EIS SUPPLEMENT

NICHOLS ROAD QUARRY

NICHOLS ROAD, NUBEENA

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Document Status

Revision	Author	Reviewer and Organisation	Date
1	R Barnes C McCoull	RW Barnes, VDC Pty Ltd	29-8-2020
Final	R Barnes C McCoull	RW Barnes, VDC Pty Ltd	30-8-2020

FOREWORD

An Environmental Impact Statement (EIS) was prepared to support a Development Application by Gadtech Materials Pty Ltd for a Planning Permit to modify the use of a quarry on a property at Nichols Road, Nubeena.

Council advertised the application for a 28-day period.

The Environment Protection Authority (EPA) received representations (provided by the planning authority) and comments from referral agencies in relation to DA01/2020 and its supporting documentation.

A supplementary report to the EIS was requested of the proponent by the EPA on 24 August 2020. Information required by the EPA is listed in Table 1.

Information has been provided in this Supplement where requested by the EPA in Table 1.

TABLE 1: ADDITIONAL INFORMATION REQUIRED BY THE EPA BOARD

ITEM	Representation No./ Agency	EIS section no.	EIS Page no.	Comments and issues	Additional information required
1	2, 3	Various		The representor is concerned that silica dust produced by the quarry and during transport will potentially cause a health impact on them / nearby residents.	Please provide details regarding potential for silica dust to occur from the resource and during operation of the site (e.g. during blasting, crushing and transport) and the measures in place to manage the potential impacts.
2	Conservation Assessment Section (CAS)	E.11.3	68	CAS notes that no specific management, mitigation or offset measures are proposed for impacts on the Tasmanian devil or eastern barred bandicoot. CAS states that while no additional traffic is proposed, the altered hours of operation have potential to increase night-time traffic (for light and heavy vehicles) significantly. Night-time is defined as one hour before dusk to one hour after dawn. CAS still recommends that an assessment be undertaken to determine if the increase in night-time traffic is significant in accordance with the following Guideline: https://protect-au.mimecast.com/s/bvH1C4QZgDU5zmPrhVItLX?domain=dpipwe.tas.gov.au CAS states that if there is a >10% potential increase in roadkill deaths, development of roadkill mitigation measures in accordance with the Guidelines is required. Alternatively, CAS notes that it could be assumed that there will be a significant increase in roadkill deaths and relevant mitigation measures could be implemented without a traffic impact assessment.	While it is understood that there will be no cartage of materials during the additional hours proposed, there will likely be light traffic coming onto the site during night-time hours, particularly during the winter months. Therefore, there is the potential for increased impacts on native wildlife. Please either provide a traffic impact assessment done in accordance with the Guideline mentioned or outline the proposed mitigation measures that will be put in place to ensure that potential impacts to native wildlife are managed appropriately for vehicles coming onto the site during night-time hours.

SUPPLEMENTARY INFORMATION

TABLE 1 ITEMS

ITEM 1

Please provide details regarding potential for silica dust to occur from the resource and during operation of the site (e.g. during blasting, crushing and transport) and the measures in place to manage the potential impacts.

It is common knowledge that dolerite contains silicate material. There are numerous dolerite quarries in Tasmania, and most of the unsealed roads in Tasmania are made from dolerite or basalt material.

Leaman[1] notes -

> Dolerite is composed of two essential and several accessory minerals. The two essential minerals; termed plagioclase feldspar and pyroxene, compose together 60-80\ of the rock. Plagioclase is a white or colourless, prismatic silicate mineral containing sodium and calcium in the proportion of about 40:60. The pyroxenes (more than one member of the pyroxene family of minerals is usually present), are greenish-black silicate minerals containing iron, calcium and magnesium. The accessory minerals are quartz, orthoclase, chlorite and magnetite. Magnetite may constitute 3-5\ of the rock and quartz+orthoclase+chlorite 20- 40%. The mineralogy of the dolerite is closely related to the form of the intrusion and the thermal history.
>
> Further information on the petrology of dolerite is given by Edwards (1942)[2], Joplin (1957, 1971[3]), Spry (1962[4]) and McDougall (1962, 1964[5]).

As noted in the EIS, in terms of managing the potential impacts the following is reiterated –

- 'dust mitigation measures including the use of sprays on the crushing unit, the wetting of the internal road network when required and the use of a water spraying system for load dampening;'[6]
- 'Water will available from the on-site sediment pond to dampen the access road and the crusher will be fitted with sprayers to prevent dust (as is standard for modern mobile crushing units) – measures described in the Tasmanian Quarry Code of Practice 2017 as being industry standard to prevent dust emissions crossing the boundary of the land upon which the quarrying activity is conducted.'[7]

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[1] The engineering properties of Tasmanian dolerite, with particular reference to the route of the Bell Bay Railway.

http://www.mrt.tas.gov.au/mrtdoc/dominfo/download/TR16_148_163/TR16_148_163.pdf

[2] EDWARDS, A.B. 1942. Differentiation of the dolerites of Tasmania. Ii II. *J .Geol.* **50**,451-480, 579-610.

