

DRAFT
Project Specific Development Proposal and
Environmental Management Plan
Guidelines

for

Bluestone Mines Joint Venture Pty Ltd

Rentails Project

Renison Bell, Tasmania

Board of the Environment Protection Authority
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ENVIRONMENT PROTECTION AUTHORITY

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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 EPA Tasmania to undertake 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.

Commonwealth environmental assessment

The project has been determined a controlled action under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (EPBC 2017/8064) and will require assessment and approval under the EPBC Act, in addition to the Tasmanian State and Local government requirements. It was determined that the proposed action will have, or is likely to have, a significant impact on the listed threatened species and communities, protected under Part 3, sections 18 and 18A of the EPBC Act.

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. The DPEMP should specifically describe the implications of the proposal for the relevant EPBC Act controlling provisions. This information should be sufficient to allow the Commonwealth Minister for the Environment and Energy to make an informed decision on whether or not to approve the taking of the action, under Part 9 of the EPBC Act, for each controlling provision.

The DPEMP 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* (EPBC Regulations).

Information on the EPBC Act can be obtained from the Commonwealth Department of the Environment and Energy’s website at www.environment.gov.au/epbc/ or by calling 1800 803 772.

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.
- Conclusions regarding matters of national environmental significance protected under the EPBC Act (in this instance listed threatened species and communities) should be summarised in a separate chapter/section of the DPEMP and include reference information as to where within the document the detailed discussion is provided.

Submission of draft and final document

Close consultation with EPA Tasmania 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 EPA Tasmania 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 DPEMP 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 DPEMP 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 DPEMP 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 Megabytes).

False or misleading statements

It should be noted that section 43A of the EMPC Act creates obligations regarding the provision of information. The DPEMP 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 DPEMP is false or misleading.

KEY ISSUES TO BE ADDRESSED

While the DPEMP should evaluate all potential effects of the proposal, it should be principally focused on the key issues identified in the table below. The level of detail provided on other issues should be appropriate to the level of significance of that issue for the proposal. Variables or assumptions made in the assessment must be clearly stated and discussed. The extent to which the limitations, if any, of available information may influence the conclusions of the environmental assessment should be discussed.

	Key issues	Section
1	Acid and Metalliferous Drainage	6.1
2	Air Quality	6.2
3	Surface Water and Ground Water Quality	6.3
4	Tailings Storage Facility Management	6.4
5	Biodiversity and natural values	6.5
6	Site Decommissioning and Closure	8.0

The minimum survey requirements and studies required in relation to these key issues are provided in the relevant sections of these guidelines.

It should be noted that 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, should not be excluded from consideration.

The following guidelines may be of particular use in preparing the DPEMP:

- Australian Government Department of Industry, Innovation and Science, Leading practice sustainable development program for the mining industry. <https://industry.gov.au/resource/Programs/LPSD/Pages/LPSDhandbooks.aspx>
- The international GARD Guide developed by INAP, the International Network for Acid Prevention. http://www.gardguide.com/index.php?title=Main_Page

All discussions and conclusions should include a full justification based on best available information, including relevant conservation advices, recovery plans, threat abatement plans and guidance documents, if applicable. Commonwealth documents regarding listed threatened species and communities can be found at: <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>.

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.
- Environmental record of person proposing to take the action (activity operator or proponent).
 - The information provided must include details of any proceedings under a Commonwealth, State or Territory law for the protection of the environment or the conservation and sustainable use of natural resources against:
 - a) The person proposing to take the action.
 - b) For an action for which a person has applied for a permit, the person making the application.

If the person proposing to take the action is a corporation, details of the corporation's environmental policy and planning framework should be described.
- 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 methods 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 processes should be described in a step-by-step manner using explanatory diagrams and flow charts where appropriate to complement the text. The description should include information on where such processes have been used in Australia or elsewhere and performance data should be provided.
- Any 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.
- A description of the mineral resource including a description of historical tailings sampling and exploration work undertaken to identify and characterise the resource, including metallurgical test results, particle size distribution and saturation levels, interstitial water depth and quality. A description of any future proposed sampling and exploration work should be included.
- A brief description of how the proposed activity relates to the historic and existing activity on the site and any existing approvals or regulatory conditions for the site.

