

Environmental Assessment
Report
Infrastructure upgrade
to East Arm Quarry
Hillwood
East Arm Resources Pty
Ltd

December 2022



ENVIRONMENT PROTECTION AUTHORITY

Environmental Assessment Report

Proponent	East Arm Resources Pty Ltd
Proposal	Infrastructure Upgrade to East Arm Quarry
Location	Hillwood
Class of Assessment	2A
PCE no.	11114
Permit Application No.	DA 2022/7 George Town Council
myDAS Folder No.	22/1344.023
myDAS Document No.	D22-483059

Assessment Process Milestones

Date	Milestone
24 January 2022	Permit application submitted to Council
9 February 2022	Referral received by the Board
15 March 2022	Guidelines Issued
15 October 2022	Start of public consultation period
31 October 2022	End of public consultation period
24 November 2022	Date draft conditions issued to proponent
6 December 2022	Statutory period for assessment ends

Glossary/Acronyms

Term	Detail
AHT	Aboriginal Heritage Tasmania
Board	Board of the Environment Protection Authority
CAS	Conservation Assessments Section, NRE
EER	Environmental Effects Report
EIA	Environmental impact assessment
EMPCA	<i>Environmental Management and Pollution Control Act 1994</i>
EMPCS	Environmental management and pollution control system
EPBCA	<i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>
LUPAA	<i>Land Use Planning and Approvals Act 1993</i>
MRT	Mineral Resources Tasmania
NCA	<i>Nature Conservation Act 2002</i>
NRE	Department of Natural Resources and Environment Tasmania
NVA	Natural Values Atlas
QCP	<i>Quarry Code of Practice (EPA 2017)</i>
RMPS	Resource Management and Planning System of Tasmania
TSPA	<i>Threatened Species Protection Act 1995</i>

Report Summary

This report provides an environmental assessment of East Arm Resources Pty Ltd proposed infrastructure upgrade to East Arm Quarry.

The proposal involves the installation of buildings and construction of ancillary infrastructure to support the existing level 2 quarry operating at 2 Greenhythe Road, Hillwood.

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 considered as part of the assessment.

Appendix 1 contains details of matters raised by the public and referral agencies during the consultation process.

Appendix 2 contains a table of the proponent's proposed management measures.

Appendix 3 contains the environmental permit conditions for the proposal.

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I. Approval Process

An application for a permit under the *Land Use Planning and Approvals Act 1993* (LUPAA) in relation to the proposal was submitted to George Town Council on 24 January 2022.

This proposal is defined as a 'level 2 activity' under clause 5(c) and 6(a), Schedule 2 of the *Environmental Management and Pollution Control Act 1994* (EMPCA), being an upgrade of an existing quarry and materials handling facility.

Section 25(1) of the EMPCA 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 9 February 2022.

The Board required that information to support the proposal be provided in the form of an Environmental Effects Report (EER) prepared in accordance with the Guidelines issued by the Board on 15 March 2022. Several drafts of the EER were submitted to EPA for review against the Guidelines prior to finalisation and acceptance on behalf of the Board on 6 October 2022.

The EER was released for public inspection for a 14-day period commencing on 15 October 2022. Advertisements were placed in *The Examiner* and on the EPA website. The EER was also referred to relevant government agencies for comment. One representation was received.

The Executive Director, Environmental Assessments has undertaken determination of the assessment under delegation from the Board.

The environmental conditions in Appendix 3 are a new set of operating conditions for the entire activity that will supersede the existing permit conditions.

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 the Environmental Management and Pollution Control System (EMPCS). Both sets of objectives are specified in Schedule 1 of the EMPCA.

The functions of the Board are to administer and enforce the provisions of the EMPCA, and 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 EMPCA.

3. The Proposal

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

Summary of the proposal’s main characteristics

Activity

The construction and installation of buildings ancillary infrastructure to support the existing level 2 quarry operating at 2 Greenhythe Road, Hillwood. The quarry has approval to extract and process up to 50,000m³ of product per annum. The quarry extracts dolerite rock from which aggregates are produced.

It should be noted that some of the proposed buildings and ancillary infrastructure have already been installed or constructed on site (as detailed below).

Location and planning context

Location	2 Greenhythe Road, Hillwood, Tasmania, 7252
Land zoning	George Town Interim Planning Scheme 2013 <ul style="list-style-type: none"> • Rural Resource Zone • Utilities Zone
Land tenure	The Land is mainly private freehold land (CT’s 175732/1, 175733/1). Crown Land is present including <ul style="list-style-type: none"> • 152416/12 (Crown Acquired Road) • Road (Department of State Growth)
Mining lease	1914 P/M and 2077 P/M
Lease area	1914 P/M is 9 hectares, and all is included in ‘the Land’, 2077 P/M is 155 hectares, with the area show in Figure 1 included in ‘the Land’.
Bond	The bond for 1914 P/M is \$6,000. The MRT Officer has advised that this is currently under review as part of the assessment of the lease transfer and a new mine plan. The bond for 2077 P/M is staged. MRT currently holds \$240,000, with a requirement to increase this as mining progresses.

Activity site

Land Use	The current land use is the existing quarry, native forest (used for silviculture and occasional stock grazing) and hardwood plantation. Surrounding land use is agriculture (mainly livestock grazing and some hardwood plantation), native forest and occasional dwellings.
Topography	The quarry occupies the lower slope of a hill system which rises as distance eastwards increases. The proposed infrastructure is being built on an almost flat area adjacent to the East Tamar Highway.
Geology	The bedrock geology of the Mining Lease is Jurassic dolerite with locally developed granophyre. Cainozoic sequences of boulder and cobbles occur in some locations, with localised ferricrete and angular gravels of vein quartz.
Soils	The soils are a moderate to shallow clay-loam to light clay, which is skeletal in some locations. The infrastructure is being built on a dolerite bedrock with overlaying clay loam soils with occasional Cainozoic sequences of boulders and cobble with a few small areas (where forest is located) coarse marine derived gravels and sands.

Hydrology	An unnamed tributary of Fourteen Mile Creek occurs to the north of the infrastructure to be installed. There are no watercourses (other than an existing drain east of the infrastructure) in the area proposed for the installation of infrastructure.
Natural Values	<p>The Flora and Fauna Report conducted for the EER found no flora or fauna listed under the <i>Threatened Species Protection Act 1995</i> (TSPA) and/or the <i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBCA).</p> <p>The Flora and Fauna Report details that there is a single native forest community present within the Survey Area; <i>Eucalyptus amygdalina</i> coastal forest and woodland (TASVEG code - DAC). This forest type is not a threatened native vegetation community within the meaning of Schedule 3A of the <i>Nature Conservation Act 2002</i> (NCA) nor is it an ecological community listed under section 181 of the EPBCA.</p> <p>The green and gold frog has been recorded (Natural Values Atlas record in October 2020) at the dam to the south-east of the quarry (within mining lease 1914 P/M).</p>

Location region

Climate	The nearest relevant Bureau of Meteorology weather recording station is at Low Head to the north of the quarry. Low Head has a typically warm summer and cool winter climate pattern. Rainfall occurs throughout the year with a peak in winter and spring (June to October), which coincides with the cooler months. Low Head is more coastal than East Arm, so it is likely to experience slightly higher levels of rainfall, and cooler winter conditions due to the cold air drainage from the Tamar Graben and a lesser coastal influence of its climate because it is not immediately at the coast. Winds are typically from the west to north-west with southerly winds
Surrounding land uses	Surrounding land use is agriculture (mainly livestock grazing and some hardwood plantation), native forest and occasional dwellings.
Species of conservation significance	The green and gold frog (<i>Litoria raniformis</i>) listed as vulnerable under the TSPA and the EPBCA has been recorded (Natural Values Atlas (NVA) record in October 2020) at the dam to the southeast of the quarry, within mining lease 1914 P/M (see Attachment 7: Flora and Fauna Report of the EER).

