

# ENVIRONMENTAL ASSESSMENT REPORT

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## Porcupine Hill Quarry

*Forthside*

Treloar Transport Pty Ltd

Board of the Environment Protection Authority

April 2018



ENVIRONMENT PROTECTION AUTHORITY

<b>Environmental Assessment Report</b>	
Proponent	Treloar Transport Pty Ltd
Proposal	Porcupine Hill Quarry
Location	Forthside Rd, Forthside Tas 7310
NELMS no.	PCE 9697
Permit application no.	2017.0169 (Devonport City Council)
Electronic Folder No.	EN-EM-EV-DE-252182
Document no.	H785937
Class of Assessment	2A

<b>Assessment process milestones</b>	
05/04/2017	Notice of Intent lodged
12/05/2017	Guidelines issued
21/12/2017	Permit application submitted to Council
4/01/2018	Referral received by the Board
13/01/2018	Start of public consultation period
30/01/2018	End of public consultation period
27/03/2018	Additional information (Supplement) submitted to the Board
05/04/2018	Draft conditions reviewed by proponent

## Acronyms

Board	Board of the Environment Protection Authority
EER	Environmental Effects Report
DPIPWE	Department of Primary Industries, Parks, Water and Environment
EIA	Environmental impact assessment
EMPC Act	<i>Environmental Management and Pollution Control Act 1994</i>
EMPCS	Environmental management and pollution control system
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
LUPA Act	<i>Land Use Planning and Approvals Act 1993</i>
PC	<i>Phytophthora cinnamomi</i>
QCoP	<i>Quarry Code of Practice 2017</i>
RMPS	Resource management and planning system
SD	Sustainable development

## Report summary

This report provides an environmental assessment of Treloar Transport's proposed intensification of use of its existing level two quarry off Forthside Rd, Forthside.

The proposal involves the extraction of quartzite material at a rate of up to 30,000 tonnes (18,750m<sup>3</sup>) per annum. Up to three blasts are expected each year. Crushing and screening are likely to occur on a campaign basis.

This report has been prepared based on information provided by the proponent in the permit application, Environmental Effects Report (EER) and Supplement to the EER. Relevant government agencies and the public were consulted and relevant submissions and comments considered as part of the assessment.

Further details of the assessment process are presented in section 1 of this report. Section 2 describes the statutory objectives and principles underpinning the assessment. Details of the proposal are provided in section 3. Section 4 reviews the need for the proposal and considers the alternatives. Section 5 summarises the public and agency consultation process and the key issues raised in that process. The detailed evaluation of environmental issues is contained in section 6. Other issues are discussed in section 7. The report conclusions are contained in section 8.

Appendix 1 details matters raised by the public and referral agencies during the consultation process. Appendix 2 contains the environmental permit conditions for the proposal. The environmental permit conditions in Appendix 2 are a new set of operating conditions for the entire, intensified activity that will supersede the existing permit conditions.

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# 1 Approval process

A Notice of Intent in relation to the proposal was received by the Board of the Environment Protection Authority (the Board) on 5 April 2017.

An application for a permit under the *Land Use Planning and Approvals Act 1993* (LUPA Act) in relation to the proposal was submitted to Devonport City Council on 21 December 2017.

The proposal is defined as two 'level 2' activities under clauses 5(a) and 6(a)(ii), schedule 2 of the *Environmental Management and Pollution Control Act 1994* (EMPC Act), being:

- 5(a) an extractive industry, the extraction of any rock or gravel and producing 5 000 cubic metres or more of rock or gravel per year; and
- 6(a)(ii) materials handling, namely processing (by crushing, grinding, milling or separating into different sizes by sieving, air elutriation or in any other manner) of rock, ores or minerals at a rate in excess of 1 000 cubic metres per year.

Section 25(1) of the EMPC Act required Council to refer the application to the Board of the Environment Protection Authority (the Board) for assessment under the Act. The application was received by the Board on 4 January 2018.

The assessment has been undertaken by the Director, Environment Protection Authority under delegation from the Board.

The Board required that information to support the proposal be provided in the form of an Environmental Effects Report (EER).

A number of drafts of the EER were submitted to EPA Tasmania for review against the guidelines prior to finalisation. The final EER was submitted to Council with the permit application. The EER was released for public inspection for a 14-day period commencing on 13 January 2018. An advertisement was placed in *The Advocate* and a notice was placed on the EPA website. The EER was also referred to relevant government agencies for comment. Three public submissions were received.

On 7 February 2018, the Director requested that the proponent submit additional information to address matters raised during the public consultation process. The proponent submitted satisfactory additional information on 27 March 2018.

## **2 SD objectives and EIA principles**

The proposal must be considered by the Board in the context of the objectives of the Resource Management and Planning System of Tasmania (RMPS), and in the context of the objectives of the Environmental Management and Pollution Control System (EMPCS) (both sets of objectives are specified in Schedule 1 the EMPC Act). The functions of the Board are to administer and enforce the provisions of the Act, and in particular to use its best endeavours to further the RMPS and EMPCS objectives.

The Board must undertake the assessment of the proposal in accordance with the Environmental Impact Assessment Principles defined in Section 74 of the EMPC Act.

The assessment has been undertaken by the Director, Environment Protection Authority under delegation from the Board.

### 3 The proposal

Quartzite material will continue to be won by excavator and dozer. A number of areas will require drilling and blasting, with up to three blasts anticipated per year to liberate about 10 000 tonnes (6,250 m<sup>3</sup>) on each occasion. In the western portion of mining lease 8M/2015 material will be extracted in a northerly direction. On adjoining lease 1704P/M, mining will occur in a westerly direction. Refer Figure 2 of this report.

A wheel loader will be used to form and deplete stockpiles, with dispatch of products by trucks with dog trailers. No permanent site based amenities will be provided. The quarry will operate on a campaign basis.

The main characteristics of the proposal are summarised in Table 1. A detailed description of the proposal is provided in Section B of the EER.

**Table 1: Summary of the proposal’s main characteristics**

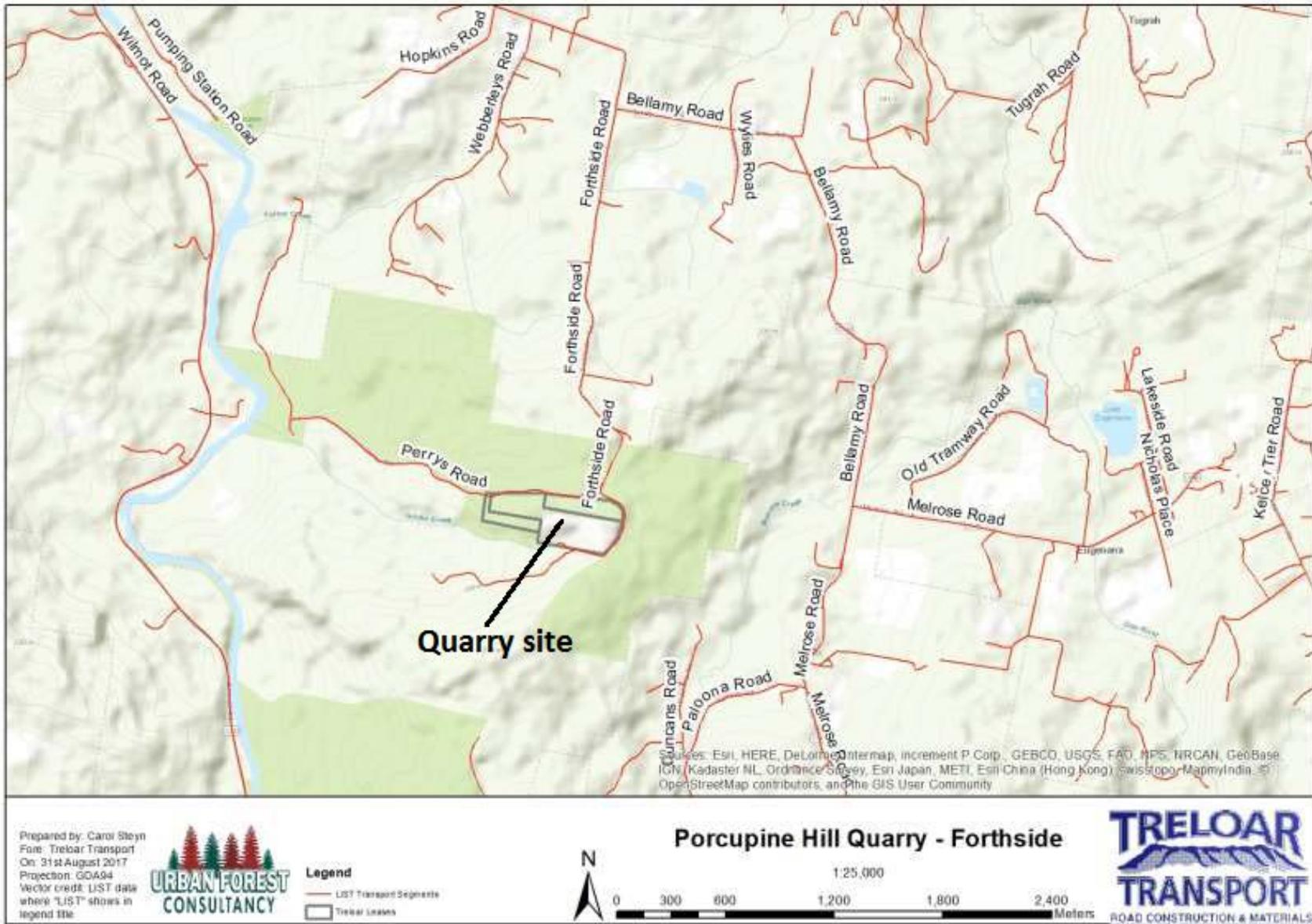
Activity	
Extraction and crushing and screening of a maximum of 30,000 tonnes (18 750 cubic metres) of quartzite material per annum.	
Location and planning context	
<b>Location</b>	Forthside Road, Forthside, as shown in Figure 1.
<b>Land zoning</b>	Rural Resource ( <i>Devonport Interim Planning Scheme 2013</i> ).
<b>Land tenure</b>	Private freehold (CT 242032/1) and Crown Land (PID 2515235).
<b>Mining leases</b>	8M/2015 and 1704P/M
<b>Lease area</b>	7ha (8M/2015) 12ha (1704P/M)
<b>Existing bond<sup>1</sup></b>	\$5,000 (8M/2015) \$7,000 (1704P/M)
Existing site	
<b>Land Use</b>	Extractive activity, forestry operations and agriculture.
<b>Topography</b>	The extractive activity is located on the crest of Porcupine Hill (250m AHD). It is visible from Sprent Rd, west of the quarry. The site slopes on all sides, draining to Goldie Creek either directly or overland via a series of unnamed tributaries.
<b>Geology</b>	Section 2.5 of the EER states the geology substrate for this area is Lts – Precambrian – Forth metamorphics - Dominantly Quartzite.
<b>Soils</b>	Section 2.5 of the EER describes soils as moderately well drained, formed from Precambrian quartzite. A dark grey sapric sandy loam overlies a greyish brown loamy sand and a massive, bleached sand densipan. There are abundant quartzite stones throughout the profile.
<b>Hydrology</b>	According to section 2 of the EER, drainage to the south reports to Goldie Creek and drainage to the north reports to an unnamed tributary of Goldie Creek. Goldie Creek discharges into the Forth River downstream of the mining leases. All drainage from the site travels via a network of settling ponds. Figure 3 of the EER illustrates site drainage.

