

**Environmental Effects
Report Guidelines
(Extractive Industry)**

**Kahuna Pastoral Company
Thomson's Quarry
Intensification, Westerway**

December 2025



ENVIRONMENT PROTECTION AUTHORITY

Table of Contents

| | |
|---|----|
| Glossary and abbreviations..... | 3 |
| Introduction..... | 5 |
| Purpose of the Guidelines..... | 5 |
| Preparing and Submitting an EER | 5 |
| Submitting an EER | 5 |
| Environmental policies and guidelines..... | 6 |
| Planning Information..... | 6 |
| Commonwealth Legislation | 6 |
| Environment Protection Authority Contact | 6 |
| Other agency contacts..... | 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..... | 10 |
| 3 Project rationale and alternatives | 10 |
| 4 Existing activity | 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 |
| 5 Weeds, pests and pathogens..... | 14 |
| 6 Waste and environmentally hazardous substances..... | 15 |
| 7 Site contamination | 15 |
| 8 Decommissioning and rehabilitation | 15 |
| Part D – Summary of Proposed Management Measures..... | 16 |
| Part E – Public and Stakeholder Consultation | 16 |
| Appendix A: Additional masked owl survey detail | 17 |

Glossary and abbreviations

| Term | Definition |
|-------------------------------------|---|
| Board | Board of the Environment Protection Authority |
| Case for assessment | Information required for environmental impact assessment, prepared according to the Board's requirements. |
| DBH | Diameter at breast height |
| Director | The Director, Environment Protection Authority, holding office under Section 18 of the <i>Environmental Management and Pollution Control Act 1994</i> . |
| EER | Environmental Effects Report |
| EMPCA | <i>Environmental Management and Pollution Control Act 1994</i> |
| EPA | Environment Protection Authority. Tasmania's independent principal environmental regulator; administers EMPCA |
| EPBC Act | <i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i> |
| Environmentally hazardous substance | 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. |
| Extractive activities | As defined under Schedule 2 of EMPCA: (a) Quarries: the extraction of 5,000 cubic metres or more of rock or gravel per year if the extraction – (i) is the subject of, or requires, a mining lease under the Mineral Resources Development Act 1995 ; or (ii) is carried out at a quarry in a State forest, within the meaning of the Mineral Resources Development Act 1995 . (b) Extractive pits: the extraction of 5,000 cubic metres or more of sand or clay per year if the extraction is the subject of, or requires, a mining lease under the Mineral Resources Development Act 1995 . (c) Mines: the extraction of any minerals producing 1 000 tonnes or more of minerals per year. |
| LUPAA | <i>Land Use Planning and Approvals Act 1993</i> |
| Materials handling | As defined under Schedule 2 of EMPCA: (a) Crushing, Grinding or Milling: processing (by crushing, grinding, milling or separating into different sizes by sieving, air elutriation or in any other manner) of – (i) chemicals or rubber at a rate of 200 tonnes or more per year; or (ii) rock, ores or minerals at a rate in excess of 1 000 cubic metres per year. (b) Coal Handling and Washing: the handling or washing of coal or carbonaceous material by any means of facilities with a total handling or washing capacity of 100 tonnes or more per day. |
| NCA | <i>Nature Conservation Act 2002</i> |
| Noise-sensitive premises | 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. |
| NRE Tas | Department of Natural Resources and Environment Tasmania |

| Term | Definition |
|---------------------|--|
| PAM | Passive acoustic monitoring |
| Planning Authority | Council for relevant local government area |
| Sensitive receptors | Off-site human or environmental elements that have the potential to be negatively affected by an emission from the proposal (other than noise emissions, see Noise-sensitive premises). |
| TNVC | Threatened native vegetation community |
| TSPA | <i>Threatened Species Protection Act 1995</i> |
| Weed | A plant species that has, or is likely to have, an adverse impact on the environment because of the introduction, spread or increase in population size of the species in an area; and includes a declared weed as defined in the <i>Biosecurity Act 2019</i> and subordinate regulations. |

Introduction

Purpose of the Guidelines

These Guidelines provide instructions for proponents on how to prepare an Environmental Effects Report (EER) for an extractive activity being assessed in Tasmania by the Board of the Environment Protection Authority (the Board).

