

# ENVIRONMENTAL ASSESSMENT REPORT

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## 'The Gums' Quarry

*634 Palana Road, Whitemark, Flinders Island*

Markarna Grazing Company Pty Ltd

**Board of the Environment Protection Authority**

**August 2017**



<b>Environmental Assessment Report</b>	
Proponent	Markarna Grazing Company Pty Ltd
Proposal	Quarry and material handling (rock crushing) activity
Location	634 Palana Road, Whitemark, Flinders Island
NELMS no.	PCE No. 9508
Permit application no.	DA012-16 (Flinders Council)
Doc1 folder	EN-EM-EV-DE-249584
Doc1 no.	H717721
Class of Assessment	2B

<b>Assessment process milestones</b>	
17 May 2016	Permit application submitted to Council
23 May 2016	Referral received by Board
7 July 2016	DPEMP Guidelines Issued
11 February 2017	Start of public consultation period
11 March 2017	End of public consultation period
28 June 2017	Supplementary information submitted to Board

<b>Acronyms</b>	
AMD	Acid and Metalliferous Drainage
Board	Board of the Environment Protection Authority
DMP	Dust Management Plan
DPEMP	Development Proposal and Environmental Management Plan
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>
MRT	Mineral Resources Tasmania
QCP	Quarry Code of Practice 2017
RMPS	Resource management and planning system
SD	Sustainable development
TSP Act	<i>Threatened Species Protection Act 1995</i>

## Report summary

This report provides an environmental assessment of Markarna Grazing Company Pty Ltd's proposed quarry and rock crushing activity.

The proposal involves the extraction by blasting and crushing of a maximum of 120,000 cubic metres of rock per year at 634 Palana Road, Whitemark, Flinders Island.

This report has been prepared based on information provided by the proponent in the Development Proposal and Environmental Management Plan (DPEMP) and DPEMP Supplement. Relevant government agencies and the public have been consulted and their submissions and comments considered as part of this assessment.

On 30 March 2017, the Board requested that the proponent submit supplementary information to address public, government agency (including DPIPWE) and Council comments on the DPEMP and to meet other information requirements. Satisfactory supplementary information was submitted by the proponent on 28 June 2017.

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 proposal, site and design alternatives. Section 5 summarises the public and agency consultation process and the key issues raised in that process. The detailed evaluation of key issues is in section 6, and other issues are evaluated in section 7 and Appendix 1. The report conclusions are contained in section 8.

Appendix 2 contains details of comments made and issues raised in the consultation process. Appendix 3 contains environmental permit conditions for the proposal.

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## 1 Approvals process

An application for a permit under the *Land Use Planning and Approvals Act 1993* (LUPA Act) in relation to the proposal was submitted to Flinders Council on 17 May 2016.

The proposal is defined as a 'level 2 activity' under clauses 5(a) and 6(a)(ii), Schedule 2 of the *Environmental Management and Pollution Control Act 1994* (EMPC Act), being a quarry and rock crushing activity producing a maximum of 120,000 m<sup>3</sup> of gravel 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 23 May 2016.

The Board required that information to support the proposal be provided in the form of a Development Proposal and Environmental Management Plan (DPEMP) prepared in accordance with guidelines issued by the Board on 7 July 2016.

Several drafts of the DPEMP were submitted to the EPA for comment prior to its finalisation and acceptance on behalf of the Board. The DPEMP was released for public inspection for a 28-day period commencing on 11 February 2017<sup>1</sup>. Advertisements were placed in *The Examiner* newspaper and on the EPA website. The DPEMP was also referred at that time to relevant government agencies for comment. Eleven public submissions were received.

On 30 March 2017, the Board requested that the proponent submit supplementary information to address public, government agency (including DPIPW) and Council comments on the DPEMP. Satisfactory supplementary information was submitted by the proponent on 28 June 2017.

## 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.

<sup>1</sup> The planning application was initially advertised by Council from 15 October 2016 to 12 November 2016. Re-advertising occurred due administrative requirements in relation to the *Land Use and Planning Appeal Act 1993*.

### 3 The proposal

Markarna Grazing Company Pty Ltd (the Proponent) proposes to increase production at an existing level 1 quarry approximately 4km north west of Whitemark, Flinders Island, to a maximum of 120,000 m<sup>3</sup> of gravel per year (figures 1 and 2, this report). Rock is to be extracted by blasting and is to be crushed and screened on the pit floor.

The DPEMP states that usual production is expected to be 20,000m<sup>3</sup> per year. Approval is, however, sought for the larger volume to enable generation of material for occasional major projects on the island. At maximum production 100,000m<sup>3</sup> may be extracted and processed within a 3 month period. During these times it may be necessary to temporarily stockpile product off the mining lease, but still within the same property boundaries. The DPEMP Supplement details a location for overflow stockpiling.

The proposed transport route for product cartage was varied in the DPEMP Supplement. During periods of usual production, access to the quarry will be along the existing access road through the property at 634 Palana Rd (figure 3, this report). During peak production a circular transport route is proposed; trucks will access stockpiles via a “right of carriageway” on the neighbouring property at 684 Palana Rd, and exit loaded via the existing access road (figure 4, this report).

The main characteristics of the proposal are summarised in Table 1. A detailed description of the proposal is provided in Section B of the DPEMP, with changes to cartage operations described in section B.2.3 of the DPEMP Supplement. The proposed quarry layout is shown in figure 5 below.

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

Activity	
Extraction by blasting, crushing and screening to produce a maximum of 120,000m <sup>3</sup> of gravel per year.	
Location and planning context	
<b>Location</b>	634 Palana Rd, Whitemark. Proposed access to the site will include use of a carriageway at 684 Palana Rd.
<b>Land zoning</b>	“Rural” in the <i>Flinders Planning Scheme 2000</i>
<b>Land tenure</b>	Private freehold
<b>Mining lease</b>	1229 P/M
<b>Lease area</b>	4 ha
<b>Bond</b>	Existing bond \$2000. Mineral Resources Tasmania (MRT) anticipates amending the bond on receipt of further information (i.e. an updated mine plan) from the proponent.
Existing site	
<b>Land Use</b>	Existing level 1 quarry. The carriageway on 684 Palana Rd is on agricultural land
<b>Topography</b>	Quarry operations are located in a north-east to south-west oriented gully running off the western side of a low ridgeline off Broughams Sugarloaf to the north. The base of the quarry is near the level of the plain to the west (refer Figure 5A, DPEMP).

<b>Geology</b>	<p>Deeply folded Siluro-Devonian turbiditic mudstone of the Mathinna series. The resource is described in section B.3 of the DPEMP as coarse fractured rock/gravel derived from in situ weathering of the bedrock.</p> <p>Seams of pyrite have been known to occur within the series, however section E.2 of the DPEMP states no evidence of acid and metalliferous drainage (AMD) is present on site.</p>
<b>Soils</b>	Thin clay loam soil with sands on the lower slopes, probably of aeolian origin.
<b>Hydrology</b>	Drainage lines run westwards from the ridgeline eastward's of the quarry. A drainage line running through the quarry has been diverted around the southern edge of the excavation area via an engineered drain.
<b>Fauna</b>	Dens and scats of the common wombat (Bass Strait), ( <i>Vombatus ursinus ursinus</i> ), listed under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> as rare, were present in sandier soils in the lower western edges of the mining lease and along the access route. No dens were observed within the quarry.
<b>Flora</b>	<p><i>Eucalyptus viminalis</i> – <i>Eucalyptus globulus</i> coastal forest and woodland, listed under the <i>Nature Conservation Act 2002</i> was mapped along the eastern edge of the carriageway on 684 Palana Rd.</p> <p>Other vegetation types along the access road and within the mining lease are reported as scrub, <i>Allocasuarina</i> forest, fernland and non-native vegetation types (agricultural land etc).</p> <p>The threatened flora species Shade pellitory (<i>Parietaria debilis</i>), listed under the <i>Threatened Species Protection Act 1995</i> (TSP Act) was identified in the mining lease area.</p> <p>Spear thistle (<i>Cirsium vulgare</i>) was the only significant environmental weed recorded within the study area.</p> <p>The coastal velvet bush (<i>Lasiopetalum discolor</i>), listed under TSP Act, was initially reported as present (later revised in the DPEMP Supplement, i.e. not present).</p>
<b>Local region</b>	
<b>Climate</b>	Mean monthly temperature and rainfall graphs at Flinders Island Airport from the Bureau of Meteorology are provided in the DPEMP. Monthly rainfall is less than 60mm in summer months and rises to 70-80mm in winter months.
<b>Surrounding land zoning, tenure and uses</b>	<p>To the north and east is located the Brougham Sugarloaf Conservation Area. Land to the west is used for agricultural purposes.</p> <p>Two residences are located within 1.2km of the mining lease:</p> <ul style="list-style-type: none"> <li>• One residence is located on the same land as the lease at 1050m and near the access route on the property to the site.</li> <li>• One residence in other ownerships is located 700m to the southeast from the mining lease with line of sight across cropping land. The closest point of the access route using the carriageway on the land under ownership of the same residence is stated in the DPEMP as 175m.</li> </ul> <p>Flinders Island Airport runway is located 2,170m from the closest point of the mining lease.</p>
<b>Species of conservation significance</b>	<p>The nearest wedge-tailed eagle nest is recorded at a distance of approximately 2km to the north northeast. The DPEMP states that no suitable nesting trees are within the study area.</p> <p>Swift parrot (<i>Lathamus discolor</i>) may potentially forage in <i>E. globulus</i> regrowth near Palana Road. The DPEMP reports there are no suitable nesting hollows.</p>
<b>Proposed infrastructure</b>	

<b>Major equipment</b>	As listed in the DPEMP, the following major items of equipment are anticipated to be used at the quarry: <ul style="list-style-type: none"> <li>• Atlas Mobile drill</li> <li>• Cat 329D Excavator</li> <li>• Cat 966H Loader</li> <li>• Pegson Jaw crusher</li> <li>• Pegson Cone Crusher</li> <li>• Twister track VSI Crusher</li> <li>• Powerscreen 2 &amp; 3 deck screens</li> <li>• Komatsu Pc650 excavator with ripper and rock breaker</li> <li>• Cat 140G Grader</li> <li>• Cat D9H Bulldozer</li> <li>• Drill Rig: As per contractor</li> </ul>
<b>Other infrastructure</b>	Blast truck and water truck.
<b>Inputs</b>	
<b>Water</b>	A water truck will be available.
<b>Energy</b>	The DPEMP states no fuel or oil will be permanently stored on the land. Blasting materials will be brought to the site when required.
<b>Other raw materials</b>	None.
<b>Wastes and emissions</b>	
<b>Liquid</b>	Stormwater runoff from extraction and stockpile areas.
<b>Atmospheric</b>	Dust from internal and external traffic, drilling and blasting, materials handling and blow-off from stockpiles.
<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; contaminated soil. Sanitary waste from a portable chemical toilet during extractive campaigns.
<b>Noise</b>	From drilling and blasting, crushing and screening equipment, mobile plant, and vehicles on site and going to and from the site.
<b>Greenhouse gases</b>	The DPEMP did not include information about the activity and its greenhouse gas emissions and potential to affect climate change.
<b>Construction, commissioning and operations</b>	
<b>Proposal timetable</b>	The DPEMP states intensification of use of the activity may occur during late 2016.
<b>Operating hours (ongoing)</b>	0700 to 1900 hours, Monday to Friday. 0800 to 1700 hours Saturday. Closed Sundays and gazetted public holidays.