<sup>1</sup> These figures will be revised upwards as a consequence of intensification of use.

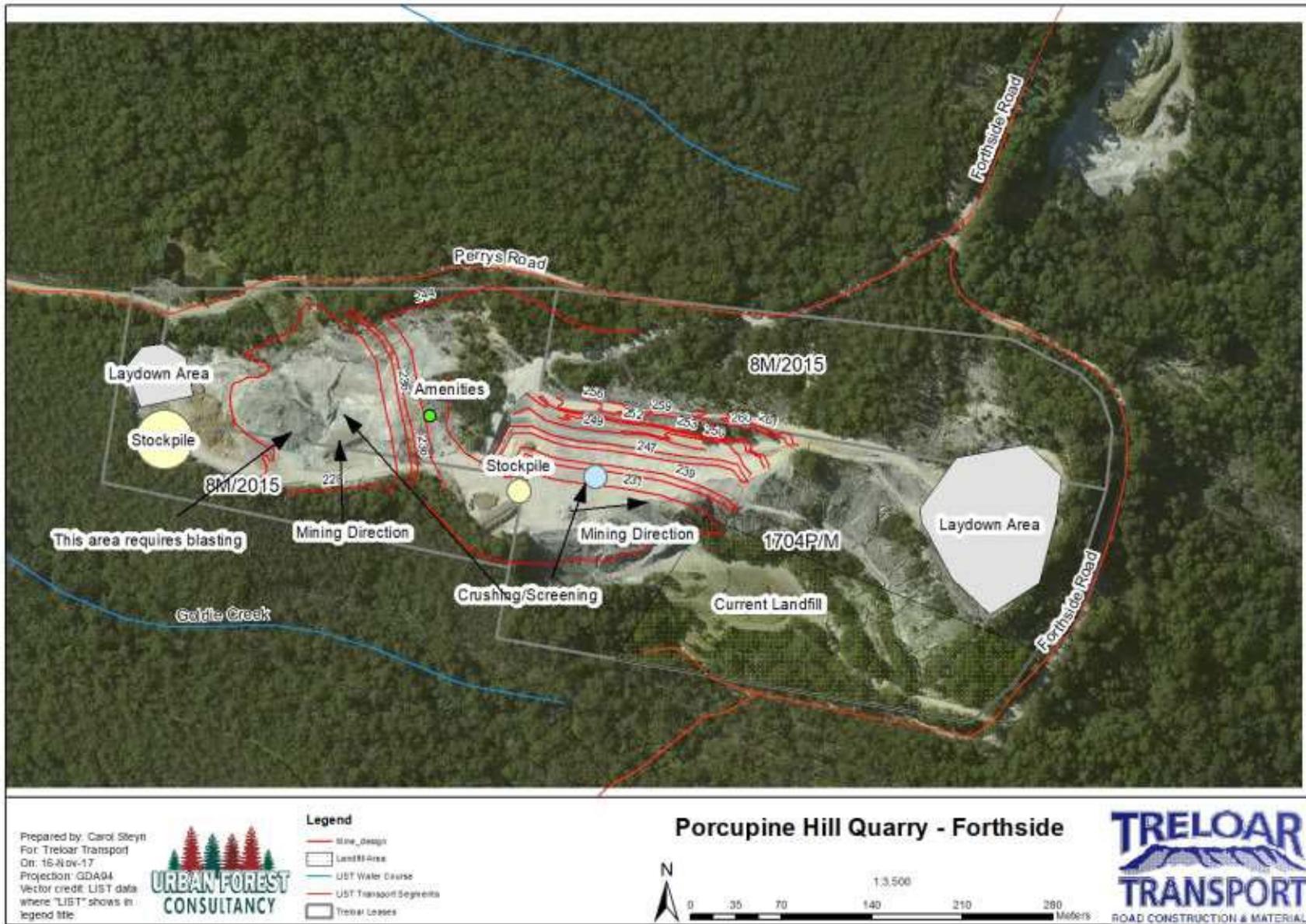
<b>Fauna</b>	<p>A Flora and Fauna Assessment (North Barker Ecosystem Services) is included with the EER as Appendix A. According to this Assessment, no fauna species listed as threatened under the Tasmanian <i>Threatened Species Protection Act 1995</i> (TSPA) were detected during the field survey. A number of threatened fauna species are, however, known to occur within 5km of the activity, including:</p> <ul style="list-style-type: none"> <li>• Wedge-tailed eagle (<i>Aquila audax fleayi</i>)</li> <li>• Great egret (<i>Ardea alba</i>)</li> <li>• Cattle egret (<i>Ardea ibis</i>)</li> <li>• Azure kingfisher (<i>Ceyx azureus subsp. diemenensis</i>)</li> </ul> <p>Table 2 of Appendix A contains the full list of fauna species of conservation significance previously recorded within 5km radius of the site.</p>
<b>Flora</b>	<p>The Assessment identified two vegetation communities on site, mapped as dry <i>Eucalyptus amygdalina</i> coastal forest and woodland (DAC; TASVEG v3.0) and extra-urban miscellaneous (FUM). DAC is not listed as threatened under the Tasmanian <i>Nature Conservation Act 2002</i> (NCA).</p> <p>No flora species listed as threatened under the Tasmanian <i>Threatened Species Protection Act 1995</i> (TSPA) were detected during the field survey. A number of threatened flora species are, however, known to occur within 5km of the activity, including:</p> <ul style="list-style-type: none"> <li>• Seepage heath (<i>Epacris moscalianus</i>)</li> <li>• Curved riceflower (<i>Pimelea curviflora</i>)</li> <li>• Tailed spider orchid (<i>Caladenia caudate</i>)</li> </ul> <p>Table 1 of Appendix A contains the full list of flora species of conservation significance previously recorded within 5km radius of the site.</p>
<b>Local region</b>	
<b>Climate</b>	<p>The Forthside Research Station lists mean annual rainfall as 985mm. Mean maximum temperature 16.1°C and minimum 7.4°C. At 09:00hrs prevailing wind is from the southwest.<sup>2</sup></p>
<b>Surrounding land zoning, tenure and uses</b>	<p>Rural Resource.</p> <p>Private freehold to the south, with the balance Crown Land (permanent timber production zone) managed by Sustainable Timber Tasmania. Porcupine Hill Regional Reserve lies about 120m to the west and 560m to the south.</p>
<b>Proposed infrastructure</b>	
<b>Major equipment</b>	<p>Part B(1) of the EER states the following equipment will be used:</p> <ul style="list-style-type: none"> <li>• 30 t excavator</li> <li>• D8 bulldozer</li> <li>• Atlas Copco F8 drill rig</li> <li>• Cat 950 wheel loader</li> <li>• Trucks with dog trailers</li> <li>• Mobile crush and screen equipment</li> </ul>
<b>Inputs</b>	
<b>Water</b>	<p>Water for dust suppression and washing equipment.</p>

<sup>2</sup> The 15:00hrs wind speed vs direction plots are not listed.

<b>Energy</b>	Diesel for mobile plant and equipment.
<b>Other raw materials</b>	Blasting reagents and equipment as required.
<b>Wastes and emissions</b>	
<b>Liquid</b>	Stormwater runoff from extraction and stockpile areas.
<b>Atmospheric</b>	Dust from drilling and blasting, excavating, crushing and screening, mobile plant and traffic movements.
<b>Solid</b>	General refuse including food scraps, paper and packaging, machinery consumables. General inert wastes such as metal waste to be collected periodically.
<b>Controlled wastes</b>	Waste engine oil. Portable chemical toilet, used during crushing and screening campaigns, will generate sanitary waste.
<b>Noise</b>	From drilling and blasting, excavating, crushing and screening, mobile plant and traffic movements.
<b>Greenhouse gases</b>	The EER did not include information about greenhouse gases.
<b>Operations</b>	
<b>Proposal timetable</b>	The EER states the quarry is likely to operate for about nine out of every 12 months.
<b>Operating hours (ongoing)</b>	0700 to 1800 hours Monday to Friday 0800 to 1600 hours Saturday



**Figure 1:** General location plan (Figure 2 of the EER).



**Figure 2:** Mining plan showing mining detail and laydown areas (Figure 6 of the EER).

## 4 Need for the proposal and alternatives

According to Part B(4) of the EER, the Forthside location was selected because it is an existing extractive activity in an area with new business opportunities for the proponent. Intensification of use is necessary to meet new demand from the Devonport and Central Coast municipalities.

The EER did not contain any details concerning site alternatives, or the potential consequences of the development not proceeding.

## 5 Public and agency consultation

A summary of the public representations and government agency/body submissions is contained in Appendix 1 of this report.

Three public representations were received. The main issues raised in the representations included:

- Noise emissions
- Blasting impacts
- *Phytophthora cinnamomi* management

The EER was referred to a number of government agencies/bodies with an interest in the proposal. Responses were received from the following:

- Sustainable Timber Tasmania (*Phytophthora cinnamomi* management)

The following Divisions/areas of the Department of Primary Industries, Parks, Water and Environment also provided advice on the EER:

- Scientific Officer (Water), EPA Tasmania
- Regulatory Officer (Mining and extractive unit), EPA Tasmania
- Noise Specialist, EPA Tasmania
- Scientific Officer (Air unit), EPA Tasmania
- Aboriginal Heritage Tasmania (AHT)
- Policy and Conservation Advice Branch (PCAB), Natural and Cultural Heritage Division
- Parks and Wildlife Service (PWS)

The Supplement to the EER prepared by the proponent provides a response to each of the relevant environmental issues raised during public consultation.

