

Guidelines for preparing a

Development Proposal and
Environmental Management Plan

for

Indicoal Pty Ltd
Langloh Coal Mine
off Lyell Highway, near Hamilton, Tasmania

Board of the Environment Protection Authority
December 2013



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 a proponent about what must be included in a 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 administrative tasks on its behalf and to establish the information base to inform its decision-making.

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 the proposed activity. 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 must be appropriate to the level of significance of that issue 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 or later stages of the assessment process.

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 must aim to provide the following.

- 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 impacts that may occur and the measures that will be taken to 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 (in particular the Board, the local Council and the Commonwealth Minister for the Environment) 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 Tasmania's Resource Management and Planning System and the Environmental Management and Pollution Control System¹ and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Structure and formatting of the DPEMP

The following points must be considered when preparing the DPEMP.

- The title page must include the proponent name, activity name, proposal address/location, the DPEMP version number (where relevant) and the month & year of publication.

¹ These objectives are specified in Schedule 1 of the EMPC Act.

- The main text of the DPEMP must be written in a clear and concise style that may be readily understood by the general reader.
- Technical terms 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. Nonetheless, salient information in all appendices must be summarised in the relevant sections of the main body of the DPEMP.
- All sources of information must be referenced. An indication must 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 must be indicated. The style of referencing should be consistent throughout.
- Significant information should be presented on maps, diagrams and site plans to enhance the level of understanding. The following requirements apply to such images.
 - All images must be of high quality, with all text readily readable.
 - All images must be capable of being readily copied and pasted electronically into other documents such as a permit (in particular all objects in electronic images must be 'grouped').
 - All colour images must, when printed or photocopied in monochrome, reproduce such that all important features are readily visible.
 - For ease of comparison, all maps, plans and aerial photographs must be oriented in the same direction as far as practicable and a north direction arrow and scale must be included.
 - An exception may be made to the above where historical documents or photographs need to be reproduced in the document.
- When providing maps or referring to spatial databases, the coordinate reference system being used must 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 commercially confidential production processes, or sites or areas of special conservation, scientific, archaeological, cultural heritage or other significance) this information should be provided in a separate, confidential appendix. A comment must 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 10 of these guidelines.
- Where appropriate, information provided in other sections should be cross-referenced to minimise duplication.

Submission of draft and final document

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

It is recommended that the proponent submit a draft DPEMP to the EPA Division for review prior to its finalisation. But it should be noted that draft documents may be rejected without detailed review if they are incomplete, contain significant formatting or typographical errors or do not comply with these 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 format for use with a word processor (such as Microsoft Word). The final version must also be suitable for publishing on the internet (PDF format). Some printed and CD-ROM 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 for a CD-ROM copy and at a nominal charge of up to \$20 in printed format.

The DPEMP will also be made available for downloading on the EPA website. Documents must 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 documents must be broken into multiple files (approximately 10 MB maximum).

Commonwealth environmental approval

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

Approval under the EPBC Act approval 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. This proposal has been determined to be a controlled action under the EPBC Act (EPBC reference number 2013/6769). The prescribed matters of national environmental significance in relation to the proposal are:

- nationally listed threatened species and communities; and
- a water resource, in relation to coal seam gas development and large coal mining development.

Information on the EPBC Act can be obtained from the Commonwealth Department of the Environment website² or by telephoning 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. The proposal has been determined to be a controlled action under the EPBC Act and is being assessed in accordance with the bilateral agreement, and so the DPEMP must specifically describe the implications of the proposal for the relevant EPBC Act controlling provisions.

False or misleading statements

It should be noted that section 43A of the EMPC Act creates obligations relating to 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.

² See <http://www.environment.gov.au/topics/about-us/legislation/environment-protection-and-biodiversity-conservation-act-1999>.

CONTENTS OF THE DPEMP

FOREWORD

This section must briefly outline the assessment and approvals process and explain the function of the DPEMP in this process.

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.
- Permit applicant details (if the applicant will be a different person/entity to the proponent).
- 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 (including 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

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 must 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 will typically need to 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) must be specified. Quantities and characteristics must be detailed.
- Energy requirements for the proposal must be outlined and the means of meeting these demands described.
- Provide details of production capacity and production rates for relevant processes including peak rates, daily average rates and annual production rates.
- Specify the hours of operation for the proposal (hours per day and specific days per week) including any seasonal variations.
- Provide full information on volume, composition, origin, destination and route of transport movements (including road, rail, shipping and air) likely to be generated during each phase of the proposal, including a break-down for over-dimension and heavy road vehicles.