Proposed infrastructure

Major equipment	No new or additional mobile operational equipment (e.g., screens, crushers, trucks) are proposed.
Other infrastructure	<p>The following buildings and ancillary infrastructure have been installed:</p> <ul style="list-style-type: none"> • Office and weighbridge (4 pods joined by roof) that includes a meeting room, amenities, kitchen/lunchroom, and weighbridge office. • Staff amenities, laboratory, solar panels and battery backup, and stores with genset (generator – backup power only). • Entrance gate. • Parking at the office (5 spaces). • Diesel powered backup generator (Kubota SQ1150B-AU-B Diesel Generator) to supplement the solar-powered array and battery backup. • Stockpile area. <p>The following is yet to be installed:</p> <ul style="list-style-type: none"> • Wastewater system with on-site wastewater treatment and disposal, including the irrigation area. • Signage. • Parking at the staff amenities (11 spaces). • Additional stockpile area.

Inputs

Water	Water for dust suppressions measures is accessed from the on-site sediment pond or via a dedicated water tanker that accesses water from the town supply or dam elsewhere on the property.
Energy	Fuel for the backup generator to supplement the solar-powered array and battery backup and to operate machinery and other equipment.
Other raw materials	None.

Wastes and emissions

Liquid	Stormwater runoff from extraction, unrehabilitated and stockpile areas.
Atmospheric	Dust from blasting, drilling, crushing, and screening. Dust from internal and external traffic, and blow-off from stockpiles.
Solid	General refuse including food scraps, paper and packaging. General inert wastes such as metal waste to be collected periodically.
Controlled wastes	Waste engine oil and potentially contaminated soil.
Noise	Noise from blasting, drilling, crushing, and screening, internal and external traffic and From activities including crushing/screening, carting material, vehicles on site and going to and from the site, and machinery and equipment.
Greenhouse gases	Greenhouse gases will be emitted through the use of heavy machinery requiring fossil fuels.

Construction and operations

Proposal timetable	As detailed in 'Other infrastructure' the majority of the buildings and ancillary infrastructure have been installed. The EER details that it is anticipated that the wastewater system and on-site wastewater treatment and disposal, including the irrigation area and additional signage are proposed to be installed and operational by December 2022. This will however be subject to the relevant approvals.
Operating hours (ongoing)	Operating hours are those of the existing quarry: <ul style="list-style-type: none"> • 0700 to 1900 hours Monday to Friday • 0800 to 1600 hours Saturday • Closed Sunday and Public Holidays (those gazetted statewide)



Figure I: Location of East Arm Road Quarry (From the LISTmap)

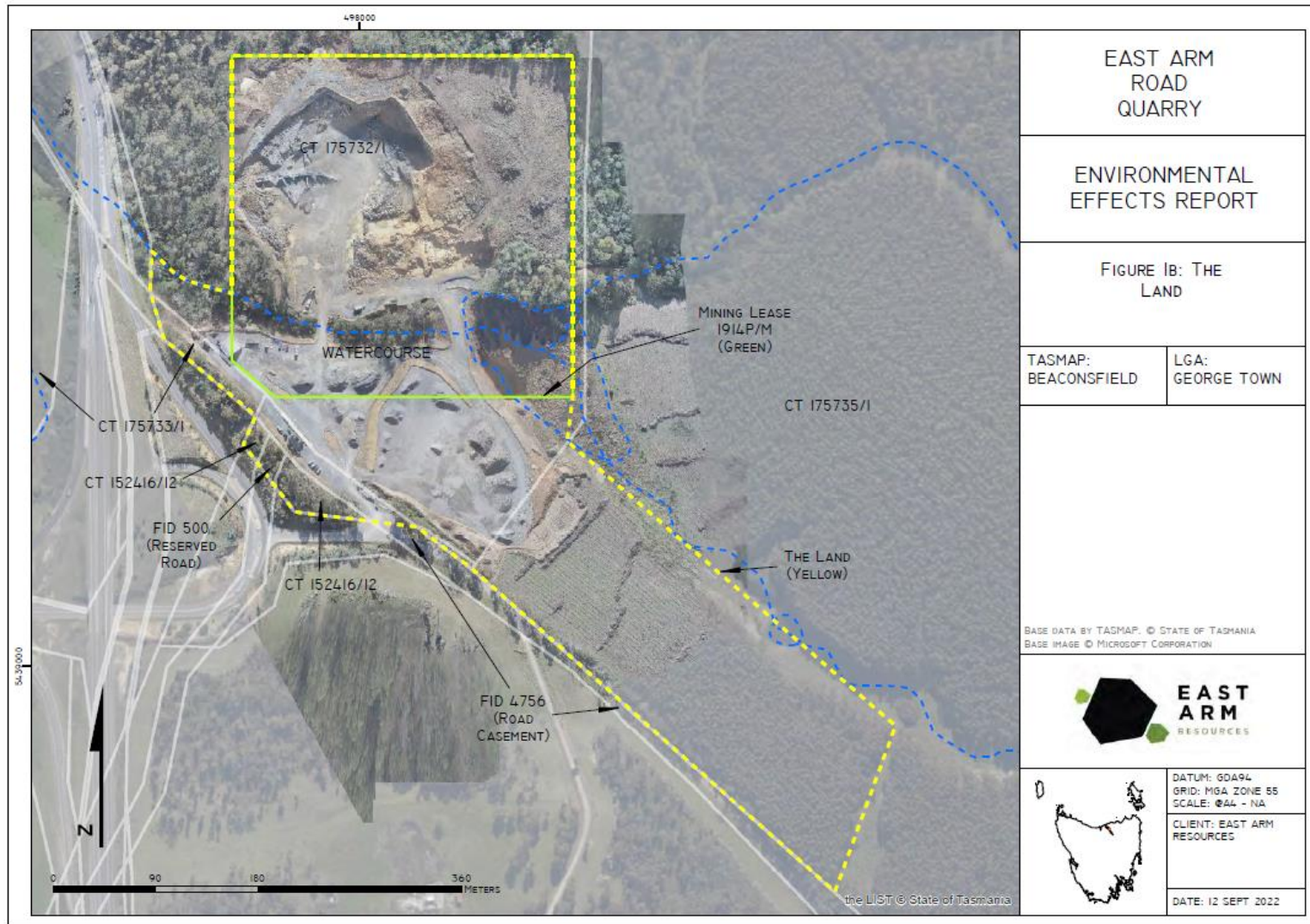


Figure 2: The Land (Figure 1B of the EER)