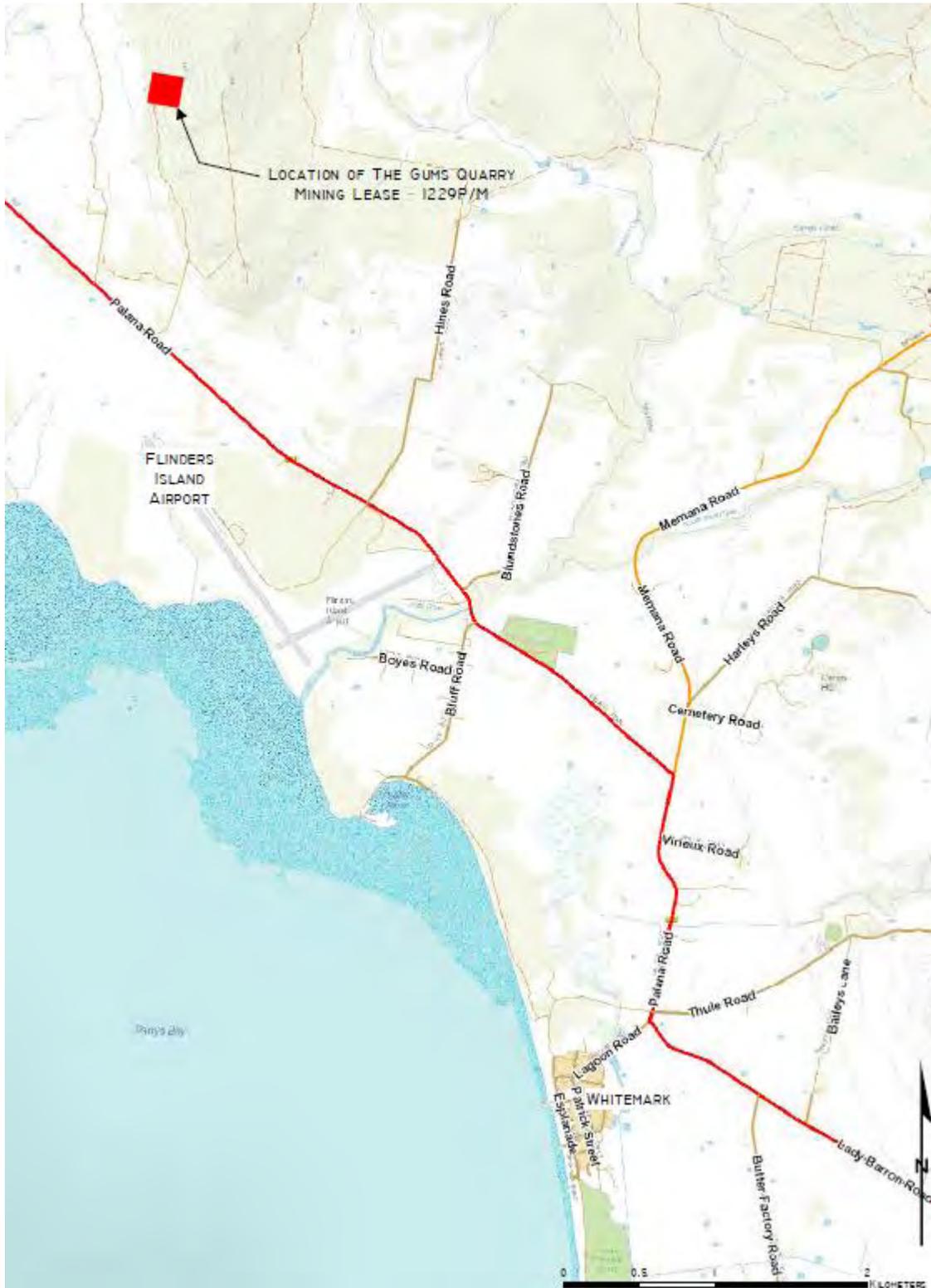


Figure 1: Location of the quarry mining lease (Figure 1-A of the DPEMP)



Figure 2: Proposal site (outlined in blue).



Figure 3: Quarry access during usual operations (Figure S-1B of the DPEMP Supplement)



**Figure 4: Cartage route during major operations. Note product stockpiles located near exit point to Palana Rd. (Figure S-1A of the DPEMP Supplement)**

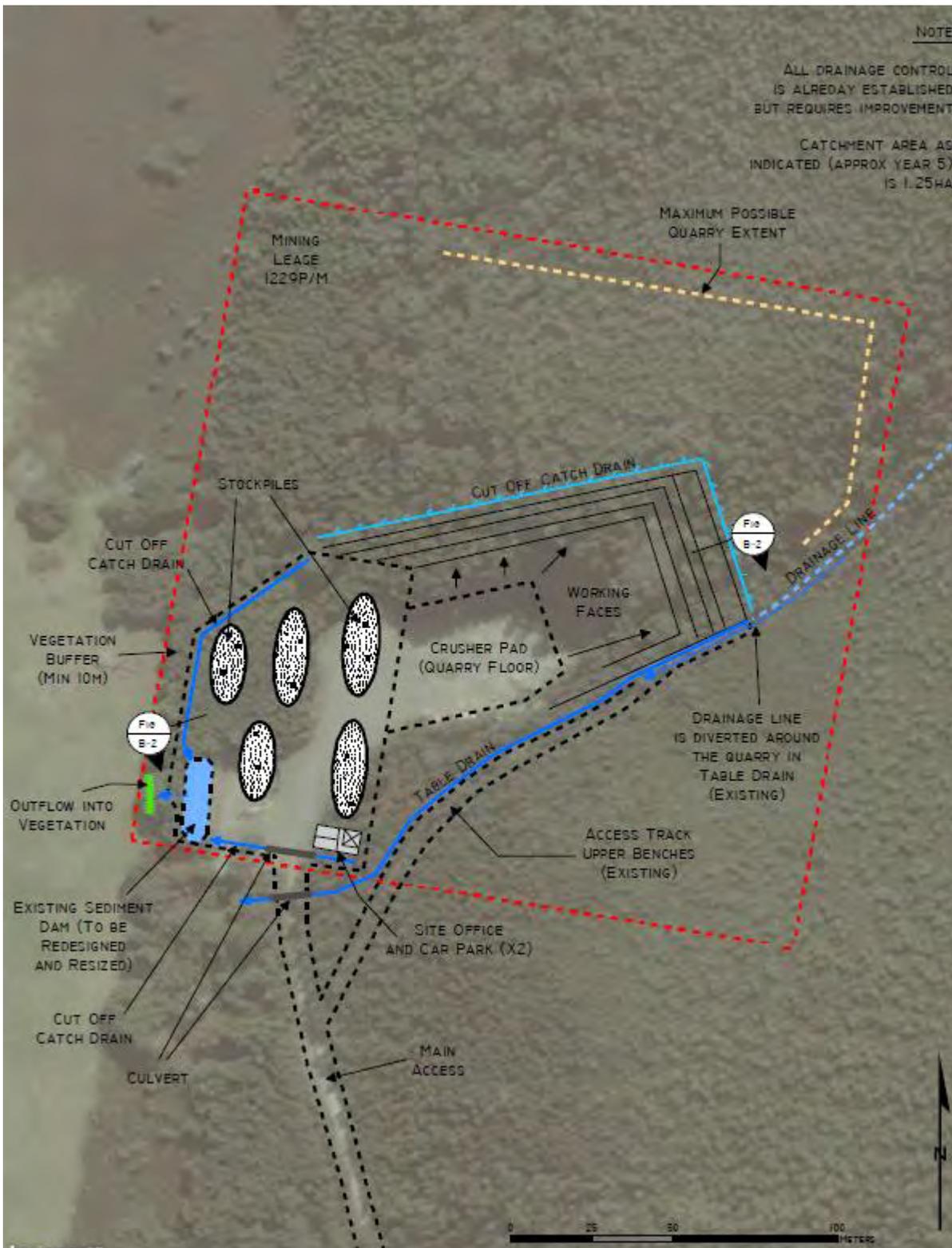


Figure 5: Quarry year 5 layout (Figure B-1 of the DPEMP).

## 4 Need for proposal and alternatives

The DPMP states the geological formation targeted by the proposal is uncommon on Flinders Island and produces a material highly suitable as a road pavement surface. All other mining leases on the island are for the extraction of sand or quarrying of granite. The proposal is to produce gravel for local use. It is indicated that generally 10,000-20,000m<sup>3</sup> of product per year would be produced. It is, however, envisaged that there may be a number of major projects on the island requiring significantly larger volumes of material. Hence provision is made in the proposal to accommodate the needs of such projects.

A number of representations queried why such a level of production would be necessary. Representors contended the proponent did not assess the comparative environmental, social and economic cost of the proposal compared to importing materials. Economic costs included damage to roads and impacts on tourism.

In section B.2.2 of the DPMP Supplement the proponent presents evidence to show the cost of importing materials for a major project would be significantly greater than extracting these materials locally. The cost of materials to repair the Flinders Island Airport runway was provided as an example.

The DPMP Supplement states environmental impacts associated with the proposal are not significant and thus regardless of the information supplied, economic considerations should not be a determinant in relation to consideration of the application.

## 5 Public and agency consultation

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

Eleven representations were received. Issues raised in representations are summarised below in two parts, firstly those that are relevant to the Board's determinations and secondly, other issues which are not.

Comments were also received from government agencies and Council. These are summarised following the discussion about public representations.

### Public representations - issues considered in this report

Issues raised relevant to the Board's determinations are as follows:

#### Noise

- Noise associated with truck movements along the access route to the quarry and from quarry operations is a concern. Hours of operation are considered excessive.
- Concerns regarding the standard of the noise assessment and assertion that noise assessment criteria chosen by the proponent are not 'fit for purpose'.
- The proposal's consistency with the *Quarry Code of Practice 2017* (QCP), including the recommended attenuation distances for noise.
- Environmental nuisance associated with increased traffic directly attributable to quarry operations.

#### Blasting

- Concerns about the standard of the blast impact assessment.
- Potential to deposit blast flyrock on neighbouring land.

#### Air emissions

- Dust associated with truck movements along the access route to the quarry and from quarry operations.
- The availability of water to mitigate dust.
- Dust contamination of crops and rainwater collection tanks.
- Compliance with the QCP Acceptable Standard for dust emissions.
- Emission of air contaminants associated with the use of diesel equipment.

#### Stormwater runoff, groundwater

- Potential to impact neighbouring land, due to excessive runoff creating waterlogged conditions.
- Deposition of sediment on neighbouring land from runoff.
- Potential for petroleum products (e.g. oils) to contaminate groundwater.
- Potential for acidic runoff.

Flora and fauna

- Potential impacts to wedge-tailed eagles and swift parrots.
- Weed propagation associated with vehicle movements.

Socio-economic

- A range of concerns were raised to suggest the economic benefits of the proposal were not sufficient to justify its potential environmental and social impacts.<sup>2</sup>

**Public representation - issues beyond the scope of this report**

Issues raised which are beyond the scope of the Board's remit are summarised as follows:

- The legality of using the Right of Way on 684 Palana Rd to access the mining lease.<sup>3</sup>
- Impacts on property value and privacy.
- Suitability of public roads on Flinders Island for truck movements associated with the quarry and road maintenance.
- Traffic safety issues.
- Visual impacts associated with the proposal.
- Bond payment and identification of the person responsible for compliance with any legal approval.<sup>4</sup>
- Compliance with the current planning scheme and impacts on proposed planning scheme amendments.

**Agency submissions and EPA specialist comment**

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

- Flinders Council  
Raised issues associated with the cartage route, discharge from the sediment pond, and the potential for bushfires.
- MRT  
Concerned mine plan was not adequate and that the mine footprint was potentially restrictive.
- Policy and Conservation Advice Branch (PCAB), DPIPW  
Noted the reported presence of the herb, *Lasiopetalum discolor*, if genuine, would indicate a substantial extension of range of that species.
- Aboriginal Heritage Tasmania (AHT)  
AHT conducted a desktop assessment for the proposal and advised survey works would not be necessary.

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<sup>2</sup> The proponent's case regarding the need for the proposal has been discussed in section 4 of this report.

<sup>3</sup> Council accepted the planning application as lodged.

<sup>4</sup> The responsible person for compliance with environmental permit conditions may be any relevant body corporate; such an entity has been identified by the proponent. The payment of bond associated with mining lease conditions is a matter for MRT.

The following EPA Tasmania Specialists were consulted in relation to the proposal:

- Water Specialist
- Noise Specialist
- Regulatory Officer

The DPEMP Supplement prepared by the proponent provides a response to each of the relevant environmental issues raised by the public and government agencies/bodies.

## 6 Evaluation of key issues

The following key environmental issues relevant to the proposal have been identified for detailed evaluation in this report:

- Noise generated by quarrying and cartage operations.
- Blasting impacts

Both issues are discussed in the following subsections.