An EER provides information about the environmental impacts of a proposed activity and associated mitigation measures. It is a statutory document required under section 74(4) of the *Environmental Management and Pollution Control Act 1994* (EMPCA) and is used by the Board as a 'case for assessment', to assess the environmental impact of an activity.

Once the EER has been accepted by the Board, it will be advertised with other documents relating to the proposal during the statutory public consultation period. The EER then remains available on the EPA website once the consultation period is complete.

After consultation, the proponent may be required to supply additional information in response to public and government agency submissions, or in response to new information. The additional information is submitted as a separate document known as a Supplement to the EER.

Further information is available at [EPA Assessment Process](#).

Preparing and Submitting an EER

The EER should be set out in five parts:

- 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

The tables below for Parts A and B can be copied into the EER and populated with information relevant to the proposal. Add rows as required, but do not remove rows. If a row is not applicable, state why.

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

The EER must be in an electronically searchable format. Images must be appropriately captioned and of sufficient quality to show all relevant aspects clearly.

The level of detail provided on each environmental issue should be appropriate to its significance to the proposal.

Where the proposal involves a change to an existing activity, the EER must describe the existing activity and clarify how it is affected and changed by the proposal.

Submitting an EER

Proponents are encouraged to submit the EER to the EPA for review before formally lodging it. Incomplete documents will not be accepted for review.

The EER should be emailed to assessments@epa.tas.gov.au and to the nominated EPA contact officer.

Environmental policies and guidelines

The Board is required to undertake its assessment against relevant policies and guidelines. Where relevant, the EER should address how the proposal will meet the following:

[Tasmanian Environment Protection Policy \(Air Quality\) 2004](#)

[Air Pollutant Design Criteria - EPA Board Statement](#)

[State Policy on Water Quality Management 1997](#)

[Environment Protection Policy \(Noise\) 2009](#)

[Tasmanian State Coastal Policy 1996](#)

[State Policy on the Protection of Agricultural Land 2009](#)

Planning Information

Where the proposal requires a permit under the *Land Use Planning and Approvals Act 1993* (LUPAA), information required solely for 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 LUPAA, where the planning application has commenced the environmental assessment process; or
- where it forms part of a combined planning and Environmental Effects Report, in a form that clearly distinguishes it from information supplied for the purpose of the Board's assessment.

Commonwealth Legislation

Approval from the Australian Government under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) is required for actions on Commonwealth land or actions that are likely to have a significant impact on one or more matters of national environmental significance.

Information on the EPBC Act can be obtained from the [Australian Government Department of Climate Change, Energy, the Environment and Water](#) website, or by calling 1800 803 772.

It is the proponent's responsibility to determine whether the EPBC Act applies to the proposal. **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 Assessments Branch:

GPO Box 1550

Hobart, Tasmania 7001

Telephone: 03 6165 4599

Email: assessments@epa.tas.gov.au

Website: www.epa.tas.gov.au

Other agency contacts

If assessments or approvals outside the Board's remit are required, the proponent should engage with the relevant agency. Go to [Guidance Documents | EPA Tasmania](#) for other agency contacts.

Content of EER

Part A – Proponent Information

Provide the following information:

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

If a different or additional entity will operate the activity after approval, provide details for that entity.

Part B – Proposal Description

If the proposal is subject to a permit application under LUPAA, the proposal description must be consistent with the permit application. Any works or activities for the purpose of the proposal (e.g. access works) must be included.