2.2 Pre-Construction and Construction Phases

- 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.
- Details of any pre-construction works, including site preparation works, and any temporary or permanent removal of vegetation including, stockpiling of vegetation, erosion control measures and the potential transport of pollutants (e.g. suspended solids) from areas of disturbance during construction.
- Details of any pre-clearance surveys and sampling to be carried out prior to commencement of construction, including dam geotechnical studies, flora and fauna etc.
- Estimates of the quantities of major raw materials required for construction and how these will be sourced.
- Nature, capacity and location of temporary construction equipment required on-site (such as cranes, concrete batch plants, rock crushers, construction camps).
- Information on the number of construction workers required in the various stages of construction, sources of labour, transport of workers to and from the site, accommodation, and support servicing requirements.
- Proposed hours per day and days per week of construction activities.

- Volume, composition, origin, destination and route for vehicle movements likely to be generated during the construction phase, including a breakdown for over-dimension and heavy vehicles; and
- A draft Construction and Environmental Management Plan (included as an appendix to the DPEMP).

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 Operational and Maintenance

- The hours of operation (hours per day and days per week) for all proposed activities including extraction, processing and transport.
- All mining processes (e.g. extraction processes including equipment, direction of works, means of extraction, conveyance of tailings; description of processing, stockpiling and waste management etc.) should be described in a step-by-step manner using explanatory diagrams and flow charts where appropriate to augment text. Note, it should be demonstrated how the resource will be extracted in a systematic manner to minimise the area of disturbance and allow for progressive rehabilitation of tailings dams.
- Description of the operational and maintenance requirements (e.g. frequency of maintenance activities, equipment access, shut downs, etc.) for all major project components. Include details on the design life for major project components.
- A description of types and quantities of materials to be extracted.
- All sources of non-mining waste (liquid, atmospheric emissions or solid). All point source atmospheric discharge points must be identified. All major sources of noise must be identified.
- Facilities to collect and treat wastes should be described together with the resultant concentrations and mass loads of pollutants to be emitted after treatment.
- Description and quantitative analysis of the water balance, including details of all water storage facilities, water requirements for each production process, freshwater input requirements, water transfer and drainage routes, discharge/decant points (storm related or otherwise), and receiving environment. The analysis should consider groundwater and surface water interactions with the existing tailings dams, and variations in precipitation and natural flow, accounting for extended dry periods and periods of excessive rainfall.
- Description of any drainage works and discharge controls (e.g. runoff collection basins).
- The volume, composition, origin, destination and route for vehicle movements (including road, rail, shipping and air) likely to be generated during the operational phase, including a breakdown for over-dimension and heavy road vehicles.
- Description of the tailings dams and method of tailings delivery and deposition. This should include existing dams to be utilised and detail dam, refurbishment, design and construction, spillways, lining, and management of tails and tailings dams (including pre-treatment, blending or segregation of tailings), dam lifts, and closure strategy taking into account potential for acid generation and the long term geotechnical stability of the dams.

2.5 Decommissioning

A description of the key decommissioning and closure activities should be provided in this section.

Note, a preliminary closure plan must be provided in the DPEMP and decommissioning and closure has been identified as a key issue for the proposal (see section 8 of these guidelines for information on requirements).

2.6 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 directions of drainage
- Road access to and from the site
- Locations of waterways and drains (including ephemeral)
- The distance(s) to any nearby sensitive uses (such as residences).
- Electricity transmission lines/ substations
- 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.

2.7 Site plans

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

- The boundary of the proposal site (including mining lease boundaries). Coordinates should be provided.
- The positions of buildings and significant structures on the site (existing and proposed).
- Locations of historical workings which may affect planning.
- Tailings extraction locations, including excavation direction & haulage roads.
- A plan of the processing plant (s) showing the locations of all major items of equipment and facilities and their positions relative to property boundaries.
- Locations of waste /product storage areas, construction materials, vegetation and topsoil stockpiles.
- Locations of tailings storage facilities (existing and proposed or refurbished etc.).
- The routes of any tailings or water recovery pipelines or sluices.
- Locations of process and raw water supply infrastructure, including drainage and piping works, pump stations, and any spillways.
- The locations of stormwater collection systems and details of drainage control measures such as cut-off drains and sediment settling ponds, including location of all discharge points (stormwater or other).
- Existing and proposed discharge points (spillways, decant tower, stormwater etc.).
- Any proposed sanitary and sewage treatment facilities.
- The location of site office, change rooms, workshop, hard stand areas, car parks and other significant structures/facilities associated with the proposal.

