# Plan of Operations

**1 July 2018 to 30 June 2023**

## Taragoola Limestone Project

**Mining Leases: ML3594, ML3595, ML3596, ML3597, ML3598, ML3599, ML3600, ML3602, ML3603, ML3604, ML3605, ML3606, ML3608, ML3609, ML80036, ML80189, ML80190, ML80191, ML80192**

## Environmental Authority – EPML00969013

## Frost Enterprises Pty Ltd

**ABN 90 000 111 884**

## Operated by Sibelco Australia Limited

**ABN 20 000 971 844**

**PO Box 74, Rosewater East, SA 5013**

**Telephone 08) 8240 8200  Facsimile 08) 8341 1010**

# PROJECT SUMMARY

| | |
|---|---|
| **Project Name:** | Taragoola Limestone Project |
| **Location Description:** | 12kms South of Calliope Township, Queensland |
| **GPS Location:** | 321189E, 7333803N |
| **Project Controller:** | Mr Simon Havis |
| **Site Contact Details:** | Sibelco Calliope<br>MS 24 Taragoola Road<br>Calliope QLD 4680<br>Ph: 07 4975 4100 |
| **Mining Lease and Expiry Dates:** | Refer to Table 1 below |
| **EA Number:** | EPML00969013 |
| **Tenure Holder Details:** | Frost Enterprises Pty Ltd<br>PO Box 74<br>Rosewater East SA 5013<br>Ph: (08) 8240 8200<br>Fax: (08) 8341 0305 |
| **Notifiable Activities:** | (29) Petroleum product or oil storage – storing petroleum products or oil (b) in above ground tanks with (iii) for petroleum products that are combustible liquids in class C1 or C2 in Australian Standard AS 1940, 'The storage and handling of flammable and combustible liquids' published by Standards Australia – more than 25,000L capacity. |
| **Mining Activities:** | Limestone mining and extraction to produce a range of agricultural and industrial limestone products for sale.<br>Waste rock removal and mine site rehabilitation. |

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|---|---|
| **TERM OF PLAN OF OPERATIONS:** | **5 Years** |
| **COMMENCEMENT DATE:** | **1 July 2018** |
| **EXPIRY DATE:** | **30 June 2023** |
| **DETAILS:** | This Plan of Operations covers Environmental Authority number EPML00969013 held by Frost Enterprises Pty Ltd, operated by Sibelco Australia Limited. The Taragoola operation has an expected life of mine of approximately 60 years. |

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# 1 INTRODUCTION

Frost Enterprises Pty Ltd owns the Taragoola Limestone Project, which is located south of the township of Calliope in Central Queensland. Frost Enterprises Pty Ltd is wholly owned by Sibelco Australia Limited (SAL) who operates the Project today.

The Project has approval under Environmental Authority (EA) EPML00969013 which covers the following Mining Leases (ML): ML3594, ML3595, ML3596, ML3597, ML3598, ML3599, ML3600, ML3602, ML3603, ML3604, ML3605, ML3606, ML3608, ML3609, ML80036, ML80189, ML80190, ML80191, ML80192.

The Project also has approval under EA EPPR00881913 for the following Environmentally Relevant Activities:

- ERA 8 (3a) - Chemical storage >10m3 but <500m3 class C1 or C2 combustible liquids
- ERA 16 (2d) – Extracting in a year >1,000,000t of material
- ERA 16 (3c) – Screening in a year >1,000,000t of material
- ERA 50 (2) - Bulk material handling >100t day

This replacement Plan of Operations describes the activities to be undertaken in accordance with EPML00969013 requirements, for the five-year planning period 1 July 2018 to 30 June 2023.

## 1.1 BACKGROUND

Significant exploration of the Taragoola limestone deposits was conducted in the early 1960's followed by application for and grant of a number of mining leases to both Frost Enterprises and Comalco. In 1967, Frost commenced mining operations on Comalco held ML3594, as well as mining and quarrying operations on its own lease ML3603.

In September 2004 Unimin Australia Limited (Unimin) purchased Frost Enterprises Pty Limited who owned and operated Taragoola Limestone Project. Unimin later purchased the adjacent Comalco mining leases on the 30th of December 2005. Unimin Australia Limited and Frost Enterprises Pty Ltd are wholly owned subsidiaries of Sibelco Australia Limited who operates the project today.