## 6 Evaluation of environmental issues

EPA Tasmania has evaluated environmental issues considered relevant to the proposal. Details of this evaluation, along with the permit conditions required by the Director, are discussed below:

The following issues are discussed:

1. Flora, fauna and habitat
2. Weed management
3. Aquatic environment and stormwater
4. Air emissions
5. Noise emissions
6. Hazardous substances
7. Rehabilitation
8. Transport impacts

### General conditions

The following general conditions will be imposed on the activity:

- Access to and awareness of conditions and associated documents.
- Incident response.
- No changes without approval.
- Change of ownership.
- Complaints register.

<b>Issue 1: Flora, fauna and habitat</b>
<b>Description of potential impacts</b>
<p>Part B(2) of the EER estimates up to 90% of the planned mining area has previously been cleared or disturbed. A field survey (see Table 1, this report) identified two vegetation communities within the lease areas, dry <i>Eucalyptus amygdalina</i> coastal forest and woodland (DAC) and extra-urban miscellaneous (FUM). The EER describes the DAC as a poor quality example due to the soil type. About 7ha of DAC remains within the lease areas.</p> <p>Table 1, Appendix A (Flora and Fauna Assessment) of the EER contains the full list of flora species of conservation significance previously recorded within 5km radius of the site.</p> <p>The EER estimates 1.1ha of vegetation may be removed over the life of mine (LOM).<sup>3</sup> The proponent anticipates clearing up to 0.5ha within the first five years of intensified use.</p> <p>Uncontrolled disturbance or removal of vegetation has the potential to impact and degrade the biodiversity and natural values of The Land and surrounding area.</p>
<b>Management measures proposed in EER</b>
No specific commitments regarding flora and fauna were included in the EER.
<b>Public and agency comment</b>
<p>The following comments regarding flora and fauna were raised during the representation period:</p> <ul style="list-style-type: none"> <li>EER (Figure 3) suggests existing vegetation will not be disturbed in the eastern portion of 8M/2015, however Figure 6 suggests otherwise. In the event vegetation is removed in this easterly portion of 8M/2015, representor's residence will potentially be exposed to quarry workings.</li> </ul> <p>The proponent prepared a Supplement to the EER (Supplement) to address matters raised during the representation period. Details provided in the Supplement, including Figure 1, clarified the proposed area of disturbance as 1.1ha. With regard to vegetation in the eastern portion of 8M/2015, the Supplement states the proposed minor area (0.3ha) of vegetation removal may, over time, expose the upper benches of the quarry to the representor's residence in the southwest. According to Figures 2 and 3 of the Supplement, line of sight to quarry workings is not anticipated before ten years of extractive activity.</p>
<b>Evaluation</b>
<p>Advice from PCAB confirmed the flora and fauna survey was valid.</p> <p>It is agreed the areas of DAC surrounding the extractive activity are of better quality than those existing on the site, and will not be affected by quarrying. Removal of approximately 1.1 of 7ha of DAC over the LOM is unlikely to compromise the biodiversity and natural values of the site.</p> <p>It is also agreed that quarrying is unlikely to affect threatened flora species identified within a 5km radius of the site, in most instances due to no viable habitat occurring on site.</p> <p>With reference to anticipated removal of vegetation from the 'easterly portion' of 8M/2015, it is accepted that the loss of 0.3ha may expose the quarry's upper benches to the representor's dwelling in the southwest. However, given this is not anticipated to occur for a substantial period, worked-out upper benches are likely to have been progressively rehabilitated to revegetated slopes. As such, no specific conditions to manage flora and fauna are considered necessary.</p>
<b>Conclusion</b>
No permit conditions are considered necessary.

<sup>3</sup> The EER states 1.7ha may be removed, 0.6ha of which occurs on the level 2 landfill area within lease 1704P/M and is not part of this proposal or assessment.

<b>Issue 2: Weed and disease management</b>
<b>Description of potential impacts</b>
<p>The Flora and Fauna Assessment identified a number of weed species on site, including declared weeds Spanish heath (<i>Erica lusitanica</i>) and Pampas grass (<i>Cortadeira</i> species) and environmental weeds Radiata pine (<i>Pinus radiata</i>) and Blue periwinkle (<i>Vinca major</i>). Cinnamon root rot fungus (<i>Phytophthora cinnamomi</i>; PC) has been confirmed at two locations on site. Weeds and diseases have the potential to impact and degrade the biodiversity and natural values of The Land and surrounding area.</p>
<b>Management measures proposed in EER</b>
<p>Part D – Management Commitments of the EER includes the following commitment regarding weed and disease management:</p> <p><i>Commitment 4</i> – Ensure weed management is conducted in accordance with corporate weed management strategy.</p> <p>Part C(1) of the EER states the proponent has a management plan it implements to control weeds and pathogens across its quarry operations.</p>
<b>Public and agency comment</b>
<p>The following comments regarding weed and disease management were raised during the representation period:</p> <ul style="list-style-type: none"> <li>• Parks &amp; Wildlife Service (PWS) suggested the recommendations within section 4.1 of the North Barker Ecosystem Services (NBES) report (EER, Appendix A) relating to weed and disease management be included within the EER Part D - Management Commitments.</li> <li>• PWS requested a copy of the proponent’s weed and PC management plan.</li> <li>• Sustainable Timber Tasmania (STT) recommended measures are applied to manage PC, including appropriate sediment control and wash down procedures.</li> </ul> <p>The proponent prepared a Supplement to the EER (Supplement) to address matters raised during the representation period. Management commitments were amended consistent with PWS recommendation, and the proponent stated it will provide EPA with a copy of its updated weed and PC management plan.</p> <p>Appendix 2, Table 2 of this report details the reasons why additional information was not required for the remaining matter (from STT).</p>
<b>Evaluation</b>
<p>The quarry’s close proximity to native forest and agricultural activities, and the presence of a number of weed species and PC on the site, means effective weed and disease control is necessary. Implementing effective weed and pathogen control (commitment 4) is appropriate and made explicit by standard condition <b>OP1</b> (weed and disease management plan). The Plan must contain, but not be limited to, measures to identify, record, map, control and monitor weeds, including an appropriate weed spraying program. In addition, the Plan must contain measures to minimise the likelihood of introducing and spreading PC to and across the site. The Plan must be submitted to the Director EPA within three months of the condition taking effect.</p> <p>Ensuring vehicles which access and/ or operate at the quarry are clean and free of weed and disease material is necessary to limit the introduction and spread of weeds and disease across and from the site. Consistent with STT’s recommendation above, standard condition <b>FF1</b> (wash down guidelines) is imposed to require the washing of all machinery prior to entry to The Land, as per DPIPWE’s Wash down Guidelines.</p>
<b>Conclusion</b>
<p>The proponent will be required to comply with the following conditions:</p> <p><b>FF1</b> Wash down guidelines</p> <p><b>OP1</b> Weed and disease management plan</p>

The relevant EER commitment is included in Schedule 3 of the permit at Other Information:  
**O13** Commitments

<b>Issue 3: Aquatic environment and stormwater</b>
<b>Description of potential impacts</b>
<p>As indicated at Table 1 of this report, site drainage to the south reports to Goldie Creek and drainage to the north reports to an unnamed tributary of Goldie Creek. Goldie Creek discharges into the Forth River downstream of the mining leases. All drainage from the site travels via a network of settling ponds. The EER notes the drainage network is often dry during summer. Figure 3 of the EER illustrates site drainage.</p> <p>Ground disturbance from quarrying may mobilise and transfer sediments to local waterways in stormwater flows. These flows may also cause erosion and scouring of local waterways.</p>
<b>Management measures proposed in EER</b>
<p>Part D – Management Commitments of the EER includes the following commitment regarding stormwater management:</p> <p><i>Commitment 10</i> - Inspect and clean out if required the permitted settling ponds.</p> <p>Table 4 of the EER lists and provides coordinates for the proposed water (discharge) monitoring locations.</p>
<b>Public and agency comment</b>
<p>EPA Tasmania's Scientific Officer (Water) provided the following comment:</p> <ul style="list-style-type: none"> <li>• Supports the commitments made concerning use of the QCoP, including in relation to benching, progressive rehabilitation and sediment and weed control. Standard conditions are recommended to manage these aspects.</li> <li>• The geology of the resource is such that there should not be any acid and metalliferous drainage risks for this site.</li> </ul> <p>The following comment regarding sediment control was raised during the representation period:</p> <ul style="list-style-type: none"> <li>• STT recommended measures are applied to manage PC, including appropriate sediment control and wash down procedures.</li> </ul> <p>Appendix 2, Table 2 of this report details the reasons why additional information was not required for the above matter.</p>
<b>Evaluation</b>
<p>The quarry's close proximity to Goldie Creek, its steep, erodible slopes and substantial areas of disturbed, unrehabilitated ground means effective stormwater control and management is necessary. Standard conditions <b>SW1</b> (perimeter drains), <b>SW2</b> (stormwater) and <b>SW3</b> (design and maintenance of settling ponds) are imposed to exclude stormwater runoff, control sediment and maintain adequate pond capacity at the quarry, and are consistent with advice provided at <b>Public and agency comment</b> above. Provided the proponent complies with these conditions, it is considered the intensification of use will have a low likelihood of causing environmental harm. While the proponent's intent to monitor water quality at two potential discharge locations on The Land is supported, explicit monitoring conditions are not considered necessary given the imposition of <b>SW1</b>, <b>SW2</b> and <b>SW3</b>. In addition, the infrequent nature and comparatively low volume of stormwater flows mean explicit monitoring conditions are not warranted.</p>
<b>Conclusion</b>
<p>The proponent will be required to comply with the following conditions:</p> <p><b>SW1</b> Perimeter drains</p> <p><b>SW2</b> Stormwater</p> <p><b>SW3</b> Design and maintenance of settling ponds</p> <p>The relevant EER commitment is included in Schedule 3 of the permit at Other Information:</p> <p><b>OI1</b> Commitments</p>

