

Environmental Assessment Report

Mt Calder Quarry Capacity Increase Montgomerys Road, Buckland

**Bryden Elliot Building &
Excavations Pty Ltd**

July 2021



ENVIRONMENT PROTECTION AUTHORITY

Environmental Assessment Report

Proponent	Bryden Elliot Building and Excavations Pty Ltd
Proposal	Mt Calder Quarry – production capacity increase
Location	188 Montgomerys Road, Buckland
NELMS no.	PCE No. 10615
Permit Application No.	DA 2020/180 (Glamorgan Spring Bay Council)
Electronic Folder No.	EN-EM-EV-DE-292796-001
Document No.	D21-109219
Class of Assessment	2A

Assessment Process Milestones

11 December 2020	Notice of Intent lodged
4 January 2021	Class of assessment determined
20 January 2021	Guidelines Issued
22 April 2021	Permit Application submitted to Council
6 May 2021	Application referral received by the Board
28 May 2021	Start of public consultation period
10 June 2021	End of public consultation period
12 July 2021	Date draft conditions issued to proponent
16 July 2021	Statutory period for assessment ends

Acronyms

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

Report Summary

This report provides an environmental assessment of the proposed increase in production capacity at Mt Calder Quarry proposed by Bryden Elliot Building & Excavations Pty Ltd.

The proposal is for an increase in annual production at the existing Mt Calder Quarry from 20,000 cubic metres to a maximum of 50,000 cubic metres of hard rock processed per annum, including an increase in the area of the mining lease to allow for the expansion. The quarry is located on private land at the end of Montgomerys Road, approximately seven kilometres to the west of the township of Buckland. Drilling and blasting of rock will continue to occur (up to approximately six blasts per annum) and crushing and screening of material will also continue.

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

On 24 June 2021, the A/Deputy Director requested that the proponent submit additional information to clarify points regarding the scope of the proposal. The proponent submitted satisfactory additional information on 28 June 2021, in the form of a Supplement to the EER.

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

Appendix I contains the environmental permit conditions. The environmental conditions in Appendix I are a new set of operating conditions for the entire, intensified activity that will supersede the existing permit conditions.

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I Approval Process

A Notice of Intent in relation to the proposal was received by the Board of the Environment Protection Authority (the Board) on 11 December 2020.

An application for a permit under the *Land Use Planning and Approvals Act 1993* (LUPA Act) in relation to the proposal was submitted to Glamorgan-Spring Bay Council on 22 April 2021.

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 an extractive activity constituting extraction of more than 5,000 cubic metres of rock or gravel per year, and materials handling constituting processing of more than 1,000 cubic metres of rock, ores or minerals 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 6 May 2021.

The assessment has been undertaken by the Acting Deputy Director, EPA Tasmania, under delegation from the Board.

The Board required that information to support the proposal be provided in the form of an Environmental Effects Report (EER) prepared in accordance with guidelines issued by the Board on 20 January 2021.

A draft of the EER was submitted to EPA Tasmania for review against the guidelines before it was finalised. The final EER was submitted to Council with the permit application. The EER was released for public inspection for 14 days commencing on 28 May 2021. An advertisement was placed in *The Mercury* newspaper and on the EPA website. The EER was also referred to relevant government agencies for comment. No representations were received.

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 assess the proposal in accordance with the Environmental Impact Assessment Principles defined in Section 74 of the EMPC Act.

The assessment has been undertaken by the Acting Deputy Director, EPA Tasmania, under delegation from the Board.

3 The Proposal

The proposal is for an increase in annual production at the existing Mt Calder Quarry from 20,000 cubic metres to a maximum of 50,000 cubic metres of hard rock processed per annum, including an increase in the area of the mining lease to allow for the expansion. Quarrying is proposed to initially focus on maximising extraction from the existing exposed area, followed by extension on the western edge of the quarry floor. The floor will then be expanded to the northeast. No disturbance is proposed to occur within the western area of the new mining lease where a threatened vegetation community has been identified.

The quarry is located on private land at the end of Montgomerys Road, approximately seven kilometres to the west of the township of Buckland (see Figure 1). Drilling and blasting of rock (up to approximately six blasts per annum) and crushing and screening of material will continue to occur. A quarry plan is shown at Figure 2.

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

Table 1: Summary of the proposal’s main characteristics

Activity	
Extraction, crushing and screening of a maximum of 50,000 cubic metres of rock per annum.	
Location and planning context	
Location	188 Montgomerys Road, Buckland, as shown in Figure 1
Land zoning	26.0 Rural Resource under the <i>Glamorgan-Spring Bay Interim Planning Scheme 2015</i>
Land tenure	Private freehold
Mining lease	1989P/M (existing) and 2099P/M (applied for)
Lease area	25 hectares total
Bond	\$30,000 bond initially, to be increased with Stage 2 if more than 3 hectares of unrehabilitated area is required.
Existing site	
Land Use	The existing quarry has operated on the site since 2014. Previously the land was partly cleared for grazing. The area of land proposed to accommodate the extended quarry footprint constitutes native woodland with a history of selective logging and firewood collection.
Topography	The quarry site is at the head of a valley, generally sloping downhill to the north, with the central north-south axis of the site constituting a slight gully and supporting an unnamed waterway. The elevation of the site is ~270m-350m AHD.
Geology and soils	The general area is mapped as supporting Podzolic soils on dolerite (LISTmap).

