

Environmental Effects  
Report Guidelines  
(Extractive Industry)  
SW & AJ Barker  
Salmon River Road Quarry,  
Temma

*May 2022*



ENVIRONMENT PROTECTION AUTHORITY

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## Table of Contents

Introduction.....	4
Purpose of the Guidelines.....	4
Preparing an EER.....	4
Planning Information.....	5
Commonwealth Legislation.....	5
Environment Protection Authority Contact.....	5
Survey and Study Requirements.....	6
Content of EER.....	7
Part A – Proponent Information.....	7
Part B – Proposal Description.....	8
1 Description of proposed activity.....	8
2 Maps and site plan/s.....	9
3 Project rationale and alternatives.....	10
Part C – Environmental Impacts and Management.....	11
1 Air quality.....	11
2 Water quality (surface, discharge and groundwater).....	11
3 Noise emissions and blasting.....	12
4 Natural values.....	13
<i>Astacopsis gouldi</i> .....	15
Giant Freshwater Crayfish.....	15
5 Weeds, pests and pathogens.....	16
6 Waste.....	16
7 Environmentally hazardous substances.....	16
8 Site contamination.....	16
9 Environmental impacts of traffic.....	17
10 Other off-site impacts.....	17
11 Monitoring.....	17
12 Decommissioning and rehabilitation.....	17
13 Greenhouse gas emissions and climate change.....	17
Part D – Summary of Proposed Management Measures.....	18
Part E – Public and Stakeholder Consultation.....	18
Appendix A: Other issues and agency contacts.....	19
Conservation Assessments.....	19
Heritage Tasmania.....	19
Aboriginal Heritage Tasmania.....	19
Parks and Wildlife – Property Services.....	19
Agriculture and Water.....	20
Transport Services.....	20
Mineral Resources Tasmania.....	20

## Introduction

### Purpose of the Guidelines

These Guidelines provide instructions for proponents on how to prepare an Environmental Effects Report (EER) for an activity being assessed in Tasmania by the Board of the Environment Protection Authority (the Board). An EER is a document that provides information about the environmental impacts of the proposed activity and the proposed mitigation measures. The Board uses the EER as a 'case for assessment', to assess the environmental impact of an activity, as required under the *Environmental Management and Pollution Control Act 1994* (EMPC Act).

Guidelines will be adapted for each proposal, where Part B and Part C include project-specific information requirements. The EER must be prepared in accordance with the project-specific Guidelines, which are issued under section 74(4) of the EMPC Act.

The EER will be advertised during the public consultation period and remain publicly available on the EPA website. After consultation, the proponent may be required to supply additional information in response to public and government agency submissions. This generally takes the form of a Supplement to the EER.

Further information is available on the [EPA Assessment Process](#)<sup>1</sup> website.

### Preparing an EER

The EER should contain five parts as follows:

- Part A – information about the proponent
- Part B – information about the proposal, site and area
- Part C – information about potential environmental impacts
- Part D – description of the proposed management measures
- Part E – description of any public consultation undertaken

Other relevant information, such as survey reports, should be attached to the EER as appendices.

The EER must be typed, A4 sized and submitted electronically (in a searchable format). All images must be of high quality, have a descriptive caption, and be capable of being easily copied and pasted into other documents such as a permit (i.e. all objects should be 'grouped'). All maps, plans, and aerial photographs must be oriented in the same direction as far as practicable and include a north arrow and scale.

The content of the EER should be prepared using a risk-based approach. The level of detail provided on each issue should be appropriate to the level of significance of that environmental issue to the proposal. 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 may not be applicable at all.

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<sup>1</sup> Available at <https://epa.tas.gov.au/assessment/assessment-process>

## Planning Information

Where the proposal is subject to a permit under the *Land Use Planning and Approvals Act 1993* (LUPA Act), information required solely for the purpose of assessment under the relevant Planning Scheme should be supplied to Council either:

- as a separate response to an additional information request from Council under section 54 of the LUPA Act, where the planning application has commenced the environmental assessment process; or
- where it forms part of a combined planning and Environmental Effects Report, distinguished from information supplied for the purpose of the Board's assessment.

## Commonwealth Legislation

The Commonwealth Government may also have a role in the environmental assessment and approval of the proposed activity. Approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is required for an action which is on Commonwealth land or is likely to have a significant impact on a matter of national environmental significance.

Information on the EPBC Act can be obtained from the [Australian Government Department of Agriculture, Water and Environment](https://www.environment.gov.au/epbc) website<sup>2</sup>, or by calling 1800 803 772.