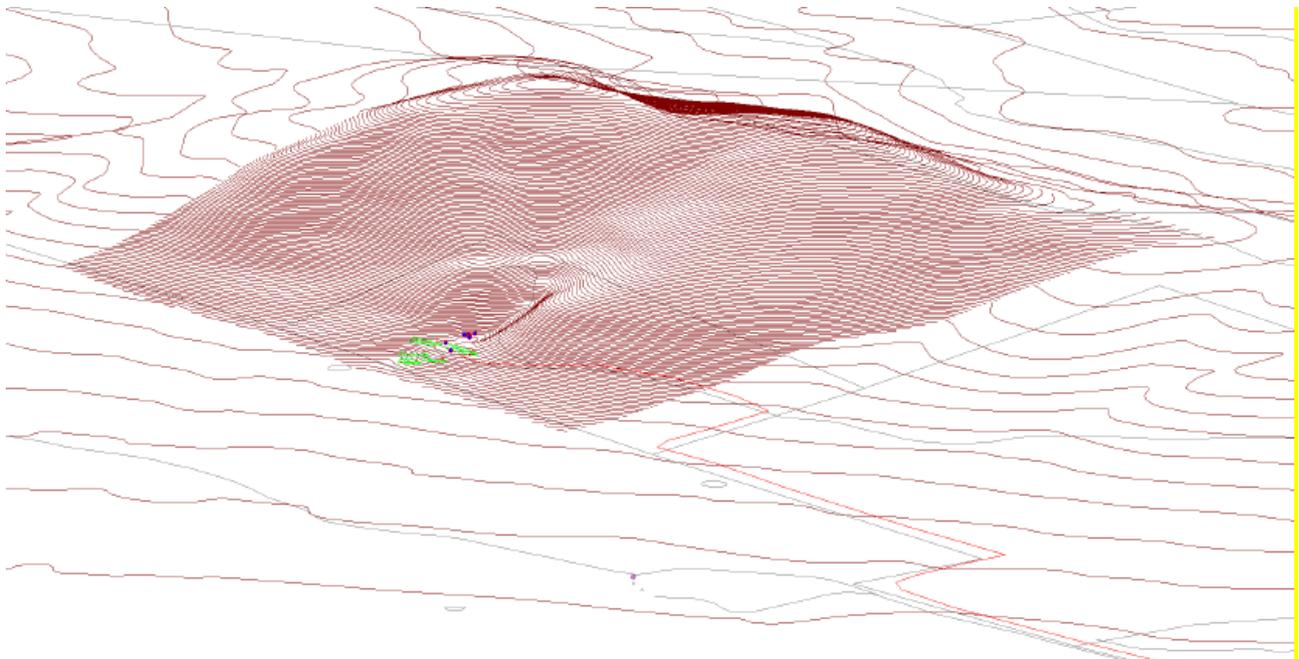
### 6.1 Noise

#### *Description*

##### **Proposed operations**

The proposed activity is to occur at an existing level 1 quarry on the western slope of a ridgeline from Broughams Sugarloaf to the north. The quarry faces southwest on to farmland that has been used for cropping. The quarry floor is some 30m from the western boundary with the agricultural land and upslope.

A residence in other ownership is located across the farmland at 684 Palana Rd approximately 800m distant from proposed noise generating activities and with a line of sight to the mouth of the quarry. A residence is located on the same property as the mining lease, 1.2km distant with no line of sight. The next nearest residence is located 1.7km distant to the west.



**Figure 6: Noise model wire frame depiction of the quarry site viewed from the southwest (the approximate direction from which the neighbouring residence views the quarry) (from Figure 7, Attachment 5 – Noise Assessment Report, of the DPEMP)**

The proposal is to extract a maximum of 20,000m<sup>3</sup> per year from the quarry as 'baseline' production with a provision to extract up to 100,000m<sup>3</sup> over periods of 3 months or less to service major contracts. In effect the proposal is to extract a maximum of 120,000m<sup>3</sup> per year.

Materials will be won by blasting and ripping. Gravel will be produced by crushing and screening. The DPEMP indicates up to three different crushers may operate at any one time (DPEMP Attachment 5), namely a jaw crusher, a cone crusher and a vertical shaft impact crusher.

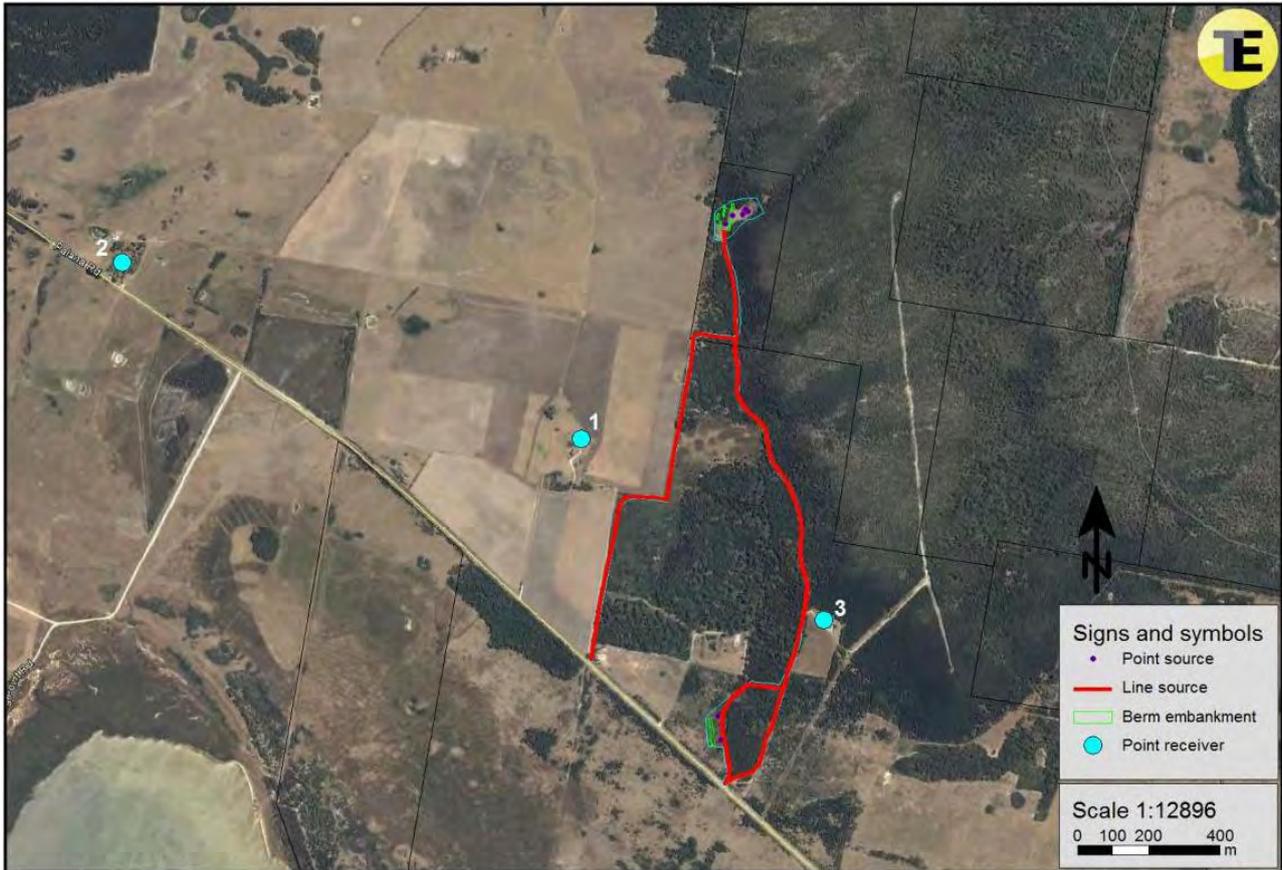
When servicing major projects, it is proposed to extend operating hours for cartage of materials beyond the acceptable standard for operating hours specified in the QCP. Operating hours for crushing are expected to be confined to the QCP hours. The proposed operating hours relevant to major project operations are listed below

**Table 2: Proposed changes to operating hours where servicing major projects, from those specified in the Quarry Code of Practice 2017.**

	QCP Hours	Crushing	Haulage
Monday to Friday	0700 to 1900	0800 to 1700	0600 to 1900
Saturday	0800 to 1600	As CQP	0700 to 1900
Sunday and Statewide Public Holidays	closed	As CQP	As QCP

During usual operations the proponent intends to use the existing access road at 634 Palana Rd. During major project periods it is estimated in the DPEMP that maximum truck movements would equate to one truck movement every six minutes. Under this arrangement, a circular route for truck loading operations is proposed. Trucks will enter via the carriageway located on 684 Palana Rd. Loading operations will occur at 634 Palana Rd prior to trucks exiting via the existing access to that land (Figure 7, this report).

According to the DPEMP Supplement, cartage during major project periods will result in empty trucks passing within 175 metres of the residence at 684 Palana Rd.



**Figure 7: Location of access road and residential receptors (blue dots). The nearest residence is located at point 1) (From Figure 2 of the DPMP Supplement, Attachment S1).**

### Operational noise assessment

Environmental noise measurements were made to determine appropriate noise assessment criteria (DPMP, Attachment 5 – Noise Assessment Report). Noise measurements were conducted adjacent the western boundary of the mining lease overlooking the farmland to the west. The following results were obtained:

- 7am to 5pm  $L_{Aeq}$  levels were 40-60 dBA with  $L_{A90}$  levels typically 15-20 dBA lower.
- After 5pm  $L_{Aeq}$  levels were 24-40 dBA and  $L_{A90}$  levels below 20dBA.

The Noise Assessment Report concluded the drop after 5pm was associated with cessation of agricultural activities.

The QCP states noise, when measured at any nearby sensitive use, must not exceed the greater of 5 dBA<sup>5</sup> above the  $L_{A90}$  environmental noise level or compliance with the following limits:

- 45 dBA from 0700 to 1900 hours (daytime)
- 40 dBA from 1900 to 2200 hours (evening), and
- 35 dBA from 2200 to 0700 hours the following day (night time)

<sup>5</sup> A revised Quarry Code of Practice was published May 2017. The revision has clarified the noise criteria by specifying that  $L_{A90}$  is relevant when considering the additional noise generated by a quarrying activity.

For the purpose of assessing the potential for noise nuisance, the noise emission criteria selected and stated in the DPEMP were:

- $L_{Aeq}$  of 50 dBA for crushing and haulage operations
- $L_{Aeq}$  of 40 dBA for haulage operations outside of crushing times

Noise modelling was conducted by VIPAC using SoundPLAN software and the CONCAWE calculation method. The VIPAC library data was used for input sound power levels. Neutral propagation conditions were assumed.

A number of scenarios were modelled. Outputs for two scenarios that are relevant to major project periods (from modelling presented in the DPEMP Supplement) are presented below:

- **Scenario 1** - crushing and hauling, with all noise generating equipment operating (with the exception of a drill rig), six trucks moving around the loop road in a ten minute period and loading operation near Palana Rd.
- **Scenario 2** - hauling only with six trucks moving and loading operations occurring.

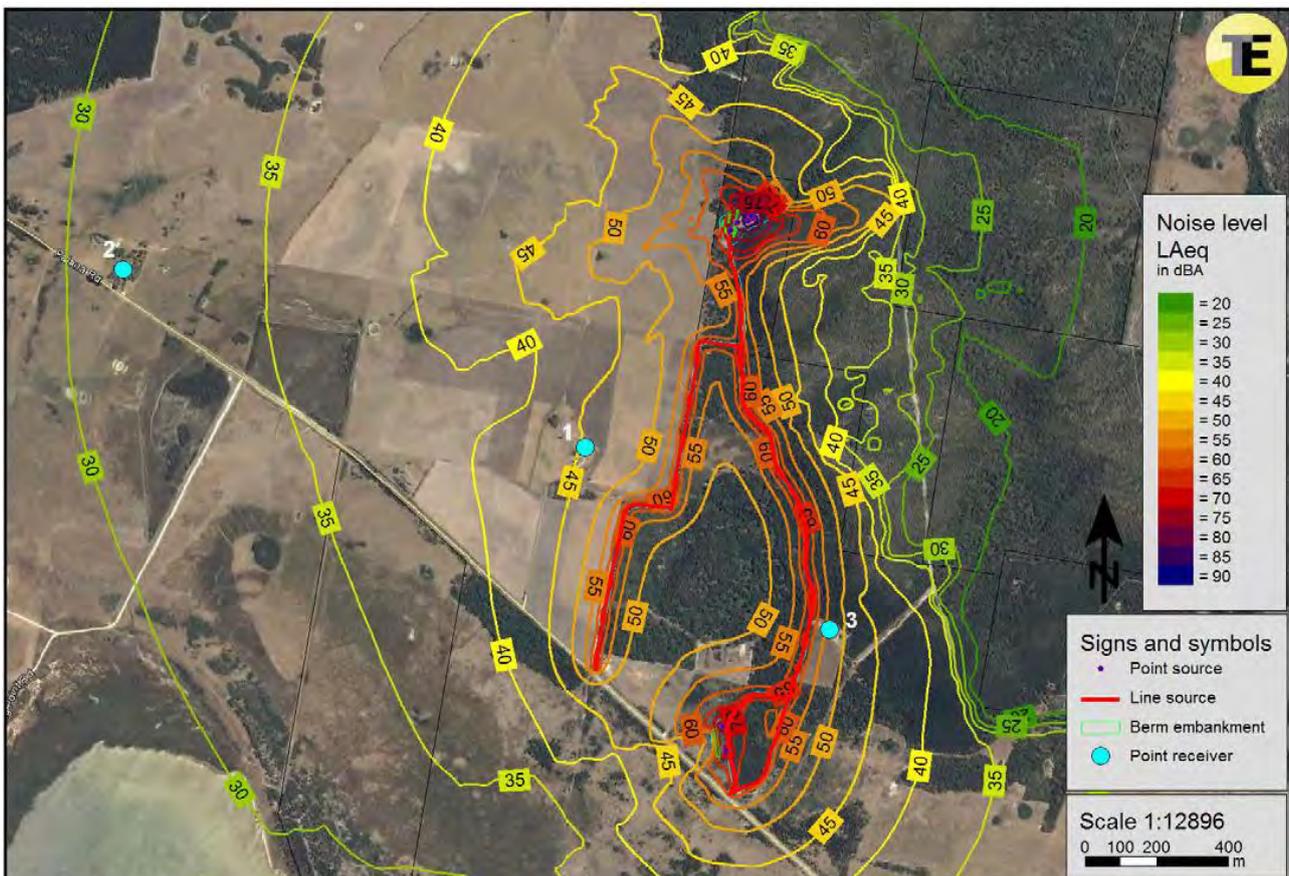


Figure 8: Modelled noise contours for crushing and hauling operation at peak intensity (Figure 3 of the DPEMP Supplement, Attachment S1)