Hydrology	A tributary to Nelsons Creek arises at the southern end of the site and flows to the north. Groundwater levels have not been tested, with the closest existing bores being at much lower elevations.
Natural Values	The western portion of the new mining lease area has been found to contain woodland constituting <i>Eucalyptus globulus</i> forest, a vegetation community listed under Schedule 3A of the <i>Nature Conservation Act 2002</i> and known to constitute significant foraging and nesting habitat for the swift parrot (<i>Lathamus discolor</i>).
Local region	
Climate	Average annual rainfall (measured at Tunnack Fire Station) is approximately 608mm. Wind direction is predominantly northerly with some afternoon westerlies.
Surrounding land zoning, tenure and uses	Surrounding land is zoned Rural Resource, privately owned and predominantly forested. The nearest residence is located approximately 1km to the southeast. The Tasman Highway runs to the south and east, approximately 1.1km from the edge of the quarry.
Proposed infrastructure	
Major equipment	Rock drill, excavator, wheel loader, mobile crusher, mobile screener, trucks and trailers. Blasting equipment as required.
Other infrastructure	One relocatable site office and amenities One relocatable container crib hut One self-bunded diesel fuel storage (4,500 litres) Sediment traps
Inputs	
Water	Water tanks and sediment traps supply water for amenities and other water uses. A water cart will be brought on site for dust suppression when weather conditions are dry and windy.
Energy	Site is connected to mains power for use in onsite office. Diesel used for mobile plant.
Wastes and emissions	
Liquid	Stormwater runoff from extraction and stockpile areas.
Atmospheric	Dust from internal and external traffic, and blow-off from stockpiles.
Solid	Topsoil and vegetation, to be primarily reused in rehabilitation. General refuse including food scraps, paper and packaging. General inert wastes such as metal waste to be collected periodically.
Controlled wastes	Waste engine oil; contaminated soil. Septic system installed for existing onsite toilet.

Noise	From screening and crushing equipment, excavator on site, and vehicle movement. Also, periodic drilling and blasting (up to six times per year).
Greenhouse gases	Vehicles and equipment onsite will generate carbon dioxide from fuel burning. No other greenhouse gases will be produced by the activity.
Construction and operations	
Proposal timetable	July to December 2021 - the existing quarry floor will be expanded to the west, stopping short of the listed DGL vegetation community, all within the existing mining lease boundary. Subsequent works will proceed to the north and east, into the new mining lease once granted.
Operating hours (ongoing)	0700 to 1900 hours Monday to Friday 0800 to 1600 hours Saturday

