements of the facility (e.g. use of generators, pumps, refuelling and maintenance requirements, etc.);
- Details of the planned operation of the offshore facility, including information such as the size and nature of the vessels to be anchored to the offshore loading facility, the duration in which they will be anchored to the facility, the frequency in which vessels will be at the facility, the manner in which vessels will be anchored to the facility and/or seabed, information on the entity that will operate the facility and undertake the loading operations, whether support vessels will be utilised, etc.
- With respect to the pipeline(s) associated with the offshore loading facility, the following information should be provided:
 - Location and dimensions of the pipeline(s) to/from the offshore pontoon;
 - Details of how the pipeline will be anchored to the seabed;
 - Details of the materials used in the construction of the pipeline.

2.2 Construction

In addition to the matters stipulated in Section 2.2 of the DPEMP General Guidelines the DPEMP must contain the following:

- Details of the construction methods for the pipeline and the offshore loading facility, and the proposed measures for minimising impacts on the marine and terrestrial environment during construction.

2.4 General location map

In addition to the matters stipulated in Section 2.4 of the DPEMP General Guidelines, the DPEMP must contain the following:

- The location of the offshore loading facility with respect to shipping lanes and other relevant existing uses of Anderson Bay.

2.5 Site plan

In addition to the matters stipulated in Section 2.5 of the DPEMP General Guidelines, the DPEMP must contain the following:

- Clear boundaries of existing and new mining lease areas and areas within the new mining lease boundary that are to be disturbed.
- Plans showing the jurisdictional boundaries in relation to the proposal (high and low water marks, boundary of planning scheme areas, etc.).
- Site plans showing existing and planned exclusion areas due to existence of natural and/or cultural heritage.
- Site plans showing the location of facilities associated with water storage and pumping.
- Plans and maps showing the pipeline and offshore loading facility with respect to the coastline and any relevant features within Anderson Bay (reefs, underwater infrastructure etc.).

4 PUBLIC CONSULTATION

In particular in respect to the construction and operation of the offshore loading facility, details of consultation undertaken and feedback received from the local community, recreational users of Anderson Bay, commercial users of Anderson Bay, and all relevant state and national agencies concerned with the operation of vessels within Anderson Bay, should be provided in the DPEMP.

5. THE EXISTING ENVIRONMENT

5.2 Environmental aspects

In addition to the matters stipulated in Section 5.2 of the DPEMP General Guidelines the DPEMP must contain the following with respect to the construction and operation of the offshore loading facility:

- Detailed information on the climatic and weather conditions (including tidal influences and details of 'average' as well as extreme weather events) that occur within Anderson Bay and which may influence the safe and environmentally responsible operation of the offshore loading facility.

6. POTENTIAL IMPACTS AND THEIR MANAGEMENT

6.4 Noise

In addition to the matters stipulated in Section 6.4 of the DPEMP General Guidelines, the DPEMP must contain the following with respect to the construction and operation of the offshore loading facility:

- Description of any sources of noise associated with both construction and operation of the offshore facility (such as pile drivers, pumps, generators, vessels etc.);
- An assessment of whether noise generated by the offshore facility's construction and operations is likely to cause nuisance for residents onshore; and
- An assessment of whether noise generated by ongoing operation of the facility is likely to affect marine wildlife.

6.6 Dangerous goods and environmentally hazardous materials

In addition to the matters stipulated in Section 6.6 of the DPEMP General Guidelines, the DPEMP must provide the following information with respect to the construction and operation of the offshore loading facility:

- A description of the dangerous goods likely to be used in the powering and maintenance of the offshore loading facility;
- A description of proposed management of dangerous goods (use and disposal) so that release of dangerous goods into the marine environment does not occur; and
- Detailed plans for management of catastrophic failure of the facility, and how the prevention of accidental release of fuels and oils into the marine environment will be achieved.

6.7 Biodiversity and natural values

In addition to the matters stipulated in Section 6.7 of the DPEMP General Guidelines, the DPEMP must contain a clear statement of where this current proposal is likely to cause additional or new impacts that were not previously assessed during the sand extraction proposal assessment undertaken in 2014, and a description of the measures that will be implemented to minimise such impacts.

Areas of proposed impact not previously surveyed should be surveyed in accordance with the *Guidelines for Natural Values Surveys – Terrestrial Development Proposals*, available from <http://dpiwwe.tas.gov.au/conservation/development-planning-conservation-assessment/guidelines>.

In particular, the following should be discussed:

- Impacts of the proposed groundwater extraction on water levels in wetlands and subsequent impacts on threatened species.
- Impacts on shorebird species that are recorded from the area or have potential habitat in the area.
- Impacts related to the potential disturbance of Potential Acid Sulfate Soils (PASS). Management measures should be in accordance with the *Tasmanian Acid Sulfate Soil Management Guidelines 2009*.

In relation to the proposed offshore loading facility and the associated pipeline, the offshore development footprint should be surveyed in accordance with the *Guidelines for Natural Values Surveys – Estuarine and Marine Development Proposals*, which can be found at <http://dpiwwe.tas.gov.au/conservation/development-planning-conservation-assessment/guidelines> and the results of the survey included in the DPEMP.

Particular attention should be given to the potential impacts on species and communities listed under the relevant schedules of the Commonwealth EPBC Act and the TSPA, as a result of construction and operation of the offshore loading facility and pipeline.

6.8 Marine and coastal

In addition to the matters stipulated in Section 6.8 of the DPEMP General Guidelines, the DPEMP must contain the following with respect to the construction and operation of the offshore loading facility:

- An oil spill contingency plan, which details the risks of oil spill associated with the construction and operation of the offshore facility and the increased traffic in Anderson Bay from large vessels associated with the facility, and a description of risk mitigation measures which includes engagement with stakeholders.
- An assessment of the risks associated with failure of any of the equipment associated with the facility and pipeline, including release of sand/slurry into the marine environment, and/or release of oils or chemicals.
- An assessment of the risk of failure of the anchoring mechanisms for the facility which would result in loss of the facility and/or the risk of associated vessels running aground, particularly during extreme weather events, and the potential impacts on the marine environment and/or shoreline environment from such a catastrophic event occurring.
- A description of potential impacts on marine mammals due to increased large vessel traffic within the Anderson Bay environment.

