

Environmental Effects Report
Guidelines (Extractive Industry)
Boral Construction Materials
Group Ltd
Flowery Gully Quarry
Development Project, Flowery
Gully Road, Beaconsfield

February 2024



ENVIRONMENT PROTECTION AUTHORITY

Table of Contents

Glossary and abbreviations.....	4
Introduction.....	5
Purpose of the Guidelines.....	5
Preparing an EER.....	5
Submitting an EER.....	5
Planning Information.....	6
Commonwealth Legislation.....	6
Environment Protection Authority Contact.....	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
4 Existing activity.....	10
Part C – Environmental Impacts and Management.....	11
1 Air quality.....	11
2 Water quality (surface, discharge and groundwater).....	12
3 Noise emissions and blasting.....	13
4 Natural values.....	14
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
Appendix B: Additional masked owl survey detail.....	21

Glossary and abbreviations

Term	Definition
Board	Board of the Environment Protection Authority
CAS	Conservation Assessments, Department of Natural Resources and Environment Tasmania
Case for assessment	Information required for environmental impact assessment, prepared according to the Board's requirements.
DBH	Diameter at breast height.
Director	Means the Director, Environment Protection Authority holding office under Section 18 of <i>Environmental Management and Pollution Control Act 1994</i> and includes a delegate or person authorised in writing by the Director to exercise a power or function on the Director's behalf.
EER	Environmental Effects Report
EMPCA	<i>Environmental Management and Pollution Control Act 1994</i>
EPA	Environment Protection Authority. Tasmania's independent principal environmental regulator which administers EMPCA and consists of a Board and a Director.
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)</i>
HCV Forest	High Conservation Value Forest
LUPAA	<i>Land Use Planning and Approvals Act 1993</i>
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	Department of Natural Resources and Environment Tasmania
PC	<i>Phytophthora cinnamomi</i>
Planning Authority	Council for relevant local government area
RCS	Respirable Crystalline Silica
TSPA	<i>Threatened Species Protection Act 1995</i>

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* (EMPCA).

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 EMPCA.

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](#)¹ 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.

Where the proposal is for a production increase/intensification/modification of the activity, the EER must provide a case for assessment of the entire activity.

Submitting an EER

It is strongly recommended that proponents submit a draft EER to the EPA for review prior to formal lodgement of the EER with the Board.

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

The EER (and any drafts submitted for review) may be submitted via email to assessments@epa.tas.gov.au and your nominated contact officer. Proponents should contact the EPA if alternative submission methods are deemed necessary.

Planning Information

Where the proposal is subject to a permit under the *Land Use Planning and Approvals Act 1993* (LUPAA), 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 LUPAA, 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 Climate Change, Energy, the Environment and Water](https://www.environment.gov.au/climate-change-energy-environment-and-water) website², 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: 03 6165 4599

Email: assessments@epa.tas.gov.au

Website: www.epa.tas.gov.au

² Available at www.dcceew.gov.au/environment/epbc

Content of EER

Part A – Proponent Information

Provide the following information regarding the proponent:

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

As the proposed activity constitutes a modification and expansion of the existing Flowery Gully Quarry, provide all details below in relation to both the existing quarry and the proposed modification and expansion.

Provide details of any current regulatory approvals (permit, licence, environment protection notice, mining lease, etc.) relating to the existing activity. Detail the activity(ies) and operation(s) permitted under the current approval and state the activities and operations that are beyond what is permitted under current regulatory approvals as part of the proposed modification and expansion.

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 the classification of the activity under Schedule 2 of EMPCA.
New or existing?	State if this is an intensification/modification of an existing activity or a new activity.
Product	Describe the product and forecast life of the activity.
Maximum extraction quantity	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.
Maximum processing quantity	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.
Method/s	State the method(s) of material extraction and processing and main items of equipment involved.
Transport	Describe the proposed transport route (can refer to figures), 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.
Area of disturbance	State: <ul style="list-style-type: none"> • Maximum area of the site proposed to be disturbed (un-rehabilitated) at any time, in hectares. • Total area of land to be cleared over the life of the proposal, in hectares. • The depth to which the material will be extracted.
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).
Operating hours	State the proposed operating hours and days.

