

Date & Time: Thu, 14 Sep 2023 at 10:08:45 AEST
 Position: 55 S 561820 5422546 (±4.6m)
 Altitude: 826m (±3.5m)
 Datum: AUSTRALIAN GEOCENTRIC 1994 (GDA94)
 Azimuth/Bearing: 144° S36E 2560mils True (±12°)
 Elevation Angle: +03.2°
 Horizon Angle: -00.2°
 Zoom: 1.0X



Ben Ridge Quarry – Environmental Effects Report

Prepared By: Barry Williams
 Date: 16 February 2024

Issue	Date	Recipient	Organisation
Revision 0	28 November 2023	Mr Bernard Johnson	Dorset Council
Revision 1	29 November 2023	Mr Bernard Johnson	Dorset Council
Revision 1	16 February 2024		Environment Protection Authority

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Appendix 1 – Natural Values Assessment – Ben Ridge Road Quarry - ECOtas

PART A – PROPONENT INFORMATION

TABLE 1: PROPONENT DETAILS

Entity name	Dorset Council
ABN	68 027 137 155
Registered address	3 Ellenor Street SCOTTSDALE Tas 7260
Postal address	PO Box 21 SCOTTSDALE Tas 7260
Contact person	Bernard Johnson
Mobile	0417 107 323
Email	bjohnson@dorset.tas.gov.au

TABLE 2: CONSULTANT DETAILS

Name	Mr Barry Williams
Business	Integrated Land Management & Planning
ABN	67 057 193 880
Address	331 South Arm Road LAUDERDALE Tasmania 7021
Contact	Barry.williams@ilmp.com.au
Phone	0437 394 492

1 DESCRIPTION OF PROPOSED ACTIVITY

TABLE 3: PROPOSED ACTIVITY

Activity	Dorset Council is the proponent/ operator of the Ben Ridge Quarry in 2017. The quarry provides road construction and maintenance materials for gravel roads in the Mathinna and Paradise Plains region.	
New or existing	This proposal is for an intensification of an existing hard rock quarry operation.	
Product	Ben Ridge Quarry will provide road construction gravel until the reserves are exhausted, design life 40 years.	
Quantities	Existing	Proposed
Maximum extraction quantity	5,000 m ³ (8,000 tonnes)	10,000 m ³ (16,000 tonnes)

Maximum processing quantity	1,000 m3 (1,600 tonnes)	10,000 m3 (16,000 tonnes)																																				
Bulk density	Different gravel products will have differing bulk densities. Assumed bulk density for all products is 1.6 tonnes/cubic metre.																																					
Methods of extraction and processing	<p>Ben Ridge Quarry is a drill and blast operation. Periodically a bench is drilled and blasted to produce shot rock. Subsequently contract crushers are engaged to process the shot rock into gravels with the appropriate material properties to meet current specifications.</p> <p>The processing operation produces stockpiles which are depleted over time by load and cart operations to council capital and maintenance projects in the region.</p>																																					
Transport	<p>The cartage task will be performed by a both heavy rigid trucks and medium combination truck and trailers. An average payload of approximately 30 tonnes is assumed.</p> <p>Trucks will enter and leave the site using Ben Ridge Road turning most commonly east towards Mathinna Plains Road.</p> <table border="1" style="width: 100%; margin-top: 10px;"> <thead> <tr> <th>Description</th> <th>Units</th> <th>Quantity</th> </tr> </thead> <tbody> <tr> <td>Annual production (m3) max.</td> <td>m3</td> <td>10000</td> </tr> <tr> <td>average bulk density</td> <td>t/m3</td> <td>1.60</td> </tr> <tr> <td>Annual production (t) max.</td> <td>t</td> <td>16000</td> </tr> <tr> <td>Conservative pay load</td> <td>t</td> <td>30</td> </tr> <tr> <td>Loads to cart production</td> <td></td> <td>533</td> </tr> <tr> <td>Weeks worked per year</td> <td></td> <td>48</td> </tr> <tr> <td>Days worked per week</td> <td></td> <td>6</td> </tr> <tr> <td>Days worked per year</td> <td></td> <td>288</td> </tr> <tr> <td>Adjust for public holidays</td> <td></td> <td>280</td> </tr> <tr> <td>Loads per day</td> <td></td> <td>1.9</td> </tr> <tr> <td>Movements per day (in/out)</td> <td></td> <td>3.8</td> </tr> </tbody> </table>		Description	Units	Quantity	Annual production (m3) max.	m3	10000	average bulk density	t/m3	1.60	Annual production (t) max.	t	16000	Conservative pay load	t	30	Loads to cart production		533	Weeks worked per year		48	Days worked per week		6	Days worked per year		288	Adjust for public holidays		280	Loads per day		1.9	Movements per day (in/out)		3.8
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Stockpiles	<p>Stripping materials will be temporarily stockpiled in windrows until the winnable product has been recovered from an area. Once worked out, the stripping will be placed back over the ground surface to encourage regeneration.</p> <p>Shot rock will remain on the quarry floor until a crushing contractor is available. The crushing program will produce a processed product stockpile which will be depleted over time.</p>																																					
Area of disturbance	Ben Ridge Quarry currently	1.60 hectares																																				
	Proposed extra development area	0.30 hectares																																				
	Proposed rehabilitation area	0.35 hectares																																				

	Total area of disturbed land 2.25 hectares		
Major equipment	During an operational campaign the following types of hire equipment will be utilised.		
	Operation	Equipment	Power (kW)
	Drilling	Mobile drill rig	120
	Ripping / excavating	Excavator	120
	Loading / stockpiling	Wheel loader CAT 950K	157
	Crushing	Primary crusher: J-1175	257
		Cone crusher: C-1540	261
		VSI: Twister-Trac VS350	403
Screening	Screener: Terex-Finlay 883	72	
Actual equipment utilised will vary according to what the hire company has available at the time.			
Infrastructure	Access	Access road is via an existing well maintained, locked security gate. As part of this proposal a pipe culvert will be installed on the roadside (Ben Ridge Road) to divert road drainage under the quarry entrance towards a road culvert further west.	
	Amenities	Activities will occur as dayworks, no onsite crib or office facilities are required.	
		Portaloo, relocatable toilet	

Proposal timeline	Documents	EPA assessment	Advertising	Council permit
	February 2023	April 2024	April 2024	June 2024

Operating hours	Weekdays	Saturday	Weekends and holidays
Quarry operations	7.00 am to 7.00 pm	8.00 am to 4.00 pm	No work.
Cartage	7.00 am to 7.00 pm	8.00 am to 4.00 pm	No work.