**The EER must include a statement on whether Commonwealth approval is likely to be required.**

## Environment Protection Authority Contact

For information about the assessment process, contact the Environmental Assessment Branch:

GPO Box 1550

Hobart, Tasmania 7001

Telephone: 0427743988

Email: [assessments@epa.tas.gov.au](mailto:assessments@epa.tas.gov.au)

Website: [www.epa.tas.gov.au](http://www.epa.tas.gov.au)

At least one draft of the EER should be submitted for review prior to formal submission to the Board. This should be emailed or file shared to [assessments@epa.tas.gov.au](mailto:assessments@epa.tas.gov.au) and your nominated contact officer.

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<sup>2</sup> Available at <https://www.environment.gov.au/epbc>

## Survey and Study Requirements

The following surveys and studies will be required as part of the EER.

<b>Key Issue</b>	<b>Surveys Required</b>	<b>Relevant Section of Guidelines</b>
Potential for Acid Mine Drainage	Geological and Geochemistry Survey	Part C (2)
Natural Values	Natural Values Survey (if any land clearance) Eagle Nest Survey	Part C (4)

## Content of EER

### Part A – Proponent Information

Provide the following information regarding the proponent:

<b>Proponent entity name</b>	(Consistent with any intended or current permit application for the activity under the LUPA Act)
<b>Proponent trading name</b>	
<b>Registered address of proponent</b>	
<b>Postal address of proponent</b>	
<b>ABN/ACN of proponent</b>	
<b>Contact person's details</b>	Name Telephone number Email address
<b>Consultant's details</b>	Name Telephone number Email address

If a different entity will operate the activity after construction, provide similar details for that entity also.

## Part B – Proposal Description

Where the proposal is subject to a permit application under the LUPA Act, the proposal description and specification of the site must be consistent with the intended or current permit application. Any works or activity that are for the purpose of the proposal (e.g. access works) must be included. If the proposed activity is associated with an existing activity (an intensification, expansion or modification), provide details of any current regulatory approvals (permit, licence, environment protection notice, mining lease, etc) relating to the existing activity.

### I Description of proposed activity

Complete the following tables and provide additional text, diagrams or flowcharts as required.

#### Proposed Activity

<b>Activity</b>	Provide a general description of the proposed activity, including the classification of the activity under Schedule 2 of the EMPC Act.
<b>New or existing?</b>	State if this is an intensification/modification of an existing activity or a new activity.
<b>Product</b>	Describe the product and forecast life of the activity.
<b>Maximum extraction quantity</b>	Provide in cubic metres and tonnes per year, and state the conversion factor. Briefly describe any seasonal variation. If it is an intensification, also provide the current extraction limit in cubic metres and tonnes per year.
<b>Maximum processing quantity</b>	Provide in cubic metres and tonnes per year (i.e. crushing, grinding, screening). If it is an intensification, provide the current processing (crushing/screening) limits in cubic metres and tonnes per year.
<b>Method/s</b>	State the method(s) of material extraction and processing and main items of equipment involved.
<b>Transport</b>	Describe the proposed transport route (can refer to figures), vehicle types, number of vehicle movements (per day), and time of day of vehicle movements.
<b>Stockpiling</b>	State the materials that will be stockpiled on site.
<b>Area of disturbance</b>	State: <ul style="list-style-type: none"> <li>• Maximum area of the site proposed to be disturbed (un-rehabilitated) at any time, in hectares.</li> <li>• Total area of land to be cleared over the life of the proposal, in hectares.</li> </ul>
<b>Major equipment</b>	List all existing and proposed plant/machinery and other temporary or permanent equipment (distinguish between existing and proposed).
<b>Infrastructure</b>	List the existing and proposed buildings, structures, access roads, internal haul roads, etc (distinguish between existing and proposed).
<b>Proposal timeline</b>	State the key proposal timeline(s).
<b>Operating hours</b>	State the proposed operating hours and days.

#### Location and planning context

<b>Location</b>	State the address of the site, and CTs and PIDs (as applicable) for all titles on which the activity will take place.
<b>Planning permit</b>	Confirm whether a Planning Permit is required under the LUPA Act. As an appendix, provide written advice from Council stating the requirement, if a planning application has not already been lodged.



<b>Land zoning and tenure</b>	Describe the land zoning and tenure of the site and surrounds. If rezoning of the site is required, provide details.
<b>Use Class and Permissibility</b>	If a permit is required under the LUPA Act, state the Use Class and Permissibility of the activity under the relevant Planning Scheme.
<b>Mining lease (ML)</b>	Provide the ML reference number(s) and status (granted/applied for).
<b>Lease area</b>	State the size of the lease area(s).
<b>Regional reserve</b>	Describe how the proposal is consistent or inconsistent with the management objectives of Lovells Creek Regional Reserve.