2.2. Construction

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

2.3. Commissioning

Provide a step-by-step description of major commissioning activities (if any) following installation of equipment. Provide indicative timeframes for the completion of major steps, and the likely sequencing of steps. The point at which commissioning will be considered complete must be specified.

2.4. General location map

A general location map (e.g. 1:25,000 scale) which identifies the following is required. The information may be shown on two or more maps if necessary to improve clarity.

- The location of the proposal site.
- Topographical features, aspect and direction of drainage.
- Geology of the area (including areas of potential acid rock drainage).
- Road access to and from the site.
- Location of waterways and drains (including ephemeral).
- The location of, and distance(s) to, the nearest sensitive uses (such as residences).
- Electricity transmission lines, communications facilities and other services.
- Boundaries of the property and mining lease on which the proposal will be located.
- Surrounding land tenure.
- Surrounding land use (including areas of conservation or recreational significance).
- Site and surrounding land zoning as per Council planning scheme.

2.5. Site plan

A site plan or plans are required which identify the proposal site and which include the following.

- The boundary of the proposal site. Show the mining lease boundaries if this constitutes the proposal site.
- Map coordinates to completely describe the proposal site and mining lease boundaries.
- Material extraction, processing and stockpiling areas.
- Stormwater management features including proposed diversion drainage pathways and significant treatment features, such as detention basins.
- The position of buildings and significant structures on the site (existing and proposed).
- The location of all major items of equipment and facilities and their position relative to site boundaries.
- The route of any internal roads, pipelines, conveyors and other means of transporting on-site materials.
- The location of loading and unloading areas.
- Details of any screening vegetation and bund walls.
- Existing vegetation and types.

2.6. Off-site infrastructure

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

3. PROPOSAL ALTERNATIVES

The rationale and need for the proposal must be described, including the consequences of the proposal not proceeding.

Describe the site selection process, including site selection criteria, alternative sites considered and an assessment of those alternatives. The assessment must compare alternatives according to clearly defined environmental, social, economic and technical criteria, 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, must be included.

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

4. PUBLIC AND STAKEHOLDER CONSULTATION

Provide details of the nature and results of public and stakeholder consultation undertaken (if any) by the proponent during project planning and preparation of the DPEMP, as well as any proposals for further consultation during and beyond the construction phase.

The Board has produced a guide to community engagement which may be of assistance³.

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 must 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 planning controls 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 contamination⁴, 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

³ Available on the internet at <http://epa.tas.gov.au/regulation/guidance-documents>.

⁴ Information on potentially contaminating activities and contaminated site assessment can be found on the internet at <http://epa.tas.gov.au/regulation/contaminated-sites>.

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 2,000 metres of the proposal site must be included. Any proposed or potential sensitive uses within this distance of the proposal site, which have been or are likely to be granted approval under the local planning scheme, must 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 and 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 2,000 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, heritage, wilderness, scientific or other special conservation significance which may be affected by the proposal. Relevant information resources include the LIST⁵ and the Natural Values Atlas⁶ and the Australian Government's Protected Matters Search Tool⁷.
- 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.

5.3 Social and 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 and trends; land values).

⁵ Available on the internet at <http://www.thelist.tas.gov.au/>.

⁶ Available on the internet at <http://www.dpiw.tas.gov.au/inter.nsf/WebPages/LJEM-6TV6TV?open>.

⁷ Available on the internet at <http://www.environment.gov.au/epbc/pmst/>.

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 must 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 must 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 must 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 by 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 must be referred to where appropriate. **Unsupported assertions that performance requirements will be achieved will not be considered adequate.**

Potential impacts

Outline all potential environmental 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 must be identified.

The evaluation of potential impacts must identify **plausible worst case consequences**, the vulnerability of the affected environment to the potential impacts, and the reversibility of the impacts. Potential cumulative impacts also need to be addressed. Interactions between biophysical, socio-economic and cultural impacts must be identified.

Predictions and evaluations of impacts must 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 must be referenced, together with the relevant research and investigations supporting them. Assumptions, simplifications and scientific judgements must be stated clearly, and the nature and magnitude of uncertainties must be clearly defined. Where relevant, the choice of a particular methodology over alternative methodologies must be explained. Where impacts are not quantifiable, they must be adequately described.

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 must be specified. Where there are clear, alternative avoidance or mitigation measures for a particular adverse environmental impact, the alternatives must 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 must be discussed. It must 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 must 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 must 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)*⁸
- 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 must 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.**

⁸ Available on the internet at http://www.dpac.tas.gov.au/divisions/policy/state_policies.