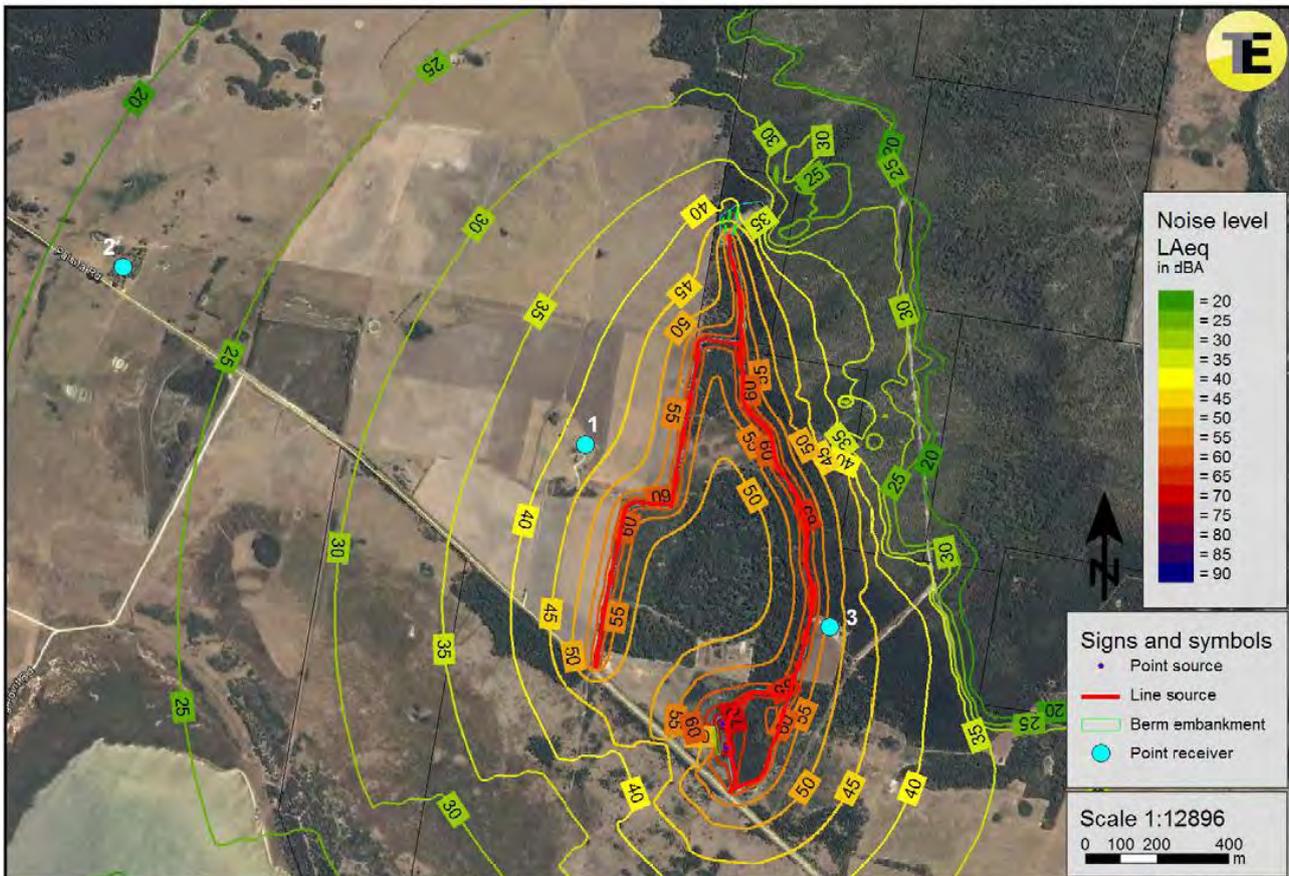


Figure 9: Noise contours for hauling operation only during peak periods (Figure 4 of the DPEMP Supplement, Attachment S1).

At the nearest residence in other ownership the predicted  $L_{Aeq}$  levels were 45 dBA for crushing and hauling operation and 42 dBA when hauling only.  $L_{Amax}$  was 48 dB(A) for both scenarios.

Drilling operations associated with blasting were also modelled. Drilling noise in isolation was found to be significantly lower than the noise levels predicted above.

The noise modelling outputs summarised above are within the noise criteria for assessment selected and stated in the DPEMP. On that basis the DPEMP concludes:

*“Predicted maximum noise levels were at levels where significant annoyance is unlikely and intrusive noise characteristics aren’t considered of significant concern....”*

This conclusion was reaffirmed following modelling of the proposed circular vehicle loading route, illustrated in Attachment S1 to the DPEMP Supplement.

## Management measures

Two modes of operation are defined in the DPEMP, these being “Normal Production” and “Major Projects”. Normal (or ‘usual’) Production is characterised as equivalent to a production rate of 20,000  $m^3$  per year whilst Major Projects is characterised by a production rate of up to 100,000  $m^3$  in a 3 month period. For normal production the existing access road at 634 Palana Rd will be used. For Major projects loading operation will be via the proposed circular route entering via 684 Palana Rd.

In addition, differential operating hours are proposed. For Major Projects the proposed hours are shown in Table 2.

The relevant noise commitments made in the DPEMP are:

**Commitment 12** - Machinery will be well maintained to minimise the risk of generating excessive noise emissions.

**Commitment 13** - Crushing and haulage will not occur concurrently between 1700 and 1900 hrs.

It is noted crushing is not proposed to commence prior to 0800 hours.

### ***Public and agency comment and responses***

One representor was concerned about potential noise impacts associated with quarry operation and with traffic movement along access roads. An additional four representors were concerned about noise generated by extra traffic along public roads.

#### **Representor comment – not relevant to the Board’s assessment**

With reference to issues raised by representors, a number of assertions made were in error or not relevant. Incorrect assertions included:

- Noise modelling considered a maximum of only three trucks every ten minutes travelling along the access route – a maximum of six trucks movements at any one time was considered in one scenario.
- Potential for echoes not taken into account in noise modelling – A 3D topographical model was used.
- Truck noise along quarry access route was ignored – this is not correct.

Issues raised that are not considered relevant to the conclusion presented in the DPEMP were:

- Noise levels of all activities occurring at the same time were not measured – The only noise source not included for modelling purposes was the drill rig. This is considered reasonable given the purpose of modelling was to determine ongoing operational noise impacts. The noise from the drill rig was separately modelled.
- There is no explanation of why an adjustment for impulsivity is not necessary – The EPA Noise Specialist considers this a matter that would have been determined by the consultant on the basis of noise level variability. It is of no consequence to the conclusions derived.
- The DPEMP refers to noise from cows, however no cows were present – this does not affect the outcome of the environmental noise measurements.
- The assertion that the predicted noise level to the nearest residence is “equivalent to a lawnmower running” – according to the EPA Noise Specialist this assertion is not supported by the literature.
- The assertion that during previous operation noise levels were significant – this is not relevant to the present noise assessment.

#### **Representor comment – relevant**

Issues raised by representors considered relevant to the assessment of operational noise are:

- A noise assessment criterion of 50dBA is 15-20 dBA above the assessed ambient noise level.
- Daytime ambient noise levels at the neighbouring residence are 40-60dB(A), however no access for measuring background noise levels was provided. In addition, there is no discussion of differences between Leq and L90 noise levels.
- No Lmax levels at the neighbouring residence provided.

- Potential for noise nuisance due to increased traffic along public roads.
- Hours of operation considered excessive.
- Environmental noise measurements may be biased, because of the period over which noise readings was taken. Background noise levels more likely 20-30dBA.
- Truck braking noise along the access route not considered

### **Other agency and EPA comment**

Flinders Council noted there are two right angle bends on the access route from the entry point on 684 Palana Rd and that this may result in nuisance truck braking noise.

The EPA Noise Specialist requested the following additional information:

- If the existing access road on 634 Palana Rd is to be used then information is required regarding the location of residences and other sensitive receptors in relation to this road and the potential for noise impacts to occur as a result of the use of the road.
- Discuss the potential speeds of vehicles on the access roads and how this would translate to braking and associated noise.

### **DPEMP Supplementary Information**

A DPEMP Supplement was prepared by the proponent to address representation and agency comment. The responses are summarised as follows:

- The proposed circular access route discussed in this report was put forward in the DPEMP supplement. It is inferred the change was to alleviate perceived nuisance impacts associated with use of the carriageway on 684 Palana Rd.
- Potential truck speeds on the access route are reported as being 20-30 km per hour. It is noted that braking noise was not discussed.

### ***Evaluation***

Two modes of production are detailed in the DPEMP, these being “Normal Production’ and “Major Projects”. It is not reasonable or practical to assess separately against two modes of production. Nor would such a scheme be amendable to environmental regulation. It is proposed that total annual production in any one year period would be 120,000m<sup>3</sup>. The proposal has therefore been assessed against this production limit and conditions and restriction will be imposed to suit this scale of operation. This assessment also assumes all cartage traffic will follow the circular route, entering via the carriageway on 684 Palana Rd and leaving via the exiting access point at 634 Palana Rd.

The EPA Noise Specialist considers the measured environmental noise levels as typical for rural areas. As such, the measurements are accepted as relevant for the purposes of assessing potential impacts at noise sensitive receptors. It is noted that L<sub>90</sub> noise levels are comparatively low.<sup>6</sup> The L<sub>90</sub> level provides an indication of the environmental noise at quieter times. For clarification, L<sub>eq</sub> is a measure of the median noise energy and L<sub>max</sub> the highest measured or modelled noise energy. L<sub>max</sub> is not relevant to the assessment of ongoing daytime operations, L<sub>eq</sub> being appropriate for this purpose.

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<sup>6</sup> **LA90,T** for a specified time interval T, means the A-weighted sound pressure level that is equalled or exceeded for 90% of that time interval.

Given the low  $L_{90}$  level the Noise Specialist does not consider the use of the chosen assessment criteria as appropriate. It is considered more appropriate to assess noise impacts against the default noise limits specified in the QCP. Accordingly condition **N1** is imposed to specify the noise limits which apply for daytime, evening and night time periods. Even when no operations associated with the quarry occur, other than cartage and loading, the noise modelling results indicate the night time limit will be exceeded (see figure 9, this report). Thus on the basis of the information provided in the DPEMP and DPEMP supplement, operating hours will be restricted to the QCP acceptable standard for operating hours (Condition **N2**). It is noted condition **N2** does provide for the Director's discretion to vary operating hours should the proponent demonstrate this is merited for a particular period.

EPA Tasmania indicated in the DPEMP Supplement request its preference for a formal agreement between the proponent and the owner of 684 Palana Rd (on which the "right of carriageway" to access the quarry is located). Such an agreement may reduce the likelihood of noise nuisance complaints. The DPEMP Supplement states the proponent has no legal obligation to secure such an agreement. Condition **G6**, requiring maintenance of a complaints register, and condition **G7**, generally requiring compliance with the QCP, are relevant in this instance.