I Description of proposed activity

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

Proposed Activity

| | |
|------------------------------------|--|
| Activity | Provide a general description of the proposed activity, including its classification under Schedule 2 of EMPCA. |
| New or existing | State whether this is an intensification, expansion or modification of an existing activity, or a new activity. If it is an existing activity, provide details of any regulatory approvals (e.g. permit, licence, environment protection notice, mining lease) relating to the existing activity. Include approval type, issuer, purpose and expiry dates, if applicable. |
| Product | Describe the product and forecast life of the activity. |
| Maximum extraction quantity | Provide the maximum extraction quantity in cubic metres and tonnes per year. State the conversion factor. Briefly describe any anticipated seasonal variation. If it is an intensification, provide the current extraction limit in cubic metres and tonnes per year. State the difference between the two. |
| Maximum processing quantity | Provide the maximum processing quantity in cubic metres and tonnes per year (i.e. crushing, grinding, screening). If it is an intensification, provide the current processing (crushing, grinding, screening) limits in cubic metres and tonnes per year. State the difference between the two. |
| Method/s | State how material will be extracted and processed and list the main items of equipment involved. |
| Transport | Describe the proposed transport route (refer to relevant maps), vehicle types, number of vehicle movements (per day), and time of day of vehicle movements. |
| Stockpiling | State the materials that will be stockpiled on site. State the maximum estimated size of the stockpiles. |
| Area of disturbance | State: <ul style="list-style-type: none"> • Maximum area of the site proposed to be disturbed (unrehabilitated) at any time, in hectares. • Total area of land to be cleared over the life of the proposal, in hectares. If it is an existing activity, include the current cleared area, in hectares. |
| Major equipment | List all existing and proposed plant/machinery and other temporary or permanent equipment (distinguish between existing and proposed). |
| Infrastructure | List the existing and proposed buildings, structures, access roads, internal haul roads, etc (distinguish between existing and proposed). |
| Proposal timeline | State the key proposal timeline(s), including the duration of each stage of proposed works. |
| Operating hours | State the proposed operating hours and days. |

Location and planning context

| | |
|-------------------------------------|--|
| Location | State the address of the site, and land title information (as applicable), with a Certificate of Title or PID reference. If a permit is required, this information must match the information in the permit application. |
| Planning permit | Confirm whether a planning permit is required under LUPAA. If a planning application has not already been lodged, provide written advice from Council confirming this requirement, as an appendix. |
| Land zoning and tenure | Describe the land zoning and tenure of the site and surrounds. If rezoning of the site is required, provide details. |
| Use Class and Permissibility | If a permit is required under LUPAA, state the Use Class and Permissibility of the activity under the relevant Planning Scheme. |
| Mining lease (ML) | Provide the ML reference number(s) and status (granted/applied for). |
| Lease area | State the size of the lease area(s). |

Description of site and surrounds

| | |
|-----------------------|---|
| Land use | Describe the land use of the site and surrounds, distance to the nearest residences, and any nearby conservation reserves or recreation areas. |
| Topography | Describe the topography of the site and surrounds. |
| Climate | State the annual rainfall, average temperatures and predominant wind direction (provide wind roses if possible). |
| Climate change | Using publicly available information (e.g., <i>Local Government Area Climate Profiles</i>), describe the potential impacts of climate change on 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. |
| Geology | Describe the geology of the site. State whether it is likely that potentially acid forming (PAF) material will be found on site. Describe any geoconservation values on or near the site (e.g. karst). |
| Soils | Describe the soils on the site. State the erodibility of the soils. State whether there is potential to encounter acid sulphate soils and/or contaminated soil. |
| Hydrology | Describe the waterbodies and aquatic values on site and in the surrounding area. State the distance from the activity to the nearest waterbody. |
| Natural Values | Describe 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 5.0 or results of a relevant survey). |

2 Maps and site plan/s

High quality spatial information should be presented with all text and relevant features clearly visible. Maps and plans should include a north arrow, scale and legend. When spatial data (including maps, plans, coordinates and heights) are provided or referred to, the horizontal and vertical datum must be specified. As a minimum, provide the following:

- **General Location Map(s)** of a suitable scale, showing:
 - the location of the proposal site;
 - relevant cadastral boundaries with title details, e.g. Volume/Folio 136529/1;
 - the mining lease;
 - road access to and from the site;
 - distance(s) from the proposed activity to any sensitive receptors with potential to be impacted by dust, noise or other emissions from the activity;
 - the applicable attenuation distance as per the Tasmanian Planning Scheme;
 - topographical features, aspect, waterways, water bodies and direction of drainage;
 - electricity transmission lines;
 - surrounding land tenure;
 - surrounding land use (including areas of conservation or recreational significance); and
 - surrounding land zoning as per the Tasmanian Planning Scheme.
- **Map of the proposed activity area** showing the maximum physical extent and location of key components of the proposal, including as relevant:
 - topography, surface water flow, drainage;
 - vegetation types, areas to be cleared or disturbed, and records of any threatened species and native vegetation communities;
 - existing and proposed buildings, structures, plant, machinery, storage areas;
 - product, overburden, soil, and waste stockpiles;
 - access, loading/unloading areas, laydown areas and parking;
 - development (staging) of the quarry or extractive pit;
 - orientation of benches and location of infrastructure at key development stages;
 - site water management (drains, settling ponds, bunding);
 - proposed locations for monitoring environmental impacts.

The map should include sufficient coordinates at corner points to accurately define the maximum activity area boundary. The activity area boundary must also be provided in a geospatial vector format (shapefile or DXF). Where works are proposed in stages over time, include definitions or boundaries of each stage.

3 Project rationale and alternatives

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

4 Existing activity

- If the proposed activity is associated with an existing activity, provide the following:
 - a summary of environmental monitoring results,
 - a comparison of environmental monitoring results with relevant regulatory limits, if applicable;
 - a summary of any public complaints regarding the existing activity received by the activity operator or by regulatory authorities;
 - details of any breaches of conditions of current regulatory approvals; and
 - details of any contraventions of environmental law.

Part C – Environmental Impacts and Management

The EER should evaluate all potential impacts of the proposal. The level of detail provided on each issue should reflect its level of significance.

For each issue:

- describe how the impact assessment has been undertaken (e.g., surveys or desktop studies);
- describe the existing environment in relation to the potential impact, including the vulnerability of the potentially affected environment;
- articulate the potential impacts, identifying plausible worst case scenarios;
- describe the management or contingency measures proposed to avoid, mitigate or offset potential adverse impacts;
- detail any specialist recommendations that have or will be implemented. Justify why implementation of any recommendations is not proposed;
- analyse how and to what degree the impacts have or will be avoided, minimised or offset, and describe any residual impacts after all the above have been considered.

1 Air quality

The air quality assessment should detail the potential impact of the proposal on local air quality, specify proposed management measures, and meet the requirements of section 7.5 of the [Quarry Code of Practice](#).

- Refer to previously stated existing environment information including climatic/meteorological conditions, terrain, land use and air quality in the vicinity of the proposal.
- Using maps, identify all potential sources of dust emissions from the site. This includes but is not limited to dust generated from disturbed topsoil, stockpiles, excavating, drilling, blasting, crushing, screening, loading, and traffic movements on- and off-site.
- Discuss and assess the potential impacts of fugitive dust and particulate matter emissions (including Respirable Crystalline Silica) from the proposed activity on the environment, and potential for the activity to cause environmental nuisance or harm at or beyond the site boundary. Consider the existing environment (local terrain and meteorological conditions including annual rainfall, the direction and strength of prevailing winds) and nearby land use (particularly the proximity of sensitive receptors).
- Describe proposed measures to reduce dust and other emissions to air from the site and activity, including vehicle movements, particularly during unfavourable meteorological conditions. These may include watering or sealing roads, covering truck loads, reducing vehicle speed, road surfacing/maintenance details, enclosures, water sprays, windbreaks, revegetation/stabilisation, and/or other measures.
- 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.
- Outline how future climate factors such as temperature, wind speed and unseasonal dry periods may impact air quality at and beyond the site boundary. Consider options for an adequate water supply to manage dust emissions in these scenarios.

2 Water quality (surface, discharge and groundwater)

The water quality assessment should detail the potential impacts of the proposal on surface water and groundwater, including consideration of sediment, waterway disturbance, environmental values and downstream water uses, specify proposed management measures and meet the requirements of section 7.9 of the [Quarry Code of Practice](#).