Location and planning context

Location	State the address of the site, and CTs and PIDs (as applicable) for all titles on which the activity will take place.
Planning permit	Confirm whether a Planning Permit is required under LUPAA. As an appendix, provide written advice from Council stating the requirement, if a planning application has not already been lodged.
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).
Geology	Describe the geology of the site, including the likelihood 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 (including erodibility), and 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	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 ³ 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 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 uses⁴ and residential zones within 1.5 km of the

³ Both can be accessed at <https://www.naturalvaluesatlas.tas.gov.au/>

⁴ 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.'

proposed activity and within the applicable attenuation distance⁵, 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 LUPAA (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 relevant contours;
 - the location and orientation of benches and development of infrastructure at key stages;
 - watercourses on and near the site;
 - site water management (drains, settling ponds, bunding and monitoring points, as relevant);
 - 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.

4 Existing activity

- As the proposed activity is associated with an existing activity, provide the following information in relation to the existing activity:
 - details of activity(ies) and operation(s) permitted under the approval.
 - a summary of environmental monitoring results;
 - a summary of public complaints regarding the activity (received by the activity operator and by regulatory authorities);
 - details of breaches of conditions of current regulatory approvals (if any); and
 - details of contraventions of environmental law (if any).

⁵ 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.

Information from documentation relating to the existing activity (such as an Environmental Management Plan or survey reports) may be used or referenced in this EER, provided the information is current.

I Air quality

The air quality assessment should detail potential impacts of the proposal on local air quality and provide evidence that the activity would not cause environmental nuisance or harm. In addition to assessing the aspects of air pollution and dust control described in section 7.5 of the [Quarry Code of Practice](#)⁶, the air quality assessment should:

- Identify and show on a site map all sensitive receptors that could potentially be affected by fugitive dust and particulate matter emissions from activities at the quarry, especially during unfavourable meteorological conditions.
- Describe the existing environment including climatic/meteorological conditions, terrain, land use and air quality in the vicinity of the proposal.
- Identify (on a site map) and characterise all sources of dust emissions from the site. This includes but is not limited to dust generated from the disturbed topsoil, stockpiles, blasting/drilling/excavating, crushing, screening, loading, and traffic movements on and off site.
- Provide details of the materials handled and equipment used on the site including the location of the equipment.
- Discuss and assess the potential impact of fugitive dust and particulate matter emissions (including Respirable Crystalline Silica) from the proposed activity on the environment and the likelihood for the activity to cause environmental nuisance or harm at or beyond the site boundary. Consider local terrain and meteorological conditions including annual rainfall, the direction and strength of prevailing winds, and land use in the vicinity of the quarry.
- Describe measures that will be employed to reduce dust movement from the site, especially during unfavourable meteorological conditions. This may include but not be limited to watering or sealing roads, covering truck loads, reduced vehicle speed, road surfacing/maintenance, enclosures, water sprays, windbreaks and revegetation/stabilisation. Discussion of the ongoing requirement to provide an adequate water supply should be included, along with considerations for water availability in response to the potential impact of future climate, such as the possibility of increasing unseasonal dry periods.
- Provide information about proposed monitoring of dust at the site.

⁶ Available at https://www.mrt.tas.gov.au/_data/assets/pdf_file/0008/229625/Quarry_Code_of_Practice.pdf

- Consider the installation of a meteorological monitoring station capable of measuring and recording wind speed and direction to inform the application of mitigation measures during unfavourable weather conditions.
- Provide information about any dust complaints related to the operation of the existing facility for the last 5 years.
- Consideration should be given to the requirements of the [Tasmanian Environment Protection Policy \(Air Quality\) 2004](#)⁷ and any supplementary documents ([including the Board Statement January 2022](#)⁸).