6.10 Heritage

In addition to the matters stipulated in Section 6.10 of the DPEMP General Guidelines, in relation to the increased level of extraction from the sand dune system, the DPEMP must contain the following:

- Details of protective measures to be employed for previously identified TASI sites; and
- Details of protective measures to ensure that potential Aboriginal heritage sites buried below the mobile sand dune deposits are not impacted by sand extraction activity, including schedules of inspections and monitoring to take place.

6.12 Visual effects

In addition to the matters stipulated in Section 6.12 of the DPEMP General Guidelines, the DPEMP must contain the following with respect to the offshore loading facility:

- Details of visual impact (if any) of the offshore loading facility (from the shore), particularly given any requirements for navigational safety devices etc.

6.15 Hazard analysis and risk assessment

In addition to the matters stipulated in Section 6.15 of the DPEMP General Guidelines, the DPEMP must contain the following with respect to the offshore loading facility:

- Analysis of the risk of detachment of the offshore loading facility from anchor points and/or detachment of vessels from the facility, particularly during poor weather conditions, and details of the consequences to the marine and shoreline environment, and a description of the proposed emergency management actions should this occur.

6.17 Infrastructure and off-site ancillary facilities

In addition to the matters stipulated in Section 6.17 of the DPEMP General Guidelines, the DPEMP must contain the following with respect to the offshore loading facility:

- Details regarding the intention (or otherwise) to seek a declaration of the area as a Port.

General Guidelines for preparing a

Development Proposal and
Environmental Management Plan

for

Level 2 activities and ‘called in’ Activities

**Board of the Environment Protection Authority
January 2014**



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GENERAL INFORMATION FOR THE PROPONENT

Purpose of these Guidelines

The *Environmental Management and Pollution Control Act 1994* (EMPC Act) requires the Board of the Environment Protection Authority (the Board) to provide guidance to the proponent about what should be included in the case for assessment.

Environmental aspects of the proposal will be assessed by the Board, while planning aspects of the proposal will be assessed by the relevant planning authority (Council). The Board has authorised the EPA Division to undertake the administrative tasks and establish the information base to inform its decision making on its behalf.

These guidelines provide general information on preparing a Development Proposal and Environmental Management Plan (DPEMP) for an activity being assessed by the Board under the EMPC Act.

Not all issues nominated in these guidelines will have the same degree of relevance to all proposed activities. Depending on the nature of the proposed activity and its location, some of the issues may be more relevant than others, while others will not be applicable at all. The level of detail provided on each issue should be appropriate to the level of significance of that issue for the proposal.

Project Specific Guidelines identifying the key issues will be prepared by the Board for use in conjunction with these general guidelines. The DPEMP must be focused on the key issues for the proposal.

These guidelines should not be interpreted as excluding from consideration other matters that emerge as significant from environmental studies, public comments or otherwise during the course of the preparation of the DPEMP.

Following the public consultation phase, the DPEMP may require amendment as a result of consideration of public and government agency submissions. This generally takes the form of a supplement to the DPEMP.

Objectives of the DPEMP

The DPEMP should aim to provide:

- A source of information from which individuals and groups may gain an understanding of the proposal, the need for the proposal, the alternatives, the environment that it could affect, the positive and negative impacts that may occur and the measures that will be taken to maximise positive outcomes, and minimise any adverse impacts, including specific management commitments.
- A basis for public consultation and informed comment on the proposal.
- A framework against which decision makers (and in particular the Board and the local Council) can consider the proposal and determine the conditions under which any approval might be given.
- A demonstration that the proposal is consistent with objectives as required by the relevant statutes and policies, including the Tasmanian Resource Management and Planning System (RMPS) and the Environmental Management and Pollution Control System (EMPCS).

How the Board uses the DPEMP

The DPEMP should be presented so as to assist the Board to make its assessment. That means detailing and substantiating both positive and negative impacts and addressing each of the RMPS and EMPCS objectives. These objectives are very much centred around the concept of sustainable development which requires consideration of meeting the economic and social needs of people now and in the future while sustaining the environment and avoiding or mitigating

adverse effects. The Board will consider each objective and then endeavour to make the decision which best furthers the objectives considered together. That decision may be to impose conditions to ensure that the objectives are furthered. In some cases it may not be possible to impose conditions to ensure that the objectives are furthered overall and in these cases the Board will reject a proposal.

Refer to the Guideline “How the EPA Board makes decisions about development proposals” for further information.

Structure and Formatting of the DPEMP

The following points should be considered when writing the DPEMP:

- The title page should include the proponent name, activity name (include “expansion” or “upgrade” where appropriate), proposal address/location, the DPEMP version number (where relevant) and the month & year of publication.
- The main text of the DPEMP should be written in a clear and concise style that is easily understood by the general reader.
- Assertions and assumptions should be supported by adequate argument and/or evidence, and any evidence relied upon should be referenced.
- Technical terminology should be avoided as far as possible. The detailed technical data and supplementary reports necessary to support the main text should be included in appendices.
- All sources of information should be referenced. An indication should also be given of the currency of the information used and how the reliability of the information was tested. In particular, the degree of confidence attached to any predictions should be indicated. The style of referencing should be consistent throughout.
- Information should be presented on maps, diagrams and site plans to enhance the level of understanding. All images must be of high quality, with all text readily readable, and should be capable of being readily copied and pasted into other documents such as a permit (e.g. all objects in images should be ‘grouped’). All colour images must, when printed or photocopied in monochrome, reproduce such that all important features are readily visible. An exception may be made to the above where historical documents or photographs need to be reproduced in the document. For ease of comparison, all maps, plans and aerial photographs should be oriented in the same direction as far as practicable and a north direction arrow and scale should be included.
- When providing maps or referring to spatial databases, the coordinate reference system being used should be specified (i.e. Australian Geodetic Datum (AGD) or Geocentric Datum of Australia (GDA)).
- Where sensitive information needs to be provided (e.g. information on production processes, or sites or areas of conservation, scientific, archaeological and cultural heritage or other special significance) this information should be provided in a separate, confidential appendix. A comment should be provided in the DPEMP to the effect that the information has been so provided.
- Specific management commitments must be clearly identified in the text and included in the commitments table referred to in Section 9 of these guidelines.
- Where appropriate, information provided in other sections should be referenced to minimise duplication.
- The DPEMP should contain a summary table showing compliance with the project specific guidelines and the relevant sections of these general guidelines.