- The locations of temporary and permanent storage areas for fuels, oils, reagents and other hazardous goods or chemicals.
- Locations of any borrow pits.
- Locations of all point source emissions and major sources of air and noise emissions.
- The routes of any pipelines, tracks, conveyors or similar means of transporting on-site materials.

2.8 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 proposal 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.

This section should describe the alternatives considered during the planning of the proposal (including mining, processing and waste storage alternatives), with particular focus on describing decision-making processes according to clearly defined environmental, social and economic, and technical criteria. This might include discussion on:

- a) Justification of the need and location of the processing plant (s).
- b) Construction methodologies and designs, and justification for selection of processing plant (s) design (s) – selection of processes, design and process inputs (including reagents, fluxes, flocculants etc.).
- c) Reclamation methods.
- d) Selection of waste (tailings) disposal options – consider both pre-treatment options and disposal methods/ locations.
- e) Construction methodologies and alternative designs and justification for tailings dams including any refurbishment options, liners etc.

4. PUBLIC CONSULTATION

The following information should be provided in the DPEMP:

- a) Details on community and stakeholder consultation already undertaken (in early planning stages).
- b) The outcomes of consultation undertaken thus far (e.g. surveys, public meetings, liaison/discussions with interested groups), clearly identifying input provided by community

and stakeholders and any resultant changes made to the proposal as a result of consultation process.

- c) A description of community and stakeholder attitudes in relation to the proposal.
- d) Details of plans for on-going engagement with the community and stakeholders throughout the assessment process and throughout the life of the proposal.

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

- 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 EPA Tasmania). 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.). This information should be displayed on maps where appropriate.
- A description of the pre-construction (i.e. baseline) level of soil contamination within the plant area and immediate surrounds.
- A description of natural processes of particular importance for the maintenance of the existing environment (e.g. fire, flooding, etc.).

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 existing conservation reserves located on or within 5 kilometres 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).
- 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 existing regulatory approvals and licences, should be provided.
- A description of the matters of national environmental significance that are within the project area and surrounding areas, including but not limited to:
 - Spotted-tail quoll (*Dasyurus maculatus maculatus*) – vulnerable
 - Tasmanian devil (*Sarcophilus harrisii*) – endangered
 - Tasmanian wedge-tailed eagle (*Aquila audax fleayi*) – endangered
 - Tasmanian azure kingfisher (*Ceyx azureus dlemenensis*) – endangered
- Information about the identification of the environmental values including survey data and historical records. Details of the surveys undertaken, including survey effort, timing and an assessment of the adequacy of the surveys, must be included. The extent to which these surveys were appropriate and undertaken in accordance with the Department of the Environment and Energy's relevant scientific and policy guidance should also be stated.
- Information detailing known/recorded populations and known or potential habitat, including habitat in the area surrounding the proposed action area. Information must include maps indicating the distribution of the matters of national environmental significance and associated habitat.

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.

Direct, indirect, cumulative and facilitated impacts should all 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.

The discussion of environmental impacts must clearly identify impacts specific to matters of national environmental significance for the EPBC Act controlling provisions identified on page 4 of this document as required by the EPBC Regulations, Schedule 4, Section 3.01 (b) and (c).

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 and their expected effectiveness

against 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. Discussion of the achievability of the measures, including affordability, should be included.

The discussion of mitigation measures must clearly identify which potential impacts to matters of national environmental significance they are targeting, as required by the EPBC Regulations, Schedule 4, Section 4.01 (b) and (c).