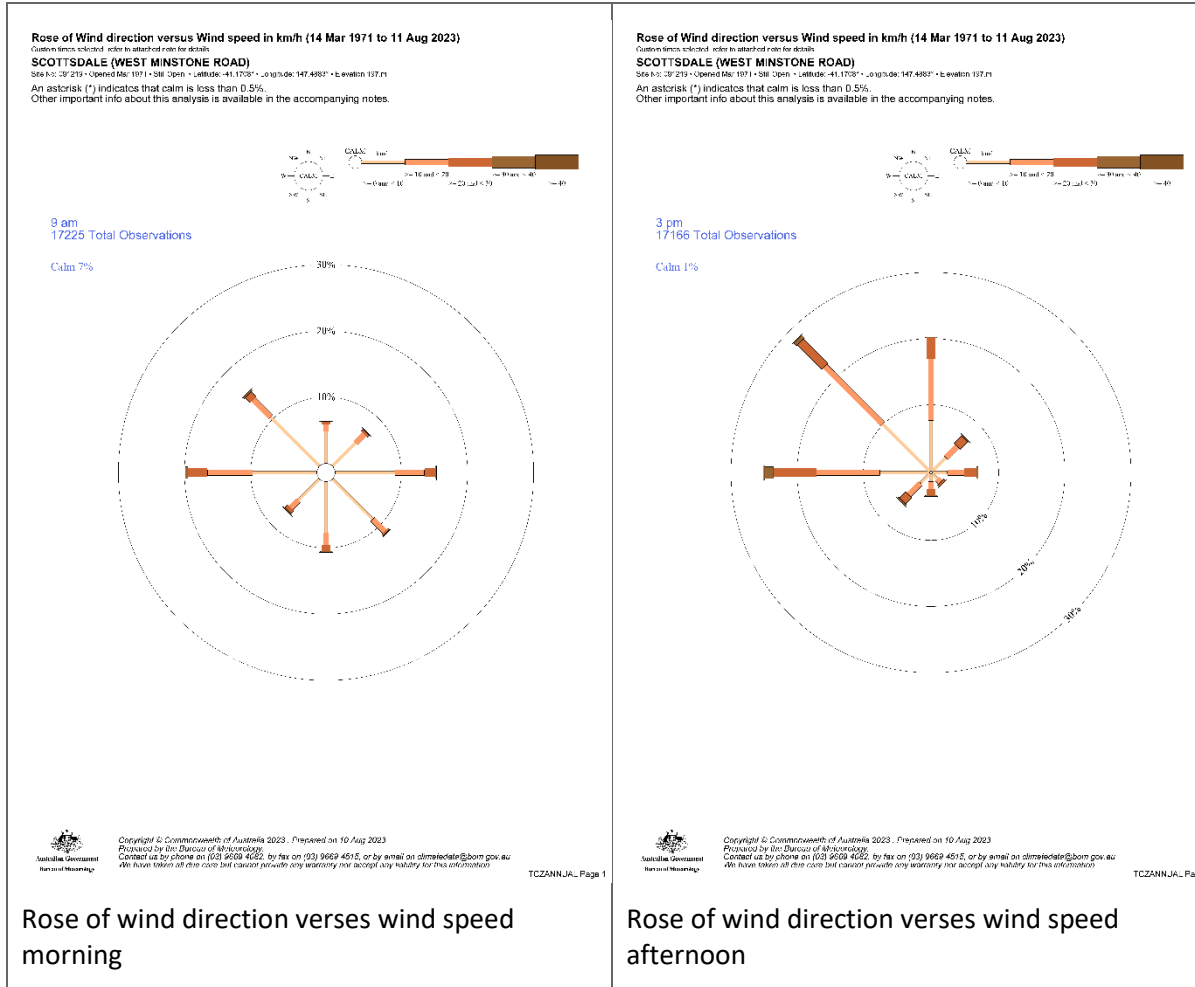
TABLE 4: LOCATION AND PLANNING CONTEXT

Location	Ben Ridge Quarry is located off the eastern side of Ben Ridge Road approximately 2.7 kilometres west from the Mathinna Plains Road junction.	
Mining lease	ML Number	4M/2017
	Lease Holder	Dorset Council
	Area	7 hectares
	Granted	16/07/2010
Property	Land tenure	South Esk Regional Reserve
	Property ID	0
Certificate of Title	-	
	Land manager	Parks & Wildlife Service
Current permitting	Dorset Council	Level 1 permit (held under existing use rights)
Current regulatory limits	Extracted	5,000 cubic metres per annum
	Processed	1,000 cubic metres per annum
Land tenure	South Esk Regional Reserve	
Planning Scheme	Tasmanian Planning Scheme – Dorset Local Provisions Schedule	
Land zoning	23. Environmental Management	
Land use planning permit	Ben Ridge Quarry is currently permitted to operate as a Level 1 quarry under ‘existing use rights’. Dorset Council advised the proposal to increase annual production capacity will require a development application.	
Use Class	Extractive industry	
Permissibility	Extractive industry is discretionary in the environmental management zone	
Mining lease	4M / 2017 has pending renewal status.	
Area of mining lease	7 hectares	
The Land	This application applies to the area of the mining lease 4M / 2017	

TABLE 5: DESCRIPTION OF SITE AND SURROUNDS

Land use	Ben Ridge Quarry is located within the South Esk Regional Reserve, which is land set aside for <i>“Mineral exploration and the development of mineral deposits in the area of land, and the controlled use of other natural resources of that area of land, including special species timber harvesting, while protecting and maintaining the natural and cultural values of that area of land”</i> (Tasmanian Government, 2023) On the opposite side of Ben Ridge Road the land is set aside for Future Potential Production Forest.					
Topography	Ben Ridge Quarry occupies a ridge top location at an elevation of approximately 820 metres AHD ¹ . The land falls away with a low gradient towards the east and steeply on the opposite side of Ben Ridge Road to the west.					
Climate	No weather stations offering a full range of data are located close to Ben Ridge Road. The closest is Scottsdale (West Minstone Road) 091219.					
Mean Maximum Temperature (°C)	February	23.0	July	12.0		
Mean Minimum Temperature (°C)	February	11.3	July	3.8		
Mean monthly rainfall (mm)	Minimum February	41.3	Maximum July	118.0	Annual	974.3
Wind Data						
Average wind direction verses speed plot 9.00 am	Average wind direction verses speed plot 3.00 pm					
The average wind direction verses speed plot for this location in the morning period shows the predominant strong winds come from the west. Less frequent and lower strength winds come from the northwest. The stronger winds will tend to carry any dust away to the southeast.	The average wind direction verses speed plot for this location in the afternoon shows the predominant strong winds frequently from the northwest. Slightly less frequently lower strength winds come from the north and west. More frequent north west winds in the afternoon will tend to carry dust towards the southeast.					

¹ AHD – Australian Height Datum



(B.O.M. (a), 2023)

<p>Geology</p>	<p>Geological mapping defines the substrate at Ben Ridge Quarry as Paleozoic Lone Star Silstone. It is described as contact metamorphosed and, in this location, granites are mapped in proximity. It is possible that granite may be encountered beneath the current quarry floor and may be exposed with further development. The siltstone presents as a fine grained rock, which when blasted factures to a blocky 100 to 150 nominal shot rock.</p>
<p>Soils</p>	<p>The insitu soils on the land surrounding the quarry appear very thin with rock outcrops common. The surrounding vegetation is poorly developed due to high elevation and poor drainage.</p>
<p>Hydrology</p>	<p>Ben Ridge Quarry is situated on the divide between two sub-catchments. On the western side Ben Ridge Road intervenes, this and easterly gradient prevent any discharge in this direction. The Conservation of Freshwater Ecosystem Values (CFEV) project classifies river section values. On the eastern side the land form has a gentle gradient towards river section 326202 which has an Integrated Conservation Value (ICV) of Medium, a Conservation Management Priority Immediate (CMPI) of Medium and a Conservation Management Priority</p>

Potential (CMPP) of High. On the southeast side the land drains to 326201 which has an ICV of Medium, a CMPI of Low and a CMPP of High.
Natural values extract from Natural Values Atlas (NRE (Tas) b, 2023)

TABLE 6: THREATENED FLORA (5000 METRES)

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
<i>Brunonia australis</i>	blue pincushion	r		n	1	22-Nov-1961

TABLE 7: THREATENED FAUNA (500 METRES)

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
<i>Perameles gunnii</i>	eastern barred bandicoot		VU	n	1	28-Nov-1988
<i>Sarcophilus harrisii</i>	tasmanian devil	e	EN	e	2	13-Jan-1990

TABLE 8: THREATENED FAUNA (5000 METRES)

Species	Common Name	SS	NS	Bio	Observation Count	Last Recorded
<i>Aquila audax</i>	wedge-tailed eagle	pe	PEN	n	1	28-May-2022
<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	e	EN	e	14	14-Nov-2018
<i>Astacopsis gouldi</i>	luteralipina or giant freshwater crayfish	v	VU	e	1	01-Jan-1900
<i>Dasyurus viverrinus</i>	eastern quoll		EN	n	8	02-Aug-2020
<i>Perameles gunnii</i>	eastern barred bandicoot		VU	n	4	13-May-2020
<i>Sarcophilus harrisii</i>	tasmanian devil	e	EN	e	8	21-Jan-2020

TABLE 9: RAPTOR NESTS (5000 METRES)

Nest ID	Species	Common Name	Obs Type	Observation Count	Last Recorded
1105	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	5	14-Sep-2006
1344	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	5	14-Nov-2018
2054	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	1	04-Feb-2013
2055	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	1	04-Feb-2013
2312	<i>Aquila audax subsp. fleayi</i>	tasmanian wedge-tailed eagle	Nest	2	31-Oct-2017
	<i>Aquila audax</i>	wedge-tailed eagle	Sighting	1	28-May-2022

TABLE 10: DECLARED WEEDS (500 M)

Species	Common Name	Observation Count	Last Recorded
<i>Ulex europaeus</i>	gorse	1	29-Jan-1997

TABLE 11: DECLARED WEEDS (5000 M)

Species	Common Name	Observation Count	Last Recorded
<i>Rubus fruticosus</i>	blackberry	1	01-Jan-2001
<i>Senecio jacobaea</i>	ragwort	2	03-Feb-2016
<i>Ulex europaeus</i>	gorse	1	29-Jan-1997