## 1.2 LOCATION AND TENURE

The Taragoola Limestone Project is located approximately 11 kilometres (km) south of the township of Calliope and 28km south of Gladstone in Central Queensland (Figure 1).

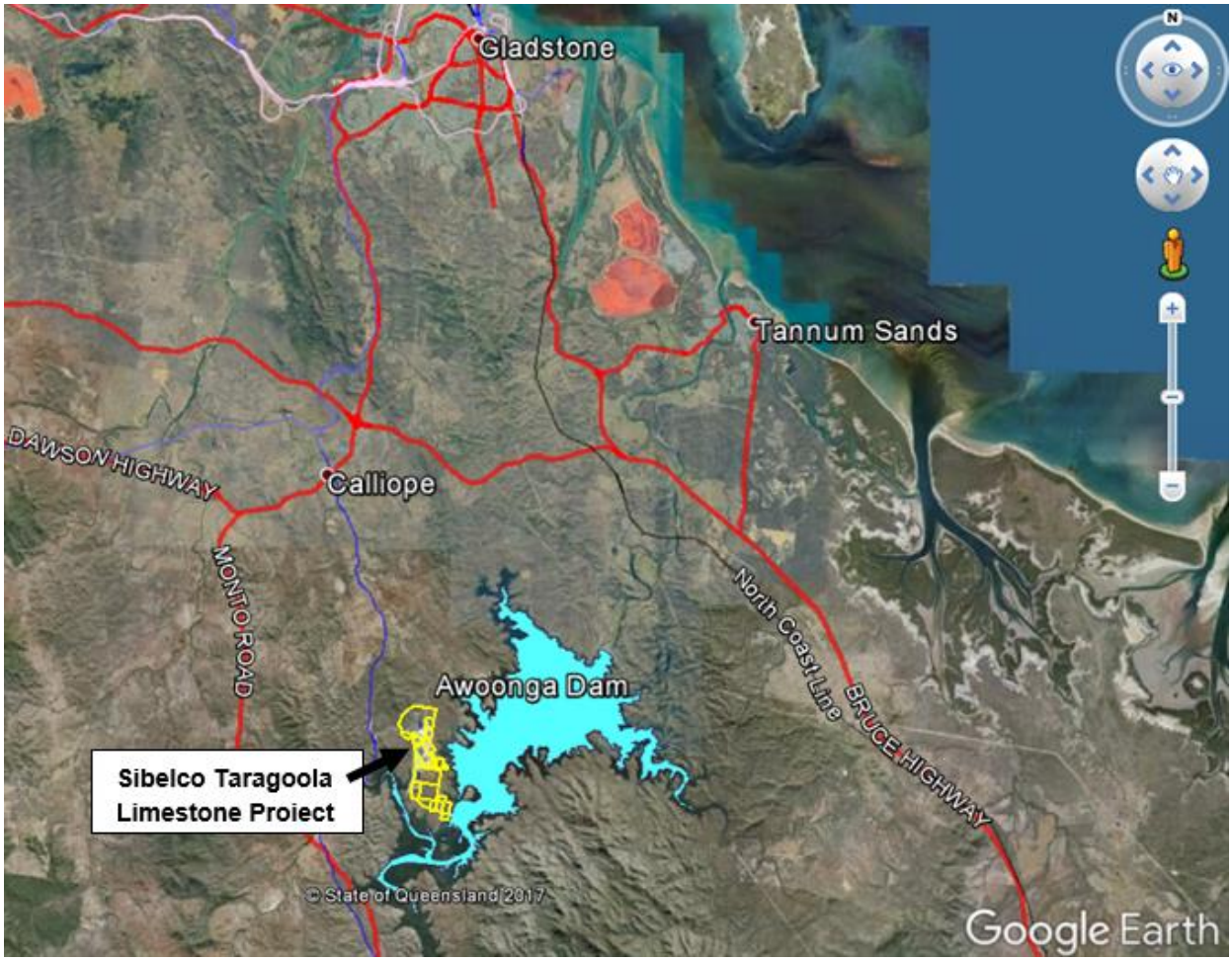


**Figure 1: Locality Map of Sibelco Taragoola Limestone Project**

Table 1 details the Mining Tenements and Lot and Plan summaries for the Taragoola Limestone Project which can also be visualised in the maps provided in Appendix 1A and 1B. The Project covers a mining lease area of approximately 425 hectares within the catchments of the Awoonga Dam that is owned and operated by the Gladstone Area Water Board. The majority of the project area is comprised of freehold land currently owned by Unimin and the Gladstone Area Water Board.