<b>Issue 4: Air emissions</b>
<b>Description of potential impacts</b>
<p>Part C(4) of the EER identifies the following potential sources of dust associated with quarrying:</p> <ul style="list-style-type: none"> <li>• Stripping of topsoil</li> <li>• Ripping and dozing of material</li> <li>• Crushing</li> <li>• Blasting</li> <li>• Stockpiling and loading</li> <li>• Road use around the quarry</li> </ul> <p>The EER identifies the nearest sensitive receptor as a residence 650m north of the site off Forthside Rd. The proponent concludes quarrying is unlikely to cause dust nuisance at nearby sensitive receptors.</p>
<b>Management measures proposed in EER</b>
<p>Part D – Management Commitments of the EER includes the following commitments regarding air emissions:</p> <p><i>Commitment 2</i> - Implement dust control measures when necessary to avoid environmental nuisance.</p> <p><i>Commitment 6</i> - Inclusion of 60km/h truck speed limit on Forthside Rd in company induction and driver’s handbook.</p> <p>Part C(4) of the EER also indicates the proponent will:</p> <ul style="list-style-type: none"> <li>• Conduct dust suppression during periods of elevated dust emissions from vehicle movements.</li> <li>• Restrict vehicle speeds to 30km/h on gravel surfaces.</li> <li>• Limit exhaust emissions from mobile plant by maintaining plant exhaust systems to manufacturer specifications.</li> </ul>
<b>Public and agency comment</b>
<p>EPA Tasmania’s Scientific Officer (Air) provided the following comment:</p> <ul style="list-style-type: none"> <li>• There is no history of complaints associated with the quarry. It is considered unlikely that fugitive dust from the quarry, or from truck transport of materials associated with it, will cause environmental nuisance off site.</li> </ul>
<b>Evaluation</b>
<p>Given the substantial distance between quarrying and the closest sensitive receptors, heavily vegetated local terrain and relatively high local rainfall, it is agreed dust associated with quarrying is unlikely to cause environmental nuisance. Nonetheless, the EER commitments and other management measures stated above are appropriate and supported. Conditions <b>A1</b> (control of dust emissions) and <b>A2</b> (covering of vehicles) are imposed to ensure dust emissions are controlled to the extent necessary to avoid environmental nuisance from quarry operations, including transport of products.</p> <p>Provided the proponent implements its proposed measures to control dust emissions, and complies with conditions <b>A1</b> and <b>A2</b>, then it is unlikely quarry operations will cause environmental (dust related) nuisance.</p>
<b>Conclusion</b>
<p>The proponent will be required to comply with the following conditions:</p> <p><b>A1</b> Control of dust emissions</p> <p><b>A2</b> Covering of vehicles</p> <p>The relevant EER commitments are included in Schedule 3 of the permit at Other Information:</p> <p><b>O11</b> Commitments</p>

<b>Issue 5: Noise emissions (including blasting)</b>
<b>Description of potential impacts</b>
<p>Crushing and screening of rock are expected to give rise to most day-to-day quarry noise, plus the movement of vehicles. Drill and blast events will also cause noise emissions.</p> <p>A Noise Survey report is included with the EER as Appendix B. The Survey uses measured ambient and background noise levels to calculate the likely noise levels at several locations around the extractive activity. The report concludes the 45 dB(A) daytime noise level criterion of the <i>Quarry Code of Practice 2017</i> (QCoP) is likely to be met at the nearest sensitive receptor when quarry equipment is operating.</p> <p>A Blast Management Plan was included with the EER as Appendix C. Predictions for air blast overpressure and ground vibration at three distances (400, 500 and 600 m) from a typical blast are provided in Table 6 of the EER. All results are less than the blasting criteria recommended in the QCoP.</p> <p>Noise from extractive operations has the potential to cause environmental nuisance off-site if not appropriately managed at the source.</p>
<b>Management measures proposed in EER</b>
<p>Part D – Management Commitments of the EER includes the following commitments regarding noise emissions and blasting:</p> <p><i>Commitment 5</i> - Ensure sensitive receptors are advised of blasting between 24hrs and seven days before a blast with blast time and date.</p> <p><i>Commitment 9</i> - Monitor all blasts.</p>
<b>Public and agency comment</b>
<p>The following comments regarding noise and blasting impacts were raised during the representation period:</p> <ul style="list-style-type: none"> <li>• The noise survey (EER, Appendix B) does not consider the operation of a drill rig, equipment necessary for blasting.</li> <li>• The estimate for air blast over pressure (114 dBL) at 420m from the quarry, the location of a rural residence, is close to the QCoP's acceptable standard (115 dBL).</li> <li>• The blast exclusion zone illustrated in Blast Management Plan (EER, Appendix C) incorporates part of representor's property, and shows a blast monitor will be located on representor's property during blasts. Representor opposes blasting on 8M/2015.</li> <li>• It was noted that blasting, crushing and screening are proposed to occur within the separation distances recommended in the QCoP.</li> <li>• Further detail concerning blast design and frequency was requested.</li> <li>• One representor opposed blasting altogether, and any unauthorised access by blast monitor.</li> </ul> <p>The proponent prepared a Supplement to address matters raised during the representation period. Information provided in the Supplement shows:</p> <ul style="list-style-type: none"> <li>• The drill rig<sup>4</sup> may produce a noise level of 62 dB(A) at the nearest dwelling. This level may be reduced to about 57 dB(A) by constructing a 4m high berm at the quarry lip, southwest boundary.</li> <li>• Blast design for the initial blast will allow a greater margin to the QCoP air blast overpressure limit, by increasing the stemming height.</li> <li>• A blast monitor is no longer located on the representor's land. An alternative monitoring point is proposed, about 420m northwest of the likely blast areas near Perrys Rd.</li> </ul> <p>With respect to the last three points, the proponent was not required to provide additional information, since:</p>

<sup>4</sup> Atlas Copco T45 model.

- The DPEMP contained sufficient information for the Board's assessment; and
- Access (by or on behalf of the proponent) to property in other ownership, for the purpose of blast monitoring, is a matter outside the purview of the Board.

## Evaluation

Consistent with the advice of EPA Tasmania's Noise Specialist, the methodology used to calculate noise levels at nearby sensitive receptors is considered acceptable. As such, the estimated noise levels of the Noise Survey are accepted as relevant for the purposes of assessing potential impacts at noise sensitive receptors.

The QCoP's acceptable standard (level of noise) applies to the proposed intensification of use. Condition **N1** (noise emission limits) is therefore imposed to specify the noise limits which apply for daytime, evening and night time periods. The EPA Noise Specialist considered the information provided in the Supplement concerning drill rig noise and concurred that the calculated level at the curtilage of the nearest dwelling was of the likely order of magnitude. Given the drill rig's (estimated) elevated noise level, the proponent must conduct a noise survey in accordance with condition **N3** during the first occasion of drilling to demonstrate that drilling can occur without compromising the noise limit specified in condition **N2** (drilling noise emission limits). Another noise survey is also considered necessary within six months of the permit taking effect, to demonstrate that the full operation, excluding drilling, can comply with noise limits specified in **N1**. The specified noise limit for drilling, 54 dB(A) when measured at any noise sensitive premises in other ownership, is considered reasonable given the proposed infrequent nature of drilling (two occasions of approximately two days per year). Condition **N2** also restricts drilling hours to 08:00 -16:00hrs Monday – Friday. Condition **N4** outlines the required noise survey method and reporting requirements.

Given the proposed infrequent nature of drilling, erecting a 4m high berm (of unknown length) to mitigate several dB(A) drill noise, while a positive measure, appears to be a substantial investment for limited return. Given that (drilling and) blasting is essential in order to liberate material from part of The Land, notifying near neighbours of planned drilling events and, where necessary, restricting drilling hours are considered more effective means to limit the potential for environmental nuisance. Notification of drilling events is specified in condition **N6** (notification of drilling).

Confining other quarrying operations likely to cause noise, such as crushing and screening, to specific hours of operation (**N5**) will also mitigate against noise impacts. Consistent with the QCoP, hours of operation (excluding drilling) will be 07:00hrs and 18:00hrs weekdays and 08:00hrs and 16:00hrs Saturdays.

While there are a number of sensitive receptors within the QCoP's recommended separation distance (1 000m) for extractive activities where regular blasting occurs, blast modelling suggests the QCoP's acceptable standard for over pressure (115 dB for 95% of blasts) and ground vibration (5mm/s peak particle velocity for 95% of blasts) can be achieved at the closest residence using careful blast design. Furthermore, the infrequent nature of blasting (up to three per year) and favourable topographical shielding are likely to limit the magnitude of blasting impacts.

Consistent with the QCoP and commitments 5 and 9, conditions **B1** (blasting times), **B2** (blasting-noise and vibration limits), **B3** (notification of blasting) and **B5** (blast monitoring) are imposed to ensure blast events are appropriately managed and monitored to limit environmental harm. In addition, as several blasts each year are forecast, the proponent will be required to prepare and conduct blasts in accordance with a Blast Management Plan, as specified by standard condition **B4** (blast management plan).

The EPA Noise Specialist considered the information provided in the Supplement concerning blast design and concluded the increase in stemming height was likely to provide a greater margin to the QCoP air blast overpressure limit.

## Conclusion

The proponent will be required to comply with the following conditions:

- N1** Noise emission limits
- N2** Drilling noise emission levels
- N3** Noise survey requirements
- N4** Noise survey method and reporting requirements
- N5** Operating hours
- N6** Notification of drilling
- B1** Blasting times
- B2** Blasting – Noise and vibration limits
- B3** Notification of blasting
- B4** Blast Management Plan
- B5** Blast monitoring

The relevant EER commitments are included in Schedule 3 of the permit at Other Information:

- OI3** Commitments

<b>Issue 6: Hazardous substances</b>
<b>Description of potential impacts</b>
<p>According to Part C(10) of the EER, no fuels or oils will be stored on site. All fuel and oil will be transported to the activity as needed by light vehicle. No more than 420 L of hydrocarbons is expected on site at any one time.</p> <p>Chemicals for the purpose of weed treatment will be on site during the annual weed management program.</p> <p>No explosives will be stored on site.</p> <p>Potential for minor loss or spills of hazardous substances exists. Uncontrolled loss of hazardous substances such as hydrocarbons can infiltrate, contaminate and degrade surface and ground water and soil ecosystems.</p>
<b>Management measures proposed in EER</b>
<p>No specific commitments concerning hazardous substances were made.</p> <p>Part C(10) of the EER states all chemicals brought on to the site will be stored in a bund with a capacity 1.5 times greater than the amount delivered to the site. Part C(10) also states each vehicle is equipped with a hydrocarbon spill kit.</p>
<b>Public and agency comment</b>
<p>Nil.</p>
<b>Evaluation</b>
<p>Since hazardous materials such as diesel and oils will be used at the quarry to operate and maintain machinery, standard condition <b>H1</b> (storage and handling of hazardous materials) is required to ensure appropriate bunding and handling procedures are in place.</p> <p>While the risk of a hydrocarbon spill or leak is considered to be low, provision of an on-site hydrocarbon spill kit as stated is appropriate and imposed by standard condition <b>H2</b>.</p> <p>As mobile plant is likely to be fuelled from containers located on utility vehicles, standard condition <b>H3</b> (handling of hazardous materials - mobile) is imposed.</p> <p>Provided that <b>H1</b>, <b>H2</b> and <b>H3</b> are observed, then the likelihood of contaminating local water and land resources is considered unlikely.</p>
<b>Conclusion</b>
<p>The proponent will be required to comply with the following standard conditions:</p> <p><b>H1</b> Storage and handling of hazardous materials</p> <p><b>H2</b> Spill kits</p> <p><b>H3</b> Handling of hazardous materials - mobile</p> <p>The following information is also provided in Schedule 3 of the permit at Information:</p> <p><b>LO2</b> Storage and handling of dangerous goods, explosives and dangerous substances</p>