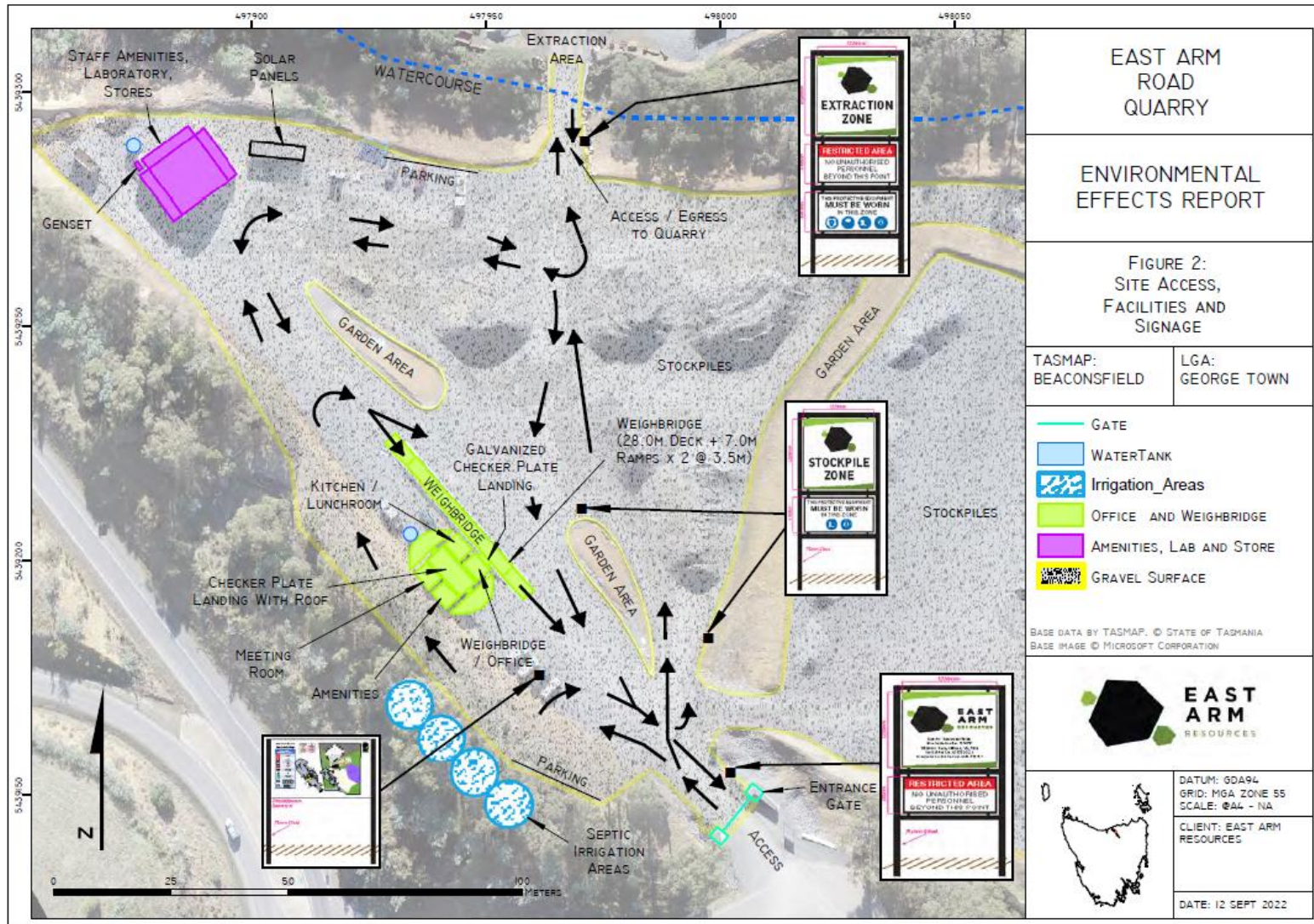


Figure 3: Site Access, Facilities and Signage (Figure 2 of the EER)

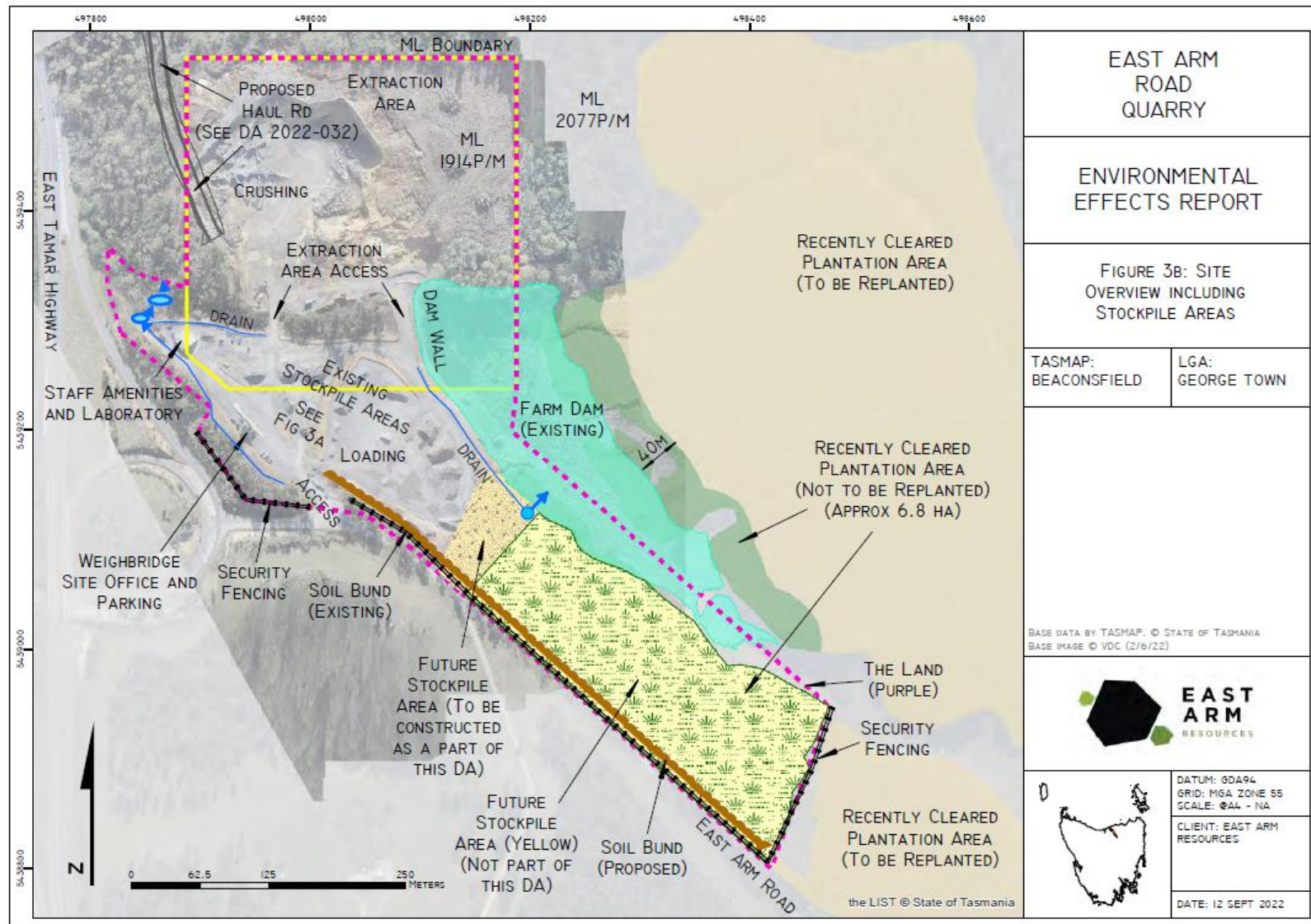


Figure 4: Overview including stockpile areas (Figure 3B of the EER)

4. Project Rationale and Alternatives

According to the EER the existing quarry produces high-quality aggregates (VicRoads certified). The infrastructure upgrade provides permanent amenities for staff and contractors working at the site, and the ability to accurately weigh material prior to delivery to customers.

The EER advises the location of the infrastructure provides an optimal layout balancing several factors including:

- The minimisation of vegetation impacts (vegetation provides screening to the infrastructure as well as retains some biodiversity values).
- The need to have parking, the office and weighbridge at the front of the quarry to provide an efficient and safe access to the quarry for all site visitors and employees.
- The need to have efficient truck/entry and exit lanes.
- Maximising the use of hardstand and existing road formations in the design to minimise topsoil stripping.
- Maintaining a safe operational space to the quarry, especially to isolate the active face area from the areas occupied by people not in machinery.
- Effectively utilise the available suitable terrain which further east is generally unsuitable for the installation of infrastructure.

Several alternative layouts were considered but the general location of the infrastructure was always constrained by the need to have the infrastructure near the frontage of the quarry.

5. Public and Agency Consultation

One public submission was received during the public consultation period however the submission related to a Council planning matter.

The development application and/or EER was also referred to several government agencies with an interest in the proposal. Submissions were received from the following:

- Conservation Assessments, Natural Resources and Environment Tasmania
- Aboriginal Heritage Tasmania, Department of Premier and Cabinet

The following individuals also provided specialist advice:

- Regulatory Officer, Environment Protection Authority
- Scientific Officer (Air), Environment Protection Authority
- Scientific Officer (Water), Environment Protection Authority
- Scientific Officer (Noise), Environment Protection Authority

Appendix I of this report contains a summary of the public submission received.

6. Evaluation of Environmental Issues

The following environmental issues are considered relevant to the proposal and have been evaluated in this section:

1. Air quality
2. Water quality
3. Noise emissions and blasting
4. Natural values
5. Weed and disease management
6. Waste management and environmental hazardous substances
7. Decommissioning and rehabilitation

6.1 General Conditions

The following general conditions will be imposed on the activity:

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

6.2 Issue 1: Air quality

6.2.1 Potential impacts

Quarrying activities can produce dust which may create an environmental nuisance or harm beyond the property boundary if not appropriately managed. Dust can originate from blasting, excavation, crushing, screening, disturbed topsoil, material stockpiles, loading of trucks, and movement of equipment and vehicles on and offsite.