Upon leaving the site product will be carted along existing public roads. The hours of operation imposed would restrict operational traffic moving to and from the quarry to general daylight hours. It is not considered reasonable to further restrict traffic movement. Consistent with the evidence presented in the DPEMP Supplement, section B.2.1, general environmental nuisance issues associated with public road traffic are managed through planning prescriptions and road maintenance.

## Conclusions

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

- G6** Complaints register to be maintained
- G7** Operation to comply with the QCP
- N1** Noise emission limits consistent with the QCP
- N2** Operating hours consistent with the QCP

## 6.2 Blasting

### Description

Rock may be liberated by blasting. The DPEMP does not indicate how many blasts per year are likely. During usual production (up to 20,000m<sup>3</sup> per year) it is likely blasting will be very infrequent. During major projects (up to 100,000m<sup>3</sup> campaign) it is expected a number of blasts may be required.

Ground vibration and air blast overpressure predictions were made at the nearest residence in other ownership (at 684 Palana Rd) (DPEMP, Attachment 5). Predictions assumed a 100kg charge mass/delay. The distance to the residence from the nearest blast site was estimated to be 800m. For air blast overpressure a high wall blast was assumed with regard the chosen equation constants.

At the nearest residence, the predicted values for the monitoring parameters were:

- Ground vibration peak particle velocity = 1.05 mm/s average and 2.78 mm/s upper bound.
- Air blast overpressure = 113 dB.

The QCP specifies the following limits:

- Ground vibration peak particle velocity = 5 mm/s
- Air blast overpressure = 115 dB(Lin Peak) for 95% of blasts.

The proponent concluded blasting impacts would be within the QCP acceptable limits. It was, however, noted that air blast overpressure may be higher should the charge not be adequately confined.

The potential for impacts associated with the generation of flyrock were noted in the DPEMP. The distance from the identified location of a drill rig used for the purposes of noise modelling, to the boundary of 684 Palana Rd, may potentially be less than 100m. The distance to the nearest airport runway is identified in the Blast Management Plan (DPEMP, Attachment 7) as 2.2 km from the mining lease boundary.

### ***Management measures***

A Blast Management Plan was prepared as part of the DPEMP (Attachment 7). The plan included the following details:

- Roles and responsibilities of the quarry operator, staff and blasting contractors.
- Blasting times and limits consistent with the QCP.
- A brief outline of the technical aspects of the blasting procedures.
- Storage and handling requirements consistent with relevant standards.
- Notification procedures in relation to neighbours, Flinders Airport and the Director of the EPA.
- Potential impacts, including potential for impacts from flyrock to the neighbouring land and to Flinders Island Airport.
- Monitoring procedures in relation to all blasts.
- Incident response procedures.

The proponent committed to implementing the Blast Management Plan (**Commitment 5**).

### ***Public and agency comment and responses***

#### **Representor comment**

One representor expressed the following concerns about blasting:

- Flyrock was deposited on the adjacent land in previous blasts associated with the existing activity. Concerned that flyrock associated with the present proposal may be deposited over a wide area, affecting farming activities. Notes the DPEMP identified Flinders Island Airport as being potentially affected by flyrock.
- Concerned predicted air blast overpressure was close to the QCP limit and thus the distance of the curtilage of the residence from the blast would be critical. Estimates the distance at 770m rather than 800m.
- Notes blast assessment does not account for topography.

The representor also stated the DPEMP did not include a Blast Management Plan (such a plan was included).

## EPA comment

The EPA Noise Specialist requested the following additional information:

- Amendment of the Blast Management Plan to ensure:
  - neighbouring land is identified as a receptor for flyrock; and
  - mitigation measures are provided in relation to deposition of flyrock on neighbouring land.
- Details of the potential location and facing of initial blasts to determine the potential for flyrock deposition.
- Discussion as to why a maximum charge mass/delay of 100kg was chosen for the purposes of assessment and of what the actual charge mass/delay may be.

## DPEMP Supplementary Information

The Blast Management Plan (Plan) was amended to remove reference to flyrock affecting Flinders Airport after consultation with the preferred blast contractor. The risks associated with aircraft flying near the quarry and relevant management measures were retained.

Section B.1.4 of the DPEMP Supplement contends that the risks of flyrock deposition on neighbouring land is low with the application of modern blast practices. Blast location and facing is not discussed, as these settings will be determined by a qualified blast contractor according to the proponent. The Plan, however, has been revised to ensure all blasts are video monitored. The proponent maintains this would allow it to determine the potential for flyrock deposition on neighbouring land.

In relation to the use of a 100kg charge mass/delay, the proponent states this charge was chosen because the rock type responds well to blasts of this size. This would be the maximum amount used and in reality the blast charge mass/delay is likely to be lower.

## Evaluation

Standard, accepted formulae were used to predict blast impacts at the nearest residence. Any mitigating aspects of topography were not taken into account in relation to air blast overpressure as it was assumed blasts would occur high in the quarry. Consequently the prediction about air blast overpressure is likely to be conservative, with the caveat the blast is adequately contained.

Blasting times, blast noise and vibration limits, and notification procedures for nearby sensitive receptors detailed in the Plan included in the DPEMP Supplement are consistent with QCP and standard management measures. Standard conditions **B1**, **B2** and **B3** make explicit the requirements to comply with these aspects of the Plan. With regard Flinders Island Airport blast notification and management, this is a matter for Council and relevant aviation authorities.

Addition technical information about blast geometry would have been preferred to determine if the potential for flyrock to be deposited on neighbouring land could be discounted. It is, however, acknowledged this is a matter to be dealt with by a blast contractor in its design of and planning for each blast. It is also agreed the implementation of contemporary blast planning and management processes is likely to reduce the potential for the generation of significant flyrock. Nevertheless, given the limited separation distance and in the absence of more detailed technical information, flyrock deposition on neighbouring land cannot be discounted. Furthermore, the onus is on the quarry operator to contain flyrock to the Land. Site-specific condition **B6** is imposed to specify that blasting on the Land must be conducted such that flyrock is retained on the Land. Condition **B6** also specifies the person responsible for the activity must, subject to landowner consent, remove any flyrock deposited beyond the boundary of the Land.

Video monitoring of each blast is considered an appropriate tool to measure blast performance and this amendment of the Plan is accordingly supported. It is agreed such information, together with detail of the blast design, is likely to be sufficient to determine whether significant flyrock has been generated and the zone over which it may have been deposited. Condition **B4** requires implementation of the Blast Management Plan and condition **B5** requires blast monitoring and the retention of monitoring data for at least two years.

On balance, it is considered blasting can be managed to ensure the potential to deposit flyrock beyond the boundary of the Land is low. The proposed permitting requirements discussed above will ensure appropriate monitoring is done to detect, and remedy where necessary, poor blast performance.

## **Conclusions**

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

- B1** Blasting times consistent with the QCP
- B2** Noise and vibration limits consistent with the QCP
- B3** Residents to be notified at least 24 hours prior to blasting
- B4** Blasting to be carried out in accordance with the Blast Management Plan
- B5** Blast monitoring required in relation to each blast on the Land
- B6** Containment of flyrock

## 7 Other issues

In addition to the key issues, the following environmental issues are considered relevant to the proposal and have been evaluated in Appendix 1.

1. Stormwater
2. Dust
3. Flora and Fauna
4. Hazardous materials and waste management
5. Decommissioning and rehabilitation

## 8 Report conclusions

This assessment has been based upon the information provided by the proponent in the permit application, DPEMP, DPEMP Supplement and in correspondence and discussion between EPA Tasmania and the proponent and the proponent's representatives.

This assessment has incorporated specialist advice provided by EPA Tasmania scientific specialists and regulatory staff, other Divisions of DPIPWE and other government agencies.

This assessment has taken into account issues raised in public submissions.

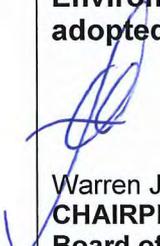
It is concluded that:

1. the RMPS and EMPCS objectives have been duly and properly pursued in the assessment of the proposal; and
2. the assessment of the proposal has been undertaken in accordance with the Environmental Impact Assessment Principles.

It is concluded that the proposal is capable of being managed in an environmentally acceptable manner such that it is unlikely that the RMPS and EMPCS objectives would be compromised, provided that the Permit Conditions - Environmental No. 9508 appended to this report are imposed and duly complied with.

## Report approval

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

  
Warren Jones  
**CHAIRPERSON**  
**Board of the Environment Protection Authority**

Meeting date: 1<sup>st</sup> August 2017

## 9 References

Van Diemen Consulting (2017) *Development Proposal and Environmental Management Plan 'The Gums' Quarry, Palana Road Whitemark, Flinders Island, Newtown, Tasmania*

Van Diemen Consulting (2017) *DPEMP Supplement 'The Gums' Quarry, Palana Road Whitemark, Flinders Island, Newtown, Tasmania*

## 10 Appendices

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- Appendix 1 Assessment of other issues
- Appendix 2 Summary of public and agency submissions
- Appendix 3 Permit conditions

## Appendix 1 Assessment of other issues

<b>Issue 1: Stormwater</b>
<b>Description of potential impacts</b>
<p>A natural drainage line running through the existing quarry has been diverted to the south of the quarry pit via a cut off drain to an existing sediment pond. The pond overflows through woody debris and native vegetation to adjacent farmland to the west. There is no defined overflow channel. The DPEMP states there is no evidence of significant overflow events. The soils are described as sandy loam and well drained such that the pond would not accumulate significant water volume.</p> <p>It is acknowledged in section E.2 of the DPEMP that the geology to be quarried is occasionally associated with seams of pyrite. It is stated there is no evidence of any pyrite on site or any signs of AMD.</p>
<b>Management measures proposed in DPEMP</b>
<p>It is proposed to redevelop the existing stormwater pond to manage all stormwater runoff from the pit and to divert the upstream catchment to the south. Assuming a year five footprint of 1.25 ha a sediment pond size of at least 850m<sup>3</sup> was calculated as necessary. To maintain its effective treatment volume, the pond would require cleaning out at least twice each year. The following commitments are made:</p> <p><b>Commitment 9</b> – A sediment pond of at least 850m<sup>3</sup> will be constructed.</p> <p><b>Commitment 10</b> – Sediment accumulation rates will be monitored and sediment removed periodically.</p> <p>With regard AMD the following commitments are made:</p> <p><b>Commitment 24</b> - The monitoring of pH of the water in the sediment pond is to be conducted at least once per week.</p> <p><b>Commitment 25</b> - If bedrock/clay material is exposed that appears to contain pyrite or sulphide containing substances it will be tested prior to being removed and/or crushed.</p>
<b>Public and agency comment</b>
<p>The following comments were received during the representation period:</p> <ul style="list-style-type: none"> <li>• Run off entering the neighbouring property may create swampy conditions.</li> <li>• Sandy sediment from the quarry site may enter the neighbouring land during periods of heavy rain.</li> <li>• If runoff is acidic then frequent liming of paddocks may be required.</li> </ul> <p>Flinders Council queried whether the vegetation buffer between the quarry and the neighbouring land was of sufficient width to mitigate the potential for sediment discharge.</p> <p>EPA Tasmania requested a description of historical impacts to the receiving environment and a discussion of any changes likely to occur as a result of the proposal.</p> <p>MRT, the EPA Regulatory Officer and the Water Specialist were satisfied additional information regarding potential AMD risk was not necessary.</p>

<b>Evaluation</b>
<p>Water quality concerns raised during the public representation period are addressed in section B.1.3 of the DPEMP Supplement. It is noted the evidence suggests that if there were to be any flows onto land adjacent the proposed activity these would be short term events, as there are no scars or erosion channels, and water would quickly dissipate due to well drained soils. It is further noted existing controls are poor and yet no significant impacts are evident. It is estimated there would be very little change to the catchment area currently draining to the adjacent land as a result of the proposal.</p> <p>The response to public and agency comment provided in the DPEMP Supplement is accepted. With the establishment of an effective site drainage collection and control system the potential impact of sediment runoff would be effectively mitigated.</p> <p>Pond sizing calculations are provided in Attachment 6 to the DPEMP. Pond size is based on relevant soil loss calculations and is accepted. Standard conditions regarding establishment of cut-off drains (<b>SW1</b>), stormwater control (<b>SW2</b>) and the establishment of settling ponds (<b>SW3</b>), are imposed to ensure water related impacts are effectively managed.</p> <p>With respect to AMD risk the proposed management measures are considered appropriate, however, as the risks are minor no specific conditions are considered merited.</p>
<b>Conclusion</b>
<p>The proponent will be required to comply with the standard conditions <b>SW1</b>, <b>SW2</b> and <b>SW3</b>.</p>