[3] JOPLIN, G.A. 1957. The problem of the quartz dolerites: some significant facts concerning mineral volume, grain size and fabric. *Pap.Proc.R.Soc.Tasm*. **91**:129-142.; JOPLIN, G.A. 1971. A petrography of Australian igneous rocks. 3rd ed. Angus and Robertson: Sydney.

[4] SPRY, A.H. 1962. Jurassic igneous rocks, in SPRY, A.H.; BANKS, M.R. (ed.). The Geology of Tasmania. *J.geol.Soc.Aust.* **9**:266-270.

[5] McDOUGALL, I. 1962. Differentiation of the Tasmanian dolerites: Red Hill dolerite-granophyre association. *Bull.Geol.Soc.Am.* **73**:279-315; McDOUGALL, I. 1964. Differentiation of the Great Lake dolerite sheet Tasmania. *J.Geol.Soc.Aust.* **11**:107-132.

[6] Pg 10

[7] Pg 32

- 'Water collected will be used in the development to dampen material when crushed (to maintain a 5-10% water component to minimise dust) and the internal road and quarry pit during periods of dry weather.'[8]
- 'E.1.2 MITIGATION MEASURES

  Crusher and screens

  Standard industry practice for dust control, which will be applied at the activity, is to dampen material prior to crushing and/or to also have installed sprayers on the output chute to minimise dust emissions from an otherwise dry product . Mobile modern crushers have such features installed and there is a water source available – water from the sediment basin or the use of a dedicated water tanker – to operate these dust suppression measures whilst crushing.

  General dust suppression measures

  General measures that will be used to suppress dust if it does occur in substantial volumes that may cause environmental harm (eg during periods of strong northerly and/or north-westerly winds in summer) include the following industry standard environmental practices for quarries :

  - Watering of internal roads as required during dry and windy conditions;
  - Retention of vegetation along the access road corridor where possible;
  - Retention of native vegetation around the quarry working area to reduce the likelihood of strong winds liberating fine particles into the air;
  - Covering of trucks with tarpaulins and/or load dampening; and
  - Minimising the geographic extent of areas of exposed soil.

  Water can be accessed from the on-site sediment pond or via a dedicated water tanker.'[9]

If water in addition to that which is located on the site is needed, a water cart owned by the quarry proponent will be used to source water.

ITEM 2

While it is understood that there will be no cartage of materials during the additional hours proposed, there will likely be light traffic coming onto the site during night-time hours, particularly during the winter months.

Therefore, there is the potential for increased impacts on native wildlife.

Please either provide a traffic impact assessment done in accordance with the Guideline mentioned or outline the proposed mitigation measures that will be put in place to ensure that potential impacts to native wildlife are managed appropriately for vehicles coming onto the site during night-time hours.

As noted in the EIS, the 0600 hrs start for the site is to allow staff (1 light vehicle) to enter the site to conduct non-extractive activities such as office work (weighbridge docket reconciliation, timesheets etc), check site signage and safety features are in place and machinery fuel, oil and/or lubricant levels. These administrative activities would not occur every day, they would only occur sporadically throughout the year with most occurring in the spring and summer period (daylight savings period) to coincide with the main period of use of the material.

[8] Pg 38

[9] Pg 57

Notwithstanding this, the measures identified in section 4.4[10] of the guidelines (see below) will be applied where practicable. It is important to remain aware that the road network is publicly accessible 24 hrs 7 days per week 365 days per year unless it is closed by the road authority (eg roadworks, emergency). Nubeena Road is the primary access to the Nubeena township by residents, visitors and those working in the area (delivery drivers, school bus drivers, employees of local businesses etc).

> **4.4 Road construction or upgrade and increased night time road use**
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> - Avoid night time use of the road where practicable.
> - Reduce speed limit on private roads (particularly at night).
> - Reduce speed limit on roads (particularly at night) where practicable.
> - Deploy facilities such as ripple strips that alert drivers to hazards.
> - Map high risk road sections and install advisory signage.
> - Undertake education and awareness training for drivers associated with the development.
> - Increase the visibility of wildlife on roads by the use of a lightly-coloured aggregate seal.
> - Reduce the volume of traffic at night (e.g. provide buses for workers) where practicable.

The quarry proponent can in reality only effect two of the mitigation measures because it has no control over the road network (eg road signage, speed limits) or other road users such as locals, tourists, truck drivers (logging, other quarries), bus drivers (school buses, tourists groups) and people commuting to or from work (including employees of the Council, State Government). The Department of State Growth regulates speed limits on roads (and there has not been an official reduction in speed for Nubeena Road to protect wildlife during night-time hours), so all the quarry proponent can do in this regard is to ask the driver of the light vehicle who is attending the quarry in night-time hours to drive slower, noting the possible presence of wildlife.

The measures that could be applied are –

- Reduce speed limit on roads at night; and
- Undertake education and awareness training of drivers associated with the development.

[10] Natural and Cultural Heritage Division (2015) Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian Devil (*Sarcophilus harrisii*). Department of Primary Industries, Parks, Water and Environment.