The quarry is in a location dominated by agricultural land (including plantation and pasture), native forest estate, and occasional residences.

The nearest sensitive receptor is a residence approximately 505 m to the south of the site. Dust generating site activities, such as crushing, or screening will be retained in their current location in the extraction area (as shown in Figure 4). The closest change to this receptor proposed in the EER is a new stockpile area which may generate dust if not appropriately managed. All other dwellings in the area are more than 1 km from the site boundary.

6.2.2 Management measures proposed in EER

The EER states that existing dust management measures in the quarry will continue to be applied, and details the following management measures:

- The road surface around the weighbridge, office pods and staff room/containers through to the edge of the existing East Arm Road seal will be sealed (likely a 2-coat bitumen seal). This will prevent dust generation from the use of the access and associated area around the weighbridge.
- Measures applied at the quarry to avoid and suppress dust include the following industry standard environmental practices for quarries (measures already applied at the quarry):
 - Crusher and screens - Standard industry practice for dust control will continue to be applied at the activity – misting of the crushing units and drop-zone areas of screens.
 - Stockpiles - stockpiles of crushed material and raw material will continue to be managed by sprinkler systems to suppress dust.

6.2.3 Public and agency comment

No comment received.

6.2.4 Evaluation

Dust emissions are not expected to increase significantly with the proposed infrastructure upgrade. The road surface around the upgraded infrastructure will be sealed to prevent dust generation.

The EER details that water can be sourced from the on-site sediment pond or via a dedicated water tanker or dam elsewhere on the property for dust suppression measures.

The EPA Air Specialist advised that the standard atmospheric conditions adequately cover the proposed activity.

Current operating conditions will be required to be imposed to reduce the risk of dust emissions creating environmental nuisance or harm for the entire activity. The proponent will be required under condition **A1** to ensure that trucks coming from the quarry are covered or dampened. Condition **A2** will require the proponent to control and actively manage dust emissions produced by all quarrying activities to ensure emissions and environmental nuisance are prevented beyond the boundary of The Land. Condition **A3** is included in relation to dust management measures from plant such as crushing and screening equipment. The requirement for compliance with the Quarry Code of Practice (QCP), condition **G7** is also relevant as this specifies requirements for dust management.

6.2.5 Conditions

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

- G7** Quarry Code of Practice
- A1** Covering of vehicles

- A2** Control of dust emissions
- A3** Control of dust emissions from plant

6.3 Issue 2: Water quality

6.3.1 Potential impacts

Sediment and contaminants from disturbed and unvegetated quarry surfaces may be entrained in water flowing across the surface of The Land, entering waterways and impacting water quality downstream of the site boundary.

A minor un-named tributary of Fourteen Mile Creek occurs between the quarry (extraction area) and the infrastructure location, traversed by an existing bridge. The un-named tributary is described as not being in a highly natural state with its catchment above the quarry supporting large tracts of plantation and native forest. The quarry has existing sediment ponds and drains to direct water to those ponds.

6.3.2 Management measures proposed in EER

The EER states the following measures will be provided to minimise water quality impacts for the proposed infrastructure:

- A sediment pond of 40 m³ capacity (a pond surface area of at least 40 m²) will be established to receive potentially polluted (sediment) surface water flows from the area occupied by the new infrastructure. The pond will be cleaned out every 1.9 years to maintain capacity.
- Drains around the infrastructure will be installed and maintained to direct surface runoff to a sediment basin north of the infrastructure area.
- The additional area for stockpile/loading to be constructed will be bunded around its edge and have drainage directed to a to-be-constructed pond to capture sediment from surface waters that would then overtop and discharge to the farm dam. The final size of that pond will be determined by the final surface area that flows to the pond. This will not be fully known until the additional stockpile area is levelled and surfaced.
- A cut-off drain will be installed and maintained to direct catchment runoff around the infrastructure (western side of the development). The clean surface water will be directed to the un-named tributary of Fourteen Mile Creek.
- Access road drains, culverts, spoon-drains, and other water shedding devices will be checked quarterly and maintained as required to minimise sediment release into stormwater.

The EER states that sediment control of surface water is managed at the quarry through avoidance and mitigation measures including:

- Minimisation of areas of disturbance.
- Minimisation of stormwater ingress and sediment mobilisation through the use of perimeter drains, cut-off drains and bunding.
- Installation and maintenance of a sediment pond to capture entrained sediment in surface flows.
- The use of a vegetated discharge zone to remove fine suspended sediment prior to water reporting to a watercourse.

6.3.3 Public and agency comment

No comment received.

6.3.4 Evaluation

It is noted that the catchment for the un-named tributary of Fourteen Mile Creek is highly modified. Controls proposed in the EER align with the requirements of the QCP. The person responsible for the activity is required by condition **G7** to comply with the QCP. The EPA Water Specialist advised that the proposed sediment pond design described in the EER to treat flow from the infrastructure area, and cleanout regime is adequate to meet expected flow and loads. The proposed diversion drains, bunding and hardstands are considered appropriate sediment control measures for the infrastructure upgrade. Current operating conditions will be required to be imposed for the entire activity to reduce the risk of impacts to water quality.

Condition **SW1** requires construction and maintenance of perimeter cut-off drains or bunds with sufficient capacity to retain run-off from a 1 in 20-year rainfall event. Condition **SW2** specifies design and maintenance requirements for settling ponds. Condition **SW3** requires collection and treatment of polluted stormwater to the extent necessary to prevent serious or material harm, or environmental nuisance. Condition **SW4** requires a 5 m separation distance from disturbed areas to the un-named tributary is maintained. This will ensure a vegetation filter strip is present and that the tributary banks are protected from erosion.

The potential for water quality to be impacted is also mitigated by condition **DC1**, which requires progressive rehabilitation such that open surfaces vulnerable to erosion are minimised, and condition **DC2** which requires topsoil to be separated and protected from erosion and disturbance (see also Issue 7).

6.3.5 Conditions

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

- SW1** Perimeter drains or bunds
- SW2** Design and maintenance of settling ponds
- SW3** Stormwater
- SW4** A 5 m buffer to the un-named tributary
- DC1** Progressive rehabilitation
- DC2** Stockpiling of surface soil
- G7** Quarry Code of Practice

6.4 Issue 3: Noise emissions and blasting

6.4.1 Potential impacts

Noise emissions from quarrying activities have the potential to cause environmental nuisance to neighbouring properties and/or impacts on public health. Such activities include vegetation removal, ripping, drilling, blasting, crushing, vibratory screening, material carting and other use of ancillary equipment.

The nearest sensitive receptor is approximately 505 m to the south of the site. The location of existing major noise sources, such as ripping, drilling, blasting, crushing etc. will not change. The use of the new stockpile area proposed in the EER is no closer to the nearest sensitive receptor and the stockpile locations do not include crushing or screening. All other dwellings in the area are more than 1 km from the site boundary.

The EER details the infrastructure upgrade includes a noise attenuated diesel-powered backup generator as an additional noise source. The generator is a backup only to provide additional power when the solar array is not generating enough power, or the battery is depleted. The generator is likely to operate more in the winter months when solar capacity to generate power from the solar array is at its lowest. The generator is only required when the quarry is operating.

The EER details that there are no changes to the methods of extraction or processing, or the volume of material extracted or processed.

6.4.2 Management measures proposed in EER

The EER states the following measures will be provided to minimise noise emission impacts for the proposed infrastructure:

- Hours of operation will continue to be 0700 to 1900 hours, Monday to Friday, 0800 to 1600 hours, Saturdays, and no operations on Sundays or public holidays (those gazetted statewide).

6.4.3 Public and agency comment

No comment received.

6.4.4 Evaluation

The proposal does not seek changes to the method of extraction or processing, or to the volume of material extracted or processed. Hours of operation will continue to be limited to daytime only. No public complaints related to noise for the existing activity have been received. It is considered that the presence of the highway nearby is likely to mitigate potential noise nuisance generated by the activity during daytime hours at the nearest residence.

The EPA noise specialist advised that the proposed attenuated generator is unlikely to cause any major noise nuisance at the nearest sensitive receptor.