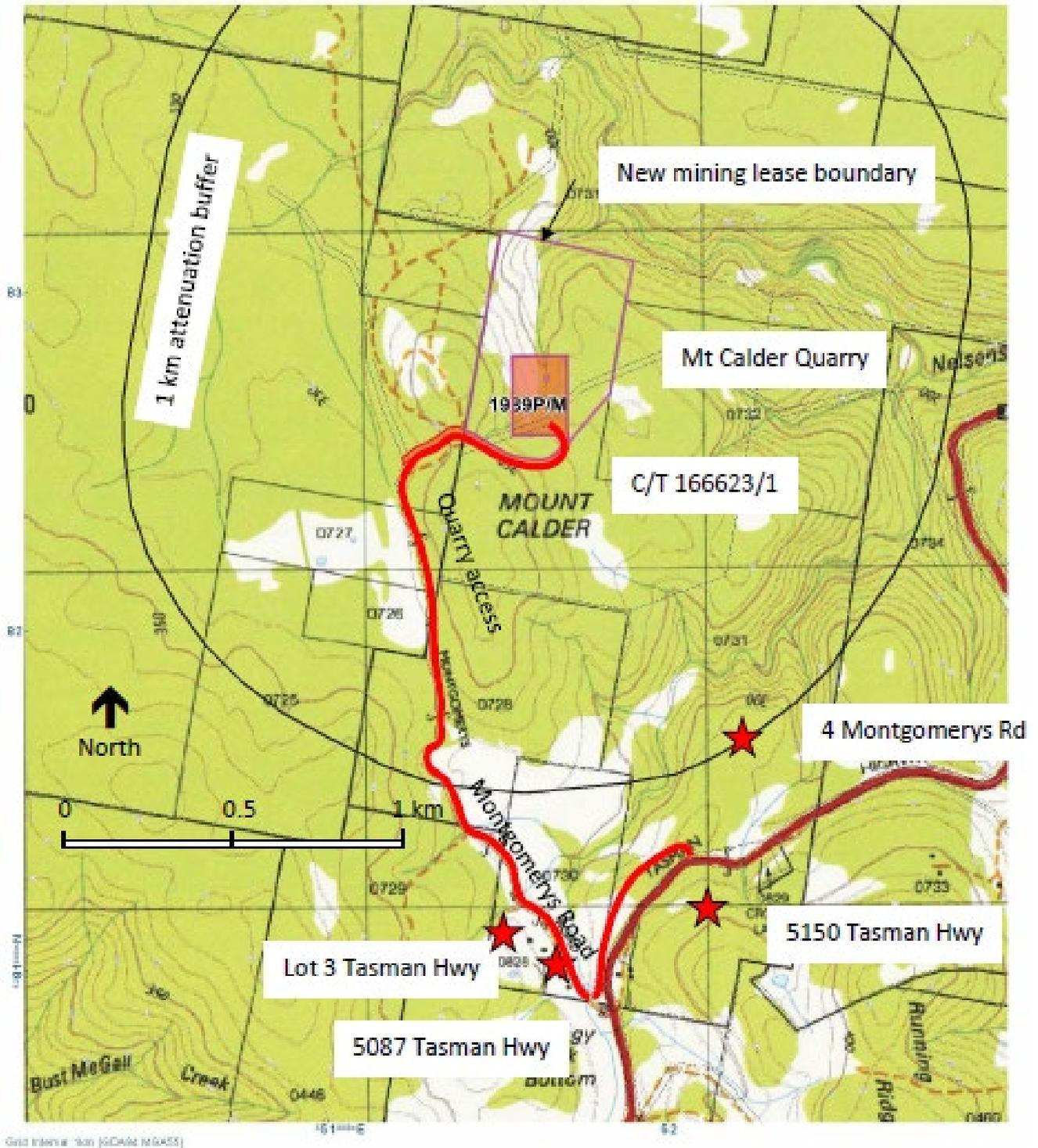


Figure 1: Location plan for Mt Calder Quarry, with nearest residents shown as red stars (Figure 1 of EER).