<b>Issue 7: Rehabilitation</b>
<b>Description of potential impacts</b>
<p>Part B(2.6) of the EER estimates a LOM of around 30 years at a mining intensity of 30 000 tpa. Part C(14) of the EER indicates the quarry's existing open area is about 8.8ha. The proponent intends to progressively rehabilitate the upper slopes of the pit to restrict the open area to a maximum 9ha.</p> <p>Part C(14) of the EER summarises the anticipated rehabilitation approach, generally in accordance with the principles and measures recommended in the QCoP. The final land form is intended to be consistent with the existing surrounding land uses of forestry and agriculture. Unchecked or abandoned quarrying activities have potential to cause ongoing impacts, such as contamination of surface and ground waters.</p>
<b>Management measures proposed in EER</b>
<p>Part D – Management Commitments of the EER includes the following commitment regarding rehabilitation:</p> <p><i>Commitment 1</i> - Stockpile any top soil removed for rehabilitation.</p> <p><i>Commitment 2</i> - Quarry operations and rehabilitation carried out in accordance with <i>Quarry Code of Practice – 3rd Edition – May 2017</i>.</p>
<b>Public and agency comment</b>
<p>The following comments regarding rehabilitation was raised during the representation period:</p> <ul style="list-style-type: none"> <li>• <i>Phytophthora cinnamomi</i> (PC) has been detected at the quarry site. Representor recommends importation of fill and similar materials, potential sources of PC, not be permitted for the purposes of site rehabilitation.</li> <li>• A substantial discrepancy between the existing permitted and proposed area of disturbance was noted.</li> </ul>
<b>Evaluation</b>
<p>The general approach to progressive rehabilitation and rehabilitation on permanent closure of the extractive activity outlined in the EER is consistent with the rehabilitation principles and suggested measures stated in the QCoP.</p> <p>Progressive rehabilitation of a working quarry (to limit its disturbed area) is an expectation under the QCoP. Standard condition <b>DC3</b> is imposed to require progressive rehabilitation and defines a maximum allowable disturbed (or open) area at any one time of nine hectares.<sup>5</sup></p> <p>Given the anticipated quarry life of about 30 years, it is appropriate to require a draft decommissioning and rehabilitation plan (DRP) within 60 days of the Director being notified of the planned cessation of the activity (<b>DC5</b>).</p> <p>It is appropriate that all stripped materials (e.g. soils and overburden) are retained for rehabilitation purposes. Consistent with commitment 1, this requirement is reflected in condition <b>DC2</b>.</p> <p>Other decommissioning and rehabilitation requirements considered necessary for this activity are standard conditions <b>DC1</b> (Notification of cessation), <b>DC4</b> (Temporary suspension of activity) and <b>DC6</b> (rehabilitation following cessation).</p> <p>With respect to importation of fill and risk of introducing PC, consistent with the proponent's statement (EER, Part C – 14, p22), any materials imported to the site for the purposes of rehabilitation, including soils and similar materials, must first be assayed and determined as free from PC. This requirement will be met by measures included in the decommissioning and rehabilitation plan, required by <b>DC5</b>.</p> <p>Provided these conditions are complied with, the likelihood of enduring material environmental harm from quarry closure is unlikely.</p>

<sup>5</sup> Consistent with maximum open area specified by MRT.

**Conclusion**

The proponent will be required to comply with the following conditions:

- DC1** Notification of cessation
- DC2** Stockpiling of surface soil
- DC3** Progressive rehabilitation
- DC4** Temporary suspension of activity
- DC5** Decommissioning and rehabilitation plan requirements
- DC6** Rehabilitation following cessation

The relevant EER commitments are included in Schedule 3 of the permit at Other Information:

- OI3** Commitments

## 7 Other issues

<b>Issue 8: Transport impacts</b>
<b>Description of potential impacts</b>
<p>A Traffic Impact Assessment (TIA) was included with the EER as Appendix D. The TIA recommends a number of measures to improve sight lines, road safety and protect road infrastructure including:</p> <ul style="list-style-type: none"><li>• Managing vegetation growth to maximise sight lines where possible</li><li>• Raising the bi-directional hazard sight board opposite the Bellamy Rd turnoff to improve its visibility as vehicles drive west over the crest.</li><li>• Extending the guardrail at the right-angled bend to protect the electricity pole from vehicles approaching the right-angled bend on Forthside Rd north of the Forthside Rd/Bellamy Rd intersection.</li></ul> <p>The TIA concludes there is no evidence to demonstrate the proposed increase to trucking activity will increase safety issues beyond those inherent with the existing road design. Vehicle movements to/ from the site may degrade the acoustic and atmospheric amenity of the local neighbourhood without suitable controls.</p>
<b>Management measures proposed in EER</b>
<p>Part D – Management Commitments of the EER includes the following commitment regarding traffic:</p> <p><i>Commitment 7</i> - Install no engine brake signs on Forthside Rd (with permission of the Devonport City Council).</p>
<b>Public and agency comment</b>
<p>The following comment regarding transport was raised during the representation period:</p> <ul style="list-style-type: none"><li>• A concern that the condition of Forthside Road is not conducive to safe vehicle movements with intensified traffic activity from the quarry.</li></ul>
<b>Evaluation</b>
<p>Road maintenance and adjustments (including managing verge vegetation) fall within the purview of Council. The conditions imposed for operating hours (<b>N5</b>), covering of loads (<b>A2</b>) and maintaining a complaints register (<b>G5</b>) are expected to reduce the risk of transport-related nuisance at nearby residential dwellings. Further restrictions to vehicle movements related to quarry operations are not considered necessary.</p>
<b>Conclusion</b>
<p>No specific conditions relating to transport are considered necessary.</p>

## 8 Report conclusions

This assessment has been based on the information provided by the proponent, Treloar Transport Pty Ltd, in the permit application, the case for assessment (the EER) and Additional Information (the Supplement to the EER).

This report incorporates specialist advice provided by EPA Tasmania scientific specialists and regulatory staff, other Divisions of DPIPWE and other government agencies, and has considered issues raised in public submissions.

It is concluded that:

1. the RMPS and EMPCS objectives have been duly and properly pursued in the assessment of the proposal;
2. the assessment of the proposed activity has been undertaken in accordance with the Environmental Impact Assessment Principles; and
3. the proposed activity is capable of being managed in an environmentally acceptable manner such that it is unlikely that the objectives of the *Environmental Management and Pollution Control Act 1994* (the RMPS and EMPCS objectives) would be compromised, provided that the Permit Conditions - Environmental No. 9697 appended to this report are imposed and duly complied with.

The environmental conditions appended to this report are a new set of operating conditions for the entire, intensified activity that will supersede the existing permit conditions.

## 9 Report approval

Environmental Assessment Report and conclusions, including permit conditions, adopted:



*Wes Ford*

**DIRECTOR, ENVIRONMENT PROTECTION AUTHORITY**

**Acting under delegation from the Board of the Environment Protection Authority**

Date: 12 April 2018

## 10 References

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Urban Forest Consultancy Pty Ltd; *Porcupine Hill Quarry Environmental Effects Report* (dated 14/12/2017), Treloar Transport Pty Ltd, Sheffield, Tasmania.

Urban Forest Consultancy Pty Ltd; *Porcupine Hill Quarry Supplement to Environmental Effects Report* (dated 27/03/2018), Treloar Transport Pty Ltd, Sheffield, Tasmania.

# 11 Appendices

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Appendix 1 Summary of public and agency submissions

Appendix 2 Permit conditions

## Appendix 1 Summary of public and agency submissions

In the following tables, EER means *Forthside – Porcupine Hill quarry* (Urban Forest Consultancy Pty Ltd) dated 14/12/2017.

**TABLE 1: ADDITIONAL INFORMATION REQUIRED BY THE EPA BOARD**

Representation No./ Agency	EER section no.	EER Page no.	Comments and issues	Additional information required
1	Part C; 1	13	EER (Figure 3) suggests existing vegetation will not be disturbed in the eastern portion of 8M/2015, however Figure 6 suggests otherwise. In the event vegetation is removed in this easterly portion of 8M/2015, representor's residence will potentially be exposed to quarry workings.	Clarify the area of vegetation likely to be disturbed on the Land over the life of mine.
1 & 2	Part C; 7	19-20	Blast exclusion zone illustrated in Blast Management Plan (EER, Appendix C) incorporates part of representor's property, and shows a blast monitor will be located on representor's property during blasts. Representor against blasting on 8M/2015.	Indicate whether or not the blast exclusion zone can be modified (e.g. by changes to blast design) to avoid the need for a blast monitor on representor's property/minimise potential blasting impacts to representor's property.
EPA Tasmania			The noise survey (EER, Appendix B) does not consider the operation of a drill rig, equipment necessary for blasting.	Provide information to demonstrate that operation of a drill rig on the Land can comply with the acceptable standard for level of noise stated in the <i>Quarry Code of Practice 2017</i> (QCoP) at any sensitive receptors within a 500m radius of the quarry.
			The estimate for air blast over pressure (114 dBL) at 420m from the quarry, the location of a rural residence, is close to the QCoP's acceptable standard (115 dBL).	Provide blast design details for the initial blast that will allow a greater margin to the QCoP air blast overpressure limit.