Current operating conditions will be required to be imposed to reduce the risk of noise emissions creating environmental nuisance or harm for the entire activity.

Condition **N1** specifies noise emission levels with lower evening and nighttime noise limits in the event some temporary future nighttime operations are required and approved by the Director. The standard condition **N2**, which defines quarry operating hours and is inclusive of associated heavy vehicle movements, is required to reduce the risk of noise related impacts on nearby residents.

Conditions **B1** and **B2** will ensure that the proponent adheres to the defined blasting times and requirements of blasting notification. The proponent will be required under condition **B3** to ensure that the blasting operational noise and vibration limits are complied with, and blasting is carried out in accordance with best practice environmental principles. Condition **B4** requires blast monitoring to be undertaken. The requirement for condition **G6** is also relevant as this specifies a complaints register is maintained.

6.4.5 Conditions

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

- G6** Complaints register
- N1** Noise emission limits
- N2** Operating hours
- B1** Blasting times
- B2** Notification of blasting
- B3** Blasting – noise and vibration limits
- B4** Blast monitoring

6.5 Issue 4: Natural values

6.5.1 Potential impacts

Land clearing and quarry operations may disturb, injure or kill threatened flora and fauna or compromise sensitive native communities. Vehicle and machinery movements associated with quarry operations increase the risk of native roadkill.

The EER states that removal of native vegetation of approximately 0.08 hectares to accommodate the buildings and infrastructure that have been installed at the site has already occurred. Additional clearing of 0.25 hectares of native vegetation is required for the infrastructure yet to be installed.

A natural values assessment was undertaken to inform the EER. This included a desktop review and field surveys to verify the findings of the desktop assessment. This concluded that no threatened flora or fauna species or vegetation communities listed under the TSPA, EPBC or NCA were observed in the survey area, however potential habitat for threatened fauna species was present.

The green and gold frog (*Litoria raniformis*) has been recorded (Natural Values Atlas record in October 2020) at the dam to the southeast of the quarry (within The Land). The EER states that the catchment that drains to the dam is mostly above quarrying activity. It details that the additional area of stockpile/loading will be bunded around its edge and have drainage directed to a to-be-constructed pond to capture sediment from surface water that would then overtop to the dam. No other changes to the use of the dam are proposed, noting that the activity currently extracts some water from the dam for dust suppression (and has done since 2013).

6.5.2 Management measures proposed in EER

No management measures proposed.

6.5.3 Public and agency comment

Conservation Assessments (CAS) advised that there were no concerns in relation to significant impacts to natural values for the proposed development based on the natural values assessment and the discussion of the extent of the development footprint in relation to site access, facilities and access. CAS advice did not cover the future stockpile areas included in this proposal.

6.5.4 Evaluation

Based on the conclusions of the natural values assessment and advice from CAS it is considered that the proposed development will have minimal impacts on natural values. Given however, that there is a record of the green and gold frog within The Land, condition **FFI** requires the proponent to protect the green and gold frog habitat at the dam to the southeast of the quarry by not undertaking any works other than what currently occurs as part of the activity (water extraction for dust suppression).

It should be noted that the current permit has a condition for the protection of sheathing yellowstar (*Hypoxis vaginata*). This species was delisted from the TSPA in 2016 (name changed to *Pauridia vaginata*) and therefore the condition is no longer required.

6.5.5 Conditions

FFI Protection of the green and gold frog habitat

6.6 Issue 5: Weed and disease management

6.6.1 Potential impacts

Weeds, pests and pathogens can disrupt environmental, agricultural and silvicultural ecosystems. Ground disturbance associated with quarry operations may facilitate weed propagation across The Land and beyond its boundaries. Vehicle and machinery movements or contamination of quarry products may cause weeds to spread from The Land to other locations.

The EER details that four plant species listed as a Declared Weed in the *Weed Management Act 1999* or a Weed of National Significance in the EPBCA occur in the vicinity of The Land, including blackberry, slender thistle, gorse and Spanish heath.

6.6.2 Management measures proposed in EER

The EER states the following management measures to minimise weed impacts:

- A weed spraying program is implemented at the quarry.

The EER also provides details on a 'Clean Machinery Policy' stating that:

Transport trucks and light vehicles pose less risk to the transportation of weed propagules if they remain on the hard surface of the roads and the gravel loading area and that these areas are managed to exclude weeds. The highest risk of transporting propagules into the quarry is from heavy machinery, such as excavators, as these can carry large clods of dirt and mud in which seed propagules can be lodged. Heavy machinery will continue to be brought into the Quarry in a clean condition; free of weed propagules, clods of dirt and vegetative matter.

6.6.3 Public and agency comment

No comment received.

6.6.4 Evaluation

A number of environmentally significant weeds are present on The Land and the risk of spreading weeds for The Land must be controlled. The management measure and 'Clean Machinery Policy' are supported.

Condition **OP1** requires machinery being brought onto The Land to be in clean condition. Condition **OP2** requires The Land to be kept substantially free of weeds to minimise the risk of weeds being spread through the transport of products from The Land. Condition **OP3** requires the preparation, approval, and implementation of a weed management plan.

6.6.5 Conditions

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

- OP1** Machinery washdown
- OP2** Weed management
- OP3** Weed management plan

6.7 Issue 6: Waste management and environmental hazardous substances

6.7.1 Potential impacts

Inappropriate storage and the spilling of any oil, fuel or environmentally hazardous material has the potential to result in contamination of soil and water if not adequately contained.

Litter and other general waste may be generated by onsite staff.

6.7.2 Management measures proposed in EER

The EER states the following management measures:

- Waste bins will be located at the quarry and labelled with the types of waste each bin is to receive. Waste will be sorted based on the classification of the type of waste, with Controlled Waste separated from all other waste streams and only carted by a licensed transport operator.
- Waste generated from machinery servicing and repairs will be disposed of at a permitted refuse disposal site.
- General refuse (e.g., food wrappers) will be collected in waste bins provided on-site for general refuse.
- Weed spraying chemicals are handled, used, and disposed of in accordance with the manufacturer's directions and relevant regulations.
- When in the quarry, fuel and oil containers are contained in double skinned/bunded pods fitted with a trigger hose with automatic shut off function to avoid a large spillage. They are located at least 10 m from any drain and the sediment pond will be bunded (moveable bunds) to a capacity at least 1.5 times the volume of the container.
- Two hydrocarbon spill kits are stored at the staff room/containers to use in the event of a spillage and will be replaced as and when required.

6.7.3 Public and agency comment

No comment received.

6.7.4 Evaluation

The EER management measures proposed are considered appropriate for managing wastes and environmentally hazardous substances. No specific waste management conditions are warranted.

In line with the management measures proposed, condition **H1** requires hazardous materials to be contained within bunded areas and condition **H2** requires appropriate spill kits to be kept on The Land and maintained in a functional condition.

Standard information items **LO2** and **O11** are included to ensure the proponent is aware of legislation relating to storage and handling of dangerous goods and substances, and best practice in relation to waste management.

6.7.5 Conditions

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

- H1** Spill kits
- H2** Storage and handling of hazardous materials

The proponent is also made aware of the following:

- LO2** Storage and handling of dangerous goods, explosives and dangerous substances
- O11** Waste management hierarchy

6.8 Issue 7: Decommissioning and rehabilitation

6.8.1 Potential impacts

Temporary or permanent cessation of quarrying operations have the potential to cause on-going impacts to the environment if rehabilitation is not managed appropriately. Rehabilitation is necessary to ensure the long-term stability of the site, prevent erosion and sedimentation, reduce uncontrolled dust emissions, provide native flora and fauna habitat, and minimise the potential for establishment of invasive flora species.

The EER states that no rehabilitation is proposed at this stage and the proposal seeks to increase the maximum area of disturbance of the quarry from 2.5 hectares to 11 hectares. The current area disturbed is 10.5 hectares, with a further 0.5 hectares to be cleared/used to install the remainder of the infrastructure.

6.8.2 Management measures proposed in EER

The EER states the following management measure:

- In the event of permanent closure of the facility prior to complete extraction of the resource the removal of infrastructure will be part of the detailed Decommissioning and Rehabilitation Plan (DRP).