### Description of site and surrounds

<b>Land use</b>	Describe the land use of the site and surrounds, distance to the nearest residences, and any nearby conservation reserves or recreation areas.
<b>Topography</b>	Describe the topography of the site and surrounds.
<b>Climate</b>	State the annual rainfall, average temperatures and predominant wind direction (provide wind roses if possible).
<b>Geology</b>	Describe the geology of the site, the lithologies present and materials to be extracted, including the extent and distribution of potentially acid forming (PAF) material on site with particular attention to any dark shales present. Describe geoconservation values on or near the site specifically identify areas of karst and describe their proximity to the site.
<b>Soils</b>	Describe the soils on the site (including erodibility), and state whether there is potential to encounter acid sulphate soils and/or contaminated soil.
<b>Hydrology</b>	Describe the waterbodies and waterways passing across the mining lease and in the locality around the mining lease. State the distance and potential pathways for waters leaving the mining lease to the nearest waterways, waterbodies or ephemeral drainage lines.
<b>Groundwater</b>	Provide location of known bores in the locality for extraction of groundwater and uses of such waters including any local groundwater dependent ecosystems.
<b>Aquatic Values</b>	Describe the PEVs (Protected Environmental Values) <sup>3</sup> set under the State Policy on Water Quality Management (1997) for surface waters in the vicinity of the proposal and any other aquatic values relevant to these waters including any EPBC Act listed aquatic species that are, or might be expected to be, present.
<b>Natural Values</b>	State the vegetation types on and near the site. List the threatened fauna, flora and vegetation communities known to occur on or near the site (use the Natural Values Atlas, TASVEG 4.0 <sup>4</sup> or results of a relevant survey).

## 2 Maps and site plan/s

To enhance understanding of the proposal, spatial information should be presented in maps, plans, diagrams and photographs. These must be of high quality and reproducible in monochrome with all text and relevant

<sup>3</sup> PEVs have been set for all Tasmanian surface waters and can be obtained here: [PEVs for Tasmanian Surface Waters | EPA Tasmania](#)

<sup>4</sup> Both can be accessed at: <https://www.naturalvaluesatlas.tas.gov.au/>

features clearly visible. Maps and plans should include a north arrow and scale. When spatial data (including maps, plans, grid coordinates and heights) are provided or referred to, the coordinate reference system must be specified. At a minimum, provide the following:

- **General Location Map** (1:25,000 or other suitable scale), showing the Mining Lease, the nearest residences in other ownership, other sensitive uses<sup>5</sup> and residential zones within 1.5 km of the proposed activity and within the applicable attenuation distance<sup>6</sup>, and the transport route(s) to and from the activity.
- **Map of the Land** on which the activity will take place and its boundary; by means of mining lease, land title information, map coordinates or other. The Land as defined by this figure must be consistent with any permit application submitted under the LUPA Act (i.e., the Land cannot extend beyond the land titles referenced in the permit application). This figure may be combined with the Site Plan. The boundary of the Land should also be provided to the Board in a geospatial vector format (shapefile or DXF).
- **Site Plan(s)** showing:
  - the boundary of the site,
  - the location of existing and proposed buildings/structures and plant and machinery,
  - the location of product, overburden, soil, and waste stockpiles,
  - the planned development (staging) of the quarry or extractive pit including in plan view and in elevation, (cross-section),
  - the location and orientation of benches and development of infrastructure at key stages including locations of crushers and screens,
  - watercourses, ephemeral drainage lines and waterbodies on and near the site,
  - site water management (expected surface water flow paths, drains, settling ponds, bunding, off-site (Mining Lease) discharge points and monitoring points, as relevant) including any likely changes as the quarry void develops over time; and
  - vegetation types, clearly marking areas to be cleared, and records of any threatened species/vegetation communities.

### 3 Project rationale and alternatives

- Explain the rationale for the proposal.
- Evaluate the benefits and disadvantages of any alternative options that have been considered.

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<sup>5</sup> Defined in the State Planning Provisions as ‘a residential use or a use involving the presence of people for extended periods except in the course of their employment such as a caravan park, childcare centre, dwelling, hospital or school.’

<sup>6</sup> Refer to relevant planning scheme or State Planning Provisions

## Part C – Environmental Impacts and Management

The EER should evaluate all potential impacts of the proposal, with the level of detail provided on each issue reflecting its level of significance. For each issue, describe how the impact assessment has been performed (for example, surveys or desktop studies). Describe the existing environment in relation to the impact, including the vulnerability of the potentially affected environment. Clearly articulate the potential impacts, identifying plausible worst-case scenarios and the reversibility of the impact. Then, describe the management or contingency measures proposed to avoid, mitigate or offset potential adverse impacts. Detail any specialist recommendations which have/will be implemented, or justify otherwise. Finally, analyse how and to what degree the impacts will have been avoided, minimised or offset, and any residual impacts.