Submission of draft and final document

Close consultation with the EPA Division and the relevant planning authority during the preparation of the DPEMP is recommended.

It is recommended that the proponent submit a draft DPEMP to both Council and the EPA Division for review prior to its finalisation. Please note that a draft document may be rejected without detailed review if it is incomplete, contains significant formatting or typographical errors, or does not comply with the Project Specific Guidelines and relevant sections of these general guidelines. More than one draft may be necessary before the document is considered suitable for public release.

The DPMP is to be submitted in electronic formats for use with a word processor (such as Microsoft Word), and suitable for publishing on the internet (PDF format). Some printed copies may also be required. The proponent will be advised of the number of copies and format required.

Once the proposal is advertised for public comment, copies of the DPMP are to be made available to the public upon request at no charge or for a nominal fee, in either printed or electronic format (e.g. CD ROM).

The DPMP will also be made available on the EPA website. Documents should be able to be downloaded over slower internet connections; images within the document should be optimised for the internet and font choices should be restricted to those most commonly used. Being judicious about the number of images and/or design elements can avoid unnecessarily adding to the file size. Large files should be broken into multiple documents (max 10 Mega bytes).

Commonwealth environmental assessment

In addition to Tasmanian requirements, the Commonwealth Government may also have a role in the environmental assessment and approval of the proposal.

Approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is required for an action which has, will have, or is likely to have, a significant impact on a matter of national environmental significance or on Commonwealth land. The matters of national environmental significance are:

- World Heritage properties;
- National Heritage Places;
- wetlands of international importance (RAMSAR wetlands);
- nationally listed threatened species and communities;
- nationally listed migratory species;
- Commonwealth marine areas;
- nuclear actions; and
- large coal mines with water quality impacts.

Information on the EPBC Act can be obtained from the Commonwealth Department of Sustainability, Environment, Water, Population and Communities' website at www.environment.gov.au/epbc/ or by calling 1800 803 772.

The Commonwealth and Tasmanian Governments have signed a bilateral agreement relating to environmental impact assessment under section 45 of the EPBC Act, which effectively accredits the State assessment process. Where the proposal has been determined to be a controlled action under the EPBC Act and is being assessed in accordance with the bilateral agreement, the DPMP should specifically describe the implications of the proposal for the relevant EPBC Act controlling provisions.

If the proposal is being assessed under the bilateral agreement, then the DPMP should contain a summary table showing that it addresses the matters specified in Schedule 4 of the Commonwealth *Environment Protection and Biodiversity Conservation Regulations 2000*.

False or misleading statements

It should be noted that section 43A of the EMPC Act creates obligations regarding the provision of information. The DPMP must not include information that is known to be false or misleading; and no matter should be omitted if it is known that without that matter the DPMP is false or misleading.

CONTENTS OF THE DPEMP

EXECUTIVE SUMMARY

An executive summary of the DPEMP should be included to provide a clear and concise overview of the proposal, its environmental implications, the approvals process and the function of the DPEMP in the context of the approvals process.

For larger DPEMPs, it is recommended that the executive summary be written as a stand-alone document, able to be provided on request to interested parties who may not wish to read or purchase the full DPEMP.

TABLE OF CONTENTS

A table of the contents of the report with reference to the relevant page numbers. It should also contain a list of figures and tables.

LIST OF ABBREVIATIONS

A list of the abbreviations, acronyms and, if relevant, a glossary of terms used in the DPEMP.

1. INTRODUCTION

Provide information on the following:

- Title of the proposal.
- Proponent details:
 - Name of proponent (legal entity).
 - Name of proponent (trading name).
 - Registered address of proponent.
 - Postal address of proponent.
 - ABN number.
 - ACN number (where relevant).
- Contact person's details:
 - Name.
 - Telephone.
 - Email address.
- Activity operator details (if the operator will be a different entity to the proponent).
- General background information on the proponent, such as relevant development and operational experience.
- General background information on the proposal, including the current status of the proposal, an overview of the principal components of the proposal, the proposal location, anticipated establishment costs, likely markets for the product, and the possibilities for future expansion.
- An examination of how the proposal relates to any other proposals that have been or are being developed or that have been approved in the region affected by the proposal.
- Environmental legislation, standards and guidelines that will be applicable (such as policies, regulations and industry codes of practice).
- Other relevant Commonwealth, State and Local Government policies, strategies and management plans with which the proposal would be expected to comply.

2. PROPOSAL DESCRIPTION

The need for the proposal should be described.

Provide a full description of the proposal, including the construction, commissioning, operational and decommissioning phases, as well as any infrastructure and off-site ancillary facilities required for the proposal.

A detailed description should be provided of key physical components of the proposal, including their function, composition, size, capacity, operational life, technical and performance requirements, inter-relationships and method of construction, operation and maintenance.

The information listed below should typically be provided.

2.1. General

- The major items of equipment (including pollution control equipment) and on-site facilities should be described. Detailed technical information on major items of equipment may be included in appendices.
- The process should be described in a step-by-step manner using explanatory diagrams and flow charts where appropriate to compliment the text.
- The raw materials required for the proposal (including water) should be specified. Quantities and characteristics should be detailed.
- Energy requirements for the proposal should be outlined and the means of meeting this demand described.
- Details of production capacity and production rates for relevant processes including peak rates, daily average rates and annual production rates.
- The hours of operation for the proposal (hours per day and specific days per week) including any seasonal variations.
- The volume, composition, origin, destination and route for vehicle movements (including road, rail, shipping and air) likely to be generated during the each phase of the proposal, including a break-down for over-dimension and heavy road vehicles.
- If the proposal is associated with an existing activity, describe any current approvals or regulatory conditions.

2.2. Construction

A step-by-step description and timetable for significant activities during the construction phase of the proposal. Indicative timeframes for the completion of major steps, and the likely sequencing of steps

2.3. Commissioning

A step-by-step description of major commissioning activities (if any) following installation of equipment. Indicative timeframes for the completion of major steps, and the likely sequencing of steps. The point at which commissioning will be considered completed should be described.