6.8.3 Public and agency comment

No comment received.

6.8.4 Evaluation

The proposed management measure in the EER is considered appropriate and supported. To ensure appropriate treatment of surface soil and implementation of progressive rehabilitation, conditions **DC1** and **DC2** are required.

Condition **DC3** requires care and maintenance of the site during temporary cessation of the activity, and rehabilitation if the activity is suspended for 2 years or more. Condition **DC4** requires notification of the Director if permanent cessation of the activity becomes likely. Condition **DC5** requires that rehabilitation be undertaken on cessation and **DC6** requires the proponent to submit a Decommissioning and Rehabilitation Plan (DRP) for the activity upon planned cessation.

6.8.5 Conditions

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

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

7. Issues not assessed by the Board

The following issues have been raised during the assessment process but are not the responsibility of the Board under the EMPCA. These may be issues which are more appropriately addressed by another regulatory agency.

The representation raised a planning issue relating to the need for Crown Consent. This matter was addressed by George Town Council and resolved with the representor.

The EPA Water Specialist noted that the onsite wastewater treatment and irrigation system will be regulated by Council and therefore this has not been assessed.

Aboriginal Heritage Tasmania (AHT) provided advice in response to a referral from the EPA to AHT. This information was provided to the proponent.

The proposal was referred to Aboriginal Heritage Tasmania (AHT) who advised that there is no known Aboriginal heritage recorded within the proposed infrastructure footprint. An Aboriginal heritage assessment was recently undertaken in this area and no Aboriginal heritage was identified. Based on the results of this assessment and the existing high levels of disturbance within much of the proposed footprint, it is believed that the area has a low likelihood of Aboriginal heritage being present. AHT recommended that an Unanticipated Discovery Plan be kept on hand during any ground disturbing works to aid the proponent in meeting their requirements under the Aboriginal Heritage Act 1975, should suspected Aboriginal heritage be discovered. Legal Obligation LO3 is included in the permit to ensure that the proponent is aware of their obligations under the Aboriginal Heritage Act 1975.

8. Report Conclusions

This assessment has been based on the information provided by the proponent, East Arm Resources Pty Ltd, in the permit application and the case for assessment (the EER).

This report incorporates specialist advice provided by EPA scientific and regulatory staff, the Department of Natural Resources and Environment Tasmania, 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; and
2. the assessment of the proposal has been undertaken in accordance with the Environmental Impact Assessment Principles; and
3. the proposal is capable of being managed in an environmentally acceptable manner such that it is unlikely that the RMPS and EMPCS objectives would be compromised, provided that the Permit Conditions – Environmental No. 11114 appended to this report are imposed and duly complied with. The environmental conditions in Appendix 3 are a new set of operating conditions for the entire activity that will supersede the existing permit conditions.

9. Report Approval

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



Martin Read

EXECUTIVE DIRECTOR, ENVIRONMENTAL ASSESSMENTS

Acting under delegation from the Board of the Environment Protection Authority

Date: 1 December 2022

10. References

Van Diemen Consulting (2022) *East Arm Quarry, Hillwood, Infrastructure Upgrade, Environmental Effects Report* (dated 23 September 2022) for East Arm Resources Pty Ltd; New Town, Tasmania.

Environment Protection Authority (2017) *Quarry Code of Practice 3rd Edition*; Hobart, Tasmania.

II. Appendices

- Appendix 1 Summary of public and agency submissions
- Appendix 2 Table of proponent management measures
- Appendix 3 Permit Conditions – Environmental No: 11114

Appendix I: Summary of public representations and agency submissions

Table I: Matters raised during public consultation period

Representation No.	Comments and Issues	Further Information Requested	EPA Comments
I	Council received a representation from Property Services (Parks and Wildlife Service) in regard to the need for Crown Consent.	No	Outside EPA jurisdiction. The Council confirmed with Property Services (Parks and Wildlife Service) that the Crown Consent from the Department of State Growth included in the application is correct and valid. Council advised it has been resolved and will be treated as if the representation is withdrawn.
Conservation Assessments (CAS), Department of Natural Resources and Environment Tasmania	Based on the attached flora and fauna field survey report and the discussion of the extent of the development footprint in relation to natural values present on the quarry site, CAS does not have any concerns in relation to significant impacts to natural values for the proposed development.	No	Noted. This advice was provided in relation to site access, facilities and signage, and did not cover the future stockpile area included in this proposal (shown in Figure 4).
Aboriginal Heritage Tasmania (AHT), Department of Premier and Cabinet	AHT has completed a search of the Aboriginal Heritage Register regarding the proposed infrastructure upgrade at the East Arm Road quarry. AHT can advise that there is no known Aboriginal heritage recorded within the proposed infrastructure footprint. An Aboriginal heritage assessment was recently undertaken in this area and no Aboriginal heritage was identified. Based on the results of this assessment and the existing high levels of disturbance within much of the proposed footprint, it is believed that the area has a low likelihood of Aboriginal heritage being present. Accordingly, AHT advise that the works should be guided by the attached Unanticipated Discovery Plan. Please be aware that all Aboriginal heritage is protected under the <i>Aboriginal Heritage Act 1975</i> . If at any time during works Aboriginal heritage is suspected, the process outlined in the Unanticipated Discovery Plan should be immediately implemented. We recommend that a copy of the Unanticipated Discovery Plan is kept on hand during any ground disturbing works	No	Noted and the legal obligations with respect to Aboriginal relics are noted in Schedule 3 of Permit Conditions – Environmental No. 11114.

Appendix 2: Proponent management measures

Table 2: Proponent management measures (Table 6 of EER)

Note – there is no proponent management measure number 4 within Table 6 of the EER

No.	Description	Timeframe	EER Reference
1	The road surface around the weighbridge, office pods and staff room/containers through to the edge of the exiting East Arm Road seal will be sealed (likely a 2 coat bitumen seal). This will prevent dust generation from the use of the access and associated area around the weighbridge.	By practical completion of the infrastructure installation	
2	<p>Measures applied at the Quarry to avoid and suppress dust include the following industry standard environmental practices for quarries:</p> <p>Crusher and screens</p> <p>Standard industry practice for dust control will continue to be applied at the activity – misting of the crushing units and drop-zone areas of screens.</p> <p>Stockpiles</p> <p>Stockpiles of crushed material and raw material will continue to be managed by sprinkler systems to suppress dust.</p> <p>Water supply and availability for dust suppression measures</p> <p>Water can be accessed from the on-site sediment pond or via a dedicated water tanker that accesses water from the town supply or dam elsewhere on the property.</p>	Measures are already applied at Quarry	C.1 AIR EMISSIONS - DUST
3	<p>A sediment pond of 40 m³ capacity (a pond surface area of at least 40 m²) will be established per Figure 7 to receive potentially polluted (sediment) surface water flows from the area occupied by the infrastructure. The pond will be cleaned out every 1.9 years to maintain capacity.</p> <p>Drains around the infrastructure will be installed and maintained to direct surface runoff to a sediment basin north of the infrastructure.</p> <p>The additional area of stockpile/loading to be constructed as depicted in Figure 3B will be bunded around its edge and have drainage directed to a to-be-constructed pond to capture sediment from surface waters that</p>	To be installed prior to practical completion of infrastructure installation	C.2 WATER QUALITY (SURFACE, DISCHARGE AND GROUNDWATER)

	would then overtop to the farm dam - the final size of that pond will be calculated by the final surface area that flows to the pond which is not fully known until the additional stockpile area is levelled and surfaced.		
5	A cut-off drain will be installed and maintained to direct catchment runoff around the infrastructure (western side of the Development – see Figure 7). The clean surface water will be directed to the un-named tributary of Fourteen Mile Creek.		
6	Access road drains, culverts, spoon-drains, and other water shedding devices will be checked quarterly and maintained as required to minimise sediment release into stormwater.	By practical completion of the infrastructure installation	
7	Hours of operation will continue to be 0700 to 1900 hours, Monday to Friday, 0800 to 1600 hours, Saturdays, and No operations on Sundays or public holidays (those gazetted statewide).	Ongoing from project commencement	C.3 NOISE EMISSIONS
8	Waste bins will be located at the Quarry and labelled with the types of waste each bin is to receive. Waste will be sorted based on the classification of the type of waste, with Controlled Waste separated from all other waste streams and only carted by a licensed transport operator. Wastes generated from machinery servicing and repairs will be disposed of at a permitted refuse disposal site.	Ongoing from project commencement	C.4 WASTE
9	General refuse (e.g., food wrappers) will be collected in waste bins provided on-site for general refuse.	Measure is already applied at Quarry	
10	Weed spraying chemicals are handled, used, and disposed of in accordance with the manufacturer’s directions and relevant regulations.	Measures are already applied at Quarry	C.5 ENVIRONMENTALLY HAZARDOUS GOODS
11	When in the Quarry, fuel and oil containers are contained in double skinned/bunded pods fitted with a trigger hose with automatic shut off function to avoid a large spillage. They are located at least 10 m from any drain and the sediment pond and will be bunded (moveable bunds) to a capacity at least 1.5 times the volume of the container.		
12	Two hydrocarbon spill kits are stored at the staff room/containers to use in the event of a spillage and will be replaced as and when required.		