### 1 Air quality

- Identification and characterisation of all sources of potential dust generation from the site. This includes dust generated from the disturbed topsoil, stockpiles and activities conducted on the site (i.e. crushing, screening, loading the product) as well as traffic movement on and off site. Information about the equipment used on the site should be provided.
- Discussion of potential of fugitive dust emissions from the proposed increased activity to cause environmental nuisance or harm, especially during unfavourable meteorological conditions. The following aspects should be taken into account:
  - distance to nearest residences (refer to the Location Map);
  - site layout (refer to the Site Plan) and land uses in the vicinity of the activity;
  - acceptable standards described in section 7 of the *Quarry Code of Practice*<sup>7</sup>;
  - terrain and local climatic conditions especially rainfall and the direction and strength of prevailing winds;
  - nature of the material excavated;
  - method of excavation and processing/handling on site; and
  - the requirements of the Tasmanian *Environment Protection Policy (Air Quality) 2004*.
- Description of any measures to be implemented to reduce dust movement from the site.
- Information about any dust complaints related to the operation of the existing facility.

### 2 Water quality (surface, discharge and groundwater)

- Describe the potential impacts of the activity on the receiving environment, with specific consideration of the risks of sediments leaving the mining lease, the disturbance or alterations to waterways, and any risks of adverse impacts on aquatic environmental values and downstream water uses.
- Describe the management measures that will be employed to control surface water and reduce the potential for erosion and sediment loss. Control measures can include: minimisation of areas of disturbance including progressive rehabilitation; minimisation of stormwater ingress and sediment mobilisation through the use of perimeter drains, cut-off drains and bunding; sediment basins or stilling areas to capture entrained sediment; and swales, rock filters, wetlands or vegetated discharge zones to remove fine suspended sediment.
- Describe any other management measures proposed to minimise impact on waterways and aquatic values.

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<sup>7</sup> Available at <https://epa.tas.gov.au/business-industry/regulation/industrial-activities/mining-and-extractive>

- Identify the dimensions, capacity and other relevant design features of key stormwater infrastructure such as drains and sediment basins, with reference to design rainfall frequency (average recurrence interval) and intensity. For sediment basins provide the sediment capture particle size, settling volume and surface area calculations and design rationale<sup>8</sup>.
- Provide details of any proposed water monitoring activities including sites, parameters and frequencies.
- A geological survey and geochemistry report must be prepared by a suitably qualified and experienced person to:
  - Describe the geology and lithologies of the resource to be extracted and of materials surrounding or underlying the resource;
  - Identify the presence and spatial distribution of shales throughout the deposit, and particularly any pyritic black shales that might be present. Given the soft, fractured condition of the resource it is suggested that several test pits could be excavated to investigate the vertical distribution of shales.
  - Discuss the results of representative samples of any dark shales. Samples must be subject to basic Acid and Metalliferous Drainage (AMD) tests not necessarily limited to; elemental analysis to identify potential contaminants of interest, water extract EC and pH measurement, total sulphur and sulphide sulphur analysis, NAG<sub>pH</sub> test work and static ABA (Acid Base Accounting) tests for ANC, MPA and NAPP; and
  - Provide an assessment of the potential risks of contamination by AMD, including pH, acidity, sulphate and salinity of run-off on site, and risks of offsite impacts where the quarry products are typically used.
- Should risks of potential contamination of waters leaving the site of AMD be present, a PAF/Acid Mine Drainage Management Plan for the site must be provided, including details of a proposed monitoring program. The plan must include considerations of any temporary or permanent storage of materials that might entail AMD risks including black shales and any alkalinity additions that might be appropriate.

### 3 Noise emissions and blasting

- Describe all noise sources, including the size and sound power level for each main piece of equipment (e.g. crusher/screen, loader, excavator, haul truck, rock drill).
- Provide a map of the location of all major sources of noise and any noise sensitive premises<sup>9</sup> within 3km of the boundary of the Land.
- Describe the potential impacts of noise generated by the activity.
- Provide a statement as to whether blasting will be undertaken, and if so, the likely blast charge, frequency of blast events (per year) and discussion of potential for blast effects (ground vibration and air-blast overpressure) to impact nearby residences.
- Evaluate the potential for the activity to create a noise nuisance, taking into consideration the:
  - distance to nearest residences and other noise sensitive premises;
  - acceptable standards described in section 7 of the *Quarry Code of Practice*<sup>10</sup>;

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<sup>8</sup> Suitable design approaches for sediment basins include those detailed in Best Practice Erosion and Sediment Control – Appendix B (June 2018 revision), International Erosion Control Association (Australasia) and Managing Urban Stormwater: Soils and Construction - Volume 2e: Mines And Quarries, Department of Environment and Climate Change, NSW Government (2008).