2.4. General location map

A general location map (e.g. 1:25,000 scale or better as appropriate) which identifies the following is required

- The location of the proposal site
- Topographical features, aspect and direction of drainage
- Road access to and from the site
- Location of waterways and drains (including ephemeral)
- The distance(s) to any nearby sensitive uses (such as residences).
- Electricity transmission lines
- Boundaries of the property on which the proposal is located
- Surrounding land tenure
- Surrounding land use (identify areas of conservation or recreational significance)
- Surrounding land zoning as per local government planning scheme.

2.5. Site plan

Site plans are required which identify the proposal site and which include the following (where relevant).

- The boundary of the proposal site in relation to land titles. Coordinates of the land should be provided.
- The position of buildings and significant structures on the site (existing and proposed).
- A floor/site plan showing the location of all major items of equipment and facilities and their position relative to property boundaries.
- The route of any pipelines, tracks, conveyors or similar means of transporting on-site materials.
- The location of raw materials storage areas.
- Details of any screening vegetation or bund walls.
- The location of loading or unloading areas.

2.6. Off-site infrastructure

Any new infrastructure or off-site ancillary facilities required to allow the proposal to proceed should be described (for example water supply, electricity supply, roads or other transport infrastructure).

3. PROJECT ALTERNATIVES

The rationale for the particular project proposed should be described.

Describe the site selection process, including site selection criteria, alternative sites considered and an assessment of those alternatives. The assessment should compare alternatives according to clearly defined environmental, social, economic and technical considerations, and provide a justification for the preferred site. The effect that any community consultation undertaken had on the selection process should be detailed.

A critique of other available technologies and the reason for the selection of the preferred technology, including from an environmental perspective, should be included where relevant. Transparency around alternatives and the criteria on which decisions have been based is encouraged as it can lead to better outcomes.

For any part of the proposal where alternative technologies, materials, design options or management practices with different environmental consequences may exist, the alternatives should be identified, their environmental performance evaluated and the reason for the proposed choice justified.

4. PUBLIC CONSULTATION

Details of the nature and results of public consultation undertaken (if any) by the proponent during project planning and preparation of the DPMP, as well as any proposals for further public consultation during and beyond project implementation.

Early community engagement often leads to better outcomes for all and is strongly encouraged. The Board has produced a guide to community engagement which is available on the EPA website at: <http://epa.tas.gov.au/regulation/guidance-documents>.

5. THE EXISTING ENVIRONMENT

Describe the proposal site location and provide an overview of the existing environment which may be affected by the construction and operation of the proposal, including areas associated with any ancillary activities.

Include details of salient features of the existing environment and, where appropriate, include maps, plans, photographs, diagrams or other descriptive detail.

The following details should be included.

5.1 *Planning aspects*

- The location of the proposal site and the associated infrastructure.
- Information on land tenure and property boundaries of the proposal site, with title details.
- Land zonings for the proposal site and surrounding areas, and any by-laws or development standards and codes that may apply to the site and surrounding areas.
- Any rights of way, easements and covenants affecting the proposal site.
- Land use and planning history of the proposal site, including the potential for site contamination¹, the present use of the site and any existing buildings and significant structures.
- A description of land use and ownership in the vicinity of the proposal site and those areas which may be affected by the proposal. The location and nature of industrial facilities, the location of individual residences, schools, hospitals, caravan parks and similar sensitive uses, and the location of any tourist or recreation facilities or routes (such as camping areas, picnic areas, walking tracks, historic routes) within 500 metres of the proposal site should be included (except where a greater or lesser distance has been specified by the EPA Division). Any proposed or potential sensitive users within this distance of the proposal site, which have been or are likely to be granted approval under the local planning scheme, should also be considered.

5.2 *Environmental aspects*

- A description of the general physical characteristics of the proposal site and surrounding area, including topography, local climate, geology, geomorphology, soils (including erodibility acid sulphate soils), vegetation, fauna, groundwater and surface drainage (including waterways, lakes, wetlands, coastal areas etc).
- A description of natural processes of particular importance for the maintenance of the existing environment (e.g. fire, flooding, etc).
- Any existing conservation reserves located on or within 500 metres of the proposal site
- Any high quality wilderness areas identified in the *Tasmanian Regional Forest Agreement* in the vicinity of the proposal site.
- Information on species, sites or areas of landscape, aesthetic, wilderness, scientific or otherwise special conservation significance which may be affected by the proposal. Relevant information resources include the LIST (www.thelist.tas.gov.au) and the Natural Values Atlas (www.naturalvaluesatlas.dpiw.tas.gov.au).

¹ Information on potentially contaminating activities and contaminated site assessment can be found online at <http://epa.tas.gov.au/epa> under 'Land Contamination'.

- An assessment of the vulnerability of the site to natural hazards (e.g. flooding, seismic activity, fire, landslips or strong winds).
- Any available ambient monitoring results for the vicinity of the proposed development (in tabular or graphical form). The results may be summarised (e.g. as annual averages) if the summary will provide adequate information.
- If the proposal is associated with an existing activity, information on current regulatory approvals and licences, should be provided.

5.3 Socio-economic aspects

Describe the existing social and economic environment that may be affected by the proposal, including information on the following:

- A summary of the social/demographic characteristics of the population living in the vicinity of the proposal site, identifying any special characteristics which may make people more sensitive to impacts from the proposal than might otherwise be expected.
- A summary of the characteristics of the local and regional economy (e.g. existing employment trends, land values).

6. POTENTIAL IMPACTS AND THEIR MANAGEMENT

Guidance for preparation of this section

While it is recognised that some details of the proposal may not be finalised at the time the DPEMP is submitted, the information presented in the document should be as up to date as possible. Where information is unavailable or details have not yet been finalised, estimates and the range of alternative options should be provided. It should be noted, however, that sufficient technical detail must be provided to enable an appropriate level of assessment to be undertaken. For each potential impact the following should be discussed.

Existing conditions

Outline the existing conditions relevant to the impact. In the case of a proposal which involves expansion or redevelopment of an existing activity, a summary of public complaints received in recent years and a discussion of the operator's response and how this may affect the current proposal.

Performance requirements

Identify the environmental performance requirements to be achieved for each environmental impact and provide evidence to demonstrate that these can be complied with. These may be standards or requirements specified in legislation, codes of practice, state policies, national guidelines or as determined by agreement with the assessing agencies. Industry best practice standards should be referred to where appropriate. **Unsupported assertions that performance requirements will be achieved will not be considered adequate.**

Potential impacts

Outline the potential environmental, social and economic impacts of the proposal (positive and negative) through all stages, including construction, operation and closure, in the absence of special control measures. Any foreseeable variations in impacts during the start-up and operational phases should be identified.