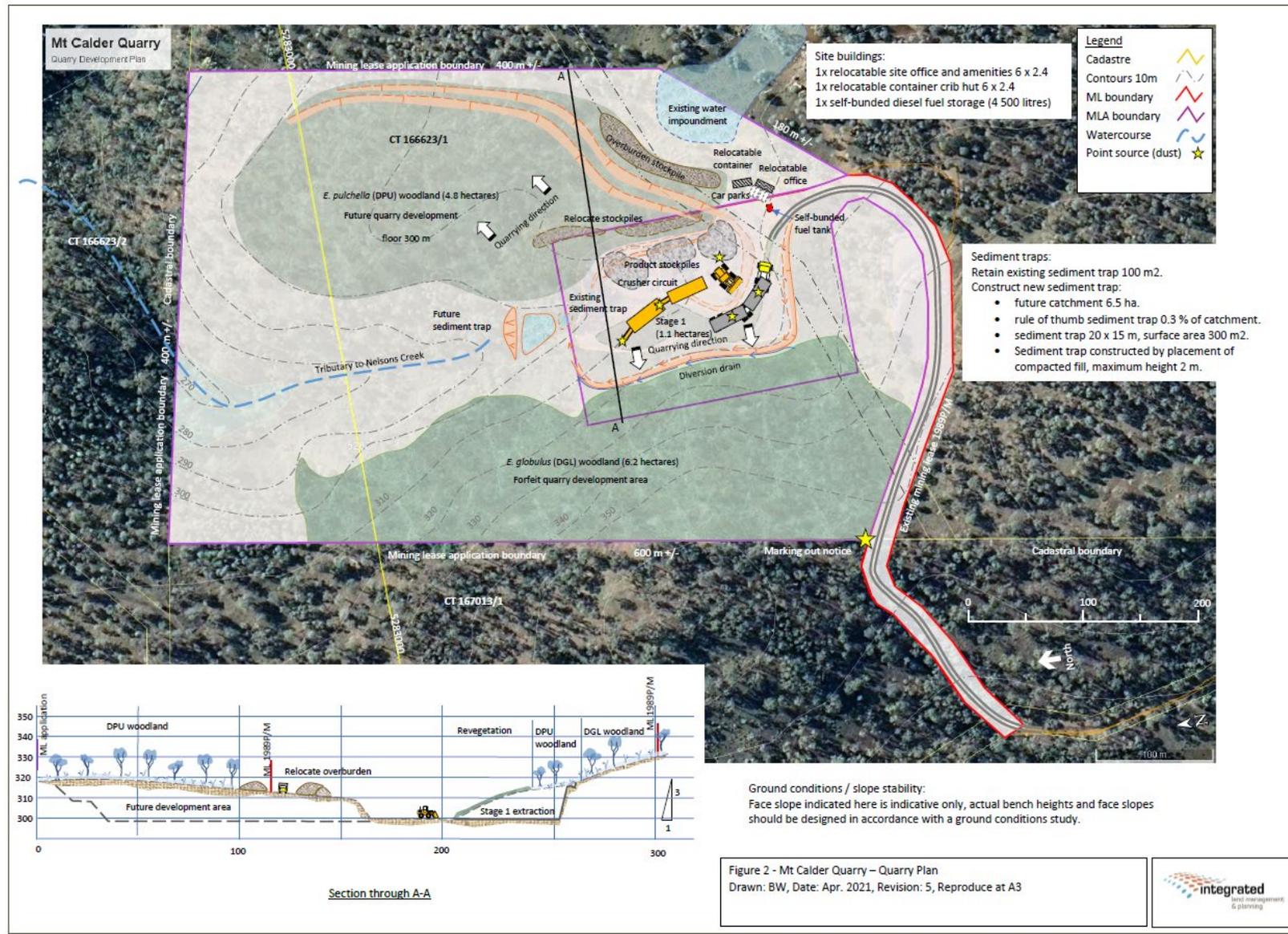


Figure 2: Quarry plan for Mt Calder Quarry (Figure 2 of EER).

4 Need for the Proposal and Alternatives

The existing quarry has been certified to supply products to government road construction contracts, but greater supply is needed than the quarry can currently provide, due both to the small area of the original mining lease and the current production limit of 20,000 cubic metres per year. Without the increase in mining lease area in particular, the quarry's life is quite limited.

The alternative would be that other quarries would need to be used to obtain gravel for road projects.

5 Public and Agency Consultation

No public representations were received.

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

- Mineral Resources Tasmania, Department of State Growth

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

- Regulatory Officer, EPA Tasmania
- Water specialist, EPA Tasmania
- Noise specialist, EPA Tasmania
- Air specialist, EPA Tasmania
- Conservation Assessments Section, Natural and Cultural Heritage Division, DPIPW

6 Evaluation of Environmental Issues

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

The following issues are discussed:

1. Natural values
2. Noise and blasting
3. Air quality
4. Water quality
5. Waste and environmentally hazardous substances
6. Decommissioning and rehabilitation

General conditions

The following general conditions will be imposed on the activity:

- Q1** Regulatory limits
- G1** Access to and awareness of conditions and associated documents
- G2** No changes without approval
- G3** Incident response
- G4** Change of responsibility
- G5** Change of ownership
- G6** Complaints register
- G7** Quarry Code of Practice

Issue 1: Natural Values
Description of potential impacts
<p>The proposed extension of the quarry will encroach into areas which are vegetated, and also potentially into a small waterway. A natural values survey has determined that the site contains one vegetation community listed as threatened under the <i>Nature Conservation Act 2002</i>, being <i>Eucalyptus globulus</i> dry forest and woodland (DGL). This vegetation community is predominantly located along the western side of the expanded mining lease area, commencing approximately 15 metres from the edge of the existing quarry floor, with a small patch at the far northern edge of the expanded mining lease.</p> <p>The remainder of the intact woodland in the lease area is classified as <i>Eucalyptus pulchella</i> forest and woodland (DPU), a vegetation community that is not listed as threatened.</p> <p>No listed flora or fauna species were detected on the site. The woodland does support potential foraging habitat for number of marsupials, including the Tasmanian devil, spotted-tailed quoll and eastern quoll, but no potential den sites were identified, or evidence of these species observed.</p> <p>The blue-gum forest provides potential foraging habitat for the swift parrot, as do the occasional <i>Eucalyptus ovata</i> (black gums) identified within the <i>E. pulchella</i> woodland. The natural values assessment states that ‘the forested areas support limited hollow-bearing trees’ which could provide nesting habitat to the swift parrot.</p> <p>No raptor nests were detected in searches on or within ~800 metres of the expanded mining lease area.</p> <p>No weeds or evidence of plant disease were identified within the mining lease area.</p> <p>As a result of operating and extending the quarry, noise and lights generated by vehicles travelling to and from the site may disturb native animals, and vehicle movement may result in further roadkill deaths. Clearing vegetation will result in some habitat loss for native flora and fauna, and potentially result in additional sediment loss from the site, leading to pollution of the aquatic environment.</p>
Management measures proposed in EER
<p>The EER states that:</p> <ul style="list-style-type: none"> a) quarry works will be excluded from the area mapped as DGL forest under the supplied natural values assessment; b) the operator of the quarry will maintain the weed and disease-free status of the area by adopting the hygiene protocols from the <i>Weed and Disease Planning and Hygiene Guidelines 2015</i> (DPIPWE, March 2015); and c) periodic monitoring will be undertaken to detect the presence of weeds anywhere around the quarry workings, with corrective action to be taken if needed.