**Table 1: Mining Tenement and Lot on Plan Summaries for EA EPML00969013**

| Mining Lease | Land Description | ML Area (ha) | ML Holder | ML Expiry Date | Authorised Holder Name |
|---|---|---|---|---|---|
| ML 3594 | Lot7_PlanSP215269<br>Lot26_PlanSP228426<br>Lot90_PlanSP275218<br>LotG_PlanSP199253 | 32.37 | Frost Enterprises Pty Ltd | 28/02/2041 | Frost Enterprises Pty Ltd |
| ML 3595 | Lot7_PlanSP215269<br>Lot26_PlanSP228426<br>Lot90_PlanSP275218<br>LotG_PlanSP199253 | 13.49 | | 28/02/2041 | |
| ML 3596 | Lot7_PlanSP215269<br>Lot90_PlanSP275218<br>LotG_PlanSP199253 | 9.1 | | 28/02/2041 | |
| ML 3597 | Lot90_PlanSP275218 | 2.83 | | 31/12/2041 | |
| ML 3598 | Lot90_PlanSP275218 | 12.448 | | 31/12/2041 | |
| ML 3599 | Lot90_PlanSP275218 | 6.798 | | 31/12/2041 | |
| ML 3600 | Lot22_PlanSP215268<br>Lot90_PlanSP275218 | 8.093 | | 28/02/2041 | |
| ML 3602 | Lot7_PlanSP215269 | 10.23 | | 31/03/2027 | |
| ML 3603 | Lot7_PlanSP215269<br>Lot26_PlanSP228426<br>Lot90_PlanSP275218 | 8.34 | | 31/03/2027 | |
| ML 3604 | Lot7_PlanSP215269<br>Lot26_PlanSP228426<br>LotG_PlanSP199253 | 4.85 | | 29/02/2028 | |
| ML 3605 | Lot90_PlanSP275218 | 9.45 | | 31/07/2028 | |
| ML 3606 | Lot90_PlanSP275218 | 5.61 | | 31/07/2028 | |
| ML 3608 | Lot22_PlanSP215268<br>Lot26_PlanSP228426<br>Lot90_PlanSP275218<br>LotE_PlanSP215268 | 57.14 | | 31/10/2030 | |
| ML 3609 | Lot22_PlanSP215268<br>Lot90_PlanSP275218<br>LotE_PlanSP215268 | 42.99 | | 31/10/2030 | |
| ML 80036 | Lot7_PlanSP215269<br>Lot26_PlanSP228426<br>Lot90_PlanSP275218<br>Lot100_PlanCTN1823<br>LotG_PlanSP199253 | 18.73 | | 30/06/2022 | |
| ML 80189 | Lot22_PlanSP215268<br>Lot90_PlanSP275218<br>LotE_PlanSP215268 | 36.05 | | 31/05/2043 | |
| ML 80190 | Lot7_PlanSP215269<br>Lot26_PlanSP228426<br>Lot90_PlanSP275218<br>LotG_PlanSP199253 | 22.5 | | 31/05/2043 | |
| ML 80191 | Lot26_PlanSP228426 | 1.6 | | 31/05/2043 | |
| ML 80192 | Lot1_PlanRP610128<br>Lot3_PlanRP610128<br>Lot4_PlanRP610128<br>Lot7_PlanSP215269<br>Lot26_PlanSP228426<br>Lot90_PlanSP275218<br>Lot100_PlanCTN1823<br>LotA_PlanSP231548<br>LotB_PlanSP231548<br>LotC_PlanSP231548<br>LotD_PlanSP231548<br>LotG_PlanSP199253 | 121.5 | | 31/05/2043 | |

## 1.3 PLAN OF OPERATIONS REGULATORY REQUIREMENTS

In accordance with Section 288 of the *Environmental Protection Act 1994* (EP Act) (current as at 1 January 2018), this replacement Plan of Operations (the Plan) describes how SAL will comply with the conditions of EA EPML00969013 (covering the Mining Leases described in Table 1 above).