TABLE 12: TASVEG 4.0 COMMUNITIES WITHIN 1000 M

Code	Community	Canopy Tree
DRO	(DRO) Eucalyptus rodwayi forest and woodland	
FUM	(FUM) Extra-urban miscellaneous	
MBS	(MBS) Buttongrass moorland with emergent shrubs	
NAD	(NAD) Acacia dealbata forest	
NLE	(NLE) Leptospermum forest	
RML	(RML) Nothofagus - Leptospermum short rainforest	
RMT	(RMT) Nothofagus - Atherosperma rainforest	MY
RMT	(RMT) Nothofagus - Atherosperma rainforest	
RSH	(RSH) Highland low rainforest and scrub	
SBR	(SBR) Broad-leaf scrub	
SLL	(SLL) Leptospermum lanigerum scrub	
WDB	(WDB) Eucalyptus delegatensis forest with broad-leaf shrubs	
WDL	(WDL) Eucalyptus delegatensis forest over Leptospermum	
WDR	(WDR) Eucalyptus delegatensis forest over rainforest	
WOB	(WOB) Eucalyptus obliqua forest with broad-leaf shrubs	
WOL	(WOL) Eucalyptus obliqua forest over Leptospermum	

TABLE 13: ACID SULPHATE SOILS WITHIN 1000 METRES

Dataset Name	Acid Sulfate Soil Probability	Acid Sulfate Soil Atlas	Description
Inland Acid Sulfate Soils	Extremely Low	Cm(p4)	Extremely low probability of occurrence (1-5% of mapping unit). with occurrences in small areas. Hydrosols, ASS generally within upper 1m in wet/riparian areas with Hydrosols (Isbell 1996). Potential acid sulfate soil (PASS) = sulfidic material (Isbell 1996 p.122). No necessary analytical data are available and classifier has little knowledge or experience with ASS, hence classification is provisional.



FIGURE 1: TASVEG 4.0 COMMUNITIES (NVA)

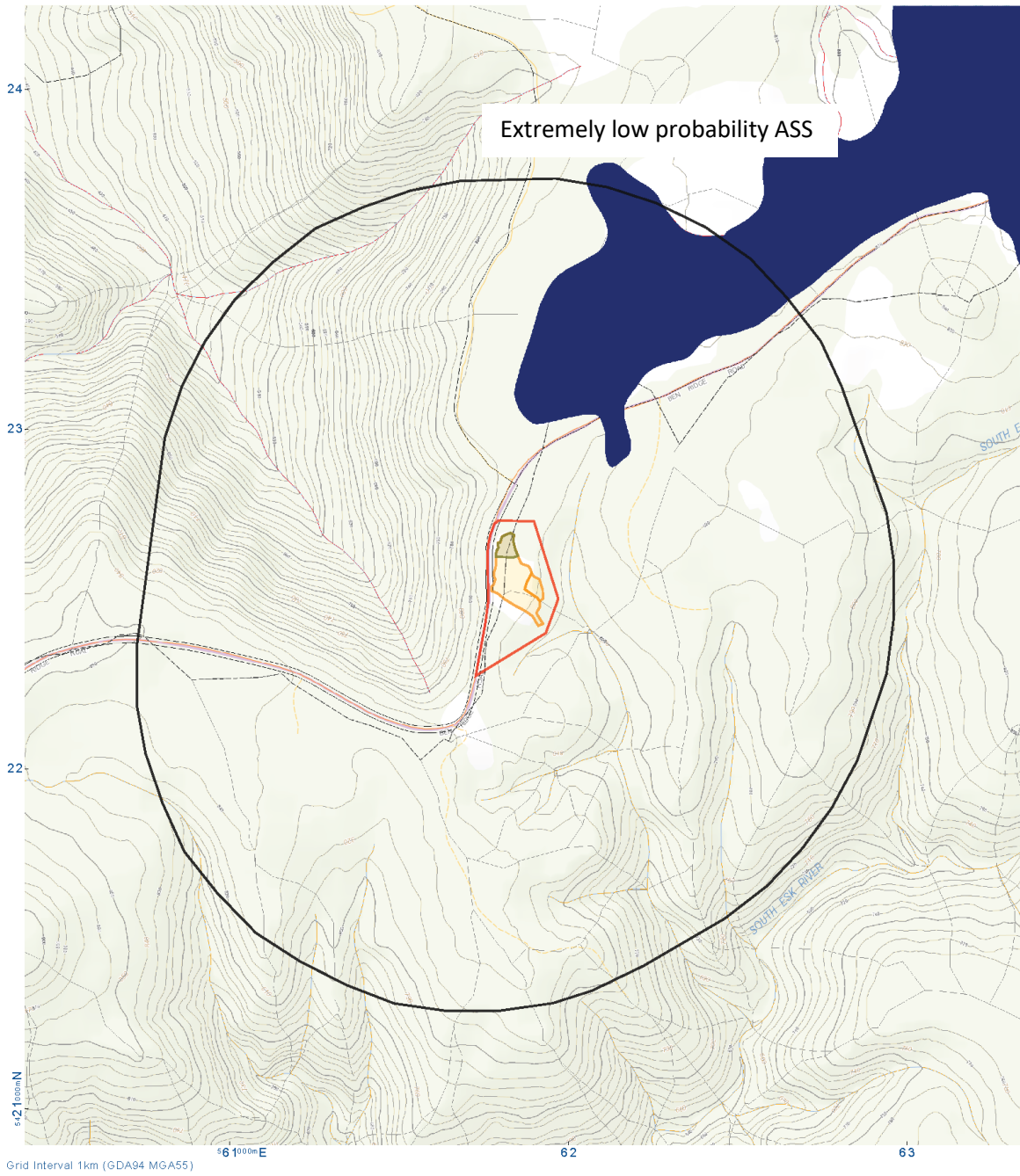


FIGURE 2: ACID SULPHATE SOIL POTENTIAL (NVA)

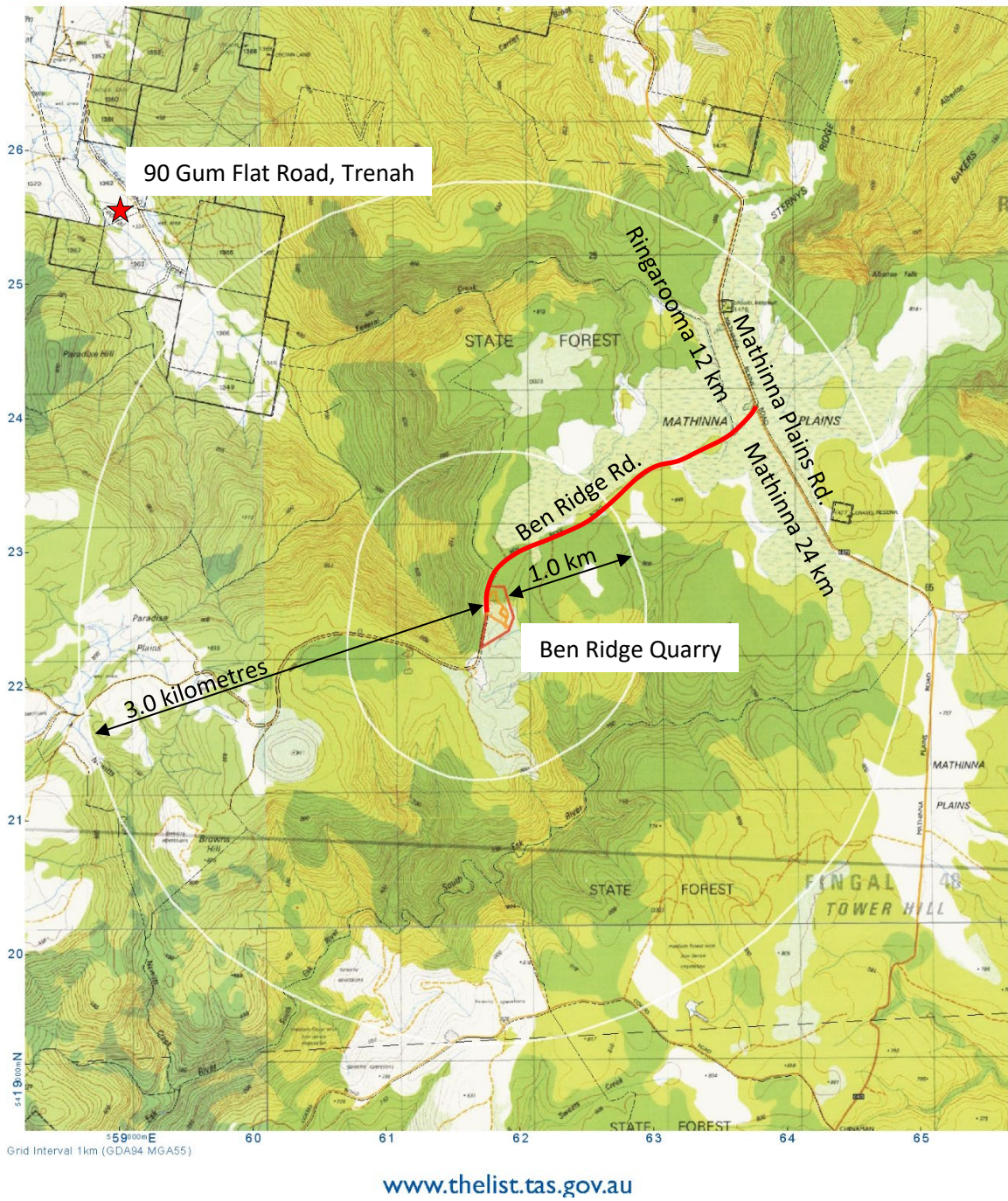









FIGURE 3: GENERAL LOCATION MAP AND SURROUNDS

Levels accuracy
Levels shown are interpreted from The LIST contours (10 m) and are indicative only. Volumes and relative elevations should be