**TABLE 2: OTHER MATTERS RAISED DURING THE PUBLIC CONSULTATION PERIOD**

Representation No./ Agency	EER section no.	EER Page no.	Comments and issues	Further Info requested [yes/no]	EPA Comments
1	Part B; 1	5	Representor prefers hours of operation (Saturday) 08:00 – 12:00hrs.	N	Proposed operating hours (Saturday) conform with period stated in (QCoP).
			Representor requests clarification of annual production figure.	N	EER (Part B; 1, p5) states the proposed (maximum) annual production amount.
DPIPWE's Policy and Conservation Advice Branch (PCAB)	Part C; 1	13	Will proponent/quarrying be confined to the 'mining plan final' illustrated in the EER, Figure 5?	Y	Clarify the extent of the quarry footprint at end of mine life.
			Representor recommends weed and disease management at the site conform to the measures outlined in the QCoP.	N	A condition to require preparation and implementation of a weed and disease management plan is anticipated.  A condition to require cleaning of machinery in accordance with the Department of Primary Industries, Parks, Water and Environment's (DPIPWE's) <i>Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania</i> , dated March 2015, is anticipated
			PCAB states it has no concerns regarding threatened flora, fauna and native vegetation. PCAB supports the proponent's intent to implement and maintain a weed and hygiene management plan.	N	DPEMP contains sufficient information for the Board's assessment.
			STT recommends measures are applied to manage <i>Phytophthora cinnamomi</i> , including appropriate sediment control and washdown procedures.	N	Conditions to manage <i>P. cinnamomi</i> , such as sediment control and cleaning of machinery, are anticipated.
Sustainable Timber Tasmania (STT)			PWS suggested the recommendations within section 4.1 of the North Barker Ecosystem Services (NBES) report (EER, Appendix A) relating to weed and disease management be	Y	Consider including the recommendations relating to weed and disease management in section 4.1 of the NBES report as management commitments (EER, Part 4).
Parks & Wildlife Service (PWS)					

			included within the EER Part D - Management Commitments. PWS requests a copy of the proponent's weed and <i>Phytophthora cinnamomi</i> management plan.		Consider providing PWS with a copy of the proponent's <i>Phytophthora cinnamomi</i> management plan.
1	Part C; 7	19-20	Representor notes blasting, crushing and screening are proposed to occur within the separation distances recommended in the QCoP. Representor also notes there is no history of blasting, crushing and screening at the quarry. Representor suggests proponent implement a number of measures to mitigate and control noise emissions from quarry operations (including blasting), as per parts 6 (6.6.1) and 7 (7.2.2.4, 7.2.3, 7.3.3 and 7.4.3) of the QCoP.	Y	Given the representor's residence occurs within the QCoP's recommended (minimum) separation distances for blasting, crushing and screening, discuss additional measures that can be applied to mitigate and control quarry noise and blasting impacts.
			Representor requests further detail concerning blast design and frequency.	N	EER (Part B; 1) states blasting is expected up to three times each year. Proposed blast design is outlined in Blast Management Plan (EER, Appendix C).
			Representor objects to blasting, and any unauthorised access by blast monitor.	N	A number of standard conditions regarding the management (including monitoring) of blasts are anticipated. Access (by or on behalf of the proponent) to property in other ownership, for the purpose of blast monitoring, is a matter outside the purview of the Board.
2					
1	Part C; 14	22	Representor notes <i>Phytophthora cinnamomi</i> has been detected at the quarry site. Representor recommends importation of fill and similar materials, potential sources of <i>P. cinnamomi</i> , is not permitted for the purposes of site rehabilitation.	N	A condition to preclude importation of fill and similar materials to the quarry site is anticipated.
Mineral Resources Tasmania (MRT)			MRT notes a substantial discrepancy between the permitted and proposed area of disturbance.	Y	Clarify the proposed maximum area of disturbance at the quarry at any one time.
3	Part C; 8	21	Representor concerned that the condition of Forthside Road is not suited to safe vehicle	N	Road maintenance and adjustments fall within the purview of Council.

			movements with intensified traffic activity from the quarry.		
1	Part E	23	Representor questions the extent to which proponent has engaged in consultation about intensification of use of quarry.	N	EER (Part E) states proponent has contacted local residents about the proposal.

**Appendix 2 Permit conditions - Environmental**

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**PERMIT PART B**  
**PERMIT CONDITIONS - ENVIRONMENTAL No. 9697**

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Issued under the *Environmental Management and Pollution Control Act 1994*

Activity:           **The operation of a quarry (ACTIVITY TYPE: Crushing, grinding, milling or separating into different sizes (rocks, ores or minerals))  
PORCUPINE HILL TAS 7315**

The above activity has been assessed as a level 2 activity under the *Environmental Management and Pollution Control Act 1994*.

Acting under Section 25(5)(a)(i) of the EMPCA, the Board of the Environment Protection Authority has required that this Permit Part B be included in any Permit granted under the *Land Use Planning and Approvals Act 1993* with respect to the above activity.

Municipality:                   **DEVONPORT**  
Permit Application Reference: **DA2017/0169**  
EPA file reference:           **252182**

Date conditions approved:           12 April 2018

Signed:



DELEGATE FOR THE BOARD OF THE ENVIRONMENT  
PROTECTION AUTHORITY

## DEFINITIONS

Unless the contrary appears, words and expressions used in this Permit Part B have the meaning given to them in **Schedule 1** of this Permit and in the EMPCA. If there is any inconsistency between a definition in the EMPCA and a definition in this Permit Part B, the EMPCA prevails to the extent of the inconsistency.

## ENVIRONMENTAL CONDITIONS

The person responsible for the activity must comply with the conditions contained in **Schedule 2** of this Permit Part B.

## INFORMATION

Attention is drawn to **Schedule 3**, which contains important additional information.

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### *Attachments*

Attachment 1: The Land (modified: 21/03/2018 17:35).....	1 page
Attachment 2: Table of commitments (modified: 26/03/2018 14:00).....	1 page

## Schedule 1: Definitions

In this Permit Part B:-

**18,750 cubic metres per year** is deemed to be equivalent to 30,000 tonnes per year.

**Aboriginal Relic** has the meaning described in section 2(3) of the *Aboriginal Heritage Act 1975*.

**Activity** means any environmentally relevant activity (as defined in Section 3 of EMPCA) to which this document relates, and includes more than one such activity.

**Authorized Officer** means an authorized officer under section 20 of EMPCA.

**Best Practice Environmental Management** or 'BPEM' has the meaning described in Section 4 of EMPCA.

**Control Location (Noise)** means a location chosen to represent the general ambient sound without contribution from noise sources at the activity.

**Director** means the Director, Environment Protection Authority holding office under Section 18 of EMPCA and includes a person authorised in writing by the Director to exercise a power or function on the Director's behalf.

**DRP** means Decommissioning and Rehabilitation Plan.

**EMPCA** means the *Environmental Management and Pollution Control Act 1994*.

**Environmental Harm** and **Material Environmental Harm** and **Serious Environmental Harm** each have the meanings ascribed to them in Section 5 of EMPCA.

**Environmental Nuisance** and **Pollutant** each have the meanings ascribed to them in Section 3 of EMPCA.

**Environmentally Hazardous Material** means any substance or mixture of substances of a nature or held in quantities which present a reasonably foreseeable risk of causing serious or material environmental harm if released to the environment and includes fuels, oils, waste and chemicals but excludes sewage.

**Full operation** includes extraction, crushing, screening and product transport activities.

**Noise Sensitive Premises** means 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.

**Person Responsible** is any person who is or was responsible for the environmentally relevant activity to which this document relates and includes the officers, employees, contractors, joint venture partners and agents of that person, and includes a body corporate.

**Stormwater** means water traversing the surface of the land as a result of rainfall.

**Tasmanian Noise Measurement Procedures Manual** means the document titled *Noise Measurement Procedures Manual*, by the Department of Environment, Parks, Heritage and the Arts, dated July 2008, and any amendment to or substitution of this document.

**The Land** means the land on which the activity to which this document relates may be carried out, and includes: buildings and other structures permanently fixed to the land, any part of the land covered with water, and any water covering the land. The Land falls within the area defined by:

- 1 Property id (PID) 2515235 and 6382521 and certificate of title 242032/1; and
- 2 as further delineated at Attachment 1 as extraction area.

**Washdown Guidelines** means the document titled *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania*, by the Department of Primary Industries, Parks, Water and Environment, dated March 2015, and any amendment to or substitution of this document.

## Schedule 2: Conditions

### Maximum Quantities

#### **Q1 Regulatory limits**

- 1 The activity must not exceed the following limits :
  - 1.1 18,750 cubic metres per year of rocks, ores or minerals processed.

### General

#### **G1 Access to and awareness of conditions and associated documents**

A copy of these conditions and any associated documents referred to in these conditions must be held in a location that is known to and accessible to the person responsible for the activity. The person responsible for the activity must ensure that all persons who are responsible for undertaking work on The Land, including contractors and sub-contractors, are familiar with these conditions to the extent relevant to their work.

#### **G2 Incident response**

If an incident causing or threatening environmental nuisance, serious environmental harm or material environmental harm from pollution occurs in the course of the activity, then the person responsible for the activity must immediately take all reasonable and practicable action to minimise any adverse environmental effects from the incident.

#### **G3 No changes without approval**

- 1 The following changes, if they may cause or increase the emission of a pollutant which may cause material or serious environmental harm or environmental nuisance, must only take place in relation to the activity if such changes have been approved in writing by the EPA Board following its assessment of an application for a permit under the *Land Use Planning and Approvals Act 1993*, or approved in writing by the Director:
  - 1.1 a change to a process used in the course of carrying out the activity; or
  - 1.2 the construction, installation, alteration or removal of any structure or equipment used in the course of carrying out the activity; or
  - 1.3 a change in the quantity or characteristics of materials used in the course of carrying out the activity.

#### **G4 Change of ownership**

If the owner of The Land upon which the activity is carried out changes or is to change, then, as soon as reasonably practicable but no later than 30 days after becoming aware of the change or intended change in the ownership of The Land, the person responsible must notify the Director in writing of the change or intended change of ownership.

#### **G5 Complaints register**

- 1 A public complaints register must be maintained and made available for inspection by an Authorized Officer upon request. The public complaints register must, as a minimum, record the following detail in relation to each complaint received in which it is alleged that environmental harm (including an environmental nuisance) has been caused by the activity:
  - 1.1 the date and time at which the complaint was received;
  - 1.2 contact details for the complainant (where provided);
  - 1.3 the subject-matter of the complaint;

- 1.4 any investigations undertaken with regard to the complaint; and
  - 1.5 the manner in which the complaint was resolved, including any mitigation measures implemented.
- 2 Complaint records must be maintained for a period of at least 3 years.

### **Atmospheric**

#### **A1 Control of dust emissions**

Dust emissions from The Land must be controlled to the extent necessary to prevent environmental nuisance beyond the boundary of The Land.

#### **A2 Covering of vehicles**

Vehicles carrying loads containing material which may blow or spill must be equipped with effective control measures to prevent the escape of the materials from the vehicles when they leave The Land or travel on public roads. Effective control measures may include tarpaulins or load dampening.

### **Blasting**

#### **B1 Blasting times**

Blasting on The Land must take place only between the hours of 1000 hours and 1600 hours Monday to Friday. Blasting must not take place on Saturdays, Sundays or public holidays unless prior written approval of the Director has been obtained.

#### **B2 Blasting - noise and vibration limits**

- 1 Blasting on The Land must be carried out in accordance with blasting best practice environmental management (BPEM) principles, and must be carried out such that, when measured at the curtilage of any residence (or other noise sensitive premises) in other occupation or ownership, airblast overpressure and ground vibration comply with the following:
  - 1.1 for 95% of blasts, airblast overpressure must not exceed 115dB (Lin Peak);
  - 1.2 airblast overpressure must not exceed 120dB (Lin Peak);
  - 1.3 for 95% of blasts ground vibration must not exceed 5mm/sec peak particle velocity; and
  - 1.4 ground vibration must not exceed 10mm/sec peak particle velocity.
- 2 All measurements of airblast overpressure and peak particle velocity must be carried out in accordance with the methods set down in *Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration*, Australian and New Zealand Environment Council, September 1990.