The content and form of this replacement Plan is as prescribed by Section 288 of the EP Act and includes:

- The period to which the replacement Plan applies (Section 2);
- Project description including each relevant ML for the EA and associated activities and their locations (Sections 2 and 3);
- Action program for complying with the conditions of the EA (Section 4);
- Rehabilitation program for land disturbed or proposed to be disturbed (Section 5); and
- Financial Assurance (Section 5).

In accordance with Section 288(3) of the EP Act, an environmental compliance statement for the replacement Plan is also included (Section 6) which addresses:

- the extent to which the plan complies with the conditions of the EA; and
- whether the amount of the Financial Assurance for the EA has been calculated in accordance with the guideline under Section 295(3)(b).

## 1.4 REPORT STRUCTURE

This replacement Plan is structured as follows:

Section 1 Provides a summary of ownership, locality, tenure and regulatory requirements for this replacement Plan of Operations.

Section 2 Describes the term and coverage of this Plan including; each relevant mining lease for the EA and the MLs to which this Plan applies.

Section 3 Provides an overview of the typical mining methods used at the Taragoola Limestone Project and detailed descriptions of the areas where mining activities are scheduled to occur over the period covered by this Plan.

Section 4 Explains how the conditions of the EA will be complied with and how the control strategies will be implemented. The structure of the action program follows the sequence of the schedules and conditions in the EA.

Section 5 Discusses the schedule of rehabilitation including all types and areas of land to be disturbed and rehabilitated during the period covered by this Plan, and an estimate to decommission all infrastructure and rehabilitate all lands scheduled to be disturbed during the period covered by this Plan. The estimate has been calculated using the Financial Assurance calculator developed by the Administering Authority. The performance category for the operation is also discussed.

Section 6 Presents the environmental compliance statement for this Plan.

# 2 TERM AND COVERAGE OF THIS PLAN OF OPERATIONS

## 2.1 PERIOD OF THIS PLAN

This replacement Plan of Operations covers a five-year planning period from 1 July 2018 to 30 June 2023.

## 2.2 COVERAGE OF THIS PLAN

This replacement Plan relates to all activities to be conducted by SAL on the leases described in Table 1 above and as relevant to EA EPML00969013. The Plan specifically addresses the scheduled mine-related activities on the following mining leases:

**ML3594** There will be mining of limestone from ML3594 during the period of this Plan. Part of this lease contains roads and a stockpile area.

**ML3595** ML3595 is used for stockpiling, truck park-up area and it also includes the ramp in to Pit 4 which is the main mining area. A portion of this lease will be rehabilitated during the Plan of Operations period.

**ML3596** No mining activity or new disturbance is planned for ML3596, during this Plan of Operations period. There is currently no disturbance on this lease.

**ML3597** No mining activity or new disturbance is planned for ML3597, during this Plan of Operations period. There is currently no disturbance on this lease.

**ML3598** No mining activity or new disturbance is planned for ML3598, during this Plan of Operations period. There is currently no disturbance on this lease.

**ML3599** No mining activity or new disturbance is planned for ML3599, during this Plan of Operations period. There is currently no disturbance on this lease.

**ML3600** No mining activity or new disturbance is planned for ML3599, during this Plan of Operations period. There is currently no disturbance on this lease.

**ML3602** ML3602 is used for a truck park-up area for trucks entering site and for stockpiling final product.

**ML3603** ML3603 contains the workshop, office areas and stockpiling for final product.

**ML3604** There will be mining of limestone from ML3604 during the period of this Plan of Operations.

**ML3605** No mining activity or new disturbance is planned for ML3605, during this Plan of Operations period. There is currently no disturbance on this lease.

**ML3606** No mining activity or new disturbance is planned for ML3606, during this Plan of Operations period. There is currently no disturbance on this lease.

**ML3608** ML3608 contains Pit 3 that had been mined previously. There are also tracks used for inspecting the land. An area of approximately 0.41ha will be cleared in 2022-2023 to extend Pit 4 to the south where limestone mining will also occur. As the wall will be a final batter it will be blasted to the final batter angle.

**ML3609** No mining activity or new disturbance is planned for ML3609, during this Plan of Operations period. There is currently no disturbance on this lease apart from tracks that are used for inspecting the land.

**ML80036** This lease is used as a waste dump, low-grade stockpile and redundant equipment area.

**ML80189** ML80189 contains the stockpiles where the overburden removed during the period of this Plan of Operations will be placed.