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.**

With respect to residual impacts to matters of national environmental significance, information must be included regarding the reasons why avoidance or mitigation of impacts cannot be reasonably achieved. If relevant, details of an offset package to compensate for residual impacts to matters of national environmental significance should be included. This should consist of an offset proposal (strategy) and key commitments and management actions for delivering and implementing a proposed offset (e.g. an Offset Management Plan). Please note the strategy and management plan should be prepared as two separate documents. The proposed offset must meet the requirements

of the Department's *EPBC Act Environmental Offsets Policy* (October 2012) available at: www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy.

The package must include, but not be limited to, the following:

- i. A description of the offset site(s) including location, size, condition and environmental values present.
- ii. Justification of how the offset package meets the EPBC Act Environmental Offsets Policy.
- iii. An assessment (and justification for each input used) of the offset site(s) using the Department's Offset Assessment Guide available at: www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy.
- iv. Details on how the offset will be secured, managed and monitored, including management actions, responsibility, timing and performance criteria. This should include the specific environmental outcomes to be achieved from management measures.

Offsets required by the State can be applied if those offsets meet the *EPBC Act Environmental Offsets Policy*.

6.1 Key issue 1: Acid and Metalliferous Drainage

Tailings reclamation

Sufficient geochemical test work must be undertaken in order to clearly demonstrate the acid forming or non-acid forming potential of the materials to be reclaimed. Detailed geochemical assessment and analysis must be undertaken and presented in the DPEMP, including sample selection methodology.

Details of the characteristics of the tailings intended to be reclaimed for processing and appropriate management practices must be described in the DPEMP, and should include the following:

- a) Material types and their mineralogy, grain sizes and geochemical characteristics, including an assessment of their acid generating (or neutralising) potential and estimated quantities of potentially acid forming (PAF) materials, non-acid forming (NAF) materials and acid consuming (AC) materials.
- b) A description of reclamation processes with regard to their potential to result in Acid and Metalliferous Drainage (AMD) formation. Estimated lag times for the different materials should be discussed (based on geochemical characteristics) as well as best practice environmental management measures to minimise potential for AMD formation.
- c) As appropriate, detection and remediation/treatment plans for potential AMD formation or seepage during the reclamation process.

Tailings resulting from the Rentails processing and waste materials

Sufficient geochemical test work must be undertaken in order to clearly demonstrate the geochemical nature of tailings resulting from the Rentails processing and any other waste materials from the process such as slags and oversize materials. Geochemical assessment and analysis must be undertaken and presented in the DPEMP, including sample selection methodology.

General details of tailings and waste characteristics and management practices must be described in the DPEMP, and should include the following:

- a) Materials mineralogy and geochemical characteristics, including an assessment of their acid generating (or neutralising) potential and estimated quantities and production rates of PAF, NAF and AC materials. This information should be provided for all waste streams.
- b) Details of any segregation, blending, thickening or dosing of tailings or waste and method of tailings delivery and deposition. Any fixation processes (such as fixation of arsenic) should be detailed and options for monitoring and optimisation described.
- c) A description of the facilities for disposal of processed tailings including any construction or refurbishment required for A-B or C dams (including liners).
- d) A description of how non-tailings waste recovered from the TSFs through the reclamation process will be managed during operations and on closure.

Study requirements

- a) Geochemical test work and modelling to quantify the acid generating potential of materials to be reclaimed and waste materials such as tailings and slags from the processes (i.e. PAF, NAF, AC), the distribution of PAF materials within the existing Tailings Storage Facilities (TSFs), and production rates including variability over time. Acid base accounting parameters should include (as a minimum) Acid Neutralising Capacity (ANC), Maximum Potential Acidity (MPA), ANC/MPA ratio, available ANC and Net Neutralization Potential (NNP).
- b) Testing must include a significant number of samples and as a minimum should consider the following parameters: metal contents; alkalinity; acidity; mineralogy of potential neutralising minerals; mineralogy of sulphides; and total sulphur. Static and kinetic testing

will be required in order to determine appropriate handling methods for both tailings to be reclaimed and processed tailings.