<sup>9</sup> 'Noise sensitive premise' is defined as: residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.

<sup>10</sup> Available at <https://epa.tas.gov.au/business-industry/regulation/industrial-activities/mining-and-extractive>

- hours of operation;
  - method of excavation and processing/handling on site;
  - topography; and
  - site layout showing locations of activities (refer to the Site Plan).
- Describe the noise attenuation measures that will be implemented.

#### 4 Natural values

- Provide records from the Natural Values Atlas and TASVEG 4.0<sup>11</sup> of any listed threatened flora/fauna species or threatened vegetation communities on or near the site. If any are present, or if the site has potential habitat for any such species, a detailed survey is likely to be required and the results should be presented in the EER.
- Provide details and results of any flora or fauna surveys undertaken on the site. Surveys must comply with the requirements of the *Guidelines for Terrestrial Natural Values Surveys related to Development Proposals*<sup>12</sup> and any relevant species-specific guidelines. The survey report must be appended to the EER.
- Detail any proposed clearing or disturbance of native vegetation or potential habitat for native fauna as part of the proposal, including details of the nature of vegetation and habitat values to be cleared or disturbed, and the area of vegetation affected (in hectares).
- Describe the potential impacts to threatened fauna, flora and vegetation communities, taking into account:
  - the clearance or disturbance of native vegetation or other potential habitat and providing details of the vegetation and habitat values to be cleared or disturbed, and the area to be affected, in hectares;
  - movement, noise, or lights during sensitive avifauna breeding seasons; and
  - roadkill from vehicles<sup>13</sup>.
- Areas to be directly or indirectly impacted by the proposed vegetation clearance must be surveyed by a suitably qualified person in accordance with the *Guidelines for Natural Values Assessments: Survey Guidelines for Development Assessments | Department of Natural Resources and Environment Tasmania (nre.tas.gov.au)* and a survey report provided including recommendations for appropriate management measures or changes to the proposal to protect natural values. The reasons for recommending a survey are provided below:

##### Threatened flora

There is a single threatened flora species recorded within 5km of the mining lease, namely northwest heath (*Epacris curtisiae*), listed as rare under the Tasmanian *Threatened Species Protection Act 1995* (TSPA). The lack of flora records may be due to a lack of surveying.

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<sup>11</sup> Both can be accessed at: <https://www.naturalvaluesatlas.tas.gov.au/>

<sup>12</sup> Available at: <https://nre.tas.gov.au/conservation/development-planning-conservation-assessment/survey-guidelines-for-development-assessments>

<sup>13</sup> Information on roadkill risk for Tasmanian Devils is available at: <https://nre.tas.gov.au/Documents/Devil%20Survey%20Guidelines%20and%20Advice.pdf>

### Threatened Fauna

Several threatened fauna species have been recorded within 5km or are within range boundary of the property (see table below). These species may have potential habitat on the property.

Species name	Common name	TSPA	EPBCA
<i>Accipiter novaehollandiae</i>	Grey Goshawk	endangered	-
<i>Aquila audax subsp. fleayi</i>	Tasmanian Wedge-tailed Eagle	endangered	Endangered
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle	vulnerable	-
<i>Dasyurus maculatus subsp. maculatus</i>	Spotted-tail Quoll	rare	Vulnerable
<i>Sarcophilus harrisii</i>	Tasmanian Devil	endangered	Endangered
<i>Galaxiella pusilla</i>	Eastern Dwarf Galaxias	vulnerable	Vulnerable
<i>Haliaeetus leucogaster</i>	White-bellied Sea-eagle	vulnerable	-
<i>Limnodynastes peroni</i>	Striped Marsh Frog	endangered	-
<i>Litoria raniformis</i>	Green and Gold Frog	vulnerable	Vulnerable
<i>Oreisplanus munionga subsp. larana</i>	Marrawah Skipper	endangered	Vulnerable
<i>Tasmaphena lamproides</i>	Keeled Carnivorous Snail	rare	-
<i>Tyto novaehollandiae subsp. castanops</i>	Masked owl (Tasmanian)	endangered	Vulnerable
<i>Ceyx azureus diemenensis</i>	Tasmanian Azure Kingfisher	endangered	Endangered
<i>Pseudemoia pagenstecheri</i>	Tussock Skink	vulnerable	-

The survey should determine if any potential habitat for the above-mentioned species is present in the disturbance footprint and should include a check of mature trees for hollows that may provide potential nests for Masked Owls, denning habitat for Tasmanian devils and quolls, and *Carex appressa* sedges that could support Marrawah Skipper. A targeted survey for Keeled Carnivorous Snail is recommended if habitat for this species will be impacted.