**ML80190** Overburden will be removed from ML80190 and limestone will be mined from this lease during the period of this Plan of Operation. An area of approximately 0.26ha will be cleared in 2022-2023 to extend Pit 4 to the south. As the wall will be a final batter it will be blasted to the final batter angle.

**ML80191** ML80191 contains part of a main haul road and a spoil pile. There will be no mining from this lease during the period of this Plan of Operation.

**ML80192** ML80192 contains the main office, weighbridge, ROM stockpile, access roads, crushing and screening plant, wash plant and main stockpile area for final product. It also contains a redundant limestone pit which is used as a water storage and for operational water use in the wash plant as required. The lease also contains a silt pond and spoil areas.

### 2.3 NOTIFIABLE ACTIVITIES

Activities as prescribed by Schedule 3 of the Environment Protection Act 1994 as notifiable activities are as follows:

- (29) Petroleum product or oil storage – storing petroleum products or oil (b) in above ground tanks with (iii) for petroleum products that are combustible liquids in class C1 or C2 in Australian Standard AS 1940, ‘The storage and handling of flammable and combustible liquids’ published by Standards Australia – more than 25,000L capacity.

The above activities are located on ML3603.

# 3 PROJECT DESCRIPTION

### 3.1 OVERVIEW OF MINING METHODS

Approximately 0.8 million tonnes of limestone products are planned to be transported by road and rail annually from the Taragoola Limestone Project during the five (5) year term of this Plan. Limestone mining will occur from Pit 4 and in the direction of Pit 3 as detailed in Section 3.3 below. Mining will consist of conventional open cut benching methods currently being performed by SAL.

Mining activities include topsoil stripping and removal of clay rich overburden and waste rock followed by extraction of limestone ore of appropriate grade and chemical properties suitable for quicklime, hydrate production and other end uses. Suitable limestone ore is then crushed, screened and washed on site before being transported to customers off site for further downstream processing. Extractive activities are also conducted on site where limestone of different grades and suitable physical properties follow a similar process to mining for the production of road base and aggregates etc. Extractive activities are authorised and conducted under ERA 16(2)(d) and EA EPPR00881913 (original permit # SPCE04023712 issued under the *Sustainable Planning Act 2009*).

During the term of this Plan, an estimated 142,000 tonnes of overburden and waste rock will be shifted annually. A large proportion of this material will be used as process feed for road base production. Material unsuitable for road base will be placed in a stockpile to the south of Pit 3.

After drilling and blasting, the limestone, overburden and or waste material is loaded by a 120-tonne excavator serviced by two 100-tonne and one 85-tonne off road dump trucks. Material is hauled either to the ROM pad for crushing, or to the stockpiles for screening or placement in the designated spoil dumps. There is a second 75 tonne excavator on site which is utilised as a backup for the open cut operations.

## 3.2 ACTIVITIES COVERED BY THIS PLAN OF OPERATIONS

This section describes the mining operations and supporting activities projected to occur during this Plan of Operations period.

Upon any significant change to activities described in this Plan, an amendment or replacement plan will be submitted at least 20 business days prior to the intended commencement of those activities. A significant change is deemed as:

- Any new activity or waste stream associated with a high or medium inherent environmental risk; or
- Any change or cumulative changes that results in an increase in financial assurance of 10% above the amount described for this Plan of Operations.

The activities to be conducted during the period of this Plan are described below in Table 2:

**Table 2: Activities covered by this Plan of Operations**

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|---|---|
| Vegetation clearing: | Prior to drill and blast the vegetation consisting predominantly of pasture grasses, along with approximately 0.25m topsoil is cleared from above the Limestone ore body and placed in stockpiles and stored for future use in site rehabilitation. Vegetation clearing is anticipated to take place on ML3608 and ML80190 (south-end of Pit 4) during this Plan of Operations period. |
| Topsoil stripping, use and stockpiling | Topsoil is stripped ahead of mining and is generally used to create safety bunds on the pit edge. Topsoil is also stored in stockpiles shown in Appendix 2. Stockpiles are built less than 2 metres in height and are seeded if they are to be stored for a long period. Topsoil stripping is anticipated to take place on ML3608 and ML80190 (south-end of Pit 4) during this Plan of Operations period. |