Key issues

The key issues that have been identified for consideration in relation to the proposal, and which should be the principle focus of the DPEMP, are as follows. This list may not be exhaustive, and other key issues may emerge during the preparation of the DPEMP.

State assessment	Commonwealth assessment
S1. Air quality impacts S2. Surface water and groundwater impacts S3. Noise and vibration impacts S4. Threatened flora and fauna species and communities listed under Tasmanian legislation S5. Coal and waste geochemistry S6. Traffic impacts S7. Closure and rehabilitation	C1. Groundwater impacts C2. Threatened flora and fauna species and communities listed under Commonwealth legislation

Survey and study requirements in relation to key issues

The following surveys and studies will be required as part of the DPEMP in relation to the key issues identified above. It is strongly recommended that the advice of the EPA is sought on the acceptability of survey techniques prior to the work being undertaken. It is also strongly recommended surveys are consistent with relevant policy statements and survey guidelines published by the Department of the Environment⁹. Where surveys deviate from published guidelines or policy statements, the DPEMP must include a justification outlining the rationale for the deviation. If required, advice in respect of the acceptability of survey techniques or effort for matters of national environmental significance can be sought from the Department of the Environment, through the EPA.

Key Issue	Survey requirements for DPEMP	Other studies for DPEMP
S1		<ul style="list-style-type: none"> Air quality impact study
S3	<ul style="list-style-type: none"> Survey of pre-existing ambient noise levels at sensitive locations 	<ul style="list-style-type: none"> Modelling of the activity's noise levels, and report Modelling of the activity's ground vibration and air blast overpressure, and report
S4, C2	<ul style="list-style-type: none"> Threatened flora and fauna surveys in relation to species listed under both Commonwealth and Tasmanian legislation 	<ul style="list-style-type: none"> Weed and Disease Management Plan
S6		<ul style="list-style-type: none"> Traffic Impact Assessment (TIA) Study of blasting impacts on road infrastructure and traffic Lyell Highway access study (if not included in the TIA)
S7		<ul style="list-style-type: none"> Mining and Rehabilitation Plan

⁹ Available on the internet at <http://www.environment.gov.au/topics/about-us/legislation/environment-protection-and-biodiversity-conservation-act-1999/policy>

6.1 Air Quality

This section must identify existing conditions, identify performance requirements to be achieved, identify any potential effects of the proposal on the local, regional and global air environment, identify measures to avoid and mitigate any possible adverse effects, and assess the overall effects on the air environment following implementation of the proposed avoidance and mitigation measures.

The following matters must be addressed in the DPEMP.

- Identify and describe all major emission sources.
- Provide a map of the location of all major emission sources.
- Describe potential sources of fugitive emissions, including odour and dust that may arise from processing, loading, unloading and transport.
- Evaluate the potential for emissions (including fugitive emissions) to cause environmental harm and nuisance and health effects, through an air quality impact study. The impact study must:
 - provide a full estimation of particle emissions for the first three years of the mine's production (i.e. until maximum production has been reached);
 - include dispersion modelling of PM₁₀ and PM_{2.5}, with a model such as Calpuff or TAPM; and
 - assess impacts on sensitive premises within five kilometres of the site, in the township of Hamilton and along transport routes.

Study methodology should be discussed beforehand with scientific staff of the EPA Division.

A report on the study must be provided with the DPEMP.

- Describe proposed mitigation measures in relation to emissions.

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant air quality policies and legislation, including Tasmania's *Environment Protection Policy (Air Quality) 2004*¹⁰.

6.2 Surface Water Quality

Discuss potential impacts of the proposal on surface water, including the following.

- Identify any proposed 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.
- Provide a map of the location of all point sources of liquid emissions.
- Provide details of stormwater management (including in reasonably foreseeable flood events). The potential for pollutants to become entrained in stormwater must be assessed.
- Provide a map of the location of stormwater collection systems and details of drainage control measures such as cut-off drains and sediment settling ponds.
- Provide estimates of the water consumption of the development throughout its lifecycle.
- Describe the risk of mine flooding events and provide a draft management plan for these.

¹⁰ Available on the internet at <http://epa.tas.gov.au/policy/air-quality-epp>.

- Describe potential levels and forms of sulphur in the coal (total percentage sulphur, percentage sulphide, presence of pyrite).
- Describe potential impacts on the Clyde River and Lake Meadowbank, and the risk of impacts on drinking, agricultural and industrial water supplies drawn from these water bodies. Reference must be made to the *Australian Drinking Water Guidelines*¹¹.
- If the proposal anticipates a discharge to a public sewerage system (including discharge of tankered waste) then a suitably detailed agreement with the operator of the sewerage system should be negotiated and noted in the DPEMP.