- Using maps, identify and describe the receiving aquatic environment that has the potential to be affected by the proposal, using data where available, including:
 - relevant [Protected Environmental Values \(PEVs\)](#); and
 - any specific sensitive uses and associated water quality considerations.
- Describe any potential liquid emissions, other than stormwater, that could arise from the proposal.
- Describe the potential impacts of the proposal on the receiving environment (surface water, groundwater, drinking water, stock water, and irrigation, as relevant).
- If quarry floor lowering is planned, describe any impacts to groundwater.
- Specify proposed water quality criteria for management of stormwater discharges from the activity area to ensure PEVs and sensitive downstream uses will not be impacted.
- Describe the management measures that will be employed to control surface water flow across the site and to reduce and limit sediment movement.
- Identify the dimensions, capacity and other relevant design features of key stormwater infrastructure, such as drains and sediment basins. State the rainfall frequency (average recurrence interval) and intensity used to design the infrastructure, with reference to relevant design criteria. Where relevant, include:
 - the sediment particle size(s) used in calculations; and
 - calculations used to determine basin volume and surface area.
- Detail any proposed on site water management and infrastructure maintenance regimes necessary to maintain the effectiveness of erosion and sediment control infrastructure.
- Describe any other management measures proposed to minimise any impact on waterways, including the Brineys Creek and Styx River tributaries crossing the site, and their aquatic values.
- Provide a site plan showing the stormwater management measures and include:
 - the water flow path;
 - any proposed clean water diversion around disturbed areas and stockpiles; and
 - the location of any sediment basin(s) and discharge point(s).
- Provide details of any proposed water monitoring activities.

3 Noise emissions and blasting

The noise assessment should detail potential noise and vibration impacts of the proposal on noise sensitive premises (NSPs), specify proposed management measures, and meet the requirements of sections 7.2, 7.3 and 7.4 of the [Quarry Code of Practice](#).

- Using maps, identify and describe the location of all site activities and all major sources of noise, and of any noise sensitive premises that could be affected by noise from the activity. If there are none, show the locations of the closest noise-sensitive premises.
- Describe all fixed and mobile noise sources. For each main piece of equipment (e.g. crusher/screen, loader, excavator, haul truck, rock drill), provide:
 - the size and sound power level,
 - noise attenuation features, and
 - hours of operation.

For traffic noise sources, describe traffic volumes and movement patterns (e.g. times of day, days of week, days per year).

- State whether blasting will be undertaken. If so, specify the likely blast charge and the frequency of blast events per year. Discuss the potential for blast effects (ground vibration, air-blast overpressure and blast fume) to impact nearby residences.
- Evaluate the potential for the activity to create a noise nuisance, considering the:

- distance to nearest residences and other noise sensitive premises;
 - existing background noise environment;
 - acceptable standards described in section 7 of the [Quarry Code of Practice](#);
 - proposed hours of operation;
 - proposed methods for excavation and material processing/handling;
 - noise-generating equipment and vehicles used;
 - local topography; and
 - proposed site layout (refer to the relevant figure).
- If there are noise sensitive premises or properties zoned for such uses within applicable attenuation distances (as per the Quarry Code of Practice and Tasmanian Planning Scheme), provide a noise impact assessment report prepared by a suitably qualified person. The noise impact assessment report must be informed by noise modelling of the proposed activity conducted by a suitably qualified person.
 - Describe the noise attenuation measures proposed to be implemented, including any proposed noise and/or blast monitoring.
 - Discuss whether there will be any residual noise impacts after noise attenuation measures have been implemented, and any remaining potential for causing environmental nuisance or harm.

4 Natural values

- Provide records from the [Natural Values Atlas](#) of any listed threatened flora/fauna species or threatened native vegetation communities on or near the site.

Threatened flora

There are records of *Pellaea calidrupium* (hotrock fern) within 5 km of the site which is listed as rare under the *Threatened Species Protection Act 1995* (TSPA).