| | |
|---|---|
| | Areas requiring topsoil at the end of the operation's life include the stockpile areas, infrastructure areas and spoil dumps. The total estimate tonnage required is around 50,000bcm.<br><br>It should be noted there are a number of spoil dumps on site which contain a high proportion of clay and soil. It is anticipated that these dumps can be processed to recover enough material to cover the required areas. The recovered material is considered to be a good growing medium with regrowth already established on a number of areas. |
| Blasting | Blasting activities will be confined to ML3594, ML3604, ML3608 and ML80190 only. |
| Active pit / Mining: | Limestone will be mined from ML3594, ML3604, ML3608 and ML80190 during the period of this Plan of Operations. |
| Water supply: | Water will continue to be sourced from the on-site sediment and storage dams. |
| Overburden Placement: | The current waste dump on ML80189 will continue to be used for waste placement.<br><br>Some areas outside the mining leases on ML3608, ML80189 and ML80190 have been disturbed by placement of mining spoil (overburden and waste rock). These materials have been used for the construction of barriers to prevent surface water inundation of the mine workings due to the recent and possible future raising of the Awoonga Dam wall. These material placements were conducted under the direction of the Gladstone Area Water Board (GAWB). Future material placement to prevent inundation by the Awoonga Dam will continue to be conducted in collaboration with the GAWB. |
| Road construction / maintenance: | Roads and tracks will be required for mine haulage, general access and land maintenance access. Mine development on ML3594, ML3604 and ML80190 will involve lateral expansion (principally to the west) and deepening of the open cut. During the five-year term of the plan, the principal emphasis will be maintenance of safe stable batters on cut and fill embankments (including spoil heaps) and ensuring that any parts of the void wall which approach terminal configuration will meet design slope criteria for rehabilitation in accordance with EA requirements. |
| Rehabilitation: | Due to the current disturbance footprint and continued expansion of the working mine pits, there is limited availability to complete significant areas of rehabilitation during the term of this Plan. However, 1.45ha has been scheduled for completion on ML3595 and ML80190 during Years 1 and 2 of this Plan of Operations period.<br><br>Should further areas of disturbed land become available and deemed suitable, additional rehabilitation will occur. |

| | |
|---|---|
| Workshop and storage: | The current workshop and storage area on ML3603 will continue to service the project over the duration of the Plan. |
| Fuel storage: | The operation has an 88,000L self-bunded diesel transtank and a flammable and combustible liquid storage area on ML3603 which will continue to service the operation. A humeceptor is in place to capture potential contaminants that may be spilled within these areas. |
| Power supply: | The current 1000 kVA is transformed down to a 415-voltage line and will continue to service the project. There is also a mobile lighting tower that is used on an as required basis to light the operation. |
| Administration: | The current administration building will continue to service the project on ML80192. |
| Product storage: | The current product storage areas will continue to service the project on ML3602, ML3603 and ML80192. |
| Hardstand areas: | The current hardstand areas will continue to service the project. |

### 3.3 FIVE YEAR MINE PLAN

The anticipated extent of the open cut mining, pit development and rehabilitation over the next five years are shown in the annual plans detailed in Appendix 3 to 7. Appendix 2A provides an overview of disturbance and rehabilitation as at the end of current Plan of Operations period June 2018 (Year 0).

Below is an annual summary of development and mining during the five-year term of this Plan.

**Year 1 (2018/19) Appendix 2B and Appendix 3**

- Mining will be mainly from the south-west corner of Pit 4 from the 1040-1028, 1028-1016, 1016-1004 benches. Some limestone from 1004-992 benches at the base of ramp 4 will also be mined.
- Overburden will be stripped from an area on the western side of Pit 4.
- Waste from pit development will go to the waste stockpile to the south of Pit 3.
- An area of 1.45ha on the eastern side of Pit 4 will be topsoiled in Year 1. This area is on ML3595 and ML80190.

**Year 2 (2019/20) Appendix 2C and Appendix 4**

- Overburden removal continues on the western side of Pit 4.
- Overburden will be placed in the waste stockpile to the south of Pit 3.
- Limestone will be mined from the southern end of Pit 4 from the 1040-1028, 1028-1016, 1016-1004 and 1004-992 benches.
- An area of 1.45ha on the eastern side of Pit 4 will be seeded during Year 2. This area is on ML3595 and ML80190.