Ground conditions / slope stability:
Face slope indicated here is indicative only, actual bench heights and face slopes should be designed in accordance with a ground

Legend

- Cadastral 
- Contours 10m 
- ML boundary 
- Watercourse 
- Bench existing 
- Bench new 
- Point source (dust) 

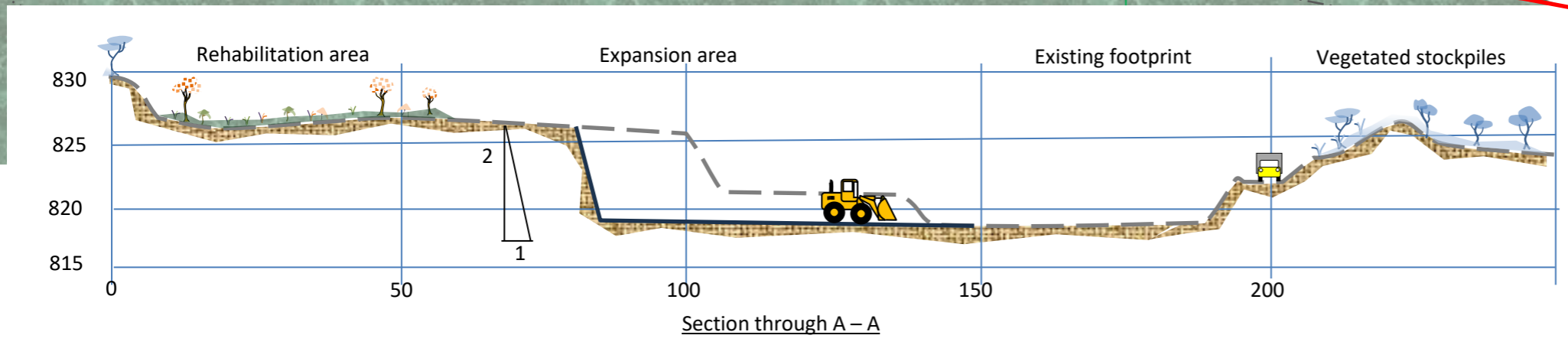
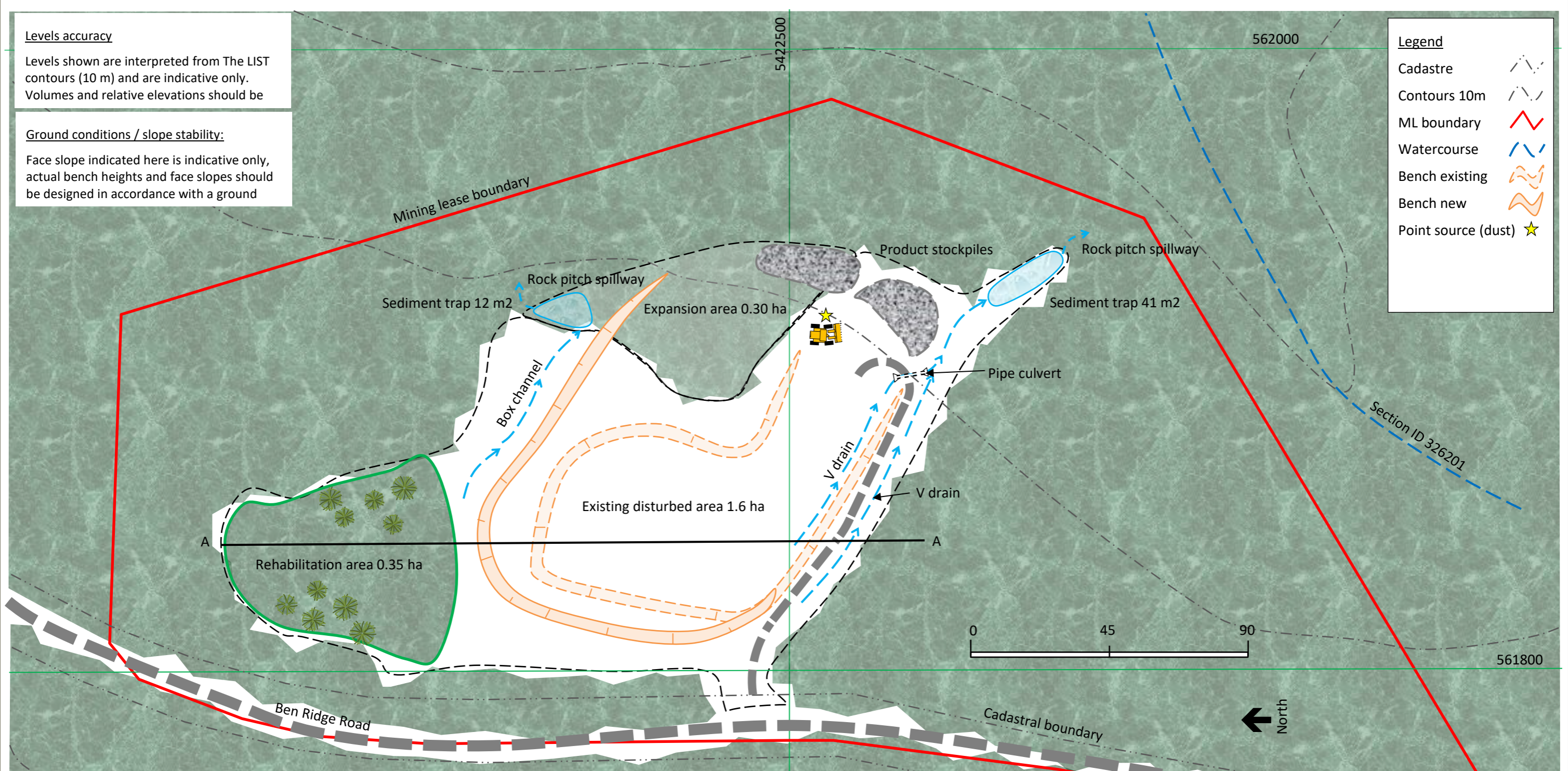


FIGURE 4: BEN RIDGE QUARRY - QUARRY PLAN
Drawn: BW, Date: Nov 2023, Revision: 2



2 PROJECT RATIONALE AND ALTERNATIVES

2.1 PROJECT RATIONALE

The Ben Ridge Quarry continues to provide road construction and maintenance gravel for works by Dorset Council. More stringent standards for road construction material specifications make processing quarry materials essential for public road applications. Using crushers and screens results in better utilisation of the source rock, more efficient placement and working and higher standards of finish. Crushing and screening contractors are engaged to process 2 or 3 years of total production for small quarries. Even though crushers are almost universally used to produce contemporary quarry materials, under environmental legislation a quarry using a mechanical crusher and screen is not regulated as a quarry but as a materials handling facility.

Under its existing permit status Ben Ridge Quarry can produce 5,000 cubic metres annually, however with the introduction of the crushing activity, the maximum annual production for a materials handling facility is 1,000 cubic metres. It is not economically viable to mobilise a crusher and screener circuit to produce 1,000 cubic metres.

Dorset Council is required to apply for a Level 2 activity permit and have the Ben Ridge Quarry regulated as a materials handling facility even though the crushing operation will only occur once every two or three years. The council do not wish to repeat a protracted application and assessment process so the decision was made to increase the maximum annual production to 10,000 cubic metres extracted and processed to cater for unpredicted future projects.