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of relevant Tasmanian water management legislation and policies including the *Water Management Act 1999*, the *State Policy on Water Quality Management 1997*¹², the *State Stormwater Strategy 2010*¹³, and the *Tasmanian State Coastal Policy 1996*¹⁴.

In particular, it must be demonstrated that the proposal will not prejudice the achievement of any water quality objectives set for water bodies under *State Policy on Water Quality Management 1997*. Where water quality objectives have not yet been set, the EPA Division must be consulted to identify the baseline water quality data required to enable the water quality objectives to be determined.

Dams

If the proposal involves the construction of a dam or dams within the meaning of Part 8A of the *Water Management Act 1999*, information relevant to a referral under section 165F of that Act should be provided in or as an appendix to the DPEMP. Such information should include geotechnical assessments, stability analyses, design drawings and specifications.

6.3 Groundwater

Discuss potential impacts of the proposal on groundwater (quality and quantity), including the following¹⁵.

- A map showing the location of any groundwater bores.
- A conceptual groundwater model for regional and local aquifer flows, including connectivity with surface waters.
- The management of any potential intersected groundwater.

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*.

Additional requirements relating to the EPBC Act are outlined in section 7.

6.4 Noise emissions

This section must identify existing conditions, identify performance requirements to be achieved, identify any potential effects of the proposal on ambient (surrounding) noise levels (during both the construction and operational phases), identify measures to avoid and mitigate any possible

¹¹ Available on the internet at <http://www.nhmrc.gov.au/guidelines/publications/eh52>.

¹² Available on the internet at <http://epa.tas.gov.au/policy/water-quality-policy>.

¹³ Available on the internet at <http://epa.tas.gov.au/epa/state-stormwater-strategy>.

¹⁴ Available on the internet at <http://www.dpipwe.tas.gov.au/inter.nsf/WebPages/CART-8Y37S8?open>.

¹⁵ Information on groundwater in Tasmania is available on the internet at <http://wrt.tas.gov.au/groundwater-info/>.

adverse effects, and assess the overall effects on ambient noise levels following implementation of the proposed avoidance and mitigation measures.

The following issues must be addressed.

- Specify the proposed operating hours.
- Identify and describe all major sources of noise on the land and any attenuating structures and/or topography, and provide a map of the location of relevant features. Potential noise sources include rock drills, rock breakers, crushers, screeners, and handling of material (including loading and transportation of material within the land).
- Describe land use and ownership in the vicinity of the site and those areas which may be affected by the proposal. Noise sensitive areas relevant to the project must be identified and documented on a map extending an appropriate distance from the centre of the proposed development. Consider the potential for noise emissions (during both the construction and operational phases) to cause nuisance for nearby land users (with particular attention to rock drilling and blasting).
- Describe any proposed measures to mitigate noise impacts.
- Conduct a survey of pre-existing ambient noise levels at sensitive locations. Survey methodology and measurement locations should be discussed beforehand with scientific staff of the EPA Division.
- Conduct modelling to determine the 30, 35, 40 and 45 dB(A) noise contours, and provide a report.
- Provide proposed blasting details, including typical blast plan, blast size and intended blast frequency.
- Conduct modelling to determine the 110, 115 and 120 dB (Lin peak) air blast over pressure contours, and provide a report.
- Conduct modelling to determine the 2.5, 5, 7.5 and 10 mm/s peak particle velocity ground vibration contours, and provide a report.
- Consider and describe the potential for noise emissions to affect terrestrial and aquatic wildlife and livestock.
- Consider and describe the potential for transport of mine product to cause environmental nuisance and harm for land users along transport routes, during both daytime and night-time.

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant noise management policies and legislation, including Tasmania's *Environment Protection Policy (Noise) 2009*¹⁶ and the *Environmental Management and Pollution Control (Miscellaneous Noise) Regulations 2004*.

6.5 Waste management

Discuss the impacts of waste generated by the proposal, including the following.

- 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 must be identified. Maintenance requirements must be included.

¹⁶ Available on the internet at <http://epa.tas.gov.au/policy/noise-epp>.

- The source, nature, quantity, and method of treatment, storage and disposal for each controlled waste must be described. Note: Controlled waste is defined in the EMPC Act and associated regulations¹⁷.

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant waste management policies and legislation, including the *Environmental Management and Pollution Control (Waste Management) Regulations 2010* and the *Environmental Management and Pollution Control (Controlled Waste Tracking) Regulations 2010*.