Public and agency comment

No public representations were received.

The Conservation Assessments and Wildlife Management Section, DPIPWE, commented that:

- the proposed exclusion from disturbance of the area mapped as *Eucalyptus globulus* dry forest and woodland (DGL) is supported;
- due to the forested areas hosting limited hollow-bearing trees, these areas represent marginal potential nesting habitat for swift parrots. Clearing of *Eucalyptus pulchella* forest and woodland (DPU) should be avoided during swift parrot breeding season (September to January) if the species is breeding in the area;
- the EER assessment of wedge-tailed eagle nesting and potential nesting sites is considered satisfactory;
- If any dens for threatened fauna are subsequently located during works then these should be managed in accordance with the *Survey Guidelines and Management Advice for Development Proposals that may impact on the Tasmanian Devil (Sarcophilus harrisii)* (see <https://dPIPWE.tas.gov.au/Documents/Devil%20Survey%20Guidelines%20and%20Advice.pdf>).
- The EER determination that the increase in traffic will be predominantly during the daytime and that Montgomerys Road and the access road are gravel, narrow and winding with maximum speed limited to 40 kilometres per hour, which will help to reduce the risk of increase in roadkill as a result of the quarry expansion, is accepted.
- The EER commitment that the Operator will maintain the weed and disease-free status of the property by adopting the hygiene protocols from the DPIPWE (2015) Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania, which can be found at: <http://dPIPWE.tas.gov.au/invasive-species/weeds/weed-hygiene/weed-and-disease-planning-and-hygiene-guidelines>, is supported.

Evaluation

The proposed quarry expansion seeks to avoid the highest value area within the new mining lease, being the vegetation identified as blue gum forest (DGL), with its potential to constitute nesting and foraging habitat for the swift parrot. Condition **FF1** specifies that no works are to encroach into this area, and that fencing or a similar barrier must be erected between the areas to be worked and this vegetation.

In regard to the remaining vegetation, no structures were observed which could provide potential denning habitat for the Tasmanian devil. There is potential for the area to provide nesting habitat for the eastern-barred bandicoot and swift parrot. Condition **FF2** requires future surveys be undertaken before clearing if it occurs more than 12 months after the date of the current survey (March 2021). Condition **FF3** requires the proponent to avoid clearing during the swift parrot breeding season, if the species is known to be nesting in the area.

The tributary to Nelsons Creek is described in the EER as an ephemeral drainage line, and so the proposed additional sediment trap immediately downstream of existing works will not cause substantial impact to the waterway. Beyond that, further disturbance of the drainage line should be minimised to preserve the capacity of the channel to cleanly drain water from the site, and to preserve the riparian vegetation immediate adjacent to the channel. Condition **FF4** requires that, below the proposed sediment trap, no additional works or disturbance is to take place within 10 metres of the centre of the drainage line, consistent with the 10 metre Waterway Protection Area which applies under the *Glamorgan-Spring Bay Interim Planning Scheme 2015*. Fencing is required to be installed when works encroach within 20 metres of the drainage line.

In order to preserve the current weed-free status of the site, condition **FF5** requires the operator to instigate weed hygiene protocols in accordance with the *Weed and Disease Planning and Hygiene Guidelines - Preventing the spread of weeds and diseases in Tasmania* (DPIPWE, 2015).

In regard to the potential for roadkill, it is considered that the proposed activity will not result in an increase in night-time traffic of 10% or more. In addition, the road leading to the quarry has frequent bends, and so is not conducive to high speed. Therefore, it is not considered that a condition regarding cartage hours is warranted.

Proposed measures for rehabilitation and stormwater management are addressed in Issues 3 and 7.

If all conditions are complied with, it is considered that, while the proposal will result in the clearing of some native vegetation, it will have minimal or no impact on threatened flora, fauna, aquatic values or vegetation communities.

Conclusion

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

- FF1** Protection of *Eucalyptus globulus* dry forest and woodland (DGL community)
- FF2** Natural values survey prior to clearing
- FF3** Clearing during swift parrot breeding season
- FF4** Protection of tributary to Nelsons Creek
- FF5** Weed hygiene