**Year 3 (2020/21) Appendix 2D and Appendix 5**

- Overburden removal continues on the western side of Pit 4.
- Overburden is placed in the waste stockpile to the south of Pit 3.

- Limestone is mined from the southern end of Pit 4 from the 1040-1028, 1028-1016, 1016-1004 and 1004-992 benches.
- The rehabilitation on the eastern side of Pit 4 will be monitored.

**Year 4 (2021/22) Appendix 2E and Appendix 6**

- Overburden removal is from the western side of Pit 4.
- Overburden is placed in the waste stockpile to the south of Pit 3.
- Limestone is mined from the western side of Pit 4 from the 1040-1028, 1028-1016, and 1016-1004 benches.
- The rehabilitation on the eastern side of Pit 4 will continue to be monitored.

**Year 5 (2022/23) Appendix 2F and Appendix 7**

- Vegetation will be cleared from the southern end of Pit 4 with the topsoil stripped and stockpiled and overburden removed for limestone mining. The batter on the overburden bench will be blasted and dug to leave a rehabilitated batter.
- Overburden is placed in the waste stockpile to the south of Pit 3.
- Limestone is mined from the western side of Pit 4 from the 1040-1028, 1028-1016, and 1004-992 benches.
- The rehabilitation on the eastern side of Pit 4 will continue to be monitored.

# 4 ACTION PROGRAM

This section describes the action program for complying with the conditions of EA EPML00969013. For each EA Schedule, the conditions, control strategies and action program details are listed sequentially, as recommended by the Department's Guidelines: *Version 1: Preparing a Plan of Operations and Audit Statement for Level 1 mining projects* and the Guideline for *Financial Assurance under the Environmental Protection Act 1994, Version 3.* All Environmental Authority (EA) EPML00969013 Tables are presented in **Appendix 8**.