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 following.

- 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. Include any controlled waste storage areas (section 6.5).
- 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 the following.

- A map of existing vegetation types 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 Tasmania's *Threatened Species Protection Act 1995*.

¹⁷ A non-exhaustive listing of categories of controlled waste is available on the internet at <http://epa.tas.gov.au/regulation/identify-a-material-as-a-controlled-waste>.

- 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 Tasmania's *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*.
- The site is located within 3 km of a wetland listed on the Conservation of Freshwater Ecosystem Values database. The DPEMP must discuss potential impacts on this wetland (including from dewatering) and associated mitigation measures.
- Identify any freshwater ecosystems of high conservation management priority using the Conservation of Freshwater Ecosystem Values (CFEV) database¹⁸. The scope of investigation must 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, on wildlife habitat strips under the *Tasmanian Forest Practices Code 1995* and on non-forest bioregional forest communities.
- Where impacts cannot be avoided, proposed measures to mitigate and/or compensate adverse impacts on biodiversity and nature conservation values must be presented.
- The potential for migration and/or introduction of pests, weeds and plant and animal diseases as a result of the proposal. A draft Weed and Disease Management Plan must be provided with the DPEMP.
- 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 must 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

Surveys must be carried out for flora and fauna listed under Tasmania's *Threatened Species Protection Act 1995*. The following requirements should be noted:

¹⁸ Available on the internet at <https://wrt.tas.gov.au/cfev/navigator>.

- surveys must, as a minimum, comply with the requirements of the *Guidelines for Natural Values Assessments* published by the Department of Primary Industries, Parks, Water and Environment (DPIPWE)¹⁹;
- the surveys must be carried out by suitably qualified person(s);
- the methodology for surveys must be developed in consultation with the Department;
- the survey for threatened flora must be undertaken at a time suitable to capture the majority of species during their flowering season; and
- report or reports on the surveys must be provided with the DPEMP.

Key legislative and policy requirements

Regard must be given to the *Australia's Biodiversity Conservation Strategy 2010-2030*²⁰ and the *Threatened Species Strategy for Tasmania*²¹.

Additional requirements relating to the EPBC Act are outlined in section 7.

6.8 Health impact assessment

Human health issues associated with the proposed activity are to be the subject of a health impact assessment carried out in accordance with the *Health Impact Assessment Guidelines* (enHealth Council, September 2001)²². A Health Impact Statement prepared in accordance with those Guidelines must be provided with the DPEMP.

Human health issues to be addressed under other sections of these DPEMP Guidelines may be addressed in detail in the health impact assessment and Health Impact Statement.

6.9 Marine and coastal

Identify any potential impacts of the proposal on marine and coastal areas not addressed in other sections. It must 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 *State Coastal Policy 1996*.

6.10 Greenhouse gases and ozone depleting substances

Discuss impacts of the proposal in relation to greenhouse gases and ozone depleting substances, including the following.

- The direct and indirect effects of the proposal on greenhouse gas production and ozone depleting substances must be described and quantified, and any greenhouse benefits of the proposal must also be described and quantified.
- It should be demonstrated that the development will implement cost-effective greenhouse best practice measures to achieve on-going minimisation of greenhouse gas emissions. Consideration should be given to measures to offset direct and unavoidable emissions from the activity.

¹⁹ Available on the internet at <http://www.dpiw.tas.gov.au/inter.nsf/WebPages/SSKA-7UM4AN?open>.

²⁰ Available on the internet at <http://www.environment.gov.au/resource/australias-biodiversity-conservation-strategy>.

²¹ Available on the internet at <http://www.dpiw.tas.gov.au/inter.nsf/WebPages/RLIG-544755?open>.

²² Available on the internet at http://www.comcarelink.health.gov.au/internet/main/publishing.nsf/Content/health-pubhlth-publicat-document-metadata-env_impact.htm

- A competent estimate must 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 ensure alignment with relevant Tasmanian Government climate change policy. Specifically, discuss the impacts of the proposal with regard to the strategy document *Climate Smart Tasmania: A 2020 Climate Change Strategy*²³.

The proponent will need to determine whether it is required to report to the Commonwealth Government under the *National Greenhouse and Energy Reporting Act 2007*.

6.11 Heritage

Discuss impacts of the proposal on heritage values, including the following.

- Declared World Heritage Area properties and values.
- Any place listed on the National Heritage List and values.
- Any place listed or interim listed on the Register of the National Estate 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 Heritage Tasmania).
- Any place on the Tasmanian Aboriginal Site Index (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 approval of the proposal. 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.