2.2 ALTERNATIVES

Two alternatives to upgrading Ben Ridge Quarry have been considered:

1. Continue to operate uneconomically with a restrictive annual processing limit.

As stated previously the Ben Ridge Quarry has a Level 1 permit and a mining lease to extract up to 5,000 cubic metres per annum. However, crushing is necessary to make the product suitable for most applications, so contract crushers would have to be mobilised to crush only 1,000 cubic metres. To continue with this approach makes the product too expensive and places a financial burden on the Dorset Ratepayers.

2. Decommission and close Ben Ridge Quarry.

The Dorset Council could decommission Ben Ridge Quarry and rehabilitate the site. Progressive rehabilitation is the most efficient and economical way to rehabilitate, using equipment when it is already located at the site and undertake rehab. works in downtime on other works. To undertake the rehabilitation effort as a project would be a cost burden on the Dorset Council without any offset in winning material for council works.

Without access to the Ben Ridge Quarry council projects would be supplied from other commercial quarries and carted potentially long distances to the works. This also would increase the cost of works causing either a blow out in works budget or less works performed. The Ben Ridge Quarry is at a high elevation; hence most projects will be downhill from there making carting easier and consuming less fuel and hence emitting less carbon dioxide to the atmosphere.

PART C – ENVIRONMENTAL IMPACTS AND MANAGEMENT

1 AIR QUALITY

Quarries generate dust through particulate emissions from mechanical activities:

- Drilling produces dust for a period during drilling and after, if dust is left on the ground.
- Blasting produces dust at the instant the shot is initiated.
- Crushers and mechanical screens can produce for the period of operation.
- Handling produces dust by dropping product from buckets into chutes and trays, dropping product from conveyors to chutes and to ground.
- Vehicle movements over unmade surfaces produce dust in dry and windy weather.

The location of these point source emissions is highlighted on the quarry plan but will change according to the varying location of key pieces of equipment.

Dust at any quarry is managed to protect the workforce from any discomfort associated with coming into contact with fine particles. In addition to improving the workplace for employees, quarry operators consider any impact of dust on neighbours either directly from the quarry operation or more remotely from vehicular traffic.

1.1 AIR QUALITY STANDARDS

Environment Protection Policy (Air Quality) 2004

Part 3 - ENVIRONMENTAL VALUES AND STANDARDS

Environmental values

6. (1) Environmental values are the values or uses of the environment that are to be protected.

(2) The environmental values to be protected under this Policy are –

(a) the life, health and well-being of humans at present and in the future;

(b) the life, health and well-being of other forms of life, including the present and future health, wellbeing and integrity of ecosystems and ecological processes;

(c) visual amenity; and

(d) the useful life and aesthetic appearance of buildings, structures, property and materials.

1.2 DUST EMISSION SOURCES

Ben Ridge Quarry is a blasting quarry applying all the activities above that can be responsible for dust emissions.

Ben Ridge Quarry can potentially generate dust through the following mechanisms;

- drilling can be a chronic source of dust emissions,
- blasting can be an acute source,
- traffic traversing unsealed processing areas and road surfaces,
- operating crushers, mechanical screens and conveyors, and
- exposed gravel surfaces and stockpiles during high wind conditions.

1.3 POTENTIAL FOR ENVIRONMENTAL NUISANCE

The most serious adverse impact as a result of excessive environmental dust emissions is to residences located close by.

Intense chronic dust emissions can coat trees and shrubs leading to poor vigor.

1.4 MITIGATING FACTORS

The prevailing and strongest winds come from the west and northwest. Dust emissions arising from the operation will tend to be directed in a south east direction onto forested land.

Ben Ridge Quarry is remote from any resident. The closest occupied house is located in Trenah at 90 Mud Flats Road, which is 3.8 kilometres from the mining lease boundary.

It is likely that a single blast and crushing campaign will produce the maximum allowable production. A blast is likely to be preceded by 3 weeks of drilling and the subsequent crushing campaign is likely to continue for a further 3 weeks. The main dust producing activities will be of short duration which will be interspersed by long periods of dormancy or low level activity in which time the vegetation can recover.

1.5 MITIGATION MEASURES

The following measures will be employed to help further mitigate the risk of adverse fugitive dust emissions:

- Trafficked surfaces on the quarry floor, benches and haul roads will be maintained in good condition and clean.
- Drop distances between buckets and hoppers and trays and off conveyor chutes will be kept to a minimum.
- Trays carrying product off site will be loaded so the maximum height of the load does not exceed the height of the sides of the tray or alternatively will have covers fitted.

1.6 RESULTANT IMPACTS

Prevailing weather conditions tend to reduce the likelihood that dust will cause a nuisance and the Ben Ridge Quarry operator will actively manage surfaces and operations to minimise the impact of dust.

The *Tasmanian Environment Protection Policy (Air Quality) 2004* (EPP) seeks to further the objectives of the *Environmental Management and Pollution Control Act 1994* set out in Schedule 1 of that Act. In relation to air quality the Act promotes the sustainable development of natural resources in a manner which avoids, remedying or mitigating any adverse effects on the environment.

MANAGEMENT MEASURE 1: DUST MANAGEMENT

Item	Proposed measure	Timeframe
1.	The quarry operator will actively manage trafficked surfaces and the surface of stockpiles to keep dust emissions to a minimum.	During operational campaigns

2 SURFACE WATER AND GROUNDWATER QUALITY

2.1 WATER QUALITY STANDARDS

State Policy on Water Management 1997

PART 2 - OBJECTIVES

5. Purpose of the Policy

5.1 To achieve the sustainable management of Tasmania's surface water and groundwater resources by protecting or enhancing their qualities while allowing for sustainable development in accordance with the objectives of Tasmania's Resource Management and Planning System. (Schedule 1 of the State Policies and Projects Act 1993)

2.2 WATER AND OVERLAND FLOW

The Ben Ridge Road mining lease (4M/2017) straddles the boundary of two surface water catchments. Drainage to the west has been interrupted by quarry extraction and has now been redirected to the east into the quarry. The area of west catchment outside the quarry has not been disturbed. The total area of east catchment within the mining lease is 5.7 hectares, of this only the quarry footprint (1.95 hectares) is captured by the quarry. The undisturbed land outside the footprint naturally drains away from the quarry. The proposed rehabilitation area is within the catchment and rehabilitation efforts will not seek to change drainage paths.

The quarry footprint drains to two points on the eastern perimeter of the site. The catchment for the northern discharge point includes the area proposed for rehabilitation and hence run off will diminish over time, total catchment area is 0.54 hectares. The catchment for the southern portion drains to the southeast corner, this catchment includes the quarry footprint and has a total area of 1.71 hectares.

The northern catchment has no sediment retention facility and drains through a constructed rectangular channel into intact vegetation at a point 50 metres from the mining lease boundary. Runoff water will percolate through vegetation for a further 55 metres before entering a watercourse, section ID 326202.

The southern catchment has no sediment retention facility and drains through a constructed shallow swale into intact vegetation at a point 20 metres from the mining lease boundary. Runoff water will percolate through vegetation for a further 35 metres before entering a watercourse, section ID 326201.

2.3 POTENTIAL FOR ENVIRONMENTAL NUISANCE

Without sediment traps there is potential for the site to generate runoff contaminated with sediment particularly from the southern catchment. The potential will increase with more activity on the site.

The northern catchment has a low potential as the land is nearly flat so runoff is slow and natural recruitment vegetation is starting to retain flows and therefore sediment. This mitigating potential will increase when active rehabilitation activities commence.

The receiving aquatic environment is 2 streams both with a ICV of moderate. These watercourses connect and become a tributary to the South Esk River which in this location also has a ICV of moderate.

The site is on the edge of the South Esk water catchment and hence the entire catchment is downstream from here. The final paper describing the Protected Environmental Values (PEVs) for tinamirakuna (Macquarie River) and South Esk River is not available but is assumed here to be similar to the North Esk catchment for surface waters with their headwaters within forest reserves:

A: Protection of Aquatic Ecosystems

(i) Protection of pristine or nearly pristine ecosystems

having regard for the management objectives for forest reserves outlined in Schedule 3 of the Forestry Act, 1920.

B: Recreational Water Quality & Aesthetics

(i) Primary contact water quality (where permitted)

(ii) Secondary contact water quality

(iii) Aesthetic water quality

That is, as a minimum, water quality management strategies should seek to provide water of a physical and chemical nature to support a pristine or near pristine aquatic ecosystem, which will allow people to safely engage in recreation activities such as swimming (where permitted), paddling or fishing in aesthetically pleasing waters.