<b>Issue 2: Dust</b>
<b>Description of potential impacts</b>
Potential sources of dust are discussed in section G1 of the DPEMP. These include ripping, topsoil stripping, rock movement, crushing, road surfaces and gravel stockpiles. It is noted that, in general, visible dust crossing the site boundary may constitute an environmental nuisance.
<b>Management measures proposed in DPEMP</b>
The proponent makes the following commitments: <b>Commitment 6</b> – standard industry control measures will be applied in relation to crushing i.e. materials to be crushed will be dampened and sprays will be installed on the output chute. <b>Commitment 7</b> – general measures such as surface dampening, retention of vegetation and restriction of the area of disturbance will be implemented
<b>Public and agency comment</b>
The following comments were made in representation: <ul style="list-style-type: none"> <li>• The potential water needs for wetting surfaces may be significant and in addition may generate significant traffic.</li> <li>• No water source is present at the quarry and thus that this water would need to be imported depleting bores on the area.</li> <li>• Dust may contaminate crops and rainwater tanks.</li> <li>• The QCP imposes a requirement to contain all dust on the site.</li> <li>• Dust may cause health impacts. Refers to silicosis and to health concerns associated with small particle sizes.</li> </ul> <p>EPA Tasmania requested a Dust Management Plan (DMP), in which was included assessment and mitigation of the potential for dust generation from access roads.</p> <p>The EPA Industry Air Specialist advised the emission of a significant fine particulate fraction is not associated with normal quarrying operations. It is also noted previous advice has been received from the Department of Health and Human Services to the effect that silicosis is primarily an occupational health and safety issue and is not a population health issue.</p>
<b>Evaluation</b>
A DMP was provided as Attachment S3 to the DPEMP Supplement. The DMP formalises the mitigation and management proposed in commitment <b>6</b> and <b>7</b> summarised above and addresses dust from the quarry operations and movements related to transport of rock products. It is acknowledged in the DPEMP Supplement that available water may be restrictive. The use of surface dust suppressants, should it be necessary, is detailed as an alternative in the DMP. Such suppressants have been found to be an effective and benign way of limiting dust in similar applications. <p>In general, dust from quarry operations and transport movements can be effectively controlled such that visible dust plumes beyond the site boundary do not occur. This is consistent with the QCP acceptable standard. Provided dust is mitigated to such an extent, then dust from quarrying operations is not expected to contaminate crops or rainwater tanks on adjacent land to any appreciable extent. Conditions <b>A1</b>, requiring covering of dusty loads, and <b>A2</b> requiring implementation of the Dust Management Plan, are imposed to limit the risk of dust nuisance.</p>
<b>Conclusion</b>
The proponent will be required to comply with standard condition <b>A1</b> and with site specific condition <b>A2</b> .

Issue 3: Flora, fauna, weeds and plant pathogens
<b>Description of potential impacts</b>
<p>An ecological survey of the quarry site and access road was included as Attachment 4 to the DPEMP.</p> <p>The threatened vegetation community <i>Eucalyptus viminalis</i> – <i>Eucalyptus globulus</i> coastal forest and woodland (DVC) occurs beside the access route to the site.</p> <p>The following threatened species, listed under the TSP Act, were described within the mining lease:</p> <ul style="list-style-type: none"> <li>• Coast velvet bush (<i>Lasiopetalum discolor</i>).</li> <li>• Shade pellitory (<i>Parietaria debilis</i>).</li> </ul> <p>One environmental-pasture weed, spear thistle (<i>Cirsium vulgare</i>), was recorded in low numbers in some areas of the survey area.</p> <p>No evidence of the plant pathogen <i>Phytophthora cinnamomi</i> was found within the survey area.</p> <p>The EPBC Act listed fauna species the common wombat (Bass Strait) (<i>Vombatus ursinus ursinus</i>) is present on the site with dens located within the sandy soils on lower slopes. No dens were observed in the quarry area which is considered unsuitable for denning. This sub-species of wombat is abundant on Flinders Island.</p> <p>Other fauna species that were considered to potentially occur within the area were:</p> <ul style="list-style-type: none"> <li>• Wedge-tailed eagle (<i>Aquila audax fleayi</i>).</li> <li>• White-bellied sea eagle (<i>Haliaeetus leucogaster</i>).</li> <li>• Swift parrot (<i>Lathamus discolor</i>).</li> </ul> <p>No suitable nesting habitat was considered present on the proposed site for any of the above species. Potential feeding habitat for the swift parrot was considered to be present in the region but outside of the area subject to potential disturbance.</p>
<b>Management measures proposed in DPEMP</b>
<p>The following commitments were made:</p> <p><b>Commitment 17</b> – a weed and disease management plan will developed.</p> <p><b>Commitment 18</b> – a ‘permit to take’ will be sought under the TSP Act in relation to any threatened flora that will need to be removed.</p> <p><b>Commitment 19</b> - The DVC community should be avoided by the construction of the access road into the quarry.</p>
<b>Public and agency comment</b>
<p>The following comments were made in representation:</p> <ul style="list-style-type: none"> <li>• A nest survey for wedge-tailed eagles is required.</li> <li>• Representor has sighted swift parrots feeding on the neighbouring property which contradicts sighting reports in the DPEMP.</li> <li>• Weeds may be imported to the site e.g. Parramatta grass.</li> </ul> <p>PCAB noted that should <i>Lasiopetalum discolor</i> be present on site this would be a significant extension of its range. Further taxonomic work should be carried out to confirm the identification.</p>

<b>Evaluation</b>
<p>In section B.2.5 of the DPEMP Supplement it is stated <i>Lasiopetalum discolor</i> (coastal velvet bush) was incorrectly reported in the mining lease and that the species is the unlisted <i>Lasiopetalum macrophyllum</i> (shrubby velvet bush). This was accepted by PCAB. No further information is required.</p> <p>PCAB did not require any further detail regarding the potential for nesting habitat or foraging habitat for the identified threatened species within the site. It is noted the area to be disturbed in conducting the activity is reported in the DPEMP as being cleared in 1986. This suggests older trees with nesting hollows are unlikely to be present.</p> <p>The commitment to develop a weed management plan is supported. Standard condition <b>OP1</b> will require weeds to be managed on the land.</p>
<b>Conclusion</b>
The proponent will be required to comply with standard condition <b>OP1</b>

<b>Issue 4: Hazardous materials and waste</b>
<b>Description of potential impacts</b>
<p>The DPEMP states fuel, oils and explosives will not be stored on the land. The potential exists for release of minor amounts of fuel or oils during incidents, accidents and malfunctions.</p> <p>Minor amounts of general waste are likely to arise from conducting the activity.</p>
<b>Management measures proposed in DPEMP</b>
<p>The following commitments were made:</p> <p><b>Commitment 8</b> - No chemicals, fuels or oils will be stored on site overnight, and refuelling of quarry equipment will be carried out using a mobile bund.</p> <p><b>Commitment 14</b> - No general machinery servicing will be conducted within the quarry. Waste generated will be disposed of at a permitted refuse disposal site.</p> <p><b>Commitment 15</b> - Waste generated by workers will be collected in waste bins and disposed of at a permitted refuse disposal site.</p>
<b>Public and agency comment</b>
<p>The following comments were made in representation:</p> <ul style="list-style-type: none"> <li>• Oil leaks may cause groundwater contamination.</li> <li>• Diesel fumes may contaminate crops and impact on health.</li> <li>• Other sources of roadbuilding materials, currently disposed of as waste, have not been considered in terms of justification for the proposal.</li> </ul> <p>Flinders Council raised a concern that the presence of flammable materials on site may increase the risk of bushfires</p> <p>With regard to crop contamination and health impacts, EPA Tasmania notes the use of diesel powered machinery is ubiquitous in agricultural areas.</p>
<b>Evaluation</b>
<p>With reference to commitment eight, the quantities of fuel and oil on the land at any one time are likely to be relatively minor and generally contained within operating machinery. Standard conditions <b>H1</b> and <b>H2</b>, requiring containment of hazardous materials and the provision of spills kits, are appropriate to mitigate the potential for land and groundwater contamination.</p> <p>With respect to waste management, the issue of use of recyclable materials for roadbuilding is not subject to consideration in this assessment. Management of waste in accordance with the waste management hierarchy is, however, encouraged (see Information Schedule <b>O12</b>). Commitments made in relation to general waste management are appropriate.</p> <p>In relation to fire risk, the DPEMP Supplement states there is an existing Community Bushfire Protection Plan prepared by the Tasmania Fire Service in consultation with Flinders Council. It is also noted that as no fuel or oils will be stored permanently on the land, the proposal does not represent an unusual risk of causing or increasing the intensity of bushfires.</p>
<b>Conclusion</b>
<p>The proponent will be required to comply with standard conditions <b>H1</b> and <b>H2</b>.</p>

<b>Issue 5: Land disturbance, decommissioning and rehabilitation</b>
<b>Description of potential impacts</b>
<p>The DPEMP reports the existing mining lease allow for an area of disturbance of 1ha. A conceptual mine plan is presented in the DPEMP for operations within this footprint (see figure 5, this report).</p> <p>Land disturbed in the course of carrying out the activity has the potential to cause further impacts, due to erosion and weed propagation.</p>
<b>Management measures proposed in DPEMP</b>
<p>The following commitments were made:</p> <p><b>Commitment 26</b> - Progressive rehabilitation will apply at the quarrying operation for those areas that have been quarried and are no longer needed or used for the operation of the quarry.</p> <p><b>Commitment 27</b> - In the event of permanent closure of the facility prior to complete extraction of the resource a detailed Decommissioning and Rehabilitation Plan will be developed and submitted to the EPA for approval.</p>
<b>Public and agency comment</b>
<p>MRT had concerns the proposed operations may not be accommodated within the proposed mine footprint. The mine plan provided did not detail locations of overburden/topsoil and vegetation stockpiles and was insufficient to demonstrate operations could be conducted within the restricted footprint. A revised mine plan was requested.</p>
<b>Evaluation</b>
<p>The concerns raised by MRT were discussed in section B.1.6 of the DPEMP Supplement. The proponent did not revise the mine plan information presented in the DPEMP. Rather, it was argued that vegetation, overburden and topsoil stockpiles would be minor in extent due to the skeletal soils present above the resource.</p> <p>The proponent did, however, acknowledge that during peak operation additional land capacity for stockpiling of product may be necessary. The DPEMP Supplement provided a plan of a location for stockpiling of product outside the mining lease but still within the land to which the planning application relates. The vegetation type on this additional land parcel is <i>Allocasuarina verticillata</i> forest. This vegetation type is common on the island. The previous natural values atlas search did not identify any threatened species in this area. Thus use of this land to stockpile product is considered acceptable. Site specific condition <b>OP2</b> allows use of this land to stockpile product only.</p> <p>Regardless of the stockpiling solution presented, the EPA Regulatory Officer shares MRT concerns that the existing allowable area of disturbance is very restrictive. Maintenance of an area of disturbance of only 1ha whilst continuing operations will be very difficult. Since the proponent has been unwilling to increase the disturbance footprint and manage this accordingly, it is considered necessary to impose a condition requiring a Mining and Rehabilitation Plan with three months of date on which the conditions take effect (condition <b>DC2</b>).</p> <p>In relation to ongoing rehabilitation requirements, management of the activity during temporary suspension, and rehabilitation upon final cessation, it is appropriate to impose standard decommissioning and rehabilitation conditions (conditions <b>DC1, DC3, DC4, DC5</b> and <b>DC6</b>).</p>
<b>Conclusion</b>
<p>The proponent will be required to comply with standard conditions <b>DC1, DC3, DC4, DC5</b> and <b>DC6</b>.</p> <p>The proponent will be required to comply with site specific conditions <b>DC2</b> and <b>OP2</b>.</p>

## Appendix 2 Summary of public and agency submissions

The following comments were made by representors and referral agencies in relation to planning application DA 012/216 and supporting documentation including the document entitled *Development Proposal and Environmental Management Plan, 'The Gums' Quarry, Palana Road, Whitemark, Flinders Island* dated 9 October 2016 (DPEMP).

Eleven public representations were received. These are identified by number only in the following Tables. Comments were also received from Council and a number of State Government agencies. A supplementary report to the DPEMP was requested in which information required by the EPA to address the comments in Table 1 is provided. In addition, the proponent was encouraged to address other public and agency comments listed in Table 2.