#### **B3 Notification of blasting**

All residents within a 1 km radius of the activity must be notified on each occasion prior to blasting on The Land. This notification must be given at least 24 hours before such blasting is due to occur. In the event that the blast(s) cannot take place at the time specified, the responsible person must advise all those residents within 1 km of the activity of the revised time at which blasting will take place.

#### **B4 Blast monitoring**

- 1 Unless otherwise approved in writing by the Director, blast monitoring must be undertaken for each blast that occurs on The Land.
- 2 Blast monitoring must be carried out at location(s) agreed in writing by the Director.

- 3 In the event that ground vibration and/or airblast overpressure caused by a blast exceeds a limit imposed by these conditions, the Director must be notified within seven days of the blast, or as soon as is reasonable and practicable.
- 4 Blast monitoring records must be maintained for a period of at least two years and must be made available to an authorized officer upon request.

### **Decommissioning And Rehabilitation**

#### **DC1 Notification of cessation**

Within 30 days of becoming aware of any event or decision which is likely to give rise to the permanent cessation of the activity, the person responsible for the activity must notify the Director in writing of that event or decision. The notice must specify the date upon which the activity is expected to cease or has ceased.

#### **DC2 Stockpiling of surface soil**

Prior to commencement of extractive activities on any portion of The Land, surface soils must be removed in that portion of The Land to be disturbed by the conduct of the activity and stockpiled for later use in rehabilitation of The Land. Topsoil must be kept separate from other overburden and protected from erosion or other disturbance.

#### **DC3 Progressive rehabilitation**

Worked out or disused sections of The Land must be rehabilitated concurrently with extractive activities on other sections of The Land. Progressive rehabilitation must be carried out in accordance with the relevant provisions of the *Quarry Code of Practice*, unless otherwise approved in writing by the Director. The maximum disturbed area of land which may remain, at any time, without rehabilitation is nine hectares.

#### **DC4 Temporary suspension of activity**

- 1 Within 30 days of becoming aware of any event or decision which is likely to give rise to the temporary suspension of the activity, the person responsible for the activity must notify the Director in writing of that event or decision. The notice must specify the date upon which the activity is expected to suspend or has suspended.
- 2 During temporary suspension of the activity:
  - 2.1 The Land must be managed and monitored by the person responsible for the activity to ensure that emissions from The Land do not cause serious environmental harm, material environmental harm or environmental nuisance; and
  - 2.2 If required by the Director a Care and Maintenance Plan for the activity must be submitted, by a date specified in writing by the Director, for approval. The person responsible must implement the approved Care and Maintenance Plan, as may be amended from time to time with written approval of the Director.
- 3 Unless otherwise approved in writing by the Director, if the activity on The Land has substantially ceased for 2 years or more, rehabilitation of The Land must be carried out in accordance with the requirements of these conditions as if the activity has permanently ceased.

#### **DC5 DRP requirements**

Unless otherwise approved in writing by the Director, a Decommissioning and Rehabilitation Plan (DRP) for the activity must be submitted for approval to the Director within 60 days of the Director being notified of the planned cessation of the activity or by a date specified in writing by the Director. The DRP must be prepared in accordance with any guidelines provided by the Director.

**DC6 Rehabilitation following cessation**

- 1 Following permanent cessation of the activity, and unless otherwise approved in writing by the Director, The Land must be rehabilitated including:
  - 1.1 stabilisation of any land surfaces that may be subject to erosion;
  - 1.2 removal or mitigation of all environmental hazards or land contamination, that might pose an on-going risk of causing environmental harm; and
  - 1.3 decommissioning of any equipment that has not been removed.
- 2 Where a Decommissioning and Rehabilitation Plan (DRP) has been approved by the Director, decommissioning and rehabilitation must be carried out in accordance with that plan, as may be amended from time to time with written approval of the Director.

**Flora And Fauna****FF1 Washdown Guidelines**

Prior to entering the land, machinery must be washed in accordance with the Washdown Guidelines, or any subsequent revisions of that document.

**Hazardous Substances****H1 Storage and handling of hazardous materials**

- 1 Unless otherwise approved in writing by the Director, environmentally hazardous materials held on The Land must be:
  - 1.1 stored within impervious bunded areas, spill trays or other containment systems; and
  - 1.2 managed to prevent unauthorised discharge, emission or deposition of pollutants:
    - 1.2.1 to soils within the boundary of The Land in a manner that is likely to cause serious or material environmental harm;
    - 1.2.2 to groundwater;
    - 1.2.3 to waterways; or
    - 1.2.4 beyond the boundary of The Land.

**H2 Spill kits**

Spill kits appropriate for the types and volumes of materials handled on The Land must be kept in appropriate locations to assist with the containment of spilt environmentally hazardous materials.

**H3 Handling of hazardous materials - mobile**

- 1 Where mobile containment of environmentally hazardous materials is utilised for the fuelling or servicing of mobile or fixed plant on The Land, all reasonable measures must be implemented to prevent unauthorised discharge, emission or deposition of pollutants:
  - 1.1 to soils within the boundary of The Land in a manner that is likely to cause serious or material environmental harm;
  - 1.2 to groundwater;
  - 1.3 to waterways; or
  - 1.4 beyond the boundary of The Land.
- 2 Reasonable measures may include spill kits, spill trays/bunds or absorbent pads, and automatic cut-offs on any pumping equipment.

## **Noise Control**

### **N1 Noise emission limits**

- 1 Noise emissions from the activity when measured at any noise sensitive premises in other ownership and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
  - 1.1 45 dB(A) between 0700 hours and 1900 hours (Day time); and
  - 1.2 40 dB(A) between 1900 hours and 2200 hours (Evening time); and
  - 1.3 35 dB(A) between 2200 hours and 0700 hours (Night time).
- 2 Where the combined level of noise from the activity and the normal ambient noise exceeds the noise levels stated above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise levels by at least 5 dB(A).
- 3 The time interval over which noise levels are averaged must be 10 minutes or an alternative time interval specified in writing by the Director.
- 4 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the Tasmanian Noise Measurement Procedures Manual.
- 5 All methods of measurement must be in accordance with the Tasmanian Noise Measurement Procedures Manual.

### **N2 Drilling noise emission limits**

- 1 When drilling is undertaken, the noise emission limits imposed by these conditions will not be considered to be breached unless the noise emissions from the activity, when measured at any noise sensitive premises in other ownership and expressed as the equivalent continuous A-weighted sound pressure level, are audible and exceed 54 dB(A).
- 2 Unless otherwise approved in writing by the Director, drilling must not take place outside the hours of 0800 hours to 1600 hours, Monday to Friday.
- 3 Notwithstanding the above paragraph, drilling must not be carried out on Sundays and public holidays that are observed Statewide (Easter Tuesday excepted).

### **N3 Noise survey requirements**

- 1 Unless otherwise approved by the Director, a noise survey must be carried out:
  - 1.1 during the first instance of drilling on The Land; and
  - 1.2 within six (6) months of the date on which these conditions take effect and under full operation, excluding drilling; and
  - 1.3 at such other times as may reasonably be required by the Director by notice in writing.
- 2 A report containing and discussing the noise survey results must be submitted to the Director within 30 days of the survey occurring.

### **N4 Noise survey method and reporting requirements**

- 1 Noise surveys must be undertaken in accordance with a survey method approved in writing by the Director, as may be amended from time to time with written approval of the Director.
- 2 Without limitation, the survey method must address the following:
  - 2.1 measurements must be carried out at day, evening and night times (where applicable) at each location; and

- 2.2 measurement locations, and the number thereof, must be specified, with one location established as a control location (noise).
- 3 Measurements and data recorded during the survey must include:
  - 3.1 operational status of noise producing equipment and throughput of the activity;
  - 3.2 subjective descriptions of the sound at each location;
  - 3.3 details of meteorological conditions relevant to the propagation of noise;
  - 3.4 the equivalent continuous ( $L_{eq}$ ) and  $L_{1}$ ,  $L_{10}$ ,  $L_{50}$ ,  $L_{90}$  and  $L_{99}$  A-weighted sound pressure levels measured over a period of 10 minutes or an alternative time interval approved by the Director;
  - 3.5 one-third octave spectra over suitably representative periods of not less than 1 minute; and
  - 3.6 narrow-band spectra over suitably representative periods of not less than 1 minute.
- 4 A noise survey report must be forwarded to the Director within 30 days from the date on which the noise survey is completed.
- 5 The noise survey report must include the following:
  - 5.1 the results and interpretation of the measurements required by these conditions;
  - 5.2 a map of the area surrounding the activity with the boundary of The Land, measurement locations, and noise sensitive premises clearly marked on the map;
  - 5.3 any other information that will assist with interpreting the results and whether the activity is in compliance with these conditions and EMPCA; and
  - 5.4 recommendations of appropriate mitigation measures to manage any noise problems identified by the noise survey.

#### **N5 Operating hours**

- 1 Unless otherwise approved by the Director, activities associated with the extraction of rock, gravel, sand, clay or minerals, and loading of product, excluding drilling and blasting but including screening/crushing, must not be undertaken outside the hours of 0700 hours to 1800 hours on weekdays and 0800 hours to 1600 hours on Saturdays.
- 2 Notwithstanding the above paragraph, activities must not be carried out on public holidays that are observed Statewide (Easter Tuesday excepted).

#### **N6 Notification of drilling**

- 1 Prior to each instance of operating the drilling rig on The Land in accordance with the conditions of this permit, the Director, General Manager of the Devonport City Council and all sensitive receptors within a 500m radius of the boundary of The Land must be notified in writing of the intention to undertake drilling.
- 2 The notification must include a schedule specifying the dates on which drilling will occur.
- 3 The notification must be delivered at least 72 hours prior to the commencement of drilling.

### **Operations**

#### **OP1 Weed management**

- 1 Within three months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director, a Weed & Disease Management Plan must be submitted to the Director for approval. This requirement will be deemed to be satisfied only when the Director indicates in writing that the submitted document adequately addresses the requirements of this condition to his or her satisfaction.