The evaluation of potential impacts should identify **plausible worst case consequences**, the vulnerability of the affected environment to the potential impacts, and the reversibility of the impacts. Potential cumulative impacts of this proposal in light of other activities underway or approved also need to be addressed. Interactions between biophysical, socio-economic and cultural impacts should be identified.

Predictions and evaluations of impacts should be based on scientifically supportable data (for existing operations this should include the results of monitoring of current emissions). The methodologies used or relied on should be referenced, together with the relevant research and investigations supporting them. Assumptions, simplifications and scientific judgements should be stated clearly, and the nature and magnitude of uncertainties should be clearly defined. Where relevant, the choice of a particular methodology over alternative methodologies should be explained. Where impacts are not quantifiable, they should be adequately described.

Where positive benefits are claimed it will generally be appropriate to explain what measures are to be taken to ensure that those positive outcomes are realised and sustained.

Avoidance and mitigation measures

Describe the measures proposed to avoid or mitigate potential adverse impacts (having regard to best practice environmental management as defined in the EMPC Act) in order to achieve the environmental performance requirements (such as through pollution control technology or management practices). The extent to which they will overcome the anticipated impacts should be specified. Where there are clear, alternative avoidance or mitigation measures for a particular adverse environmental impact, the alternatives should be reviewed and the preferred option justified.

Where pollution control equipment and/or treatment processes are key factors in achieving satisfactory environmental performance, contingencies in the event of breakdown or malfunction of the equipment or processes should be discussed. It should be demonstrated that the maintenance of pollution control equipment can be provided for without causing performance requirements to be exceeded.

Where measures to control environmental impacts are necessary, but will not be undertaken by the proponent, the means by which the proponent will ensure that the necessary measures are implemented should be identified (e.g. lease conditions, trade waste agreement, contractual arrangement or other binding third party commitment). **Mitigation measures over which the proponent has no control will generally not be considered adequate.**

Assessment of net impacts

An assessment of the overall impacts of the development on the environment after allowing for the implementation of proposed avoidance and mitigation measures. This should include an evaluation of the significance of impacts, the potential for emissions to cause environmental and health impacts and comparison with current environmental conditions (for existing activities) and with state, national and international regulations and standards. Any net benefits likely to result from the proposal should be identified.

Discuss the impacts of the proposal in terms of the constraints or benefits it may place on the current or future use of land within the proposal site and surrounding area, including:

- Impacts on existing or proposed tourist or recreation activities, such as camping areas, picnic areas, walking tracks, horse riding tracks, heritage trails etc.
- Impacts on residential activities.
- Impacts on industrial activities.
- Impacts on agricultural activities, including any requirement of the *State Policy for the Protection of Agricultural Land* (2007) - (see http://www.dpac.tas.gov.au/divisions/policy/state_policies)
- Impacts on local and regional tourism.
- Impacts on other commercial activities.

Offsetting unavoidable adverse impacts.

If adverse residual environmental impacts from the proposal are considered unavoidable despite the adoption of best practice environmental management avoidance and mitigation measures, then proposals to offset such impacts should be detailed. For example, if the loss of conservation values, community assets or amenities is considered unavoidable, measures to compensate for those losses should be proposed in proportion to the loss. Any offset actions proposed must be demonstrated to be 'real' actions. That is, **the offset actions must have a measurable and relevant benefit which would otherwise not have occurred.**

6.1 Air Quality

Discuss potential impacts of the proposal on the local, regional and global air environment. Including:

- Identifying any proposed new point source atmospheric discharge points.
- A map of the location of all point sources of atmospheric emissions.
- A description of potential sources of fugitive emissions (including odour and dust that may arise from loading, unloading and transport).

Legislative and policy requirements

Consideration should be given to the requirements of the Tasmanian *Environment Protection Policy (Air Quality)* (see <http://epa.tas.gov.au/policy/air-quality-epp>).

6.2 Surface Water Quality

Discuss potential impacts of the proposal on surface water, including:

- Identifying any proposed new point source liquid emissions (wastewater and stormwater). Note: wastewater means water used or contaminated during carrying out the activity, and does not include clean stormwater arising from rainfall on the proposal site.
- A map of the location of all point sources of liquid emissions.
- Details of stormwater management (including in reasonably foreseeable flood events). The potential for pollutants to become entrained in stormwater should be assessed.
- A map of the location of stormwater collection systems and details of drainage control measures such as cut-off drains and sediment settling ponds.
- If the proposal anticipates a discharge to a municipal sewerage system (including tankered waste) then a suitably detailed agreement with the operator of the municipal sewerage system should be negotiated.

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of relevant water management policies and legislation including the *Water Management Act 1999*, the *State Policy on Water Quality Management 1997*, the *State Stormwater Strategy 2010*, and the *Tasmanian State Coastal Policy 1996*.

In particular, it must be demonstrated that the proposal will not prejudice the achievement of any water quality objectives set for water bodies under the *State Policy on Water Quality Management 1997* (see <http://epa.tas.gov.au/policy/water-quality-policy>). Where water quality objectives have not yet been set, the EPA Division should be consulted to identify the baseline water quality data required to enable the water quality objectives to be determined.

6.3 Groundwater

Discuss potential impacts of the proposal on groundwater (quality and quantity), including:

- A map showing the location of any groundwater bores.
- A conceptual groundwater model for regional and local aquifer flows.

Information on groundwater in Tasmania is available at: <http://wrt.tas.gov.au/groundwater-info/>

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant water management policies and legislation, including the *Water Management Act 1999* and the *State Policy on Water Quality Management 1997*.

6.4 Noise emissions

Discuss impacts of the proposal on ambient (surrounding) noise levels (during both the construction and operational phases), including:

- Identifying and describing all major sources of noise.
- A map of the location of all major sources of noise.
- Considering the potential for noise emissions (during both the construction and operational phases) to cause nuisance for nearby land users.
- The potential for noise emissions to affect terrestrial, marine and freshwater wildlife and livestock.

Legislative and policy requirements

Consideration should be given to the requirements of the Tasmanian *Environment Protection Policy (Air Quality)* (see <http://epa.tas.gov.au/policy/air-quality-epp>).