Threatened fauna

There are records of the following fauna listed under the TSPA and/or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) within 5 km of the site.

- *Aquila audax subsp. Fleayi* (Tasmanian wedge-tailed eagle) listed as endangered under both the TSPA and the EPBC Act.
- *Sarcophilus harrisi* (Tasmanian devil) listed as endangered under both the TSPA and the EPBC Act.
- *Dasyurus maculatus subsp. maculatus* (spotted-tailed quoll) listed as rare under the TSPA and Vulnerable under the EPBC Act.
- *Tyto novaehollandiae subsp. castanops* (Tasmanian masked owl) listed as endangered under the TSPA and Vulnerable under the EPBC Act.

Threatened native vegetation community

Some of the current mining lease is mapped as *Eucalyptus tenuiramis* forest and woodland on sediments, which is listed as a threatened native vegetation community (TNVC) under the *Nature Conservation Act 2002* (NCA).

- Undertake a natural values survey by a qualified person. Surveys must comply with the requirements of the [Guidelines for Terrestrial Natural Values Surveys related to Development Proposals](#) and any relevant species-specific guidelines. The survey report must be appended to the EER. The natural values survey should include (but not be limited to):
 - A determination as to whether any potential habitat for the above-mentioned species is present.
 - A survey undertaken by a suitable qualified and experienced person to determine the exact location of the Natural Values Atlas recorded wedge-tailed eagle nests relative to the proposed activity, and whether unknown nests or potential eagle habitat exists within 1 km of the proposed activity. Nest searches should be carried out by at least one assessor who has attended and passed a Forest Practice Authority/Natural Resources and Environment Tasmania (NRE Tas) approved eagle management course. See the [FPA Fauna Technical Note 1](#) and the [EPA Guide to Eagle Nest](#)

[Searching and Nest Activity Checks](#) for further information. Searches for the presence of nests should be undertaken outside the breeding season management constraint period (that is outside July to January, inclusive).

- A survey for the presence of denning habitat for the Tasmanian devil and or spotted-tailed quoll in accordance with the [Tasmanian Devil Survey Guidelines and Management Advice for Development Proposals](#) (the Devil Guidelines). Any potential den sites for the Tasmanian devil and/or the spotted-tailed quoll detected within the proposed activity area that are likely to be impacted by the proposal should be monitored and managed in accordance with the Devil Guidelines. Dens are considered a product of wildlife under the NCA, and a permit is required for their decommissioning.
- A survey to identify potential masked owl nesting and/or roosting habitat. For masked owls this includes any area proposed to be disturbed as part of the proposal, plus a buffer of at least 150 m. See Appendix A for further information. Masked owl nests, whether active or inactive, are a product of wildlife under the NCA.

If the activity or development will impact species listed as threatened under the TSPA, permits may be required, including but not limited to permits to 'take'. 'Take' is defined in the TSPA as kill, injure, pursue, damage, destroy and collect. Permits may also be required to collect and handle threatened flora and fauna specimens during surveys, and to take wildlife and/or products of wildlife listed in the Schedules of the *Nature Conservation (Wildlife) Regulations 2021*. The processing of permit applications may take up to four weeks. Information on applying for a permit can be found on the NRE Tas website [Permits for Threatened Species, Wildlife and/or Products of Wildlife \(for Consultants & Development-related Activities\) | Department of Natural Resources and Environment Tasmania](#).

- Describe the potential impacts to threatened fauna, flora and native vegetation communities, taking into account:
 - any clearing or disturbance of native vegetation or other potential habitat. Provide details of the vegetation and habitat values to be cleared or disturbed, and the area to be affected, in hectares;
 - vehicle movement, noise, or lights during sensitive avifauna (bird) breeding seasons; and
 - roadkill from vehicles. An increase in night-time (between one hour before sunset and one hour after sunrise as defined by the Bureau of Meteorology) traffic on internal and nearby roads of more than 10%, combined with a high abundance of Tasmanian devils and/or Tasmanian devil roadkill records in the Natural Values Atlas is considered potentially significant in terms of impacts on the Tasmanian Devil. See the [Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian Devil \(*Sarcophilus harrisii*\)](#) for more information.
- Describe any potential impacts to geoconservation sites (e.g. karst systems), aquatic or riparian environments and other natural values, and the management measures proposed to mitigate these impacts.
- Describe the management measures that will be implemented to avoid, minimise or mitigate impacts to threatened fauna, flora, vegetation communities and other natural values.