If surveying identifies the presence of any threatened fauna, nests, dens or hollows, further information should be sought from Conservation Assessment Section, Department of Natural Resources and Environment Tasmania (CAS) before any development works commence. If any potential dens for Tasmanian devils or quolls are recorded and are likely to be impacted by the proposal, these should be managed in accordance with the *Tasmanian Devil Survey Guidelines and Management Advice for Development Proposals* (The Devil Guidelines) available at <http://dpiwwe.tas.gov.au/conservation/development-planning-conservation-assessment/survey-guidelines-for-development-assessments>

Any dens that cannot be avoided will require a permit to take under the *Nature Conservation Act 2002*.

If surveying identifies any threatened fauna species, or their habitat, listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBCA) that may be impacted by the proposed development, the proponent should make themselves aware of their obligations under the EPBCA.

- **Wedge-tailed Eagle Survey**

There is a known Wedge-tailed Eagle nest (nest ID 2197) to the north of the quarry, about 800m from the mining lease boundary. It is noted that activities cease in the area of the lease within 1km of this nest during nesting/breeding season (July to January inclusive). Eagle nest management on the site must be described.

While the eagle nesting habitat model indicates a low to medium likelihood of unrecorded nests within 1km of the quarry site, Wedge-tailed eagle pairs often have several nests in their territory and the likelihood of finding additional nests within 2km of a known nest is high. It should also be noted that the modelling may not be accurate in some locations. An eagle nest survey must be undertaken of suitable habitat within 500m direct distance and 1km line-of-sight of the quarry to determine if any unknown nests are present (searches for the presence of nests should be undertaken outside of the breeding season).

The development application states that excavation, crushing and screening are proposed at the quarry. If blasting will be undertaken, advice should be sought from CAS.

- **Tasmanian Devil and Spotted-tailed Quoll – Roadkill**

CAS notes the proposed quarry operating hours which indicate there may be an increase in night-time traffic. If the proposal will generate an increase in night-time traffic on internal haul roads or Salmon River Road, of more than 10%, then this is considered significant in regard to likely impacts on the Tasmanian devil and Spotted-tailed Quolls. It is recommended that roadkill mitigation measures be implemented in accordance with the Devil Guidelines. As per the Devil Guidelines night-time constitutes the hours between one hour before dusk and hour after dawn.

- **Threatened aquatic fauna**

The nearby creeks, Salmon and Lovells Creek, have the potential to contain listed threatened species (see table below). Run off and spillage must be adequately managed to avoid impact to these species. Required investigations into the likelihood for acid rock drainage are described in Part C (3).

Species name	Common name	TSPA	EPBCA
<i>Prototroctes maraena</i>	Australian Grayling	vulnerable	Vulnerable
<i>Astacopsis gouldi</i>	Giant Freshwater Crayfish	vulnerable	Vulnerable
<i>Beddomeia salmonis</i>	Hydrobiid Snail (Salmon River)	rare	-
<i>Beddomeia gibba</i>	Hydrobiid Snail (Salmon River Road)	rare	-

- **Karst**

Mapping indicates the site is surrounded by sensitive karst with a high Conservation of Freshwater and Ecosystem Value (CFEV).

The geology at the quarry site is mapped as: ‘pale-weathering, thin bedded, laminated quartz siltstone with subordinate interbedded fissile shale’ (Salmon River Siltstone) (1:25,000 Digital Geology of Tasmania). Adjacent low-lying terrain is mantled by Quaternary sediments which obscure the bedrock geology. However, carbonate rock (Smithton Dolomite) crops out on nearby watercourses, suggesting that dolomite may also be present under the Quaternary cover. Furthermore, although aspects of the geological structure are unclear, if the siltstone ridge occupies the core of a downwards dipping fold structure (syncline), then dolomite may also be present within deeper underlying strata beneath the ridge.

Whilst Smithton Dolomite is known to be associated with karst development at other locations in north-west Tasmania, CAS is not aware of any specific reports of karst in the Salmon River-Lovells



Creek area; nor is extensive karst development expected in this area, given lack of relief and limited outcrop. An absence of obvious enclosed depressions or other indications of karst corroborates this view. Therefore, based on presently available evidence, the risk of karst complications is considered low in this case. Notwithstanding this preliminary finding, potentially karstic dolomite is present in the area and this must be investigated and discussed.

- Describe the management measures that will be implemented to mitigate or avoid impacts to threatened fauna, flora and vegetation communities or other natural values.