Standards and guidelines that apply to the work of Aboriginal Heritage Officers and Consulting Archaeologists are available from Aboriginal Heritage Tasmania²⁴.

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 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 DPMP.

²³ Available on the internet at:

http://www.dpac.tas.gov.au/divisions/climatechange/what_the_government_is_doing/2020_strategy.

²⁴ Available on the internet at <http://www.aboriginalheritage.tas.gov.au/>.

Historic heritage

The advice of the Heritage Tasmania 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. Particular attention should be given to Heritage Tasmania's *Pre-Development Assessment Guidelines*²⁵.

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 on the site 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.

6.12 Land use and development

This section must 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 must identify measures to avoid, mitigate and/or compensate for any possible adverse effects.

The following issues must 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 Tasmania's *State Policy for the Protection of Agricultural Land (2007)*²⁶
- Effects on local and regional tourism.
- Effects on other commercial activities.

Provide details of the mining lease or mining lease application relating to the proposal.

6.13 Visual impacts

Discuss impacts of the proposal on the visual landscape, including the following.

- 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 must include viewpoints likely to be visited by tourists or recreational users, points along the Lyell Highway and at nearby residences. 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, appropriate facility and plant location, height, size, design, colour and separation, and vegetation screening.

²⁵ Guidelines for assessing historic heritage sites are available on the internet at <http://www.heritage.tas.gov.au/guidelines.html>.

²⁶ Available on the internet at http://www.dpac.tas.gov.au/divisions/policy/state_policies.

6.14 Social and economic issues

Discuss the social and economic impacts of the proposal, including the following.

- An estimate of total capital investment for the proposal.
- The impacts on local and State labour markets for both the construction and operational phases of the proposal. Skills and training opportunities should also be discussed.
- The likely number of workers residing locally and the likely number of fly-in/fly-out and drive-in/drive-out workers.
- The impacts on upstream/downstream industries, both locally and for the State.
- The extent to which raw materials and services will be sourced locally.
- A qualitative assessment of community infrastructure impacts, 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 and regional tourism sector.
- Impacts on the local, regional, state and national economies.

6.15 Site health and safety issues

Review any site 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 occupational health and safety issues have been taken into account during the planning of the proposal, including an analysis of alternatives. Safety management systems to be used during construction and operational phases must be described.

The following issues must be addressed.

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

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant policies and legislation, including the *Work Health and Safety Act 2012* and associated Regulations.

6.16 Hazard analysis and risk assessment

Provide a preliminary analysis (appropriate to the scale of the proposal) of the potential for a major hazard event (e.g. an explosion) to occur and proposed safeguards to prevent such an occurrence. The preliminary analysis must 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.

6.17 Fire risk

Discuss the potential fire risk associated with the proposal, including the following.

- Consideration of fire within the site, fire escaping from the site and the impact of wildfire originating outside the development. Include attention to the risk of spontaneous combustion of coal.
- The objectives and management principles to be adopted for the preparation of a Fire Management Plan.
- A Fire Management Plan must be provided with the DPEMP.
- The Fire Management Plan must be fully integrated with other relevant documents, such as the Tasmania Fire Service Local Area Fire Management Plan, the Forestry Tasmania Fire Management Plan and the Parks and Wildlife Service Fire Action Plan for relevant districts.

Legislative and policy requirements

It must be demonstrated that the proposal is consistent with the objectives and requirements of all relevant policies and legislation, including the *Fire Service Act 1979* and the *Work Health and Safety Act 2012*.

6.18 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, railways, transmission lines or other services required as a result of the proposal, must 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 of such infrastructure must be assessed.

In respect of roads, discussion in the DPEMP must include (but not be limited to):

- impacts of road haulage on pavements; and
- impacts of blasting activity on roads.

In respect of transmission lines, discussion in the DPEMP must include (but not be limited to):

- the need, if any, to relocate towers and lines;
- safety and proximity issues;
- impacts on transmission line easements;
- blasting impacts on towers; and
- dust suppression for the prevention of dust accumulation on insulators.

The Department of Infrastructure, Energy and Resources, Central Highlands Council, Transend, Aurora Energy, Tasrail and any other relevant authorities and utilities should be consulted regarding infrastructure impacts. Describe the results of consultation in the DPEMP.

6.19 Environmental management systems

This section must 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.

6.20 Cumulative and interactive impacts

Where relevant, this section must contain an assessment of the potential cumulative impacts of the proposal, based on existing and other formally proposed developments in the region, which have not been addressed in previous sections. Interactions between biophysical, socio-economic and cultural impacts of the proposal should be discussed.