6.5 Waste management

Discuss the impacts of waste generated by the proposal, including:

- Identify the source, nature and quantities of all wastes, (liquid, atmospheric or solid) including general refuse and by-products from the various stages of the process likely to be generated.
- Methods and facilities proposed to collect, store, reuse, treat or dispose of each waste stream should be identified. Maintenance requirements should be included.
- The source, nature, quantity, and method of treatment, storage and disposal for each controlled waste should be described. Note: Controlled waste is defined in the EMPC Act and associated regulations. A non-exhaustive listing of categories of Controlled waste can be found on the internet at <http://epa.tas.gov.au/regulation/identify-a-material-as-a-controlled-waste>.

Legislative and policy requirements

Waste management measures must be in accordance with the following hierarchy of waste management, arranged in decreasing order of desirability:

- avoidance;
- recycling/reclamation;
- re-use;
- treatment to reduce potentially adverse impacts; and
- disposal.

6.6 Dangerous goods and environmentally hazardous materials

Discuss impacts of the proposal in relation to dangerous goods and environmentally hazardous materials (any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment and includes fuels, oils, waste and chemicals), including:

- The nature, quantity and storage location of all environmentally hazardous materials including Dangerous Goods (as defined in the *Australian Code for the Transport of Dangerous Goods by Road and Rail*) that will be used during the construction and operation of the proposal.
- A map showing the location of temporary and permanent storage areas for fuels, oils, and other dangerous goods or chemicals.
- The measures (such as bunded areas or spill trays) to be adopted to prevent or control any accidental releases of dangerous goods and environmentally hazardous materials.

- Contingency plans for when control measures/equipment breakdowns or accidental releases to the environment occur, including proposed emergency and clean-up measures and notification procedures.
- Identify any safety management requirements for the protection of human health and safety affecting the community.

6.7 Biodiversity and natural values

Discuss impacts of the proposal on biodiversity and nature conservation values (terrestrial and aquatic) including:

- A map of existing vegetation and type and threatened species.
- Impacts on flora, vegetation communities and habitat, with particular reference to rare and threatened species, communities and habitats, including those listed under the relevant Schedules of the Commonwealth EPBC Act and the Tasmanian *Threatened Species Protection Act 1995*.
- Impacts on fauna, including impacts on species, communities and habitats, with particular reference to rare and threatened species, migratory species, communities and habitats, including those listed under the relevant Schedules of the Commonwealth EPBC Act and the Tasmanian *Threatened Species Protection Act 1995*.
- Impacts on identified areas or habitats of conservation significance, including designated conservation areas, areas relating to the requirements of international treaties (e.g. Japan-Australia and China-Australia Migratory Bird Agreements (JAMBA/CAMBA) and Ramsar (wetlands) Convention), or wetlands listed in *A Directory of Important Wetlands in Australia*.
- Identify any freshwater ecosystems of high conservation management priority using the Conservation of Freshwater Ecosystem Values (CFEV) database (accessible on the internet under water.dpiw.tas.gov.au/wist/). The scope of investigation should encompass the vicinity of the proposed development where there is likelihood of alteration to the existing environment. The specific CFEV information used for DPMPs should be Conservation Management Priority_Potential which is appropriate for Development Proposals.
- Impacts on sites of geoconservation significance or natural processes (such as fluvial or coastal features), including sites of geoconservation significance listed on the Tasmanian Geoconservation Database.
- Impacts on existing conservation reserves which may be affected by the proposal, with reference to the management objectives of the reserve(s) and the reserve management plan(s) (if any).
- Impacts on any high quality wilderness areas identified in the *Tasmanian Regional Forest Agreement* (Tasmanian RFA) which may be affected by the proposal.
- Impacts on other species, sites or areas of landscape, aesthetic, wilderness, scientific, geodiversity or otherwise special conservation significance.
- Clearing of native vegetation and habitat associated with the construction and maintenance of the proposal and the impact of any clearing on sites, species or ecological communities of special conservation significance, including any impact on the comprehensive, adequate and representative reserve system identified as part of the Tasmanian RFA, maintenance of forest communities under the *Permanent Native Forest Estate Policy*, on wildlife habitat strips under the *Tasmanian Forest Practices Code 1995* and on non-forest communities.
- Where impacts cannot be avoided, proposed measures to mitigate and/or compensate adverse impacts on biodiversity and nature conservation values should be presented.
- The potential for migration and/or introduction of pests, weeds and plant and animal diseases as a result of the proposal.

- Rehabilitation of disturbed areas following the completion of construction activities and cessation of the activity, including any proposed seed collection and progressive rehabilitation programme.
- Reference should be made to potential impacts of vehicle movements on wildlife as a result of the proposal, and to proposed mitigation measures for any wildlife priority areas.

Requirements for surveys

Any flora and fauna surveys must, as a minimum, comply with the requirements of the document [Guidelines for Natural Values Assessments](#) published by the Department of Primary Industries, Parks, Water and Environment (DPIPWE). The methodology for surveys should be developed in consultation with the Department.

Key legislative and policy requirements

Regard should be given to the *Australia's Biodiversity Conservation Strategy 2010-2030*, the draft *Tasmania's Nature Conservation Strategy* and the *Threatened Species Strategy for Tasmania*.

6.8 Marine and coastal

Identify any potential impacts of the proposal on marine and coastal areas not addressed in other sections. It should identify measures to avoid and mitigate any possible adverse impacts and assess the overall impacts on marine and coastal areas following implementation of the proposed avoidance and mitigation measures. Cross referencing should be made to other relevant sections dealing with conservation values (marine flora and fauna, geoconservation) and coastal impacts.

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant marine and coastal policies and legislation, including the *Living Marine Resources Management Act 1995*, *State Policy on Water Quality Management 1997* and the *Tasmanian State Coastal Policy 1996*.

6.9 Greenhouse gases and ozone depleting substances

Discuss impacts of the proposal in relation to Greenhouse Gases and ozone depleting substances including:

- The direct and indirect effects of the proposal on greenhouse gas production and ozone depleting substances should be described and any greenhouse benefits of the proposal discussed.
- It should be demonstrated that the development will implement cost-effective greenhouse best practice measures to achieve on going minimisation of greenhouse gas emissions.
- A competent estimate should be provided for 'whole of life' greenhouse gas emissions for the proposed development, including significant emissions associated with planning, design, construction, procurement, maintenance, use and disposal as well as interactions with services, infrastructure, occupants and the natural environment. Details should also be provided of measures that will be used to minimise 'whole of life' emissions and the anticipated effectiveness of these measures should be specified. Where less emissions-intensive options are not adopted, justification should be provided and/or mechanisms to offset greenhouse gas emissions should be identified.