2 Water quality (surface, discharge and groundwater)

- Describe the potential impacts of the activity on the receiving environment, with specific consideration of sediment and waterway disturbance, environmental values and downstream water uses.
- Describe the erosion and sediment control management measures that will be employed to control surface water and reduce the potential for erosion and sediment loss. Erosion and sediment control measures must be consistent with best practice. Refer to the [International Erosion Control Association, Best Practice Erosion and Sediment Control \(EPESC\) document](#).⁹ Control measures include: minimisation of areas of disturbance; 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.
- 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 rationale¹⁰.
- Describe the waterbodies and aquatic values on site and in the surrounding area, including relevant Protected Environmental Values as per the [State Policy on Water Quality Management 1997](#).¹¹
- State the distance from the activity to the nearest waterbody.
- Provide details of any proposed water monitoring activities.
- Demonstrate that the proposal is consistent with the [State Policy on Water Quality Management 1997](#).¹¹

⁷ Available at https://epa.tas.gov.au/Documents/EPP_Air_Quality_2004.pdf

⁸ Available at <https://epa.tas.gov.au/Documents/Board%20Statement%20-%20Update%20to%20Air%20Pollutant%20Design%20Criteria%20used%20in%20the%20EIA%20Process%20-%20January%202022.pdf>

⁹ Available at <https://www.austieca.com.au/publications/best-practice-erosion-and-sediment-control-bpesc-document>

¹⁰ 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) available at <https://www.austieca.com.au/documents/item/697>

¹¹ Available at https://epa.tas.gov.au/Documents/State_Policy_on_Water_Quality_Management_1997.pdf

3 Noise emissions and blasting

- Describe all noise sources, including the size and sound power level for each main piece of equipment (e.g. truck movements, excavator, dozer, front wheel loader, crushing and screening activities). Sound power levels of the existing equipment should be based on site specific source measurements.
- Provide a map showing locations of all major sources of noise and any noise sensitive premises¹² that may potentially be affected by the quarry operation.
- Evaluate noise impact of the proposed development discussing the following:
 - Discuss any past complaints and how these were managed.
 - Provide a comparison scenario between noise emissions from the existing and proposed activities, identifying any changes that will increase noise emissions at any noise sensitive premises.
 - Predict cumulative noise emissions from the existing and proposed quarry sites/activities at any noise sensitive premises.
- Investigate and discuss noise mitigation measures to ensure that:
 - The proposed activities/changes do not increase the existing ambient noise level at any noise sensitive premises.
 - The cumulative noise emissions from the proposed and existing activities are below the of 'Background Noise Levels (LA90) + 5 dB(A)' noise levels.
 - The cumulative noise emissions from the existing and the proposed quarry sites do not exceed the noise limit listed in section 7 of the [Quarry Code of Practice](#).¹³
- Provide details of the need for blasting, the expected number of blasts per year and the notional blast plan, including:
 - Results of ground vibration modelling to predict peak particle velocity contours out to 1mm/s.
 - Results of airblast overpressure modelling to predict dB (lin) level contours out to 100 dB(lin).
 - Assess potential for health and nuisance impacts from vibration on sensitive receptors based on the relevant vibration criteria.
- Pursuant to the [Tasmanian Environment Protection Policy \(Noise\) 2009](#)¹⁴, discuss whether any best practice management have or will be employed:
 - To reduce noise emissions to the greatest extent that is reasonably practical.
 - To reduce dominant or intrusive noise characteristics of any activity to the greatest extent that is reasonably practical.
- All methods of measurement must be in accordance with the [Tasmanian Noise Measurements Procedure Manual](#).¹⁵
- Provide a proposed noise and vibration management plan to minimise impact and to address noise/vibration related complaints.

¹² '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.