- c) Identify metals and other chemical elements or ions of potential environmental concern and assess the potential for leaching of elements to the receiving environment from both reclaimed tailings (including reclamation, handling and stockpile/ storage and processing) and processed tailings (including transport of tailings to the TSFs, management within the TSFs and decant of any supernatant).
- d) Sufficient representative sampling and chemical testing must be undertaken of the tailings contained within A-B & C Dams to determine on the chemical variability of existing tailings within the A-B and C Dams. Sampling must consider the entire tailings profile and include all those elements that have the potential to impact public health or cause environmental harm to the surrounding environment via air emissions (stack, fugitive sources) and water emissions (surface/ ground water).
- e) Identify suitable best practice AMD management measures (based on the results of geochemical test work) and describe how these would be implemented on site, relevant to the proposal.
- f) The management and treatment of high and low sulphur tailings waste streams must be described and mechanisms to minimize AMD on TSF closure must be identified.

6.2 Key issue 2: Air Quality

- Identify potential sources of atmospheric emission including point sources and diffusive sources and indicate the location of these sources on a map.
- For each identified emission source describe the likely composition, quantities and estimate rates of emission to the atmosphere.
- Fully characterise the tailings and describe any plant inputs (including reagents, fluxes and fuels) to inform nature of pollutants likely to be emitted from the stack (as required in previous dot point).
- Provide a detailed description of potential sources of fugitive emissions including dust that may arise from construction and site preparation work as well as loading, unloading and transport.
- Undertake atmospheric dispersion modelling, in relation to the contaminants of concern, to assess the impacts of air emissions from the proposed facility relative to criteria in the *Environmental Protection Policy (Air Quality) 2004* (Air EPP). Modelling should be conducted by a suitably qualified specialist in accordance with the EPA's Draft of Tasmanian Atmospheric Dispersion Modelling Guidelines available on the EPA Tasmania website.

It is strongly recommended that the scope and method of atmospheric dispersion modelling be discussed with the EPA's Air Modelling Officer prior to commencement of modelling.

- Discuss the results of the air dispersion modelling in relation to the requirements of the Air EPP. Include a description of the surrounding land uses, sensitive receptors, nearby industries in other ownership and provide any details of consultation that the proponent may have had with stakeholders.
- Provide an assessment of the potential for emissions to air from the stack and diffusive sources at the proposed facility with respect to the likelihood of causing environmental nuisance or environmental harm. The assessment should also cover a variety of conditions like plausible worst case scenarios and upset conditions. It should contain information about the time (of the day), duration, frequency and potential impact of these worst-case emissions from the facility. This information will be relevant to the interpretation of the results of air dispersion modelling.
- Measures to manage unavoidable emissions should be implemented in accordance with the requirements of the Air EPP.

- Consideration should be given to implementing a background ambient air monitoring program, before the facility is constructed to enable a subsequent assessment of the impact of the proposed facility on the local environment to be undertaken.

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/Documents/EPP_Air_Quality_2004.pdf).

6.3 Key issue 3: Surface Water and Groundwater Quality

This section should identify existing conditions, detail the performance requirements to be achieved, identify potential effects of the proposal on the receiving environment (including surface water, groundwater and soil), identify measures to avoid and mitigate potential adverse effects and assess the overall effects on the receiving environment following the implementation of the proposed avoidance and mitigation measures.

This section should demonstrate that all reasonable and practicable measures have been taken (having regard to best practice environmental management as defined in the EMPC Act) to minimise the generation and discharge of contaminated wastewater.

Discharge of contaminated wastewater to the environment

If the proposal includes any discharge of wastewater to the environment, then a detailed consideration of the nature of the discharge and of the receiving environment must be presented. Any proposed treatment processes should be described and the potential impacts upon the receiving environment must be assessed under typical and plausible worst case conditions.

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.

For proposals with the potential to impact upon groundwater, this section should identify existing conditions, identify performance requirements to be achieved, identify any potential effects of the proposal on groundwater quality or quantity, identify measures to avoid and mitigate any possible adverse effects, and assess the overall effects on groundwater following implementation of the proposed avoidance and mitigation measures.