5 Weeds, pests and pathogens

- List the weeds, 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.
- Describe the proposed management measures for preventing the spread of weeds, pests and pathogens.
- Provide a Weed and Disease Management Plan prepared in accordance with the [Weed and Disease Planning and Hygiene Guidelines](#).

6 Waste and environmentally hazardous substances

- Describe the solid and liquid waste that will be produced by the activity (e.g. overburden, Potentially Acid Forming material, cleared vegetation, metal and machinery service wastes, used oils, amenities, waste and general refuse).
- Describe how each type of waste will be managed. In order of preference, waste should be avoided, reused or recycled if possible, and treated (stabilised) if necessary.
- Detail the nature and quantity of any environmentally hazardous substances that will be stored (permanently or temporarily) and/or handled on site. This includes fuels, oils, waste and chemicals.
- Describe how and where these substances will be stored. Discuss what measures will be in place to prevent release and respond to accidental spills (e.g. bunding, availability of spill kits).
- Identify any dangerous goods (as per the [Australian Code for the Transport of Dangerous Goods by Road and Rail](#)) and controlled wastes (see the [EPA website](#) for more information) that will be present on the site, with reference to standard classification. Detail how they will be managed.

7 Site contamination

- State whether the activity area has been used in the past for activities which may have contaminated soil or groundwater.
- If past use of the activity may have contaminated soil or groundwater beyond very localised or small-scale occurrences, a preliminary site investigation (PSI) of human health and environmental risks associated with existing site contamination must be completed in accordance with the [National Environment Protection \(Assessment of Site Contamination\) Measure 1999](#) (the ASC NEPM).

8 Decommissioning and rehabilitation

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

Part D – Summary of Proposed Management Measures

Provide a table summarising the proposed measures identified in Part C for avoiding, minimising and managing the potential environmental impacts of the proposal. These should be written as unambiguous statements of action.

Table 1. Proposed management measures (example)

| No. | Proposed Management Measure | Timeframe |
|-----|---|--|
| 1 | e.g. Design and install a sediment settling pond capable of containing runoff from a 1-in-20 year storm event as described in Part C, paragraph 2.6 of the EER. | e.g. At least 30 days before commencement of operations. |
| 2 | e.g. Develop a solid waste management plan as described in Part C, paragraph 8.4 of the EER. | e.g. Within three months of approval and before treatment or removal of any waste. |
| 3 | e.g. Erect a noise attenuation barrier as described in Part C, paragraph 9.2 of the EER | e.g. At least 30 days before commencement of operations. |

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 main feedback from consultation and proponent responses.
- [Guidance on Community Engagement](#) is available on the EPA website.

Appendix A: Additional masked owl survey detail

Survey of Tasmanian masked owl

- Nesting habitat includes forests, woodlands, and pasture mosaics with mature hollow-bearing trees, including individual remnant trees in paddocks and forestry plantations. Tasmanian masked owls nest exclusively in tree hollows. Hollows suitable for masked owl nesting are large (≥ 15 cm diameter at the entrance), deep and spacious enough to accommodate up to four masked owl chicks. Suitable hollows are more likely to be found in large trees with a diameter at breast height (DBH) greater than 100 cm, though both suitable hollows and nests may also be found in smaller DBH trees.
- If potential masked owl nesting habitat is identified, it is recommended that either a 150 m buffer is established around each potential nesting tree, or further investigations are undertaken (see below) to confirm whether the trees contain signs of nesting activity. Hollows suitable for Tasmanian masked owl nesting are typically found in large, old trees nearing the end of their life cycle, which are more likely to be structurally unsound. The 150 m buffer aims to protect these senescent trees from wind damage, conserve surrounding roosting habitat and minimise the need to remove nest trees for safety reasons.