(DPIWE, Dec 2005)

2.4 SEDIMENT CONTROL INFRASTRUCTURE (NORTHERN CATCHMENT)

It is not contemplated to undertake further extraction from the northern catchment and the majority of the area will be the subject of an active rehabilitation effort. In the short term rehabilitation activities are likely increase runoff and particularly contaminated runoff. As part of this proposal a sediment retention basin (sediment trap) will be constructed at the end of the channel to retain sediment transported from the rehabilitation area.

2.5 SEDIMENT CONTROL INFRASTRUCTURE (SOUTHERN CATCHMENT)

Extractive operations will proceed in the southern catchment including drilling blasting crushing loading and earthmoving. As part of this proposal the swale drain will be formalised into a V-drain and a sediment trap will be constructed at the terminus. The discharge from the sediment trap will run across a stone pitched spillway constructed in natural ground and into the vegetation at the current point.

2.6 LIKELIHOOD FOR ENVIRONMENTAL NUISANCE

The Mathinna Plains region has a moderately high annual rainfall of around 1 metre with the highest mean monthly totals (above 100 mm) occurring in the winter months. With areas of exposed ground and fines particles from blasting and crushing present there is a moderate likelihood that a high rainfall event may cause an emission of turbid water from the site without controls in place.

2.1.1 MITIGATING FACTORS

The main mitigating factor to date is the lack of activity at the site limiting the amount of fine particles disturbed by operations. At the time of inspection, no work had occurred for a period and the runoff water discharging into vegetation was clear, see Plate 2 on flowing pages.

2.7 POTENTIAL IMPACT AND MITIGATION

2.7.1 POTENTIAL IMPACT

Uncontrolled runoff entrained with sediment can smother receiving vegetation and form a beach in the receiving watercourse. The aquatic flora and fauna in the section of stream bed receiving the beach will be suffocated. Even with no additional sediment added to the system, the beach will move with successive rainfall events, gradually moving downstream and impacting the natural aquatic ecosystem as it travels.

In addition to the PEVs described above specific fauna species are likely to be present and rely on the river system health These include:

- *Astacopsis gouldii* (giant freshwater crayfish)
- *Galaxiella pusilla* (dwarf galaxiid)
- *Prototroctes maraena* (Grayling)
- Rearing and spawning habitat for *G. maculatus* and *G. truttaceus*, spawning for grayling in particular, as well as for lampreys, blackfish, trout, estuarine perch, sandies.
- Macrophytes - these are of botanical importance as well as habitat for macroinvertebrates.

2.7.2 MITIGATION MEASURES

The entire development area will be serviced by two new sediment traps, designed for the worst-case scenario. In the northern catchment the worst case is the current area with rehabilitation works underway (0.54 hectares). In the southern catchment the sediment trap will be designed for the expanded area which is likely to be realised within 2 years. (1.71 hectares).

2.8 DESIGN FOR V DRAINS AND SEDIMENT TRAPS

The design for the drains and sediment traps will consider the worst-case scenario which is a 1 in 20 year design event with the maximum area of unrehabilitated land exposed.

A 1 in 20 year return interval is roughly equivalent to Annual Exceedance Probability of 5%

2.8.1 SEDIMENT CONTROL CALCULATIONS

Southern catchment area calculations

Design stormwater infrastructure 1 in 20 year storm description	units	result
Storm (AEP 5%)	mm	124
Catchment	hectares	1.710
Coefficient of runoff		0.500
Design flow	m ³ /s	0.295
Channel flow		
triangular channel width	m	1.000
flow depth	m	0.500
average slope	m/m	0.010
Volumetric flow rate (Omni calculator webtool)	m ³ /s	0.315

Type D sediment trap

Water temperature	degrees (C)	15
Critical particle characteristics (d)	default	2.6
Sediment settlement coefficient (Ks)	Table B22	3270
Effective length to width ratio	3:1	
Hydraulic efficiency		1.0
1 in 1 year ARI 120 hour storm (I)	mm/hr	1.04
Discharging to sensitive receiving waters Y%		85.0
K1		23.2
K2		12.6
R		36.7
Volumetric runoff coefficient (assume sandy loam)	Table B31	0.042
Minimum volume of upper settling zone	m3	26.38
Minimum storage zone + settling zone	m3	40
From Table B25		
Settling zone depth	m	0.65
Storage zone depth	m	0.85
Surface area (minimum)	m2	41
Total sediment trap volume (minimum)	m3	40

Northern catchment area calculations

Design stormwater infrastructure 1 in 20 year storm		
description	units	result
Storm (AEP 5%)	mm	124
Catchment	hectares	0.540
Coefficient of runoff		0.500
Design flow	m3/s	0.093
Channel flow		
Rectangular channel width	m	0.600
flow depth	m	0.300
average slope	m/m	0.010
Volumetric flow rate (Omni calculator webtool)	m3/s	0.203
Type D sediment trap		
Water temperature	degrees (C)	15
Critical particle characteristics (d)	default	2.6
Sediment settlement coefficient (Ks)	Table B22	3270
Effective length to width ratio	3:1	
Hydraulic efficiency		1.0
1 in 1 year ARI 120 hour storm (I)	mm/hr	1.04
Discharging to sensitive receiving waters Y%		85.0

K1		23.2
K2		12.6
R		36.7
Volumetric runoff coefficient (assume sandy loam)	Table B31	0.042
Minimum volume of upper settling zone	m3	8.33
Minimum storage zone + settling zone	m3	12
From Table B25		
Settling zone depth	m	0.65
Storage zone depth	m	0.85
Surface area (minimum)	m2	13
Total sediment trap volume (minimum)	m3	12

The design above uses the approach recommended for a Type D sediment basins in Appendix B of the International Erosion Control Association Australasia (IECA) Best Practice guidelines (IECA, June 2018).

The southern area includes the extraction, processing and stockpile areas and includes the proposed expansion area into the catchment. Stormwater runoff will be intercepted and directed to a new sediment trap by a V drain with a surface width of 1.0 m and a depth 0.5 m as per calculations above.

The calculations also determine that a sediment trap with an overall (settling and storage) capacity of 40 m³ is required. A basin 12 m long by 5 m wide provides a 60 m² surface area (41 m² required) an overall depth of 1.5m with 1 in 2 side slopes the total volume will be 65 m³ (40 m³ required).

The northern catchment comprises mainly the rehabilitation area which will initially be disturbed by earthworks associated with rehabilitation activities and then over time run-off will diminish as vegetation cover increases.

The rehabilitation area will be serviced by surface drains leading to an existing drainage channel. The channel will be improved to provide a width of 0.6 m and a depth of 0.3 m.

The calculation determines that a sediment trap with an overall capacity of 12 m³ is required. A basin 9 m long by 3 m wide provides a surface area of 27 m², an overall depth of 1.5 m with side slopes of 1 in 2 the total volume will be 20 m³.

2.9 NET ENVIRONMENTAL IMPACT

The operator is required to control emissions at the point runoff water from the site crosses the mining lease boundary. The discharge points from the northern and southern catchments are shown on the quarry plan, Figure 4: Ben Ridge Quarry - Quarry Plan.

New sediment control infrastructure installed as part of this proposal will ensure that adequate detention time and capacity is provided to minimise the risk of a discharge during period of inactivity.

Although not relevant from a compliance view point, the discharge from the northern sediment trap will travel approximately 90 metres, and the southern 45 metres through vegetation before entering a defined watercourse.

MANAGEMENT MEASURE 2: SEDIMENT CONTROL MANAGEMENT

Item	Proposed measure	Timeframe
2.	Sediment traps with a capacity to accommodate a 1 in 20 year event will be constructed to capture run off from the northern and southern catchments	On issue of a permit

2.10 GROUNDWATER

2.10.1 SITUATION

Groundwater levels and flows commonly appear as a subdued representation of the surface topography. No constructed water bores have been installed in proximity to the Ben Ridge Quarry site.

Rainfall records for Ringarooma shows the region received an event 36.4 mm 30 August, followed by 6 mm, 5 September and another 5.2 mm, 8 September preceding an inspection on 14 September. At the time of the inspection areas on the quarry floor had standing water as did areas of rock plate in the area slated for rehabilitation.

2.10.2 MITIGATION MEASURES

Extraction has not encountered groundwater to date and the immediate plan is to expand the existing quarry footprint horizontally. If future extraction is to proceed in the floor of the existing pit preliminary drilling will test if this extra depth will encounter the water table.