6.21 Traffic impacts

Discuss the traffic impacts of the proposal, including (but not limited to) the following.

- 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 must be discussed (such as impacts on other roads users and residences adjacent to roads).
- A Traffic Impact Assessment must be conducted, in accordance with the DIER *Traffic Impact Assessments (TIA) Guidelines*²⁷, and a report provided.
- Describe options for access from the mine to the Lyell Highway, including access via Langloh Road. Impacts on safety must be described (if not covered in the TIA).
- Describe the impacts of blasting activity on traffic, including the potential for road closures during blasting activity.
- Describe the impacts of dust on affected intermodal facilities and on road surfaces (including how coal dust may affect skid resistance).
- Identify railways likely to be used for transport of mine product, and describe requirements and impacts. Particular attention should be given to options that minimise road transport.
- Identify likely requirements for transport by vessels on State waters and inland waters, and describe requirements and impacts. Particular attention should be given to options that minimise road transport.
- Describe potential environmental impacts associated with traffic and transport by road, rail and water (in this section or other relevant sections of the DPEMP).
- The Department of Infrastructure, Energy and Resources, Central Highlands Council, Marine and Safety Tasmania, Tasrail and any other relevant authorities should be consulted regarding traffic impacts and transport options. Describe the results of consultation in the DPEMP.

7. EPBC ACT REQUIREMENTS

This section should address each of the requirements set out below. In instances where these overlap with those identified elsewhere in these guidelines, a succinct summary may be provided here with clear and comprehensive cross-referencing to ensure the all relevant information is provided and readily identifiable.

²⁷ Available on the internet at http://www.transport.tas.gov.au/_data/assets/pdf_file/0007/19267/TIA_Framework_Edition_1_09-2007_Final.pdf

The DPEMP must also include a summary table outlining the relevant page numbers where each of the requirements set out in schedule 4 (regulation 5.04) of the Commonwealth's *Environment Protection and Biodiversity Conservation Regulations 2000* are addressed.

7.1 Impacts on EPBC Act listed threatened species

To ensure that the Commonwealth Minister for the Environment has sufficient information to make an informed decision on whether or not to approve the proposal under Part 9 of the EPBC Act, this section must include a consideration of the impacts of the proposal on at least the following EPBC Act listed threatened species and communities:

- masked owl, *Tyto novaehollandiae castanops* (vulnerable)
- wedge-tailed eagle (Tasmanian), *Aquila audax fleayi* (endangered)
- Australian grayling, *Prototroctes maraena* (vulnerable)
- spotted-tail quoll (Tasmanian population), *Dasyurus maculatus maculatus* (vulnerable)
- eastern barred bandicoot (Tasmanian subspecies), *Perameles gunnii gunnii* (vulnerable)
- Tasmanian devil, *Sarcophilus harrisii* (endangered)
- lowland native grassland of Tasmania (critically endangered)
- Midlands mimosa, *Acacia axillaris* (vulnerable)
- black-tipped spider-orchid, *Caladenia anthracina* (critically endangered)
- matted flax-lily, *Dianella amoena* (endangered)
- curtis' colobanth, *Colobanthus curtisiae* (vulnerable)

For each of the matters listed above, this section must provide the following:

- quantification (in hectares) of the extent and quality of habitat (and/or number of individuals) present within the development site, including provision of survey information with detailed descriptions of survey timing, location, effort, methods and results including a discussion detailing if surveys were undertaken in accordance with published best practice guidelines²⁸;
- information detailing known populations (and records), or high quality habitat for the relevant matter(s) within five kilometres of the development site;
- the extent to which EPBC Act listed threatened species and communities could be impacted by the proposal. This must include details on the quality and quantity of habitat in hectares and / or number of individuals (if available and applicable) likely to be impacted and include details on whether any impacts are likely to be unknown, unpredictable or irreversible; and
- a local and regional scale analysis of the likely impacts to the protected matters identified.

This assessment should not be limited to the proposal site and should include any offsite impacts resulting from the proposal. Such impacts could include for example, increased road-kill as a result of any traffic generated by the action or impacts of the action on any potential downstream habitats.

The DPEMP must also outline and consider the implications on matters of national environmental significance resulting from the transport of product from the mine site to port and any resulting requirements for new or upgrades to existing infrastructure.

²⁸ Particularly those available on the internet at <http://www.environment.gov.au/epbc/guidelines-policies.html>.

The information provided on these matters should be consistent with any relevant publicly available policy guidance or listing advice provided by the Department of the Environment. In addition to direct impacts the DPEMP should also consider indirect²⁹ and cumulative impacts.