¹³ Available at <https://epa.tas.gov.au/business-industry/regulation/industrial-activities/mining-and-extractive>

¹⁴ Available at [https://epa.tas.gov.au/policy/statutory-policies/state-policies-and-environment-protection-policies/environment-protection-policy-\(noise\)-2009](https://epa.tas.gov.au/policy/statutory-policies/state-policies-and-environment-protection-policies/environment-protection-policy-(noise)-2009)

¹⁵ Available at https://epa.tas.gov.au/Documents/Noise_Measurement_Procedures_Manual_2008.pdf

4 Natural values

- Undertake a survey by a suitably qualified person in accordance with the [Guidelines for Terrestrial Natural Values Surveys related to Development Proposals](#)¹⁶ and any relevant species-specific guidelines taking into account the species mentioned below and any other listed threatened flora/fauna species or threatened vegetation communities identified during the surveys. The survey report must be appended to the EER.

Tasmanian devil

- There are records of Tasmanian devil (*Sarcophilus harrisii*) within 1 km of the site. The Tasmanian devil is listed as endangered under the *Threatened Species Protection Act* (TSPA) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). It is recommended that the impact site is surveyed in accordance with the [Tasmanian Devil Survey Guidelines and Management Advice for Development Proposals](#) (the Devil Guidelines).¹⁷
- If any potential den sites for the Tasmanian devil are recorded at the impact site, and are likely to be impacted by the proposal, these should be monitored and managed in accordance with the Devil Guidelines. Any dens that cannot be avoided will require a permit to take under the *Nature Conservation Act 2002* (NCA).

Masked owl

- There are records of masked owl (*Tyto novaehollandiae* subsp. *castanops*), which is listed as endangered under the TSPA and Vulnerable under the EPBC Act, within 5 km of the site. It is recommended that the impact site is surveyed to identify potential nesting and/or roosting habitat for the masked owl. See Appendix B for further information.

Swift parrot

- The site is within the core range of the swift parrot (*Lathamus discolor*), which is listed as endangered under the TSPA and Critically Endangered under the EPBC Act. The proposed impact area is within proximity to *Eucalyptus ovata* forest and woodland (DOV) which is considered foraging habitat for the swift parrot. Any tree in the survey area which is 70 cm diameter at breast height (DBH) or more has the capacity to bear hollows large enough to be suitable nesting habitat for swift parrots. It is recommended that the site survey identifies if any suitable nesting habitat exists for the swift parrot.
- An additional threat to swift parrot is colliding with human-made objects such as windows and chain-link fences. It is recommended that infrastructure is designed to minimise collision risks to swift parrots. Appropriate management measures, if required, must be described. For general information and advice on building structures which minimise risk of collisions (e.g. wire-mesh fences or windows) - see [Guidelines and recommendations for parrot-safe building design](#)¹⁸ and [Bird-Friendly Building Design](#)¹⁹. For comprehensive advice on avoiding collisions with glass – see [An end to birds dying at windows](#)²⁰.

Aquatic threatened flora

- Middle Arm Creek runs through the site and the surrounding area. There are records of aquatic threatened fauna listed under the TSPA and/or the EPBC Act in the area that potentially have habitat in Middle Arm Creek (see table below).

¹⁶ Available at <https://nre.tas.gov.au/conservation/development-planning-conservation-assessment/survey-guidelines-for-development-assessments>

¹⁷ Available at <https://nre.tas.gov.au/Documents/Devil%20Survey%20Guidelines%20and%20Advice.pdf>

¹⁸ Available at https://assets.wwf.org.au/image/upload/v1689811506/file_minimising-swift-parrot-collision-threat-1apr08.pdf

¹⁹ Available at <https://abcbirds.org/wp-content/uploads/2020/09/Bird-Friendly-Building-Design.pdf>

²⁰ Available at <https://abcbirds.org/glass-collisions/resources/>

Species name	Common name	TSPA	EPBC Act
<i>Litoria raniformis</i>	Green and Gold Frog	vulnerable	Vulnerable
<i>Limnodynastes peroni</i>	Striped Marsh Frog	endangered	-
<i>Engaeus granulatus</i>	Central North Burrowing Crayfish	endangered	Endangered