PLATE 1: LOOKING SOUTHEAST ACROSS FLOOR



PLATE 2: CURRENT QUARRY FLOOR DISCHARGE POINT

3 NOISE EMISSIONS

The Ben Ridge Quarry will operate intermittently. A drill and blast will be preceded by some scaping the ground to prepare for the drilling. Drilling is likely to take approximately 1 week and will entail the operation of the drill rig and an excavator. The blast will occur shortly after the completion of the drilling.

The shot rock will remain on the quarry floor until such time as a crushing contractor becomes available. A crushing campaign is likely to continue for a period of 2 weeks and will comprise the excavator, wheel loader, crushing circuit and screener.

After the crushing campaign the product stockpiles will be depleted through periodic cartage campaigns which will entail a wheel loader and on-road truck and trailers.

3.1 NOISE GENERATING EQUIPMENT

The actual equipment used will vary according to the contractor used and what equipment the contractor has available at the time.

Table 14: Assumed sound power level is a list of equipment used by contractors on these types of operation. The sound power levels tabulated have been derived from previous studies on other sites.

TABLE 14: ASSUMED SOUND POWER LEVEL

Operation	Equipment	Power (kW)	Sound power dB
Drilling	Mobile drill rig	120	117
Stripping / excavating	Excavator	120	108
Loading / stockpiling	Wheel loader CAT 950K	157	103
Cartage	On-road truck	320	104
Crushing	Primary crusher: J-1175	257	120
	Cone crusher: C-1540	261	
	VSI: Twister-Trac VS350	403	
Screening	Screener: Terex-Finlay 883	72	109

3.2 NOISE SENSITIVE PREMISES

There are no residences or other sensitive receptors within 3 kilometres of the Ben Ridge Quarry. Figure 3: General location map and surrounds shows the location of the nearest sensitive premise which is 90 Mud Flat Road, which is separated by a distance of 3.9 kilometres from the Ben Ridge Quarry mining lease boundary.

3.3 BLASTING

The Operator currently and will continue to apply drilling and blasting techniques to liberate source rock. Blasting in the future will seek to fracture approximately 10,000 cubic metres. To achieve this a blast is likely to consist of approximately 100 holes 9 to 10 metres deep using around 8,000 kgs of explosives producing a maximum instantaneous charge (MIC) of approximately 50 kg.

To be compliant with the Quarry Code of Practice the following limitation are placed on emissions from blasting:

Blasting must be carried out such that, when measured at the curtilage of the nearest residence (or sensitive use) in other occupation or ownership, air blast and ground vibration comply with the following:

- a) for 95% of blasts, air blast overpressure must not exceed 115 dB (Lin Peak);*
- b) air blast overpressure must not exceed 120 dB (Lin Peak) at all;*
- c) for 95% of blasts, ground vibration must not exceed 5 mm/s peak particle velocity; and*
- d) ground vibration must not exceed 10 mm/s peak particle velocity at all.*

(EPA Tasmania, May 2017)

3.4 POTENTIAL NOISE IMPACT AND MITIGATION

Ben Ridge Quarry is a daytime operation (see table reproduced from Part B below) and is remote from any sensitive receptors.

Operating hours	Weekdays	Saturday	Weekends and holidays
Quarry operations	7.00 am to 7.00 pm	8.00 am to 4.00 pm	No work.
Cartage	7.00 am to 7.00 pm	8.00 am to 4.00 pm	No work.
Blasting	10.00 am to 4.00 pm	No work	

3.5 NOISE ATTENUATION MEASURES

Equipment will be well maintained and late model machines with proprietary exhaust silencers fitted to ensure noise emissions are as low as possible.

Quarry operations currently occur during normal daytime hours of 7.00 am to 7.00 pm. The hours of operation for this proposal will remain unchanged.

3.6 ENVIRONMENT PROTECTION POLICY (NOISE) 2009

The Environment Protection Policy (Noise) 2009 (EPP (Noise)) seeks to protect environmental values of the acoustic environment to ensure the;

- wellbeing of the community including social and economic amenity,

- wellbeing of individuals, including the individual's,
 - health, and
 - opportunity to work, study, sleep, relax and have conversation without unreasonable interference from noise.

The policy assumed the values are protected for the majority of the population if acoustic indicator levels are not exceeded and no individual sources of noise are dominant or intrusive.

3.7 NET ENVIRONMENTAL IMPACT

The Ben Ridge Quarry is ideally located to minimise the potential for any impact arising from noise generated by drilling blasting or crushing. No specific noise attenuation measures are warranted

4 NATURAL VALUES

A natural values assessment of the Ben Ridge Quarry site and surrounds was undertaken by ECOtas on 10 November 2023. The report of the assessment is included in this document as Appendix 1 and summarised below. Preliminary research and a site investigation resulted in a report which provided the following findings:

4.1 REPORT FINDINGS

- No plant species listed as threatened under state or commonwealth legislation were detected.
- No fauna species listed as threatened under state or commonwealth legislation were detected.
- The area supports potential habitat for Tasmanian devil, spotted tailed quoll, eastern quoll although no evidence of dens or habitation were detected.
- The site does not support vegetation communities that could be interpreted as "priority vegetation" as defined in the Tasmanian Planning Provisions.
- No declared weed species were detected although one species considered by the report author to be an environmental weed was detected.
- There was no evidence of *Phytophthora cinnamomic* (root rot), myrtle wilt, myrtle rust was recorded.
- The study area does not support habitat conducive to frog chytrid disease except at a highly localised scale.

The report goes on to make the following recommendations:

4.2 REPORT RECOMMENDATIONS

4.2.1 NATIVE VEGETATION

Clearance and conversation and or disturbance of native vegetation can proceed within the constraints provided under the terms of the mining lease. A setback from the mining lease boundary of 10 metres is required.

4.2.2 WEED AND HYGIENE MANAGEMENT

- Occurrences of *Digitalis purpurea* (foxglove) should be treated prior to the increase in production. Treatment should extend from the quarry floor as far as practical and allowed into the surrounding vegetation.

- Surface water should be intercepted and channelled in defined surface drains to run-off and sediment control infrastructure.
- The top bench of the quarry should be scalped clean of topsoil and vegetation for at least a machine width to reduce the risk of topsoil contaminating the quarry products.
- Machinery from other sites should be thoroughly washed down to ensure no soil or weed seeds are imported.
- A permanent 10 metre buffer will be provided from the farthest extent of extractive operations to the mining lease boundary protecting the rainforest vegetation to the east of the site.
- When clearing is taking place, any trees felled shall be felled into the quarry disturbed area and not out into the intact vegetation.
- Stripping and topsoil windrows will not be placed adjacent to the forest area supporting *Nothofagus cunninghamii* (myrtle).

5 WEEDS, PESTS AND PATHOGENS

Weed observations, findings and recommendations are included in the previous section.

MANAGEMENT MEASURE 3: VEGETATION AND HYGIENE MANAGEMENT

Item	Proposed measure	Timeframe
3.	A 10 metre buffer of undisturbed vegetation will remain between activities and the mining lease boundary and rainforest community on the eastern perimeter.	On issue of a permit
4.	A weed and disease hygiene protocol in accordance with the measures described in Appendix 1 of the Weed and Disease Planning and Hygiene Guidelines (DPIPWE, March 2015) will be implemented.	On issue of a permit

6 WASTE

6.1 WASTE FROM EXTRACTION

Ben Ridge Quarry will produce minimal waste products from extraction. Stripping will consist of current vegetation cover which will be broken up and stockpiled along with any topsoil in low windrows or will be applied directly onto the rehabilitation area. Extra materials will be stockpiled and be placed over the ground surface once extraction is complete and an area is considered ready for progressive rehabilitation.

Previous experience shows the source rock fractures well with blasting, producing no oversize and to date no rock has been found to be unsuitable for production. The entire volume of shot rock is processed and incorporated into the product stockpile and used in works.

Mapping shows an area of potentially acid forming soil located to the north of the Ben Ridge Quarry site. This is likely to be saturated organic soil/peat situated on poor draining shallow bedrock. There is no evidence of acid forming rock is present or that these soils will be encountered in the limited area of clearing proposed for this expansion.

6.2 SPARES AND LITTER

Machinery will be taken off site to the Operator's workshops for servicing and maintenance. Spares or waste generated through breakdowns or routine lubrication will be retained in workers utilities and taken off-site at the end of each working day.

Litter emanating from lunches and other amenities will be retained in enclosed containers and periodically disposed of to an approved disposal site.

7 ENVIRONMENTALLY HAZARDOUS SUBSTANCES

7.1 HYDROCARBONS

Mobile equipment will be refuelled using a utility mounted refuelling facility. Lubricants, engine oil and hydraulic fluid for daily maintenance will not be stored on-site. Lubricants for daily servicing will be kept in the operator's utility vehicles.