13	A Weed Spraying Program is implemented at the Quarry.	Measure is already applied at Quarry	C.6 WEEDS, PESTS AND PATHOGENS
14	Sediment traps will be monitored to ensure the total capacity of the impoundment is not reduced by more than half. If accumulated sediment is excessive, the trap will be cleared out and the spoil set aside with overburden to be blended with product or used in future rehabilitation works.	Measure is already applied at Quarry	C.9 MONITORING
15	In the event of permanent closure of the facility prior to complete extraction of the resource the removal of the infrastructure will be part of the detailed Decommissioning and Rehabilitation Plan (DRP) required by Permit Conditions - Environmental No. 8931/1.	DRP submitted to EPA for approval within 60 days of scheduled permanent closure	C.10 DECOMMISSIONING AND REHABILITATION

Appendix 3: Permit Conditions – Environmental No: 11114

PERMIT PART B
PERMIT CONDITIONS - ENVIRONMENTAL No. 11114

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

Activity: **The operation of a quarry and materials handling (ACTIVITY TYPE: Crushing, grinding, milling or separating into different sizes (rocks, ores or minerals))**
INFRASTRUCTURE UPGRADE TO EAST ARM ROAD QUARRY, 2 GREENHYTHE ROAD HILLWOOD TAS 7252

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

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

Municipality: **GEORGE TOWN**
Permit Application Reference: **DA 2022/7**
EPA file reference: **22/1344**

Date conditions approved: 01 December 2022

Signed:



DELEGATE FOR THE BOARD OF THE ENVIRONMENT PROTECTION AUTHORITY

DEFINITIONS

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

ENVIRONMENTAL CONDITIONS

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

INFORMATION

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

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Attachments

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Schedule 1: Definitions

In this Permit Part B:-

50,000 cubic metres is considered equivalent to 80,000 tonnes.

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

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

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

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

DRP means Decommissioning and Rehabilitation Plan.

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

Environmental Effects Report means the document titled Environmental Effects Report for East Arm Road Quarry, Hillwood - Infrastructure Upgrade dated 23 September 2022.

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

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

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

Noise Sensitive Premises means residences and residential zones (whether occupied or not), schools, hospitals, caravan parks and similar land uses involving the presence of individual people for extended periods, except in the course of their employment or for recreation.

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

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

Stormwater means water traversing the surface of The Land as a result of rainfall.

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

The Land means the land on which the activity to which this document relates may be carried out, and includes: buildings and other structures permanently fixed to the land, any part of the land covered with water, and any water covering the land. The Land is defined as delineated on the plan at Attachment 1.

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

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

Schedule 2: Conditions

Maximum Quantities

Q1 Regulatory limits

- 1 The activity must not exceed the following limits :
 - 1.1 50,000 cubic metres per year of rocks, ores or minerals processed.
 - 1.2 50,000 cubic metres per year of rock, ores or minerals extracted.

General

G1 Access to and awareness of conditions and associated documents

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

G2 Incident response

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

G3 No changes without approval

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

G4 Change of responsibility

If the person responsible for the activity intends to cease to be responsible for the activity, that person must notify the Director in writing of the full particulars of any person who will become the person responsible for the activity, before such cessation.

G5 Change of ownership

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

G6 Complaints register

- 1 A public complaints register must be maintained. The public complaints register must, as a minimum, record the following detail in relation to each complaint received in which it is alleged that environmental harm (including an environmental nuisance) has been caused by the activity:
 - 1.1 the date and time at which the complaint was received;
 - 1.2 contact details for the complainant (where provided);
 - 1.3 the subject matter of the complaint;
 - 1.4 any investigations undertaken with regard to the complaint; and
 - 1.5 the manner in which the complaint was resolved, including any mitigation measures implemented.
- 2 Complaint records must be maintained for a period of at least 3 years.

G7 Quarry Code of Practice

Unless otherwise required by these conditions or required in writing by the Director, the activity (or activities) undertaken on The Land must comply with the Acceptable Standards provisions of the *Quarry Code of Practice*.

Atmospheric

A1 Covering of vehicles

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

A2 Control of dust emissions

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

A3 Control of dust emissions from plant

- 1 Dust produced by the operation of all crushing and screening plant must be controlled by the use of one or more of the following methods to the extent necessary to prevent environmental nuisance:
 - 1.1 the installation of fixed water sprays at all crushers and at all points where crushed material changes direction due to belt transfer;
 - 1.2 the installation of dust extraction equipment at all crushers and at all points where crushed material changes direction due to belt transfer, and the incorporation of such equipment with all vibrating screens;
 - 1.3 the enclosure of the crushing and screening plant and the treatment of atmospheric emissions by dust extraction equipment; or
 - 1.4 any other method that has been approved in writing by the Director.

Blasting

B1 Blasting times

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

B2 Notification of blasting

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

B3 Blasting - noise and vibration limits

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

B4 Blast monitoring

- 1 Unless otherwise approved in writing by the Director, blast monitoring must be undertaken for each blast that occurs on The Land.
- 2 Blast monitoring must be carried out at location(s) agreed in writing by the Director.
- 3 In the event that ground vibration and/or airblast overpressure caused by a blast exceeds a limit imposed by these conditions, the Director must be notified within seven days of the blast, or as soon as is reasonable and practicable.
- 4 Blast monitoring records must be maintained for a period of at least two years.

Decommissioning And Rehabilitation**DC1 Progressive rehabilitation**

Worked out or disused sections of The Land must be rehabilitated concurrently with extractive activities on other sections of The Land. Progressive rehabilitation must be carried out in accordance with the relevant provisions of the *Quarry Code of Practice*, unless otherwise approved in writing by the Director. The maximum disturbed area of land which may remain, at any time, without rehabilitation is 11 hectares.

DC2 Stockpiling of surface soil

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

DC3 Temporary suspension of activity

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

DC4 Notification of cessation

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

DC5 Rehabilitation on cessation

- 1 Unless otherwise approved in writing by the Director, rehabilitation upon permanent cessation of the activity must be undertaken in accordance with relevant provisions of the *Quarry Code of Practice* and in accordance with the following:
 - 1.1 rehabilitation earthworks must be substantially completed within 12 months of cessation of the activity; and
 - 1.2 rehabilitated areas must be monitored and maintained for a period of at least three years after rehabilitation works have been substantially completed, after which time the person responsible for the activity may apply in writing to the Director for a written statement that rehabilitation has been successfully completed.

DC6 DRP requirements

Unless otherwise approved in writing by the Director, a Decommissioning and Rehabilitation Plan (DRP) for the activity must be submitted for approval to the Director within 30 days of the Director being notified of the planned cessation of the activity or by a date specified in writing by the Director. The DRP must be prepared in accordance with any guidelines provided by the Director.

Flora And Fauna**FF1 Protection of the green and gold frog (*Litoria raniformis*) habitat**

Unless otherwise approved in writing by the Director, no works other than water extraction for dust suppression are to be undertaken at the dam to the southeast of the quarry, as identified in the Environmental Effects Report as having a record of the green and gold frog.