- In areas where excavation, track building or construction activities are planned around wetlands and waterways, demonstrate adherence to the legislation, policies and guidelines set out in the NRE [Wetlands and Waterways Works Manual](#).²¹

Threatened flora

- There are records of flora listed under the TSPA and/or the EPBC Act within 5 km of the site, that potentially have habitat within the site.
- There is a record of juniper wattle (*Acacia ulicifolia*), which is listed as rare under the TSPA, within the site. [The Threatened Species Notesheet](#) lists the nearby Cabbage Tree Hill as a key site for the species and the Dan's Hill Conservation Area (7 km northeast of the site) is listed as an important reserve for the species. Please note that land clearance is sighted as a primary threat to juniper wattle and it is recommended that any impact to the species is avoided. If any listed threatened flora species are identified and will be impacted by the proposed development, a permit to take under the TSPA will be required.
- 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). It is noted that within the proposed clearance area there is Dry Eucalypt Forest and Woodland (*Eucalyptus amygdalina*) which is recognised as a high conservation value (HCV) forest.
- 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. Provide 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;
 - Roadkill from vehicles²².
- Describe the 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 mitigate or avoid impacts to threatened fauna, flora and vegetation communities or other natural values.

²¹ Available at <https://nre.tas.gov.au/conservation/flora-of-tasmania/tasmanias-wetlands/wetlands-waterways-works-manual>

²² Information on roadkill risk for Tasmanian Devils is available at <https://nre.tas.gov.au/Documents/Devil%20Survey%20Guidelines%20and%20Advice.pdf>

5 Weeds, pests and pathogens

- List the weeds²³, 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.
- There have been two confirmed cases of *Phytophthora cinnamomi* (PC) within 1 km of the site. Adherence to strict hygiene measures is recommended. Practical information on how to minimise the risks of introducing and spreading PC can be found in the manual [Keeping it clean - A Tasmanian field hygiene manual to prevent the spread of freshwater pests and pathogens](#).²⁴
- Discuss the proposed management measures for preventing the spread of weeds, pests and pathogens (e.g. vehicle washdown procedures). It is recommended a plan be developed and implemented to control the spread of weeds and pathogens. Information about controlling the introduction and spread of weeds and the development of weed and disease management plans can be found in Section 4 of the [DPIPWE \(2015\) Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania](#).²⁵

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 substances²⁶ 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 goods²⁷ and controlled wastes²⁸ 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.

²³ Weed means 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 *Biosecurity Act 2019* and subordinate regulations.

²⁴ Available at https://dpiuwe.tas.gov.au/Documents/15130802_52keepingitcleanspreadswe.pdf

²⁵ Available at <https://nre.tas.gov.au/Documents/Weed%20%20Management%20and%20Hygiene%20Guidelines.pdf>

²⁶ '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.

²⁷ As defined in the Australian Code for the Transport of Dangerous Goods by Road and Rail.

²⁸ 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 (note that night-time is defined as being from one hour prior to sunset to one hour after sunrise) increase of over 10% on the unnamed quarry entry road off Flowery Gully Road? If so, it would be deemed significant in terms of potential impacts on the Tasmanian devil and proposed roadkill mitigation measures must be described. See the [Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian Devil \(*Sarcophilus harrisii*\)](#)²⁹ 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.
- 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).
- Provide progressive rehabilitation plan referring to the site map. This should include but is not limited to the timeframe and the area of disturbance.

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 strategy³⁰.
- 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.

²⁹ Available at <https://nre.tas.gov.au/Documents/Devil%20Survey%20Guidelines%20and%20Advice.pdf>

³⁰ 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 I. Proposed management measures

No.	Proposed Management Measure	Timeframe
1	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].	At least 30 days prior to commencement of operations.
2	Develop a solid waste management plan as described in Part C, paragraph 8.4 [of the EER].	Within three months of approval and prior to treatment or removal of any waste.
3	Erect a noise attenuation barrier as described in Part C, paragraph 9.2 [of the EER]	At least 30 days prior to 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 outcome or main findings of any community consultation.
- [Guidance on Community Engagement](#)³¹ is available on the EPA website.