7.2 LEAK AND SPILLS

The Operator will provide a hydrocarbon spill kit ready for immediate deployment if a hydrocarbon leak or spill occurs. A hydrocarbon boom will be available for deployment across the surface of the sediment trap should a hydrocarbon spill or leak enter the sediment control infrastructure.

7.3 OTHER HAZARDOUS SUBSTANCES

Any herbicides that may be used by contractors in controlling weeds at the site will not be stored at the site and will remain in the contractors' vehicles during the contract works.

MANAGEMENT MEASURE 4: HAZARDOUS SUBSTANCE MANAGEMENT

Item	Proposed measure	Timeframe
5.	A hydrocarbon spill kit and a hydrocarbon boom will be available and ready for immediate deployment in the event of a leak or spill.	During operational campaigns

8 ENVIRONMENTAL IMPACTS OF TRAFFIC

All activities will occur intermittently at Ben Ridge Quarry. Striping new areas for extraction, drilling and blasting, crushing and stockpile building will all occur on a campaign style basis. Cartage is likely to be more consistent throughout the year, although most projects will occur during the construction season September to April.

TABLE 15: TRUCK MOVEMENTS

Description	Units	Quantity
Annual production (m3) max.	m3	10000
average bulk density	t/m3	1.60
Annual production (t) max.	t	16000

Conservative pay load	t	30
Loads to cart production		533
Weeks worked per year		48
Days worked per week		6
Days worked per year		288
Adjust for public holidays		280
Loads per day		1.9
Movements per day (in/out)		3.8

8.1 COMMUNITY IMPACTS

Traffic from Ben Ridge Quarry will travel directly onto Ben Ridge Road, turn right towards the junction with Mathinna Plains Road and then either north or south. Some regular maintenance activities will occur on Ben Ridge Road which will cause trucks to travel left and right.

There are no residences or other sensitive premises fronting onto Ben Ridge Road or Mathinna Plains Road in the vicinity of the Ben Ridge Quarry. There is a low likelihood of any environmental impact because of noise or dust.

8.2 NATIVE FAUNA IMPACTS

The ecological assessment concluded that the quarry area and surrounds is potential foraging and denning habitat for native carnivorous marsupials although no dens were observed during field work. The ecological report found that as the Ben Ridge Quarry is operated on an intermittent basis it is unlikely that the quarry will increase night time traffic and threaten native nocturnal animals. Most of the activity at the quarry will occur during the construction season when days are longer which supports the findings of the ecological report.

9 OTHER OFF-SITE IMPACTS

Ben Ridge Quarry only relies on the existing road infrastructure to operate. No other inputs such as water or electrical power is required. No other off-site impacts will occur because of increasing production at Ben Ridge Quarry

10 MONITORING

10.1 MONITORING

Ben Ridge Quarry will conduct regular and routine monitoring to ensure compliance with environmental conditions.

10.2 SEDIMENT CONTROL INFRASTRUCTURE

The Operator will observe the level of accumulated sediment in the sediment traps and drainage channels. Once the level of accumulated sediment in the traps or drains has risen to half the full water level the sump and drains will be cleaned out. The spoil gathered from clearing the sediment traps and drains will be stored with rehabilitation materials for use in future rehabilitation activities.

10.3 DUST IMPACTS

The quarry operator will observe dust conditions in dry and windy conditions during extractive or processing campaigns. If dust is observed crossing the operations area boundary suppression activities will be implemented including:

- Water cart deployed on trafficked surfaces.

10.4 WEEDS

During normal operations the operator, employees and contractors will observe the quarry stockpiles and surrounding areas for emergent weeds and if present, initiate controls as required.

11 DECOMMISSIONING AND REHABILITATION

11.1 PROGRESSIVE REHABILITATION

This proposal includes immediate progressive rehabilitation of an area of the current quarry footprint which is considered not suitable for future extraction. This area more that offsets a new area of clearing to provide a more efficient footprint for future quarry operations.

Future progressive rehabilitation will be confined to the external perimeter of the existing disturbed area. This future rehabilitation will take place only when the existing quarry face has reached its fullest extent.

11.2 DECOMMISSIONING

Once all remaining marketable materials have been recovered the Operator will initiate decommissioning and rehabilitation:

- All machinery, sheds and equipment will be removed from the site.
- Faces will be reduced to maximum height of 5 metres.
- The access track quarry floor and remaining benches will be ripped to enhance infiltration.
- Overburden stockpiles will be spread over the ripped surfaces and placed against the toe of remaining faces to further reduce the height.
- Topsoil stockpiles will be spread on the finished surface and any remaining stripping pulled back over this.
- Both the northern and southern sediment trap will be retained until a self-sustaining vegetation cover is achieved and then allowed to gradually fill and become a wetland.
- The gate securing the site will be retained and remain locked until full rehabilitation is complete.

11.3 MONITORING DURING REHABILITATION

Until such time as the site is considered rehabilitated the Operator will continue to monitor the following aspects of the rehabilitation:

Inspection	Action
Emerging weeds	Weed control using herbicide spray or cut and paint.

Eastern sediment trap will be inspected for capacity	Clean out if accumulated sediment has reduced trap effectiveness.
Planting and natural recruitment revegetation	Broadcast native seed mix if revegetation is not successful.

12 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Quarries contribute to greenhouse gas (GHG) emissions through fossil fuels used to energise equipment:

- Mobile drill rigs, crushers and screens,
- Excavators, wheel loaders and trucks are energised by diesel engines.

Excavators, wheel loaders and trucks are used at all quarries. Drill rigs are used at hard rock quarries. Some quarries with fixed plant have the crushers, screens and associated conveyors energised by electrical power. In Tasmania using renewable energy gives fixed plant quarries an advantage in terms of reducing GHG emissions.

The major contributor when considering the overall GHG contribution of quarries is often cartage. When cartage is taken into consideration it makes economic and GHG emission sense to locate the heavy construction material source close to the market. In the case of Ben Ridge Quarry the market is council roads projects on gravel roads in the vicinity of the quarry.

Any saving resulting from sourcing heavy construction material from a fixed plant quarry would be outweighed by the additional GHG emissions associated with carting products long distances. Ben Ridge Quarry has an added advantage in that it is located at a high elevation, cartage to most projects will cause laden trucks to be travelling downhill and hence consuming less fuel and generating less GHG emissions.

Climate change will cause an increase in the frequency and severity of bush fires. Ben Ridge Quarry will be only operated intermittently so the likelihood that the site will be impacted by a bushfire is less although a fire in the forested land surrounding the quarry will affect road infrastructure which will temporarily interrupt planned operations.

PART D SUMMARY OF PROPOSED MANAGEMENT MEASURES

Item	Proposed measure	Timeframe
1.	The quarry operator will actively manage trafficked surfaces and the surface of stockpiles to keep dust emissions to a minimum.	During operational campaigns
2.	Sediment traps with a capacity to accommodate a 1 in 20 year event will be constructed to capture run off from the northern and southern catchments	On issue of a permit
3.	A 10 metre buffer of undisturbed vegetation will remain between activities and the mining lease boundary and rainforest community on the eastern perimeter.	On issue of a permit
4.	A weed and disease hygiene protocol in accordance with the measures described in Appendix 1 of the Weed and Disease Planning and Hygiene Guidelines (DPIPWE, March 2015) will be implemented.	On issue of a permit
5.	A hydrocarbon spill kit and a hydrocarbon boom will be available and ready for immediate deployment in the event of a leak or spill.	During operational campaigns

PART E PUBLIC AND STAKEHOLDER CONSULTATION

This proposal seeks to increase the current level of production at Ben Ridge Quarry from less than 1,000 cubic metres processed to 10,000 cubic metres. The proposal has been deemed by Dorset Council as requiring a Development Application. A quarry processing material at a rate greater than 1,000 cubic metres per year is classified under Schedule 2 of the *Environmental Management and Pollution Control Act 1995* (EMPC Act) as a Level 2 Activity.

Stakeholders that have been consulted through this process include the following:

- Dorset Council has been consulted regarding the status of the existing quarry and consideration of the requirement for a Development Application.
- The Board of the Environment Protection Authority (EPA) through a Notice of Intent and this Environment Effects Report.

A development application will be submitted to the Dorset Council for a discretionary activity which will require advertising to the public through print media, private notice to property owners that share a boundary with the site as well as a physical notice posted on the land. During the consultation period Council will accept representations from interested parties and both Council and the EPA will consider the representation in their assessment of the proposal.

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