Hazardous Substances

H1 Storage and handling of hazardous materials

Unless otherwise approved in writing by the Director, environmentally hazardous material held on The Land, including chemicals, fuels and oils, must be located within impervious bunded areas or spill trays which are designed and maintained to contain at least 110% of the total volume of material.

H2 Spill kits

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

Noise Control

N1 Noise emission limits

- 1 Noise emissions from the activity when measured at any noise sensitive premises in other ownership and expressed as the equivalent continuous A-weighted sound pressure level must not exceed:
 - 1.1 50 dB(A) between 0800 hours and 1800 hours (Day time); and
 - 1.2 35 dB(A) between 1800 hours and 0800 hours (Night time).
- 2 Where the combined level of noise from the activity and the normal ambient noise exceeds the noise levels stated above, this condition will not be considered to be breached unless the noise emissions from the activity are audible and exceed the ambient noise levels by at least 5 dB(A).
- 3 The time interval over which noise levels are averaged must be 10 minutes or an alternative time interval specified in writing by the Director.
- 4 Measured noise levels must be adjusted for tonality, impulsiveness, modulation and low frequency in accordance with the Tasmanian Noise Measurement Procedures Manual.
- 5 All methods of measurement must be in accordance with the Tasmanian Noise Measurement Procedures Manual.

N2 Operating hours

- 1 Unless otherwise approved by the Director, activities associated with the extraction of rock, gravel, sand, clay or minerals, and loading of product, and screening/crushing must not be undertaken outside the hours of 0700 hours to 1900 hours on weekdays and 0800 hours to 1600 hours on Saturdays.
- 2 Notwithstanding the above paragraph, activities must not be carried out on public holidays that are observed Statewide (Easter Tuesday excepted).

Operations

OP1 Machinery washdown

Prior to entering The Land, machinery must be washed in accordance with the Weed and Disease Guidelines, or any subsequent revisions of that document.

OP2 Weed management

The Land must be kept substantially free of weeds to minimise the risk of weeds being spread through the transport of products from The Land.

OP3 Weed management

- 1 Within 3 months of the date on which these conditions take effect, or by a date otherwise specified in writing by the Director, a Weed & Disease Management Plan must be submitted to the Director for approval. This requirement will be deemed to be satisfied only when the Director indicates in writing that the submitted document adequately addresses the requirements of this condition to the Director's satisfaction.
- 2 The plan must be consistent with the Weed and Disease Guidelines, or any subsequent revisions of that document.
- 3 The person responsible must not implement the Weed Management Plan until the Director has approved the Plan. Once approved the person responsible must act in accordance with the approved Plan.
- 4 In the event that the Director, by notice in writing to the person responsible, either approves a minor variation to the approved plan or approves a new plan in substitution for the plan originally approved, the person responsible must implement and act in accordance with the varied plan or the new plan, as the case may be.

Stormwater Management**SW1 Perimeter drains or bunds**

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

SW2 Design and maintenance of settling ponds

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

SW3 Stormwater

- 1 Polluted stormwater that will be discharged from The Land must be collected and treated prior to discharge to the extent necessary to prevent serious or material environmental harm, or environmental nuisance.

- 2 Notwithstanding the above, all stormwater that is discharged from The Land must not carry pollutants such as sediment, oil and grease in quantities or concentrations that are likely to degrade the visual quality of any receiving waters outside The Land.
- 3 All reasonable measures must be implemented to ensure that solids entrained in stormwater are retained on The Land. Such measures may include appropriately sized and maintained sediment settling ponds or detention basins.

SW4 Waterway buffer

Unless otherwise specified in writing by the Director, land within 5 m of the un-named tributary (labelled 'Watercourse' on Attachment 1) must not be disturbed.

Schedule 3: Information

Legal Obligations

LO1 EMPCA

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

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

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

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

1.2 *Explosives Act 2012* and subordinate regulations; and

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

LO3 Aboriginal relics requirements

1 Aboriginal relics, objects, sites, places and human remains regardless of whether they are located on public or private land, are protected under the *Aboriginal Heritage Act 1975*.

2 Unanticipated discoveries of Aboriginal heritage must be reported to Aboriginal Heritage Tasmania on **1300 487 045** as soon as possible.

Other Information

OI1 Waste management hierarchy

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

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

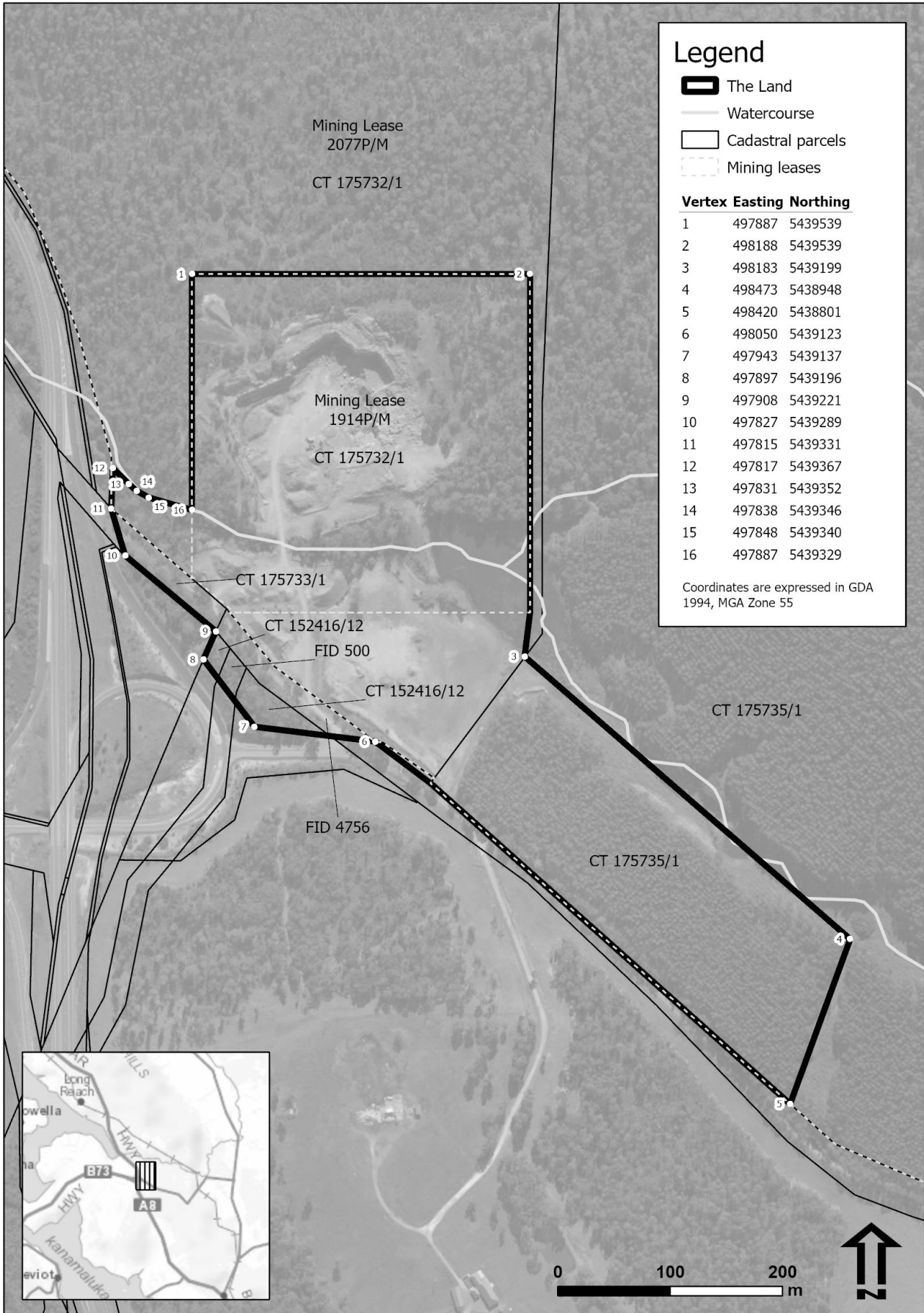
1.2 waste should be re-used or recycled to the maximum extent that is practicable; and

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

OI2 Notification of incidents under section 32 of EMPCA

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

Attachment 1: The Land





ENVIRONMENT PROTECTION AUTHORITY