Issue 2: Noise and blasting
Description of potential impacts
<p>During operation of the quarry, noise will be generated by the movement of excavators, loader, crushers, screens and trucks, which may affect sensitive receptors. The nearest residence to the quarry site in other ownership is located approximately 1,000 metres to the southeast of the mining lease boundary (980 metres when measured on LISTmap).</p> <p>Drilling and blasting are proposed to be undertaken up to six times per year, with potential for noise and vibration impacts on sensitive receptors.</p>
Management measures proposed in EER
<p>The EER states that:</p> <ul style="list-style-type: none"> a) All equipment operating at the quarry will be recent models and fully maintained, with proprietary silencers fitted. b) The quarry floor, haul roads and access road will be maintained free of ruts and pot holes to ensure traffic noise is minimised. c) Operators will ensure that drop distances are minimised and vehicles and equipment maintain slow speeds. d) Blasting activities will be managed by a fully certified blasting contractor, all blasts will be monitored and the results of monitoring included in a blast report.
Public and agency comment
<p>None received.</p>
Evaluation
<p>The Quarry Code of Practice (QCP) recommends a minimum distance of 1,000 metres between activities and sensitive receivers where ‘regular blasting takes place’. The nearest residence to the quarry in other ownership is on the edge or just within this distance. The quarry manager’s residence is 165 metres from the quarry, on the same title, and so is not considered to constitute a sensitive receptor.</p> <p>The nearest residence in other ownership is well outside the separation distance of 750 metres as recommended in the QCP for extractive activities involving crushing. It is also noted that the extractive activity is proposed to progress northwards over time, away from the nearest residence. There are no residences located within 1km of the quarry to the north. Proposed operating hours are consistent with those recommended in the QCP, i.e. 7am-7pm Monday to Friday, 8am-4pm Saturday, and no operation on Sundays or public holidays. Therefore, it is considered unlikely that standard operating noise from the proposed activity will result in any environmental nuisance for residents, and no specific mitigation measures are considered necessary. To facilitate regulation of noise, should it become necessary, condition N1 specifies standard noise limits in accordance with levels recommended in the QCP, condition N2 requires that a noise survey be conducted should any change be made to the activity which is likely to substantially alter the noise produced, and condition N3 specifies requirements for noise survey methods and reporting. Condition OPI prescribes operating hours.</p> <p>The EER includes monitoring results from two recent blasts at the quarry, which indicate that the majority of noise and vibration emissions from these blasts were within the acceptable</p>

standards for air blast overpressure and ground vibration when measured at the manager’s residence. The proposed hours for blasting are restricted to those recommended in the QCP, i.e. 10am-4pm Monday to Friday.

To ensure adequate planning of the quarry’s blasting program, condition **B1** requires preparation of a blast management plan within three months of the new permit taking effect and includes a requirement to notify any residents within 1km before blasting. Condition **B2** restricts hours in which blasting is permitted. Standard airblast overpressure and vibration limits as per the QCP are imposed for blasting impacts (condition **B3**), with each blast to be monitored (condition **B4**). Condition **B5** requires notification of the Director if the measured ground vibration or air blast over pressure exceeds specified limits.

In regard to heavy vehicle noise, it is anticipated that average daily traffic movements associated with the upgraded quarry operation will increase from 14 to 22, with peak movements to increase to 36 per day. A majority of these movements will be heavy vehicles, with the remainder being staff cars. The EER states that residences most likely to be affected by additional truck movements on Montgomerys Road are those situated at the end of the road closest to the Tasman Highway. As a result of a previous permit condition, a chip seal was installed for a 120 metre section of Montgomerys Road outside no. 5087 Tasman Highway, protecting the house from both noise and dust impacts that may be greater if this road section was unsealed.

Given that quarry operating hours are limited, it is considered unlikely that there will be noise impacts from quarry traffic at night. Even with the increase in production, vehicle movements at peak production will average approximately 3 per hour, which does not appear excessive. Therefore, the noise impact on residents is not considered likely to be significant.

Conclusion

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

- N1** Noise emission limits
- N2** Noise survey requirements
- N3** Noise survey method and reporting
- OPI** Operating hours
- B1** Blast management plan
- B2** Blasting times
- B3** Blasting – noise and vibration limits
- B4** Blast monitoring
- B5** Ground vibration

<p>Issue 3: Air quality</p>
<p>Description of potential impacts</p>
<p>The quarry operation is likely to generate dust in dry weather conditions at each stage of the extraction and handling process. Dust generally has the potential to coat vegetation, affect water quality, and cause a nuisance for residences and road users.</p> <p>The nearest property boundary to the edge of the mining lease is approximately 980 metres to the southeast. Some residents are located close to Montgomerys Road near the junction with Tasman Highway.</p>
<p>Management measures proposed in EER</p>
<p>The EER states that:</p> <ul style="list-style-type: none"> • Trafficked surfaces on the quarry floor, benches and haul roads will be maintained in good condition; • Drop distances between equipment will be kept to a minimum; • Trays carrying product off site will be loaded such that the load height does not exceed the height of the sides of the tray, or covers will be fitted; • The operator will deploy a water cart on days where weather conditions are especially dry and windy.
<p>Public and agency comment</p>
<p>None received.</p>
<p>Evaluation</p>
<p>Wind direction at the site is predominantly northerly with some afternoon westerlies. Annual rainfall is moderate.</p> <p>Given substantial distances to the nearest sensitive receivers, it is unlikely that the proposal will result in any dust nuisance. However, the proponent has an obligation to minimise the opportunity for dust to cross property boundaries as set out in the acceptable standards of the QCP. In order to ensure this, it is necessary to impose conditions requiring covering vehicles transporting excavated materials (A1), and containment of dust to prevent it causing a nuisance (A2)</p>
<p>Conclusion</p>
<p>The proponent will be required to comply with the following conditions:</p> <p>A1 Covering of vehicles</p> <p>A2 Control of dust emissions</p>