7.2 Impacts on water resources

This section of the DPEMP needs to provide enough information (or clearly refer to other sections in the DPEMP where the information is contained) to assess the impact of the action on water resources including the effectiveness of any proposed mitigation, management and monitoring / adaptive management measures. Further details can be found in the *Independent Expert Scientific Committee Information Guidelines for the proposals relating to the development of coal seam gas and large coal mines where there is a significant impact on water resources*³⁰. It is recommended that the DPEMP contain sufficient information to enable consideration by the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (IESC) when the proposal is referred to the IESC for advice prior to any approval decision.

7.3 Mitigation Measures and Management

The DPEMP must provide information on specific measures proposed to be undertaken to avoid, mitigate, and manage impacts to matters of national environmental significance. Information must be provided on the extent to which mitigation measures are likely to be effective in reducing significant impacts and any residual impact that may remain once mitigation measures have been implemented. Information must also be provided on whether the mitigation measures have any statutory or policy basis, and an indication of how much they will cost.

In addition, the DPEMP should include:

- (a) a map or map(s) which illustrates the location(s) of any proposed construction exclusion zones or buffer zones to protect matters of national environmental significance and details on how these areas will be excluded, or protected;
- (b) an outline of any environmental plan(s) that set out the framework for continuing management, mitigation and monitoring programs for the relevant impacts during all phases of the action, including any provisions for independent environmental auditing must be provided (for example, erosion and sediment and weed and hygiene control measures); and
- (c) associated timeframes for undertaking proposed mitigation measures (i.e. duration and timing of implementation). This must be addressed for both the construction phase and operational life of the action.

7.4 Offsets

The DPEMP must provide information on any offset (compensation) measures which are available and achievable, in the event they are deemed to be required by the department. This section should consider offsets for all EPBC listed species and communities for which there may be significant residual impacts, (or contingency offsets where impacts are uncertain such impacts from roadkill).

²⁹ A definition of indirect impacts can be found in the *EPBC Significant Impact Guidelines 1.1: Matters of National Environmental Significance (2009)*, available on the internet at <http://www.environment.gov.au/epbc/guidelines-policies.html#guidelines>

³⁰ Available on the internet at <http://www.environment.gov.au/coal-seam-gas-mining/pubs/iesc-information-guidelines.pdf>

The offset proposal must include:

- (a) a detailed description of the offset(s), such as how, when and where the offsets will be delivered and managed;
- (b) details of how the offset(s) will compensate for the impact(s) upon matters of national environmental significance resulting from the action;
- (c) a description of how the offset(s) will ensure the protection, conservation and management of the relevant matters of national environmental significance, for the life of the impact;
- (d) a description of how the offset(s) are consistent with the *EPBC Act Environmental Offsets Policy* (October 2012) and any other relevant Commonwealth policies and guidance documents³¹; and
- (e) the anticipated cost (financial and other) of delivery the offset(s).

7.5 Environmental Record

In addition to consideration of the matters of environmental significance, the following information must be provided:

- 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:
 - the person proposing to take the action; and
 - for an action for which a person has applied for a permit, the person making the application; and
- details of the corporation's environmental policy and planning framework if the person proposing to take the action is a corporation.

8. MONITORING AND REVIEW

This section must provide an outline of a monitoring, review and reporting programme for all aspects of the proposal. The programme must 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 must be included.

³¹ These documents can be found at on the internet at www.environment.gov.au/epbc/publications/environmental-offsets-policy.html

9. DECOMMISSIONING AND REHABILITATION

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

A preliminary Mining and Rehabilitation Plan must be provided with the DPEMP.

The maximum area of land that may be disturbed at any one time is likely be specified in the permit conditions, and the Mining and Rehabilitation Plan must take this into account.

10. COMMITMENTS

This section should contain a consolidated commitments table listing all of the commitments made throughout the DPEMP. Commitments must be sequentially-numbered, brief, 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 one basis for the preparation of conditions of approval, should approval be granted.

11. CONCLUSION

Describe the proposal and draw together the critical environmental impacts of the proposal, both positive and negative; present a balanced overview of the net environmental impacts of the proposal, and the extent to which any adverse impacts on the environment can be satisfactorily avoided, mitigated, remediated or compensated. The conclusion should also describe how the proposal meets the objectives of relevant Commonwealth and State assessment and planning policies and legislation.

12. REFERENCES

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

13. 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 must be summarised 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*

EPBC Act – *Environment Protection and Biodiversity Conservation Act 1999* (Cth)

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

Tasmanian RFA – Tasmanian Regional Forest Agreement