Legislative and policy requirements

Discuss impacts of the proposal in terms of the evolving national response to climate change and greenhouse gas emissions and the targets set in the *Climate Change State Action Act 2008* and *Climate Smart Tasmania: A 2020 Climate Change Strategy*). Proponents will need to determine whether they are required to report to the Commonwealth under the *National Greenhouse and Energy Reporting Act 2007*.

6.10 Heritage

Discuss impacts of the proposal on heritage values, including impacts on:

- Declared World Heritage Area properties and values.
- Any place listed on the National Heritage List and values.
- Any place listed on the Tasmanian Heritage Register (maintained by the Tasmanian Heritage Council), including consideration of cultural landscapes.
- Any place on the Tasmanian Historic Places Inventory (maintained by the Tasmanian Heritage Office).
- Any place on the Tasmanian Aboriginal Site Index (maintained by the Tasmanian Heritage Office), including consideration of cultural landscapes.
- Local Government planning scheme heritage schedules.
- Any other places of heritage significance.

Aboriginal heritage

An assessment of Aboriginal heritage by an appropriately qualified person is commonly required prior to project approval. Different types of Aboriginal heritage assessment may be required depending upon the nature of the site. Before engaging a consultant, Aboriginal Heritage Tasmania should be contacted for advice.

The standards and guidelines packages that apply to Aboriginal Heritage Officers and Consulting Archaeologists are available at <http://www.aboriginalheritage.tas.gov.au/>.

Consultation with the Tasmanian Aboriginal Lands Council, Tasmanian Office of Aboriginal Affairs, Aboriginal Heritage Tasmania, as well as with Aboriginal communities, should occur prior to any survey of potential sites to establish regulatory requirements for heritage values, places and landscapes.

Note: Information about the precise location of Aboriginal sites may be confidential. Confidentiality requirements should be discussed with Aboriginal Heritage Tasmania and confidentiality information should not be included in the DPEMP.

Historic heritage

The advice of the Tasmanian Heritage Office should be sought with regard to impacts on places listed on the Tasmanian Heritage Register and to establish regulatory requirements for heritage values, places and landscapes. Any approvals required under the *Historic Cultural Heritage Act 1995* should be identified. Guidelines for assessing historic heritage sites can be found at www.heritage.tas.gov.au/guidelines.html

Legislative and policy requirements

The advice of the Aboriginal Heritage Tasmania should be sought to establish regulatory requirements for Aboriginal heritage values, places and landscapes. Any Aboriginal heritage material identified must be reported to the Director of National Parks and Wildlife and dealt with in accordance with the *Aboriginal Relics Act 1975*. Where a request is made to seek to disturb, destroy or otherwise deal with an Aboriginal relic as per Section 14 (1) of the *Aboriginal Relics Act 1975*, information relevant to a permit under that Act will be required. The status of existing or pending permit applications should be provided in the DPEMP.

6.11 Land use and development

This section should identify any potential effects of the proposal in terms of constraints or benefits it may place on the current or future use of land within the proposal site and surrounding area. It should identify measures to avoid, mitigate and compensate for any possible adverse effects.

The following issues should be addressed (where relevant).

- Effects on existing or proposed tourist or recreation activities, such as camping areas, picnic areas, walking tracks, horse riding tracks, heritage trails etc.
- Effects on residential activities.
- Effects on industrial activities.
- Effects on agricultural activities, including any requirement of the *State Policy for the Protection of Agricultural Land (2007)* - (see http://www.dpac.tas.gov.au/divisions/policy/state_policies)
- Effects on local and regional tourism.
- Effects on other commercial activities.

6.12 Visual impacts

Discuss impacts of the proposal on the visual landscape, including:

- Assess the capacity of the landscape to absorb any visual changes as a result of the proposal. The assessment should also take account of the appearance of the proposal from significant vantage points. These should include points both inside and outside the site and should include viewpoints likely to be visited by tourists or recreational users. The methodology used and assumptions made in the assessment should be clearly identified.
- Presentation of 'artists impressions', photomontages or visual modelling is recommended.
- Measures to avoid and mitigate potential adverse visual impacts should be identified, such as minimising vegetation clearance, facility height, size, design, colour, separation and post-construction revegetation.

6.13 Socio-economic issues

Discuss the social and economic impacts of the proposal, including:

- An estimate of total capital investment for the proposal and where that capital will be expended (particularly in relation to the source of large capital items of processing equipment).
- Operational expenditures and revenues.
- The impacts on local and State labour markets for both the construction and operational phases of the proposal. The number and nature of direct and indirect jobs arising from the proposal must be detailed. Skills and training opportunities should also be discussed.
- The impacts on upstream/downstream industries, both locally and for the State.
- The extent to which raw materials, equipment, goods and services will be sourced locally.
- A qualitative assessment of impacts on local social amenity and community infrastructure, including recreational, cultural, health and sporting facilities and services. Any proposals to enhance or provide additional community services or facilities should be described.
- Community demographic impacts (changes to cultural background, occupation, incomes).
- Impacts on land values, and demand for land and housing.
- Impacts on the local, regional, state and national economies.
- Any publicly funded subsidies or services to be relied upon for the construction or operation of the proposal.
- Any impacts on Local, State and Federal Government rate, taxation and royalty revenues.

The extent to which these socioeconomic considerations need to be described depends in part upon the nature and extent of any negative impacts or risks to the environment arising from the proposal. Modest proposals with relatively low level and localised environmental impacts or risks may only require a detailed explanation of intended capital expenditure, operational expenditures, revenues and employment levels (distinguishing between direct and indirect employment) and a qualitative discussion of other socio- economic aspects of particular relevance.

Proposals with higher level or broader scale environmental impacts will require a more comprehensive and robust substantiation of the economic and social benefits of the proposal to allow the Board to undertake a robust assessment of the benefits and adverse impacts of the proposal. Such substantiation would include an explanation of the methodologies used to model impacts and describe the manner and results of engagement with the local community to determine their needs and aspirations in relation to the proposal.