## 5 Weeds, pests and pathogens

- List the weeds<sup>14</sup>, pests and pathogens occurring on or near the site.
- Evaluate the potential for the activity to introduce or spread weeds and diseases to, from and within the site. *Phytophthora* has been observed on surrounding roads. The site should be inspected for *Phytophthora* and a report provided. If detected at the quarry, then the EER should describe how the quarry can eradicate the pathogen and be rehabilitated before operation to resumes or expands. Proposed management measures should include a detailed description of how the quarry will maintain a *Phytophthora*-free status into the future.
- Discuss the proposed management measures for preventing the spread of weeds, pests and pathogens (e.g. vehicle washdown procedures).

## 6 Waste

- Describe the solid and liquid waste that will be produced by the activity (e.g. overburden, Potentially Acid Forming material, metal and machinery service wastes, used oils, general refuse).
- Describe the proposed methods for avoidance, reuse, recycling, treatment and disposal of waste.

## 7 Environmentally hazardous substances

- Detail the nature and quantity of any environmentally hazardous substances<sup>15</sup> that will be stored (permanently or temporarily) and/or handled on site. This includes fuels, oils, waste and chemicals.
- Describe the storage method and location of any environmentally hazardous substances and discuss the proposed management measures to prevent release and respond to accidental spills (e.g. provision of spill kits).
- Identify any dangerous goods<sup>16</sup> and controlled wastes<sup>17</sup> that will be present on the site, with reference to standard classification. Detail how they will be managed.

## 8 Site contamination

- Has the site on which the activity is to be located been used in the past for activities which may have caused soil or groundwater contamination? If so, provide details. Include details of any assessments of soil or groundwater contamination on the site.

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<sup>14</sup> Plant species declared as a weed under the *Weed Management Act 1999*.

<sup>15</sup> 'Environmentally hazardous substance' is defined as: 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.

<sup>16</sup> As defined in the Australian Code for the Transport of Dangerous Goods by Road and Rail.

<sup>17</sup> Information on controlled waste identification and classification is available at: <https://epa.tas.gov.au/business-industry/regulation/waste-management/controlled-waste>



## 9 Environmental impacts of traffic

- Provide details of the vehicle types, number of vehicle movements, times of movements and route(s).
- Evaluate the potential for transport to and from the site to cause a noise nuisance to residences and other noise sensitive premises in proximity to the Land, considering the type, volume and time of traffic associated with the proposal.
- Evaluate the potential to cause a dust nuisance as a result of traffic in proximity to the Land.
- Will the activity result in a night-time (between one hour before dusk and one hour after dawn) traffic increase of more than 10% on roads in proximity to the Land? If so, roadkill mitigation measures for Tasmanian Devils may need to be addressed. See the *Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian Devil (Sarcophilus harrisi)*<sup>18</sup> for more information.

## 10 Other off-site impacts

- Does the activity have the potential to generate any other off-site impacts that may affect the amenity of residences or other sensitive uses (such as schools and hospitals)? If yes, provide details. The location of all nearby residences or other sensitive uses must be clearly shown on the area map (see Part B).

## 11 Monitoring

- Describe any proposed environmental monitoring and reporting for the activity. Should risks of AMD be identified as present the water quality monitoring plan must include appropriate measures which at a minimum must include field measurements of pH and EC.
- Show all proposed monitoring points on the site plan (see Part B).

## 12 Decommissioning and rehabilitation

- Describe the proposed decommissioning and rehabilitation measures in the event of cessation of the activity.
- Describe any proposed progressive rehabilitation measures, with reference to the staged development of the quarry/extractive pit (refer to the Site Plans as relevant).

## 13 Greenhouse gas emissions and climate change

- Describe how the proposal will implement best practice environmental management in energy consumption and in transport of materials to and from the proposed activity, to minimise greenhouse gas emissions.
- Discuss the impacts of the proposed activity in relation to Tasmania's climate change strategy<sup>19</sup>.
- Describe the potential impacts of climate change upon the proposal. For example, it may be appropriate to plan for more intense storm events, more severe fire weather, long-term sea level rise, etc.

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<sup>18</sup> Available at [Devil Survey Guidelines and Advice.pdf \(nre.tas.gov.au\)](http://www.nre.tas.gov.au/Devil_Survey_Guidelines_and_Advice.pdf)

<sup>19</sup> Available at: <http://www.dpac.tas.gov.au/divisions/climatechange>

## Part D – Summary of Proposed Management Measures

This section should contain a table of the proposed measures for avoiding, minimising and managing the potential environmental impacts of the proposal (as identified in Part C). These should be written as specific, unambiguous statements of action (see example below).