Presence / absence surveys for Tasmanian masked owl – passive acoustic monitoring (PAM)

- Masked owls can be very discreet. A combination of survey techniques should be used to minimise the risk of a nest being overlooked. Passive acoustic monitoring (PAM) techniques should be employed to determine the presence or absence of masked owl in the landscape, using the method below:
 1. Conduct two deployments of acoustic recorders, each lasting three weeks. The recorder deployments should be separated by at least six weeks and should occur in late winter and late spring to maximise the likelihood of detecting masked owl calls and potential breeding activity.
 - a. If the first deployment detects masked owls, the second deployment is not necessary.
 - b. If the first deployment does not detect masked owls, the second deployment is needed to increase confidence in any claim that masked owls are unlikely to be present in the landscape.
 2. Ensure recordings are made throughout the whole night and are not limited to dusk and dawn.
 3. Analyse recorded data to identify masked owl calls. Analysis can be undertaken manually by a trained rater, or by using reliable software.
- It is important to consider the detection range of recorders when drawing conclusions about the presence or absence of the species. For example, in steep terrain, thick vegetation or where environmental conditions may limit their ability to detect owl calls, recorders may need to be positioned closer together.
- If existing records confirm the presence of masked owls, or if consultants elect to assume the species' presence in the landscape, passive acoustic monitoring may be omitted.
- Once presence in the landscape has been confirmed by PAM or assumed, or once PAM conducted in accordance with the above indicates that masked owls are unlikely to be present in the landscape, the responsible person should proceed according to the relevant scenario outlined below.

PAM scenario 1 – Masked owls absent in the landscape:

If passive acoustic monitoring indicates the absence of masked owls in the landscape, no further survey action is required. However, to support the conclusion that masked owls are absent from the landscape, an overview of the survey methodology should be submitted to the EPA, including:

- the total number of acoustic recorders deployed and a map of their locations in the landscape;
- the duration of each recording session and the specific times that were recorded each night; and

- a summary of any environmental factors that might affect detection, such as weather conditions and habitat/vegetation type.

PAM scenario 2 – Masked owls detected but nesting habitat will not be impacted:

If passive acoustic monitoring indicates the presence of masked owls in the landscape, but proposed works will not impact potential nest trees or occur within 150 m of any potential nest tree, no further survey action is required.

PAM scenario 3 – Masked owls detected, and nesting habitat will be impacted:

If passive acoustic monitoring indicates the presence of masked owls in the landscape, and proposed works will impact potential nest trees or occur within 150 m of any potential nest tree, further assessment of potential nesting trees is recommended.

Nest tree surveys for Tasmanian masked owl

- Nest tree surveys must be undertaken in a manner that minimises potential disturbance. Survey methods are listed below in decreasing order of preference and increasing order of their potential to disturb the target species.
 1. Initial inspection: Inspect trees for any signs of nesting or roosting, such as regurgitated pellets, whitewash or feathers at the base of the tree within the tree's dripline. The absence of these signs does not rule out the presence of a nest, but their presence can strongly indicate nesting activity. Ground-based and aerial (drone) inspections may be used to determine whether a tree contains hollows with an entrance hole ≥ 15 cm, though these methods are not suitable for conducting hollow inspections.
 2. Observation of hollows: Observe hollows from sunset to several hours after to detect owls exiting from hollows. A camera should record the hollow during the observations to minimise observer error, ideally using night vision or heat detection capabilities.
 3. Inspection of hollows: Use an action camera on a pole to inspect inside the hollow to determine whether the hollow has been used as either a nest or roosting hollow.
 4. Invasive methods: If the above, less-invasive methods are inconclusive, trees can be tapped firmly using a hammer, heavy stick or similar, to see whether an owl is flushed from the hollow.
 5. Physical Inspection: Consider physical inspection of hollows. The value of the information that would be gained should be weighed against the potential dangers to the assessor and disturbance to masked owls. An alternative may be to assume that masked owls are present in the hollow.



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