<p>Issue 4: Water quality</p>
<p>Description of potential impacts</p>
<p>The intensified activity will create additional exposed surfaces that could be vulnerable to erosion and sediment loss in such events. In addition, the quarry has the potential to result in contamination of surface water from pollutants such as oils.</p> <p>An unnamed ephemeral drainage channel commences within the mining lease area, running north down the centre of the site through a gully, feeding into Nelsons Creek and eventually the Prosser River. This channel would likely receive any sediment or contamination that is not successfully contained. The EER suggests that water from Nelsons Creek and Prosser River is likely to be used for irrigation, and potentially for stock watering or even domestic supply.</p>
<p>Management measures proposed in EER</p>
<p>The EER states that:</p> <ul style="list-style-type: none"> a) A sediment trap will be constructed above the head of the water channel to accommodate flows from a 1 in 20 year rain event to enable silt settlement. b) The sediment traps and drains will be cleaned out once the level of accumulated sediment has risen to half the full water level. <p>Management of potential chemical contaminants is discussed below under Issue 5.</p>
<p>Public and agency comment</p>
<p>None received.</p>
<p>Evaluation</p>
<p>The existing quarry has a diversion drain to intercept overland flow and direct it away from disturbed areas. Other site drains carry runoff water from haul roads, benches and the quarry floor to an existing 15 x 7m sediment trap, which the EER states is proving generally adequate for detention of sediment from the existing open area of ~1.9 hectares.</p> <p>The EER states that a weir will be introduced into the existing sediment trap to split flows, thereby reducing turbulence and increasing effectiveness of the sediment trap.</p> <p>A second larger trap of 20m x 15m is proposed to then be constructed immediately downstream of the existing one, which will be retained. In combination, the two traps have been calculated to have adequate capacity to contain a 1 in 20 year rainfall event for a total catchment area of 6.5 hectares, which is larger than the proposed maximum open area of 6 hectares.</p> <p>The proposed onsite management of surface water is generally consistent with the acceptable standards of the Quarry Code of Practice (EPA Tasmania, May 2017) (QCP) in regard to drainage and erosion control.</p> <p>However, there is need to protect the gully from unnecessary encroachment to minimise downstream contamination. As discussed above under Issue 1, condition FF4 requires that, below the proposed sediment trap, no additional works or disturbance is to take place within 10 metres of the centre of the drainage line.</p>

Limiting the surface water quantity to be managed is an important consideration and will require maintenance of appropriately located perimeter drains or bunds (required by condition **SW1**). Condition **SW2** requires management of any water pollutants to ensure they are not discharged from the land. To do this, installation and maintenance of a new, larger sediment pond is necessary. Design and maintenance of settling ponds is addressed by condition **SW3**.

The application of these conditions in conjunction with existing site measures is considered adequate to minimise the discharge of sediment or other pollutants in stormwater from the site, and therefore limit the likelihood of impacts to water quality downstream.

Conclusion

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

SW1 Perimeter drains or bunds

SW2 Stormwater

SW3 Design and maintenance of settling ponds

Issue 5: Waste and environmentally hazardous substances
Description of potential impacts
<p>Operation of the quarry will generate stripped vegetation, topsoil and overburden, some of which will be retained in windrows and then used later for rehabilitation.</p> <p>Small amounts of domestic waste materials, and spares or waste generated through minor mechanical servicing will be generated. Lubricants, engine oil and hydraulic fluid will be stored on site, with fuel brought in on a daily basis. Spillage of any oil or fuel has the potential to result in contamination of soil and water if not adequately contained.</p>
Management measures proposed in EER
<p>The EER states that:</p> <ul style="list-style-type: none"> a) Mobile machinery will be serviced before being deployed to the site; b) Breakdowns and routine lubrication will be addressed onsite, and spares or waste generated from this will be retained in worker vehicles and taken offsite at the end of each working day; c) Litter will be retained in closed containers and periodically disposed of to an approved disposal site; d) Mobile equipment will be refuelled using a utility mounted refuelling facility; e) Lubricants, engine oil and hydraulic fluid will be stored on a bunded pallet within a storage shed; f) A hydrocarbon spill kit and boom will be retained onsite; g) Explosives will not be stored onsite.
Public and agency comment
None received.
Evaluation
<p>The proposed management measures for waste and hydrocarbon containment, and potential spill, are consistent with the practices prescribed in the QCP and are supported. Given the presence of a drainage channel in the centre of the site, avoidance and management of potential hydrocarbon spills are particularly important. Permit conditions H1, H2 and H3 are necessary in order to ensure compliance with the QCP in regard to mobile and non-mobile storage of chemicals and fuel.</p>
Conclusion
<p>The proponent will be required to comply with the following conditions:</p> <p>H1 Storage and handling of hazardous materials</p> <p>H2 Handling of hazardous materials – mobile</p> <p>H3 Spill kits</p>