Table 1. Example management measures

No.	Example Management Measure	Timeframe
1	<i>Design and install cut-off drains, site surface water drainage and sediment settling pond(s) capable of containing runoff from a 1-in-20 year storm event as described in Part C, paragraph 2.6 [of the EER].</i>	<i>At least 30 days prior to commencement of operations.</i>
2	<i>Develop a solid waste management plan as described in Part C, paragraph 8.4 [of the EER].</i>	<i>Within three months of approval and prior to treatment or removal of any waste.</i>
3	<i>Erect a noise attenuation barrier as described in Part C, paragraph 9.2 [of the EER]</i>	<i>At least 30 days prior to commencement of operations.</i>

## Part E – Public and Stakeholder Consultation

- Describe any public or stakeholder consultation that has taken place or is intended (such as with other government agencies, community groups or neighbours).
- Provide details of the outcome or main findings of any community consultation.
- *Guidance on Community Engagement* is available on the EPA website at [Guidance Documents | EPA Tasmania](#).

## Appendix A: Other issues and agency contacts

In addition to a permit under the LUPA Act and the EMPC Act, there may be other legal requirements to allow your proposal to proceed. These may include other permits, licences or landowner consent. You may also need to contact other Government agencies to obtain information for the purpose of assessment under the LUPA Act or the EMPC Act.

Your proposal may have been referred to other agencies in the process of preparing Guidelines. Should assessments or approval outside of the Board's responsibilities be required, you should engage with the respective agency to progress them. The following list identifies some of the key agencies you may need to contact.

### Conservation Assessments

Department of Natural Resources and Environment Tasmania

Telephone: (03) 6165 4396

Email: [conservationassessments@nre.tas.gov.au](mailto:conservationassessments@nre.tas.gov.au)

Website: [www.nre.tas.gov.au/conservation](http://www.nre.tas.gov.au/conservation)

Purpose: Natural values including flora, fauna, and geoconservation values, or permits to deal with threatened species.

### Heritage Tasmania

Department of Natural Resources and Environment Tasmania

Telephone: (03) 6165 3700

Email: [enquiries@heritage.tas.gov.au](mailto:enquiries@heritage.tas.gov.au)

Website: [www.heritage.tas.gov.au](http://www.heritage.tas.gov.au)

Purpose: Historic cultural heritage, including State-level site listings, impacts and permits as required under the *Historic Cultural Heritage Act 1995*. Where works are proposed in or in close proximity to a heritage place entered on the Tasmanian Heritage Register or likely to be of heritage significance to the whole of Tasmania, and a permit is required under the *Land Use Planning and Approvals Act 1993*, the proposal will be referred to Heritage Tasmania by the planning authority. There may also be additional sites listed under local planning schemes, impacts on which are assessed by the relevant planning authority.

### Aboriginal Heritage Tasmania

Department of Natural Resources and Environment Tasmania

Telephone: 1300 487 045

Email: [aboriginal@heritage.tas.gov.au](mailto:aboriginal@heritage.tas.gov.au)

Website: [www.aboriginalheritage.tas.gov.au](http://www.aboriginalheritage.tas.gov.au)

Purpose: Aboriginal heritage, including desktop assessment, artefact survey requirements, permits and advice.

### Parks and Wildlife – Property Services

Department of Natural Resources and Environment Tasmania

Telephone: (03) 6169 9015

Email: [PropertyServices@parks.tas.gov.au](mailto:PropertyServices@parks.tas.gov.au)

Website: [www.parks.tas.gov.au](http://www.parks.tas.gov.au)

Purpose: Impacts on parks and reserves managed by Parks and Wildlife, or Crown land.

### **Agriculture and Water**

Department of Natural Resources and Environment Tasmania

Telephone: 1300 368 550

Email: [Water.Enquiries@nre.tas.gov.au](mailto:Water.Enquiries@nre.tas.gov.au)

Website: [www.nre.tas.gov.au/water](http://www.nre.tas.gov.au/water)

Purpose: Water licences and works impacting natural waterway flow (e.g., dams or fords).

### **Transport Services**

Department of State Growth

Telephone: (03) 6166 3369

Email: [permits@stategrowth.tas.gov.au](mailto:permits@stategrowth.tas.gov.au)

Website: [www.transport.tas.gov.au](http://www.transport.tas.gov.au)

Purpose: State roads, including where any proposal requires works on or access from a State-managed road.

### **Mineral Resources Tasmania**

Department of State Growth

Telephone: (03) 6165 4800

Email: [info@mrt.tas.gov.au](mailto:info@mrt.tas.gov.au)

Website: [www.mrt.tas.gov.au](http://www.mrt.tas.gov.au)

Purpose: Mining Leases