The following specific information should be provided (noting that data and information from recent site projects may be relevant):

- Ambient surface and groundwater quality survey results of the existing receiving environment (including evaluation of historical sources of pollution including mass loadings at various flows).
- Identification of principle discharge points from A-B and C dams to the receiving environment during both the reclamation phase and during use of any refurbished TSFs for storage of processed tailings.
- Detail of drainage and assessment of the likelihood of unintended discharge from onsite water holding facilities.
- Expected water quality of emitted water and expected annual mass loadings discharged should be reviewed in comparison to ambient water quality. Proposed discharges must satisfy the *State Policy on Water Quality Management 1997*.
- Impacts on surface and ground waters including from discharge of wastewater and exposure of tailings and waste materials to the atmosphere. Assessment of impact on the surface water receiving environment should include the full extent of any mixing zone.
- Measures to ensure protection of the quality and quantity of the region's surface and groundwater resources.

- Details of an appropriate surface and groundwater monitoring and reporting program, developed by a suitably qualified and experienced person, in order to facilitate protection and maintenance of the quality and quantity of the catchment's water resources.

Construction phase

Provide details of management practices for areas disturbed during the construction phase to prevent sediment movement into watercourses. This should include contingencies for failure of control measures, such as during heavy rainfall or flooding.

Details of the location and proposed management of any borrow pits should also be provided, particularly in relation to impacts associated with vegetation clearance and sedimentation near waterways.

Other water related issues

The following issues should be also addressed (where relevant):

- Details of stormwater management (including reasonably foreseeable flood events) on the proposal site should be provided. The potential for pollutants to become entrained in stormwater should be assessed. Estimation of runoff volumes and available detention capacity/times should be included and the rainfall intensity data used in the design of stormwater management structures should be described.
- Details of any additional liquid wastes should be included.

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 *Inland Fisheries Act 1995*.

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, EPA Tasmania should be consulted to identify the baseline water quality data required to enable the water quality objectives to be determined.

The Water Management Branch has provided the following comments:

- It is noted that the proposal will include “dam works” within the meaning of Part 8A of the *Water Management Act 1999*, which will need to be considered by the Minister in accordance with Section 165F of the Act.
- In order for the Minister to be able to make a final determination when the proposal is referred, all relevant geotechnical assessments, dam safety hazard category assessments, design drawings and works specifications, and a Dam Safety Emergency Management Plan relevant to any of the “dam works” associated with the proposal should be included either within or as addendums to the final DPEMP. These documents must comply with the *Water Management (Safety of Dams) Regulations 2015* and the relevant Guidelines produced by the Department.
- Any referral to the Minister in the absence of this information will most likely result in a Notice being issued for further information which would add additional time to the assessment process.

6.4 Key issue 4: Tailings Storage Facility Management

This section should identify and describe those characteristics of the A-B and C dams that are likely to change during tailings reclamation and placement of processed tailings and which may have the potential to result in environmental impacts to water and land. While geotechnical assessment of the existing and proposed structures will inform this section it should be noted that the geotechnical assessment and subsequent design of the facilities will be assessed separately under the *Water Management Act, 1999*.

Discuss the potential impacts of tailings reclamation and placement of processed tailings and any other wastes within the TSFs including:

- Changes in pore pressure, phreatic surface, settlement or movement during reclamation especially in relation to upstream raises.
- Changes in rheology of processed tailings and any resultant implications for pore pressure and phreatic surface etc.
- Any implications for suspension/ resuspension of processed tailings due to wind driven wave action.
- Potential changes in the quantity and quality of any seepages and how these would be managed.
- Any requirements to remove or replace TSF wall structures and proposed mechanisms for this.
- Provide a Tailings Management Plan that includes a detailed tailings reclamation and placement strategy for Dams A-B, C and D. The ultimate disposal of waste streams (for example tailings, slag, ferric arsenate) from the process to achieve closure must be described. Tailings permeability and beaching characteristics should be described taking into account any other non-tailings waste materials that are placed within the TSFs.

6.5 Key issue 5: Biodiversity and natural values

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

- A map of existing vegetation types and locations of 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 (including but not limited to those listed at 5.2) 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 DPEMPs 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.
- Details on whether any impacts are likely to be unknown, unpredictable or irreversible.
- 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 program.
- 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 Agency.

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*.

All surveys should make reference to relevant survey guidelines, including an assessment of the adequacy and appropriateness of the surveys with respect to these guidelines. Documents regarding listed threatened species can be found at: <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl>.