Any information of a confidential nature may be provided as a separate appendix and noted by reference only in the main document.

6.14 Health and safety issues

Review any health and safety issues relating to employees, site visitors and the public which have not been addressed in other sections.

It must be demonstrated that health and safety issues have been taken into account during the planning of the proposal, including an analysis of alternatives. It should be demonstrated that compliance with the *WorkHealth and Safety Act 2012* and the *Work Health and Safety Regulations 2012* will be achieved. Health and safety management systems to be used during construction and operational phases should be described.

The following issues should be addressed.

- Construction phase health and safety issues.
- Security arrangements to prevent unauthorised access to the proposal site during construction.
- Operations, maintenance and inspection health and safety issues.

6.15 Hazard analysis and risk assessment

Provide a preliminary analysis (appropriate to the scale of the project) of the potential for a major hazard event (such as an explosion) to occur and proposed safeguards to prevent such an occurrence. The preliminary analysis should systematically identify all potential major hazards (internal and external) to people and the environment associated with the construction, operation, maintenance and decommissioning of the proposal.

6.16 Fire risk

Discuss the potential fire risk associated with the proposal. Including:

- Consideration of fire within the site, fire escaping from the site and the impact of wildfire originating outside the development.
- The objectives and management principles to be adopted for the preparation of a fire response plan.

- The fire response plan should be fully integrated with other relevant documents, such as a Tasmania Fire Service Local Area Fire Management Plan, a Forestry Tasmania Fire Management Plan and a Parks and Wildlife Service Fire Action Plan for relevant districts.

Legislative and policy requirements

The DPMP should demonstrate compliance with the relevant requirements of the *Fire Service Act 1979* and the *Work Health and Safety Act 2012*.

6.17 Infrastructure and off-site ancillary facilities

Discuss impacts of the proposal on any significant off-site or infrastructure facilities (including increased use of existing infrastructure, such as roads, ports and quarries), identify measures to avoid and mitigate any possible adverse impacts and assess the overall impacts following implementation of the proposed avoidance and mitigation measures. For example, upgrading or re-routing of roads, rail or other services required as a result of the proposal, should be detailed.

Identify roads and other infrastructure to be used by vehicles for the proposal (during both construction and operation). Potential environmental impacts associated with construction and use of such infrastructure should be assessed.

6.18 Environmental management systems

This section should provide information on strategic matters relating to environmental management of the proposal, including a description of the following:

- Any environmental management systems or environmental policies implemented or proposed by the proponent, which are relevant to the environmental management of the proposal.
- Organisational structure and environmental responsibility within that structure for the proposal.
- Procedures and instructions to employees (including contractors) on minimising adverse environmental impacts of activities, as well as employee induction and education programs to ensure an appropriate response to operational environmental concerns should be included in relevant sections.

6.19 Cumulative and interactive impacts

Where relevant, this section should contain an assessment of the potential cumulative impacts of the proposal in the context of existing and approved developments in the region, if such impacts have not been addressed in previous sections.

Other proposals which have been formally proposed, and for which there is sufficient information available to the proponent to allow a meaningful assessment of their impacts, should also be considered in that assessment. Uncertainties about potential impacts in such cases should be identified.

Interactions between biophysical, socio-economic and cultural impacts of the proposal should be discussed.

6.20 Traffic impacts

This section should identify roads to be used by vehicles associated with the proposal (both during construction and operation) and the likely volume and nature of traffic and timing of traffic flows, including details of the current usage of these roads. Impacts associated with altered traffic flows should be discussed (such as impacts on other roads users and residences adjacent to roads).

7. MONITORING AND REVIEW

This section should provide an outline of a monitoring, review and reporting programme for each sector of the proposal. The programme should be designed to meet the following objectives:

- Monitoring of compliance with emission standards and other performance requirements identified in the DPEMP.
- Assessing the effectiveness of the performance requirements and environmental safeguards in achieving environmental quality objectives.
- Assessing the extent to which the predictions of environmental impacts in the DPEMP have eventuated.
- Assessing compliance with commitments made in the DPEMP.

A map showing the location of all monitoring sites and a table of proposed monitoring including location, parameters and frequency should be included.

8. DECOMMISSIONING AND REHABILITATION

The DPEMP should describe an on-going, staged approach to site decommissioning and rehabilitation throughout the proposal life.

A preliminary Decommissioning and Rehabilitation Plan or Closure Plan should be outlined.

9. COMMITMENTS

This section should contain a consolidated commitments table listing all of the commitments made throughout the DPEMP. Commitments must be sequentially numbered, unambiguous statements of intent. For each commitment, the table must specify when the commitment is to be implemented, specify who is responsible for the undertaking of the commitment, and refer to the section of the DPEMP where the commitment is detailed.

The commitments will provide a basis for the preparation of conditions of approval, should approval be granted.

10. CONCLUSION

Describe the proposal and draw together the critical environmental, social and economic impacts of the proposal, both positive and negative; present a balanced overview of the net impacts of the proposal, and the extent to which any adverse impacts can be satisfactorily avoided, mitigated, remediated or compensated and positive impacts promoted and sustained. The conclusion should also describe how the proposal meets and furthers the objectives of relevant Commonwealth and State legislation, policies, plans and strategies.. This should be done by itemising the RMPS and EMPCS objectives and providing a commentary about how the proposal addresses each of the objectives.

11. REFERENCES

This section should provide details of authorities consulted, reference documents etc.

12. APPENDICES

As a means of improving readability of the DPEMP document, detailed technical information which supports the DPEMP should be included in appendices. The salient features of the

appendices should be included in the main body of the DPEMP. Care should be taken to avoid inconsistencies between technical content of Appendices and the DPEMP itself, unless carefully explained.

GLOSSARY

DPEMP – Development Proposal and Environmental Management Plan

EMPC Act – Environmental Management and Pollution Control Act 1994

EMPCS - Environmental Management and Pollution Control System objectives to be found in Schedule 1 of the EMPC Act

EPBC Act - Environment Protection and Biodiversity Conservation Act 1999 (Cth)

JAMBA/CAMBA - Japan-Australia and China-Australia Migratory Bird Agreements

RMPS – Resource Management and Planning System of Tasmania objectives to be found in Schedule 1 of the EMPC Act

Tasmanian RFA - Tasmanian Regional Forest Agreement