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

Representation No./ Agency	Comments and issues	Additional information required
6	Contends that the purpose of the Right of Way (ROW) on the neighbouring property was to access an internal block and that because this block now has independent access the ROW "has lost its intended use". Asserts it is not legal to use the ROW to access the quarry.	Confirm the access routes from Palana Road to the quarry site and provide the map grid coordinates of each access point to the land to which the planning application relates, noting that these access points may be relevant to the EPA Board's determinations.
6	Believes water spray requirements for wetting surfaces will be significant and require frequent water truck movements. This number of water trucks has not been taken into account.	Discuss in terms of the dust management plan required later in this information request.
6	All run off will eventually enter the neighbours property and it is asserted this would create swamps in low spots.	Provide a description of the current condition of the receiving environment for runoff from the site, including any degradation apparent as a result of historical operations on the quarry site. Discuss any changes to runoff volume and quality likely as a result of the proposal and the potential impacts.
6	Asserts sand enters the neighbouring property during heavy rains	As above
6	Asserts no water source exists at the quarry and thus water would have to be imported resulting in depletion of water bores in the area	Indicate where possible sources of water for use in surface wetting are located taking into account periods where significant volumes of water for road wetting may be envisaged.

6	Asserts fly rock was deposited on the neighbouring land during a previous blast at the site and that this caused damage to mowing machinery. Concerned that the potential for fly rock to deposit on the land would prevent cropping. Refers to the reported potential for flyrock to land on the airport runway located 2,175m distant as evidence that fly rock could affect a potential cropping area of 300Ha as well as be a risk to residences, cars and people.	The blast management plan in the DPEMP must be amended to ensure neighbouring agricultural land is identified as a receiving environment and mitigation measure should be provided to specifically manage potential deposition of flyrock on that land. The potential location and facing of initial blasts is necessary information to enable assessment of potential flyrock deposition on the neighbouring agricultural land without mitigation.
6	<p>It is asserted the VIPAC noise assessment is considered deficient for the following reasons:</p> <ol style="list-style-type: none"> <li>1. Recommends a noise limit of 50dBA which is 15-20 dBA above the assessed ambient noise level.</li> <li>2. Says that daytime ambient noise levels at the neighbouring residence are 40-60dB(A) however no access for measuring background noise levels was provided. In addition, there is no discussion of differences between Leq and L90 noise levels.</li> <li>3. No Lmax levels at the neighbouring residence provided. It is noted there is no explanation of why an adjustment for impulsivity is not necessary.</li> <li>4. Does not measure noise levels of all activities occurring at the same time.</li> <li>5. Considers a maximum of only 3 trucks every 10 minutes travelling along the access route.</li> <li>6. The distance between the location of the blast and the curtilage of the neighbouring dwelling is estimated at 770m rather than the reported 800m distance. Given the closeness of the estimated Air blast overpressure to the assessment criteria the difference is considered critical.</li> <li>7. Blast assessment does not account for topography.</li> <li>8. As no blast plan has been prepared the ability to meet the overpressure levels cannot be assessed.</li> <li>9. No working of air blast overpressure is provided.</li> </ol>	<p>Discuss why a maximum charge mass/delay of 100kg was chosen for the purpose of assessment? What would be the actual maximum charge mass/delay be?</p> <p>NB: the above information is necessary to assess likelihood of air blast overpressure exceedances. No additional information is needed to address the other comments made in relation to the VIPAC report.</p>
Flinders Council	Proposal raised during site meeting with Council to use the existing access road to the mining lease for outgoing traffic is not discussed in the DPEMP.	If a change in traffic movements is proposed, confirm all potential routes for inbound and outbound traffic, volumes of traffic on each and circumstances under which they are to be used.

Flinders Council	Concerns raised that a 10m vegetation buffer is not sufficient to ensure discharge from the proposed sediment dam will not impact on the neighbouring land.	Provide a description of the current condition of the receiving environment for runoff from the site, including any degradation apparent as a result of historical operations on the quarry site. Discuss any changes to runoff volume and quality likely as a result of the proposal and the potential impacts.
	It is noted that in the proposed access route there are 2 right angle bends nearest the neighbouring residence that are likely to result in truck breaking noise.	Discuss the potential speeds vehicles will be moving along the access route on the land and how will this translate into braking and associated noise.
MRT	“The mine plan fails to identify any areas that will be needed for overburden/topsoil/vegetation stockpiling purposes.”	Provide a revised mine layout showing indicative locations for stockpiling of overburden, topsoil and vegetation.
	“The mine plan does not appear to represent the true space required for stockpiling, truck movements etc. and appears to represent a conceptual schematic of the sites layout only. The mine plan appears to be somewhat optimistic in its expectations for it to remain inside the current footprint.”	Provide a revised mine plan containing sufficient information to demonstrate that at peak production all truck movements to from and on the site can be accommodated within the proposed footprint, as well as ongoing operations and stockpiling. Stockpiles include overburden, topsoil and vegetation stockpiles.  The initial proposed disturbance footprint must be defined and areas to be progressively rehabilitated as the quarry extends should be identified. The layout should be based on typical dimensions of equipment, turning requirements for trucks and other vehicles and practical working volumes of stockpiles. It must be demonstrated that uncontrolled emission of materials from the proposed footprint or expansion of the footprint beyond the proposed area will not occur.

EPA Tasmania - Dust	It is noted that according to the DPEMP, at the proposed quarry operation peak intensity the number of loads transported would be 1 every 6 minutes. This equates to one vehicle movement every 3 minutes 6 days a week over a period of 3 months. It is considered that should it be necessary to mitigate dust generation from the road surface during these periods via surface wetting that doing so would be difficult.	<p>It is noted that there is an existing alternative access route to the proposed quarry on the application land. It is also noted that Council has advised that the use of the existing access road, at least for some vehicle movements, is being considered. As discussed above confirmation of vehicle route usage is required.</p> <p>Submit a dust management plan which takes into account road routes on the land to which the planning application for the proposal relates. The plan should include:</p> <ul style="list-style-type: none"> <li>• an assessment of the potential dust generated from the road surfaces and from the quarry location to cause an environmental nuisance at the nearest residence in other ownership. This assessment should be based on available meteorological data and take into account worst case weather conditions. Mitigating factors such as distance of the routes from potential residences in other ownership and vegetation screening for each route should be taken into account.</li> <li>• Procedures for dust monitoring and complaints response</li> <li>• Practical mitigation procedures eg circumstances under which work will be ceased to allow for surface wetting or for unfavourable condition to dissipate.</li> </ul> <p>The EPA Board will consider such impacts directly attributable to the proposal in its decision making regarding the proposed activity. Particularly where a viable alternative route which may pose less of a potential risk is available.</p>
EPA Tasmania - Noise	No information is provided of potential noise impacts associated with use of the existing access road on the land to which the planning application relates.	<p>If the existing access road on the land is to be used then provide details of distances of the road from residences and any other sensitive receptors, noting whether these residences are in ownership other than by the owner of the land to which the application relates.</p> <p>Discuss potential noise impacts associated with the use of this route as opposed to the route detailed in the DPEMP.</p>

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

Representation No./ Agency	Comments and issues	Further Info Requested [yes/no]	EPA Comments
1,3	Assertion that the public roads are not suitable for heavy trucks or prolonged use by smaller trucks. Suggestion that the size of truck and the number of trucks per day be limited.	No	This matter is outside the EPA Board's responsibility.
1,2,4,5,7	Concerns that large number of trucks using public roads will create a traffic hazard. Two representors identified the "tourist season" as a particular concern. One representor considered such high levels of traffic were inconsistent with the Planning Scheme. Suggestion that speed limit for trucks would be appropriate	No	This matter is outside the EPA Board's responsibility.
1,2,4,5	Concerns that traffic along public roads associated with the quarrying operation will create a noise nuisance (or that noise is not discussed) and general loss of amenity for adjacent residences.	Yes	It is noted that environmental nuisance directly attributable to traffic movements associated with the proposal can be taken into account by the EPA Board in its determinations.  Road condition and use will affect the potential for the proposal to cause environmental nuisance. This is a matter which Council may consider during the planning assessment.  Provide a description of potential transport routes along public roads, residential setbacks along these routes and vehicle movements along these routes during peak production compared with during other periods to assist the EPA Board. Such information would be particularly relevant for hours of operation proposed outside of those specified in the Quarry Code of Practice.
1,2,4, 5,7	The visual impact of the existing quarry is noted eg as a "scar on the landscape". Concerns raised that the proposal will increase the extent of the visual impact. On representor considers Visual impact	No	This matter is outside the EPA Board's responsibility.

	should be assessed from the perspective of aircraft arriving and departing.		
3,5	Belief that the proposal will benefit one individual for little benefit to the community as a whole, in particular potential damage to roads, increased traffic and noise are noted against some short term work as a benefit.	Yes	The economic uses of quarried material and benefits of the proposal have not been described in any detail in the DPEMP, nor weighed up against potential environmental impacts. Such information would provide useful context for the EPA Board as well as representors.
4	Considers restriction should be placed on the potential for quarried materials to be exported.	Yes	The economic uses of quarried material and benefits of the proposal have not been described in any detail in the DPEMP, nor weighed up against potential environmental impacts. Such information would provide useful context for the EPA Board as well as representors.
1,5,7	A maximum production limit of 20,000 tonnes [or less] is considered adequate for the islands needs and that a permit for the higher production limit is unnecessary.	No	The environmental impacts of the proposal will be assessed for a production limit of 120,000m <sup>3</sup> per annum.
7	The annual production capacity of the activity is considered excessive. Long term theoretical extraction volumes would result in significant landscape impacts. No consideration beyond the 20 year timeframe is made.	No	Sufficient information has been provided in the DPEMP.
2,6	The following errors are identified in the DPEMP: <ul style="list-style-type: none"> <li>• Extraction to start July/August 2016.</li> <li>• Boyer Rd does not exist on Flinders Island.</li> <li>• This quarry is not a coal mine.</li> <li>• Repairs will be floated to the Lilydale Workshop.</li> <li>• Material for the Markana Park runway seems to apply to Sunbury and the rock mentioned is quartz.</li> <li>• There is no Gundagi Rd on Flinders Island.</li> </ul> <p>One representor believes the report to be a cut and paste of a report for a coal mine in Bangor and therefore infers it is not valid documentation.</p>	Yes	While these errors are not considered to affect the assessment made of the environmental aspects of the operation, it is considered that amendment would remove any inferred ambiguity.
2,4,5,6	Either dispute or consider there is insufficient evidence provided to support assumptions that the rock from the	Yes	The economic aspects of the proposal have not been described in any detail in the

	quarry can be used for Flinders Island Airport runways and Council and State Government roads. One representor was concerned regarding the lack of detail of all potential projects for the gravel resource believing it makes it difficult to determine if the DPEMP is sufficient.		DPEMP, nor weighed up against potential environmental impacts. Such information would provide useful context for the EPA Board as well as representors.
2,4,5	Assertion bitumen roads were repaired in 2016 following damage caused by "pine plantation trucks". Inference truck movements to and from the activity would cause similar issues. On representation concern general regarding road damage and costs.	No	This matter is outside the EPA Board's responsibility.
2,4,5	Concerns commitments won't be carried out or conditions won't be enforced	No	Environmental aspects of the proposal will be assessed on their merits and conditions or restrictions imposed accordingly.
2,6	The existing quarry has not been in operation continuously since 1986 and therefore the quarry being termed a "working quarry" is disputed. One representor states that because operations have largely ceased thus the proposal should be treated as "an application for a new level 2 quarry".	No	The planning application is for a new activity.
2,5	Consider the proposal will reduce market value of adjoining properties. No recompense for this loss is mentioned in the documentation.	No	This matter is outside the EPA Board's responsibility.
2	Assertion that if fly rock lands on an existing crop it would be impossible to clean up and the crop would be lost.	No	The blast management plan must be amended as already discussed.
3	As the access road (in part) is located on an adjoining property considers an agreement with the adjoining landowner should be in place.	Yes	Details of discussion with the adjacent landowner regarding access to the proposal site should be provided. Without an agreement, although access may be legal, it is more likely that environmental nuisance complaints will be made and require resolution.
3	States proponent does not provide data to support assertion that the transport of quarry material to the island by barge is more expensive. Therefore it cannot be assessed whether the proposal is more favourable [economically] than the existing situation.	Yes	The economic aspects of the proposal have not been described in any detail in the DPEMP, nor weighed up against potential environmental impacts. Such information would provide useful context for the EPA Board as well as representors.