Issue 6: Decommissioning and rehabilitation
Description of potential impacts
<p>Rehabilitation is necessary to ensure long term stability of the site, prevent sedimentation and erosion, provide native flora and fauna habitat, and minimise the potential for establishment of invasive flora species. The EER supplement states that the proposed maximum open area is 6 hectares to enable adequate manoeuvring and flexibility in operating the quarry.</p>
Management measures proposed in EER
<p>The EER proposes:</p> <ul style="list-style-type: none"> a) Progressive rehabilitation after stage I of works is completed; b) Prior to closure, construction of intermediate benches into any operating quarry face higher than 5 metres, or alternatively placement of overburden against the toe of the face to reduce the height to 5 metres and provide a growing medium; c) A decommissioning process including: <ul style="list-style-type: none"> a. Removal of all machinery, sheds and equipment from the site; b. Spreading of any remaining overburden and topsoil stockpiles across the floor of the quarry; c. Cleaning out of any sediment traps and use of spoil in rehabilitation works; d. Ripping of quarry access road and any side tracks and hard stands to facilitate moisture infiltration; e. Spreading of any seed slash from clearing over the floor surface; and f. Securing the access against unauthorised entry.
Public and agency comment
<p>None received.</p>
Evaluation
<p>The QCP strongly supports the principle of progressive rehabilitation and discusses in detail the need for careful management and use of topsoil to facilitate plant growth.</p> <p>The measures proposed in the EER are supported and considered to be generally consistent with the recommendations of the QCP.</p> <p>Condition DC1 requires that soil be stockpiled progressively, and condition DC2 specifies the requirement for active progressive rehabilitation, as identified in the QCP, with a maximum disturbed area at any one time of 6 hectares.</p> <p>Conditions DC3 and DC4 stipulate notification of the Director if there is temporary or permanent cessation of the activity.</p> <p>Conditions DC5 and DC6 require preparation of a Decommissioning and Rehabilitation Plan (DRP) in the case of permanent or long-term cessation, prepared as recommended in the QCP, and that rehabilitation itself must be undertaken. Rehabilitation must be 'substantially completed' within 12 months of cessation.</p>

Conclusion

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

DC1 Stockpiling of surface soil

DC2 Progressive rehabilitation

DC3 Temporary suspension of activity

DC4 Notification of cessation

DC5 DRP requirements

DC6 Rehabilitation on cessation

7 Other Issues

The following issues have been raised during the assessment process and are discussed briefly here. These are issues which are not assessed by the Board under the EMPC Act, and/or are under the jurisdiction of another regulatory agency.

I. Transport Impacts

The EER states that the increase in production will result in an increase of average daily traffic movements associated with the quarry from 14 to 22, with expected peak movements to increase to 36 per day.

While the impact of traffic on noise levels, air emissions and natural values is within the scope of the Board's assessment under the EMPC Act, the issue of increased traffic in regard to network capacity, access functionality and road condition is within the scope of Glamorgan Spring Bay Council's assessment under the *Glamorgan-Spring Bay Interim Planning Scheme 2015*. Any relevant permit conditions would be applied by Glamorgan Spring Bay Council in its planning permit.

8 Report Conclusions

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

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

It is concluded that:

1. the RMPS and EMPCS objectives have been duly and properly pursued in the assessment of the proposal;
2. the assessment of the proposed activity has been undertaken in accordance with the Environmental Impact Assessment Principles; and
3. the proposed activity is capable of being managed in an environmentally acceptable manner such that it is unlikely that the objectives of the *Environmental Management and Pollution Control Act 1994* (the RMPS and EMPCS objectives) would be compromised, provided that the Permit Conditions - Environmental No. 10615 appended to this report are imposed and duly complied with.

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

9 Report Approval

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



Cindy Ong

A/DEPUTY DIRECTOR, EPA TASMANIA

Acting under delegation from the Board of the Environment Protection Authority

Date: 21 July 2021

10 References

Williams, Barry; *Bryden Elliot Building & Excavations Pty Ltd – Mt Calder Quarry – Capacity Increase – Environmental Effects Report* (dated 14 April 2021), Integrated Land Management & Planning, Lindisfarne, Tasmania

II Appendices

Appendix I Permit conditions

Appendix I – Permit conditions – Environmental



ENVIRONMENT PROTECTION AUTHORITY