- 2 The plan must be consistent with the Washdown Guidelines, or any subsequent revisions of that document.
- 3 The person responsible must implement and act in accordance with the approved plan.
- 4 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved plan or approves a new plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

### **Stormwater Management**

#### **SW1 Perimeter drains or bunds**

- 1 Perimeter cut-off drains, or bunds, must be constructed at strategic locations on The Land to prevent surface run-off from entering the area used or disturbed in carrying out the activity. All reasonable measures must be implemented to ensure that sediment transported along these drains, or bunds, remains on The Land. Such measures may include provision of strategically located sediment fences, appropriately sized and maintained sediment settling ponds, vegetated swales, detention basins and other measures designed and operated in accordance with the principles of Water Sensitive Urban Design.
- 2 Drains, or bunds, must have sufficient capacity to contain run-off that could reasonably be expected to arise during a 1 in 20 year rainfall event. Maintenance activities must be undertaken regularly to ensure that this capacity does not diminish.

#### **SW2 Stormwater**

- 1 Polluted stormwater that will be discharged from The Land must be collected and treated prior to discharge to the extent necessary to prevent serious or material environmental harm, or environmental nuisance.
- 2 Notwithstanding the above, all stormwater that is discharged from The Land must not carry pollutants such as sediment, oil and grease in quantities or concentrations that are likely to degrade the visual quality of any receiving waters outside the Land.
- 3 All reasonable measures must be implemented to ensure that solids entrained in stormwater are retained on The Land. Such measures may include appropriately sized and maintained sediment settling ponds or detention basins.
- 4 Stormwater discharged in accordance with this condition must not be directed to sewer without the approval of the operator of the sewerage system.

#### **SW3 Design and maintenance of settling ponds**

- 1 Sediment settling ponds must be designed and maintained in accordance with the following requirements:
  - 1.1 ponds must be designed to successfully mitigate reasonably foreseeable sediment loss which would result from a 1 in 20 year storm event;
  - 1.2 discharge from ponds must occur via a stable spillway that is not subject to erosion;
  - 1.3 all pond walls must be stable and treated with topsoil and vegetated or otherwise treated in such a manner as to prevent erosion; and
  - 1.4 sediment settling ponds must be periodically cleaned out to ensure that the pond design capacity is maintained. Sediment removed during this cleaning must be securely deposited such that sediment will not be transported off The Land by surface run-off.

## Schedule 3: Information

### Legal Obligations

#### **LO1 EMPCA**

The activity must be conducted in accordance with the requirements of the *Environmental Management and Pollution Control Act 1994* and Regulations thereunder. The conditions of this document must not be construed as an exemption from any of those requirements.

#### **LO2 Storage and handling of dangerous goods, explosives and dangerous substances**

**1** The storage, handling and transport of dangerous goods, explosives and dangerous substances must comply with the requirements of relevant State Acts and any regulations thereunder, including:

**1.1** *Work Health and Safety Act 2012* and subordinate regulations;

**1.2** *Explosives Act 2012* and subordinate regulations; and

**1.3** *Dangerous Goods (Road and Rail Transport) Act 2010* and subordinate regulations.

#### **LO3 Aboriginal relics requirements**

**1** The *Aboriginal Heritage Act 1975*, provides legislative protection to Aboriginal heritage sites in Tasmania regardless of site type, condition, size or land tenure. Section 14(1) of the Act states that; Except as otherwise provided in this Act, no person shall, otherwise than in accordance with the terms of a permit granted by the Minister on the recommendation of the Director of National Parks and Wildlife:

**1.1** destroy, damage, deface, conceal or otherwise interfere with a relic;

**1.2** make a copy or replica of a carving or engraving that is a relic by rubbing, tracing, casting or other means that involve direct contact with the carving or engraving;

**1.3** remove a relic from the place where it is found or abandoned;

**1.4** sell or offer or expose for sale, exchange, or otherwise dispose of a relic or any other object that so nearly resembles a relic as to be likely to deceive or be capable of being mistaken for a relic;

**1.5** take a relic, or permit a relic to be taken, out of this State; or

**1.6** cause an excavation to be made or any other work to be carried out on Crown land for the purpose of searching for a relic.

**2** If a relic is suspected and/or identified during works then works must cease immediately and the Tasmanian Aboriginal Land and Sea Council and the Aboriginal Heritage Tasmania be contacted for advice before work can continue. In the event that damage to an Aboriginal heritage site is unavoidable a permit under section 14 of the *Aboriginal Heritage Act 1975* must be applied for. The Minister may refuse an application for a permit, where the characteristics of the relics are considered to warrant their preservation.

**3** Anyone finding an Aboriginal relic is required under section 10 of the Act to report that finding as soon as practicable to the Director of National Parks and Wildlife or an authorized officer under the *Aboriginal Heritage Act 1975*. It is sufficient to report the finding of a relic to Aboriginal Heritage Tasmania to fulfil the requirements of section 10 of the Act.

#### **LO4 Change of responsibility**

If the person responsible for the activity ceases to be responsible for the activity, they must notify the Director in accordance with Section 45 of the EMPCA.

## **Other Information**

### **OI1 Notification of incidents under section 32 of EMPCA**

Where a person is required by section 32 of EMPCA to notify the Director of the release of a pollutant, the Director can be notified by telephoning 1800 005 171 (a 24-hour emergency telephone number).

### **OI2 Waste management hierarchy**

1 Wastes should be managed in accordance with the following hierarchy of waste management:

1.1 waste should be minimised, that is, the generation of waste must be reduced to the maximum extent that is reasonable and practicable, having regard to best practice environmental management;

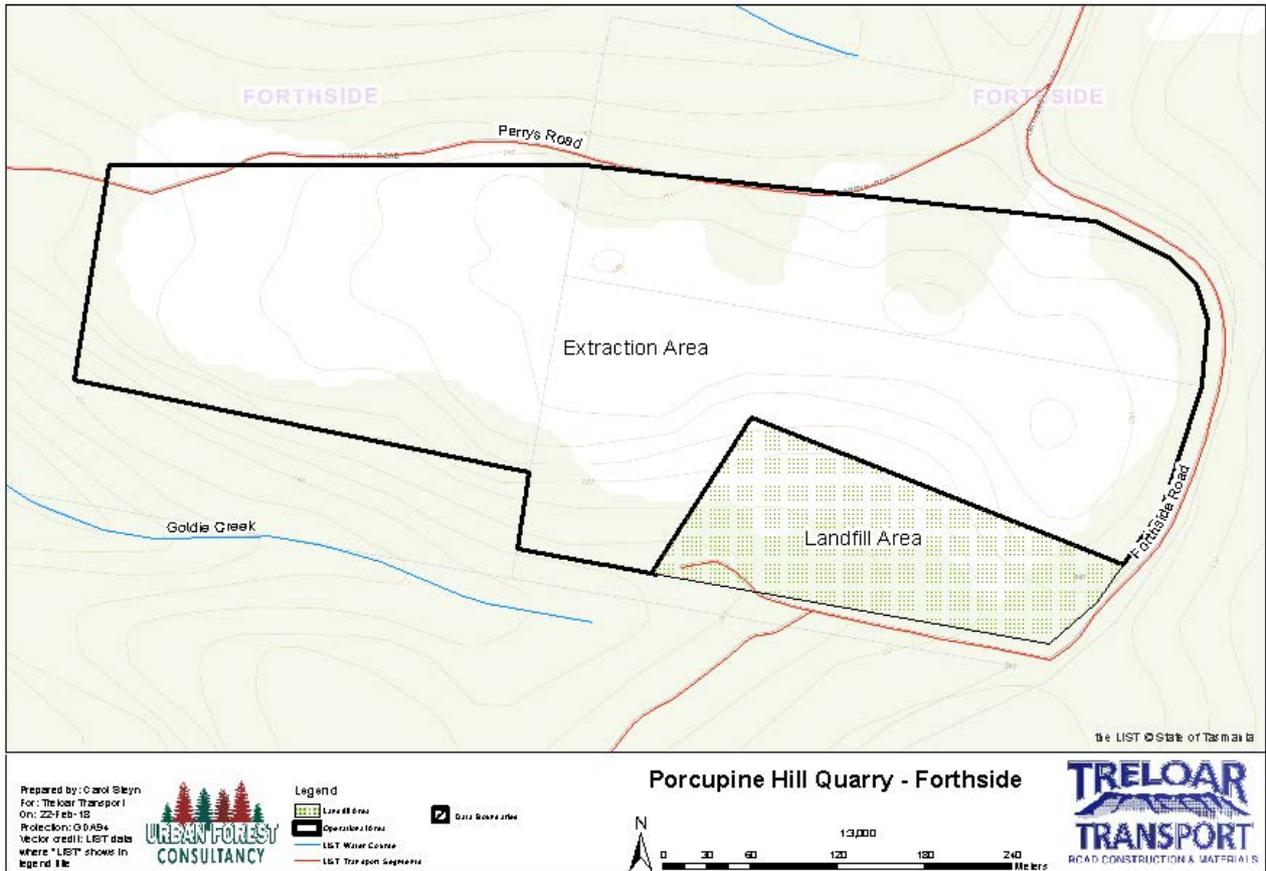
1.2 waste should be re-used or recycled to the maximum extent that is practicable; and

1.3 waste that cannot be re-used or recycled must be disposed of at a waste depot site or treatment facility that has been approved in writing by the relevant planning authority or the Director to receive such waste, or otherwise in a manner approved in writing by the Director.

### **OI3 Commitments**

The person responsible for the activity has a general environmental duty to conduct the activity in accordance with the commitments contained in Attachment 2.

# Attachment 1: The Land



## Attachment 2: Table of commitments

TABLE OF COMMITMENTS BY APPLICANT – TRELOAR  
TRANSPORT CO – PORCUPINE HILL QUARRY, FORTHSIDE

Commitment type & no.	Detail	When
<b>Flora &amp; fauna</b>		
4	Ensure weed management is conducted in accordance with corporate weed management strategy.	Annual basis.
<b>Aquatic and stormwater</b>		
10	Inspect and clean out, if required, permitted settling ponds.	Biannual basis.
<b>Air emissions</b>		
2	Implement dust control measures when necessary to avoid environmental nuisance.	At all times.
<b>Blasting</b>		
5	Ensure sensitive receptors as advised of blasting between 24hrs and 7 days before a blast with blast time and date.	As required.
9	Monitor all blasts.	Ongoing.
<b>Transport</b>		
6	Inclusion of 60km/h truck speed limit on Forthside Rd in company induction and driver's handbook.	Within one month of permit taking effect.
7	Install no engine brake signs on Forthside Rd (with permission of the Devonport City Council).	Within one month of permit taking effect.
<b>Rehabilitation</b>		
1	Stockpile any top soil removed for rehabilitation.	Ongoing.
<b>Operations</b>		
3	Quarry operations and rehabilitation carried out in accordance with <i>Quarry Code of Practice</i> – 3rd Edition – May 2017.	At all times.