10,11	Consider the proposal will provide jobs and material which one representor notes would otherwise be imported.	Yes	The economic aspects of the proposal have not been described in any detail in the DPEMP, nor weighed up against potential environmental impacts. Such information would provide useful context for the EPA Board as well as representors.
9	Considers that it is vital the proposal proceed for the “economic and social prosperity of the island”	Yes	The economic aspects of the proposal have not been described in any detail in the DPEMP, nor weighed up against potential environmental impacts. Such information would provide useful context for the EPA Board as well as representors.
4,5	Considers the proposed hours of operation to be excessive	Yes	Operations outside of the ‘acceptable standard’ hours specified within the Quarry Code of Practice should be justified.
5	Believes that the proposal will impact on tourism	Yes	The economic aspects of the proposal have not been described in any detail in the DPEMP, nor weighed up against potential environmental impacts. Such information would provide useful context for the EPA Board as well as representors.
6	Notes that when the original level 1 quarry was approved all exclusion zones were on the owners land and that is no longer the case as some of the land has been purchased by the neighbour.	No	Environmental aspects of the proposal will be assessed in relation to the potential impact on nearby residences and other relevant sensitive receptors.
6	Does not believe the proposal meets the quarry code of practice in “most aspects” Refers to the following distances recommended by the quarry code of practice: <ol style="list-style-type: none"> <li>1. 1000m for blasting. Separation distance is to the nearest residence is 300m less the considers blasting should be prohibited.</li> <li>2. “the containment area should be within the boundaries of the quarry lease”</li> </ol>	No	Sufficient information is provided in the DPEMP to enable assessment against the quarry code of practice.

	<p>3. Crushing distance should be 750m however in this case the distance is 600m.</p> <p>4. All dust should be contained within the quarry lease.</p>		
6	Notes there is an existing access road on the land to which the application relates.	Yes	<p>As discussed, if this access road is to be used then some additional information is required in relation to potential noise and dust impacts.</p> <p>In addition it would be of benefit to state why this road was, at least initially, not considered for use as the primary access to the quarry.</p>
6	Asserts truck noise for the access road at the nearest residence is ignored.	No	Truck noise has been considered.
6	Believes ambient noise readings were carried out they were selectively taken during ploughing resulting in elevated recorded level.	No	The measured ambient noise level is considered consistent with levels measured at other locations where farming activity occurs from time to time.
6	Asserts ambient noise is 20dBA at most and thus the assessment criteria of 50dBA is 30dBA above criteria and therefore "not allowed".	No	For daytime noise levels, 50dBA is considered a reasonable assessment criterion. It should, however, be noted that lower limits may be considered for early morning evening or night time activity.
6	Considers that echo effect of the terrain has not been taken into account and that this would significantly increase noise pollution.	No	A three dimensional terrain model was used and reflecting surfaces are taken into account by SoundPLAN.
6	Infers noise report is in error as it refers to noise made by cows and there are no cows on the property.	No	Does not impact on report findings.
6	Asserts no mention made of truck passing the house every 6 minutes.	No	This is detailed and modelled.
6	Asserts that during operation at the site 13 years ago noise emissions were significant.	No	Not relevant to the current assessment.
6	Considers the suggestion to install noise proof windows or similar implies noise will be a problem.	No	Not relevant to the current assessment.
6	Believes that with truck braking and acceleration noise from truck movements along the access road will be significantly higher than predicted.	Yes	Additional information is required regarding likely speeds of vehicles and associated braking noise on the land to which the application relates. Speeds

			and associated noise outside that land are not a matter considered by the Board directly, however environment impacts attributable to the proposed activity on the land can be considered in the EPA Board's determination.
6	Asserts a noise of 40 dBA at the house would be equivalent to a lawn mower running 15 metres from the house for the duration major projects periods	No	The assertion is not supported by the literature in relation to this issue.
6	Considers there will be a loss of privacy for the neighbouring residence.	No	This matter is outside the EPA Board's responsibility.
6	Oil leaks would result in contamination of groundwater on neighbouring land.	No	Sufficient information has been provided in the DPEMP.
6	"All diesel powered vehicles and machinery will need to have particulate filters and Add Blue systems."	No	This matter is outside the EPA Board's responsibility.
6	Asserts that the combined diesel exhaust and particulate matter pollution pose an elevated health risk for nearby residents	No	The use of diesel powered machinery is ubiquitous in agricultural areas.
6	Concerned about the potential for deposition of dust and diesel exhaust fumes on crops	No	A dust management plan has been required.
6	Concerned silica dust will be emitted if vehicle loads not properly wetted and that this has the potential to cause silicosis	No	In relation to other quarries, advice from Department of Health and Human Services has been received to the effect that silicosis is primarily an occupational health and safety issue and is not a population health issue.
6	Concern regarding dust contamination of rainwater tanks on the neighbouring property making it unsuitable for drinking. This would mean the neighbour would have to import water at great cost.	No	A dust management plan has been required.
6	Refers to a quarry code of practice acceptable standard that "all dust must be contained within the quarry lease" [Acceptable standard 6.5.2 reads "Dust should not normally be visible crossing the boundary of the premises"]	No	A dust management plan has been required.
6	Discusses health hazards associated with small sized particulate matter (PM10 and PM2.5)	No	Emission of a significant fine particulate fraction is not associated with normal quarrying operations.
6	Concerns raised about enforcement, bond payment to Council for damage	No	This matter is outside the EPA Board's responsibility.

	caused by the proposal (including to roads) and the responsible person for quarry operations being The Adams Group rather than Markarna Grazing.		
6	Concerned a traffic impact assessment has not been carried out.	No	This matter is outside the EPA Board's responsibility.
6	Concerned the quarry will impact on the growing of barley on the neighbouring land for a whisky distillery due to dust and diesel fume contamination and the damage to the "Clean Green" brand.	No	The use of diesel powered machinery is ubiquitous in agricultural areas. Brand issues are outside the EPA Board's responsibility.
6	Argues that if the quarry were approved it would mean the proposed interim land zoning of Rural Living could not be made permanent as it would be inconsistent with the quarry presence.	No	This matter is outside the EPA Board's responsibility.
6	Asserts wedge tailed eagles visit the quarry regularly. Without a survey for nests in the vicinity of the quarry it is asserted that the potential impact on the species is unknown.	No	An assessment of the potential for Wedge Tailed Eagle nesting habitat is provided. The Policy and Conservation Advice Branch, DPIPWE, did not raise concerns regarding this assessment.
6	Asserts swift parrots feed on the neighbouring property contrary to reported sightings being at some distance.	No	An assessment of the potential for swift parrot breeding and foraging habitat is provided. The Policy and Conservation Advice Branch, DPIPWE, did not raise concerns regarding this assessment.
6	All run off will report to the neighbour's paddocks. If runoff is acidic it would mean frequent liming would be required.	No	Sufficient information is provided in the DPMP to assess this issue.
6	It is asserted the proposal does not comply with the <i>Flinders Island Planning Scheme 2000</i> and therefore should be rejected.	No	This matter is outside the EPA Board's responsibility.
6	Concerned regarding the importation of weeds from roadsides, particularly Parramatta Grass. Considers washdown of all vehicles entering the property is necessary.	No	Sufficient information is provided in the DPMP to assess this matter.
7	DPMP does not discuss the potential for recycling of materials currently going to landfill as a component of roadbuilding materials	No	The proposal relates to a rock extraction activity. Opportunities for incorporation of other materials into road construction works are outside the scope of the Boards assessment.

Council	Site distance along Palana road will require removal of vegetation. How is site distance to be guaranteed given that the proponent does not own the land on either side of the access point from Palana Road.	No	This matter is outside the EPA Board's responsibility.
Council	"The current site can be seen as a scar on the land. Further extension of the existing site may mean a large visual scar on the hillside."	No	This matter is outside the EPA Board's responsibility.
Council	"A recent farm fire highlighted the need for Bushfire Protection, to the Community, from high risk activities." Council also states that "environmental impacts may also arise from a site fire due to the nature of materials (fuel etc) used on site."	Yes	The nature of the activity proposed on the land is described, however no comment is made regarding the relative sensitivity of the activity to bushfire and potential associated emissions, or the potential for generation of escaped fire, compared to other activities consistent with the land zoning.
PCAB	"The DPEMP indicates that <i>Lasiopetalum discolor</i> is present at the site. If present, this would represent a significant increase in range for the species, as there are no records of this taxon from Flinders Island (the only extant population in Tasmania is on Prime Seal Island). Internal experts have advised that the population is more likely to be the non-listed <i>Lasiopetalum macrophyllum</i> . It is therefore recommended that specimens of the plant be lodged at the Tasmanian Herbarium, for confirmation (or otherwise) of species identification.  Should the population be confirmed to be <i>Lasiopetalum discolor</i> , a permit to take would be required and it is recommended that prior to lodgement of an application further advice should be sought from PCAB. As a minimum the applicant would be required to develop a mitigation plan in accordance with the "mitigation hierarchy" set out in Appendix 4 of the Department of Primary Industries, Parks, Water and Environment Guidelines for Natural Values Surveys - Terrestrial Development Proposals."	No	This information is necessary in relation to securing a "permit to take" under the <i>Threatened Species Protection Act 1995</i> ".
MRT	The mine cross section is not to scale.	No	Does not impact upon the EPA Board's assessment
MRT	"The Particle size distribution report sent to Golder Associates P/L Melbourne Laboratory states in the Sample history	Yes	This information may be useful in describing the

	<p>&amp; comments that the sampled material is from stockpiled material at Mt Aitken Road, Sunbury, Victoria. This may well be material that was transported from the Flinders quarry 1229P/M for the purposes of assessment, however, it would be appreciated to know with certainty if this is in fact the case.”</p>		<p>economic benefits associated with the proposal.</p>
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## Appendix 3 Permit Conditions – Environmental No. 9508

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**PERMIT PART B**  
**PERMIT CONDITIONS - ENVIRONMENTAL No. 9508**

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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))**  
**THE GUMS QUARRY, 634 PALANA ROAD**  
**WHITEMARK TAS 7255**

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:           **FLINDERS**  
 Permit Application Reference:   **DA012-16**  
 EPA file reference:           **249584**

Date conditions approved:

01 AUG 2017

Signed:

 \_\_\_\_\_  
 CHAIRPERSON, 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.



CHAIRPERSON, BOARD OF THE ENVIRONMENT PROTECTION AUTHORITY

01 AUG 2017

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*Attachments*

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Attachment 2: Product Stockpile Location (modified: 19/07/2017 10:05)..... 1 page



CHAIRPERSON, BOARD OF THE ENVIRONMENT PROTECTION AUTHORITY

### Schedule 1: Definitions

In this Permit Part B:-

**Aboriginal Relic** has the meaning described in section 2(3) of the *Aboriginal Relics 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.

**Blast Management Plan** means the plan entitled *The Gums Quarry, Flinders Island Blast Management Plan - Revised April 2017* included as Attachment S5 to the document entitled *DPEMP Supplement, 'The Gums' Quarry, Palana Road, Whitemark, Flinders Island*, dated 14 April 2017, or any subsequent amendments of that plan approved in writing by the Director.

**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.

**Dust Management Plan** means the plan entitled *Dust Management Plan, The Gums Quarry, Palana Road, Whitemark, Flinders Island*, dated 1 February 2017, included as Attachment S3 to the document entitled *DPEMP Supplement, 'The Gums' Quarry, Palana Road, Whitemark, Flinders Island*, dated 14 April 2017, or any subsequent amendments of that plan approved in writing by the Director.

**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.

**Flyrock** has the same meaning as that described in the *Tasmanian Quarry Code of Practice May 2017*, namely rock thrown an excessive distance from the blasting site.

**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.

**Quarry Code Of Practice** means the document of this title published by the Environment Protection Authority in May 2017, and includes any subsequent versions of this document.

**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: CT 245509/1 [which includes mining lease 1229 P/M]; CT 173164/3; and land within CT 141190/3 marked 'RIGHT OF CARRIAGEWAY, PLAN REF - CT 141190'.

**Weed** means a declared weed as defined in the *Weed Management Act 1999*.



CHAIRPERSON, BOARD OF THE ENVIRONMENT PROTECTION AUTHORITY

01 AUG 2017

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## Schedule 2: Conditions

### Maximum Quantities

#### **Q1 Regulatory limits**

- 1 The activity must not exceed the following limits :
  - 1.1 120,000 cubic metres per year of rocks, ores or minerals processed.
  - 1.2 192,000 tonnes/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 responsibility**

If the person responsible for the activity intends to cease to be responsible for the activity, that person must notify the Director in writing of the full particulars of any person succeeding him or her as the person responsible for the activity, before such cessation.

#### **G5 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.



CHAIRPERSON, BOARD OF THE ENVIRONMENT PROTECTION AUTHORITY

01 AUG 2017