6.6 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.
- Provide estimates of the sound power levels for all major operational sources of noise.
- A map of the location of all major sources of noise.
- A consideration of the potential for noise emissions (during both the construction and operational phases) to cause nuisance for nearby sensitive receivers.
- The potential for noise emissions to affect fauna.

Legislative and policy requirements

Consideration should be given to the requirements of the Tasmanian *Environment Protection Policy (Noise) 2009* (see [http://epa.tas.gov.au/policy/statutory-policies/state-policies-and-environment-protection-policies/environment-protection-policy-\(noise\)-2009](http://epa.tas.gov.au/policy/statutory-policies/state-policies-and-environment-protection-policies/environment-protection-policy-(noise)-2009)).

6.7 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) likely to arise, including general refuse and by-products from the various processing stages.
- Fully describe all waste streams (including their physical and chemical composition).
- 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 any controlled wastes 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.

6.8 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.

Particular reference should be made to the management of fuels, lubricants, processing inputs (reagents etc.) required for equipment during construction, processing and maintenance activities.

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 Heritage Register (maintained by Aboriginal Heritage Tasmania), 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 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 existing 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:

- An assessment of 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 *Work Health 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 proposal) 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.

TasNetworks has also provided the following comments:

- Modification to existing assets or a requirement for additional assets may be required for this proposal and the ownership, location and type of assets will need to be determined.
- Some of the works may be classified as 'work of minor environmental impact' under the Electricity Supply Industry Regulations 2008 while others may require assessment under planning scheme. The assessment process for any proposed works will need to be determined and discussed with TasNetworks to ensure that the appropriate process(s) are undertaken.
- In addition, the potential for dust and other airborne particulates to impact on the safe and reliable operation of TasNetworks assets needs to be addressed. Asset life and maintenance costs should be considered.

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 program for each sector of the proposal. The program 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 locations of all monitoring sites and a table of proposed monitoring including location, parameters and frequency should be included.

8. KEY ISSUE 6 - SITE DECOMMISSIONING AND CLOSURE

The DPEMP should describe an on-going, staged approach to site decommissioning and closure throughout the proposal life. The DPEMP must also address unanticipated closure.

A preliminary Decommissioning and Rehabilitation Plan or Closure Plan should be provided. The plan should include (but not be limited to) the following:

- Decommissioning and rehabilitation of the processing plant including progressive shutdown and contingencies for unanticipated site closure.
- Progressive closure of the TSF's appropriate to the classification of the facilities and materials contained within them.
- Methodologies for unexpected closure of the site including in the event that one or more TSFs are partially open and low sulphur material is not available for cover.
- Details of proposed TSF closure strategies including mechanisms to reduce the long-term potential for AMD formation and any ongoing water quality management requirements.
- Details of the approximate quantities, types and sources of NAF cover materials required for TSF closure including any waste rock, clay and soils.

- A preliminary post closure water balance to demonstrate that proposed closure strategies are achievable.
- Details of the proposed final landform and revegetation to support the post mining land use.
- Details of any infrastructure to remain post closure.
- Details of monitoring and maintenance required to ensure the long-term performance and integrity of rehabilitated structures/ areas including the monitoring and maintenance required to ensure the long-term performance and integrity of the TSFs.
- Provision of cost estimates to effectively decommission and close the site during development and operation. Both unexpected and planned closure scenarios should be costed. The unexpected closure scenario should assume a worst case (for example maximum TSF area (s) open).

9. COMMITMENTS

This section should contain a consolidated commitments table listing all of the commitments made throughout the DPMP. 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 DPMP 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.

With regard to matters of national environmental significance, conclusions regarding the environmental acceptability of the proposal must be made. This should include discussion on compliance with the principles of Ecologically Sustainable Development (ESD) and the objects and requirements of the EPBC Act. To assist the proponent, the *National Strategy for Ecologically Sustainable Development* (1992) is available on the following web site: <https://www.environment.gov.au/about-us/esd/publications/national-esd-strategy>.

11. REFERENCES

This section should provide details of authorities consulted, reference documents etc. The currency (date), reliability and uncertainty of the reference material should be stated within the DPMP at a location appropriate for the structure of the DPMP.

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)

EPBC Regulations – Environment Protection and Biodiversity Conservation Regulations 2000 (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