³¹ Available at <https://epa.tas.gov.au/business-industry/assessment/guidance-documents>

Appendix A: Other issues and agency contacts

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

Your proposal may have been referred to other agencies by EPA. If assessments or approvals outside of the Board's responsibilities are required, you should engage with the respective agency to progress them. The following list identifies some of the 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

Website: 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

Website: 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 near 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 Premier and Cabinet

Telephone: 1 300 487 045

Email: aboriginalheritage@dpac.tas.gov.au

Website: 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

Website: 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

Website: 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

Website: 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

Website: www.mrt.tas.gov.au

Purpose: Mining Leases

Appendix B: Additional masked owl survey detail

Survey of masked owl

- Potential habitat for masked owl includes locations below 600 m altitude with trees over 100 cm diameter at breast height (DBH) that contain large hollows. Breeding habitat includes forests, woodlands, and pasture mosaics with remnant trees. Tree hollows suitable for masked owl breeding are large (≥ 15 cm diameter at the entrance) and deep and generally spacious enough to provide protection for up to four masked owls. Trees over 100 cm DBH have a higher probability of containing suitable nesting hollows.
- Masked owl roosting sites will often only be used for one night at a time and can include either hollows suitable for nesting or smaller hollows with a 15 cm diameter entrance with sufficient room for only one owl. Masked owls will also roost in vegetation, such as on branches. Masked owls may use multiple roosting sites within their territory and juvenile masked owls often use more roosting sites than adults. Roosting sites are often found within 1200 m of a nesting tree.
- If potential nesting habitat is identified, it is recommended that either a 150 m buffer is established around suitable nesting trees or further investigations are undertaken to confirm if suitable trees are nest trees. It should be noted that a nest tree could be unoccupied but still considered an important nest – a masked owl will have several in its territory and will rest one to let it clean.
- Masked owls can be very discreet. A combination of techniques should be used to minimise the risk of a nest being overlooked. Ideally, call play back will be used initially. If call play back successfully results in a response from a masked owl, their presence in the area can be confirmed. However, a lack of vocalisation in response to call play back cannot be taken as proof of absence (as masked owls can be notoriously silent even when known to be present). In such cases, it is recommended the following actions are undertaken in order to further examine potential nesting trees (in preferred sequence):
 1. Trees should be checked for any signs of nesting or roosting (regurgitated pellets, whitewash, feathers at the base of the tree within the tree's dripline). Lack of these signs does not indicate an absence of nest but the presence of any of these signs can strongly indicate a nest hollow.
 2. Hollows should be observed from sunset to several hours after sunset to detect owls exiting from hollows. A video camera should also be recording and focused on the hollow during the sunset observations to remove likelihood of any observer error. Ideally the camera will have night vision or heat detection capabilities.
 3. An action camera on a pole should be used to observe inside the hollow to attempt to determine if the hollow is being used as either a nest or roosting hollow.
 4. If the above, less-invasive methods are inconclusive (including camera hole inspections concluding that the hollow is somewhat labyrinthine whereby camera observations may not be able to ensure all of the hollow has been thoroughly inspected), trees should be tapped firmly (hammer, heavy stick etc) to see if a bird is flushed from the hollow.
 5. Finally, as a last resort, (as it is dangerous for the assessor and highly disturbing to masked owls), consider physical inspection of hollows.

It should be noted that a negative result for any of the above survey methods, apart from physical inspection, is not considered conclusive proof of lack of presence (but may indicate likely absence).

- Masked owl nests are a product of wildlife under the NCA. It should be noted that Conservation Assessments (CAS) of Natural Resources and Environment Tasmania (NRE) has never issued a permit to remove a confirmed Tasmanian masked owl nest and any proposal to do so would be considered significant and an offset would likely be required. It is recommended that if impacts to a nest cannot be avoided then discussions with CAS occur as early in the planning stage as possible.