**Table 3: Environment Authority EPML00969013 Action Program**

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| **Department Interest – General** | | | |
| (A1) | **Financial assurance**<br>Provide financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.<br><br>*The calculation of financial assurance for condition A1 must be in accordance with the administering authority's Guideline – Financial Assurance for Mining Activities, and may include a performance discount. The amount is defined as the maximum total rehabilitation cost for complete rehabilitation of all disturbed areas, which may vary on an annual basis due to progressive rehabilitation. The amount required for the financial assurance must be the highest total rehabilitation cost calculated for any year of the Plan of Operations and calculated using the formula: (Financial Assurance = Highest total annual rehabilitation cost x Percentage required).* | Financial assurance has been provided in the form of a Bank Guarantee as defined by previous Plan of Operations. | Financial assurance will remain in place until the administering authority is satisfied that no claim is required. |
| (A2) | The financial assurance is to remain in force until the administering authority is satisfied that no claim on the assurance is likely. | Financial assurance will remain in place until the administering authority is satisfied that no claim is likely. | The financial assurance will remain in place throughout the term of this Plan and will not be cancelled unless authority to do so is provided in writing from the administering authority. |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| | Note: *Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority.* | Where progressive rehabilitation is completed and acceptable to the administering authority, progressive reductions to the amount of financial assurance will be applicable where rehabilitation has been completed in accordance with the acceptance criteria defined within this environmental authority. | |
| (A3) | In carrying out the environmentally relevant activities, the holder of this environmental authority must take all reasonable and practicable measures to prevent and/or minimise the likelihood of environmental harm being caused. Any environmentally relevant activity, that if carried out incompetently, or negligently, may cause environmental harm, in a manner that could have been prevented, shall be carried out in a proper manner in accordance with this authority.<br><br>*Note: This authority authorises the environmentally relevant activity, it does not authorise environmental harm unless a condition contained within this authority explicitly authorises that harm. Where there is no condition or the authority is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.* | Operations to be conducted in accordance with the EA, Plan of Operations and other relevant legislation. | Definitions of environmental harm and other matters in the Environment Protection Act 1994 will be considered in the operation of the mining activities. |
| (A4) | **Maintenance of measures, plant and equipment**<br>The environmental authority holder must ensure:<br>a) that all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority are installed;<br>b) that such measures, plant and equipment are maintained in a proper condition; and | Measures, plant and equipment will be installed and maintained as required to ensure compliance with the conditions of the EA. | Plant and equipment will be maintained and operated in accordance with the manufacturers' specifications during the term of this Plan of Operations. |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| | c) that such measures, plant and equipment are operated in a proper manner. | | In addition, the maintenance and operation of plant and equipment will comply with SAL's corporate and site-specific policies.<br>Records of plant and equipment maintenance will be documented along with other equipment related to site activities. |
| (A5) | **Monitoring and records**<br>Record, compile and keep for a minimum of five years all monitoring results required by this environmental authority and make available for inspection all or any of these records upon request by the administering authority. | Records of all relevant monitoring results will be kept for a minimum period of 5 years. | All monitoring results will be catalogued and will be maintained. Records will be kept for a minimum period of 5 years and made available to the administering authority upon request. |
| (A6) | Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring. | Monitoring will be conducted by competent persons. | All persons conducting environmental monitoring shall be trained in appropriate environmental sampling and monitoring techniques and will understand the monitoring standards and requirements. |
| (A7) | **Storage and handling of flammable and combustible liquids**<br>Spillage of all flammable and combustible liquids must be contained within an on-site containment system and controlled in a manner that prevents environmental harm (other than trivial harm) and maintained in accordance with the current version of AS 1940 - Storage and Handling of Flammable and Combustible Liquids. | Spillage prevention and handling of flammable and combustible liquids will be accordance with AS 1940. | The operation has an 88,000L self-bunded diesel transtank and a flammable and combustible liquid storage area on ML3603. A humeceptor is in place to capture potential contaminants that may be spilled within these areas.<br><br>Stocked spill kits shall be provided and operational site personnel will be trained in their use. |
| (A8) | Spillage of all chemicals must be contained within an on-site containment system and controlled in a manner that prevents environmental harm. | Chemicals must be contained in a containment area on site. | Site to ensure that all chemicals are contained within a contained area as prescribed by AS 1940. |
| (A9) | **Notification of emergencies, incidents and exceptions**<br>All reasonable actions to be taken to minimise environmental harm, or potential environmental | Operations to be conducted in accordance with the EA, Plan of Operations and other relevant legislation. | SAL has implemented company-wide procedures which include incident notification and response |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| | harm, resulting from any emergency, incident, or circumstances not in accordance with the conditions of this environmental authority. | | actions under *CWP 10.202 EHS Incident Notification & Investigation.*<br>The site maintains a compliance register which includes the requirement to notify the administering authority within 24 hours of a relevant incident. |
| (A10) | As soon as practicable after becoming aware of any emergency, incident or information about circumstances which results or may result in environmental harm not in accordance with the conditions of this environmental authority, the administering authority must be notified by telephone or email. | Notify administering authority of any release of contaminants not in accordance with the conditions of this EA. | Persons on site are trained to identify and advise the appropriate supervisors and or environmental department of any release of contaminant not in accordance with the conditions of this EA.<br><br>Supervisors and environmental advisor to advise administering authority if release is not in accordance with conditions of EA. |
| (A11) | Not more than fourteen days following the initial notification of an emergency or incident, written advice must be provided of the information supplied in accordance with condition A8 in relation to:<br>a) proposed actions to prevent a recurrence of the emergency or incident;<br>b) outcomes of actions taken at the time to prevent or minimise environmental harm;<br>c) proposed actions to respond to the information about circumstances which result or may result in environmental harm. | Relevant personnel to be aware of responsibility to notify the administering authority within 14 days. | Relevant personnel to notify the administering authority within 14 days of an emergency or incident. |
| (A12) | As soon as practicable, but not more than six weeks following the initial notification of an emergency, incident or information about circumstances which results or may result in environmental harm, environmental monitoring must be performed and written advice must be provided of the results of any such monitoring performed to the administering authority. | Relevant personnel to be aware of responsibility to notify the administering authority within the appropriate timeframe of the results of any monitoring undertaken as a result of an emergency or incident. | Relevant person to notify the administering authority within the appropriate timeframe of the results of any monitoring undertaken as a result of an emergency or incident. |

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| (A13) | **Definitions**<br>Words and phrases used throughout this environmental authority are defined in the Definitions section of this authority. Where a definition for a term used in this environmental authority is sought and the term is not defined within this environmental authority, the definitions in the *Environmental Protection Act 1994,* its regulations and policies must be used. | Definitions section of the EA to be consulted where required. | Definitions section of the EA to be consulted where required. |
| **Department Interest – Air** | | | |
| (B1) | **Dust nuisance**<br>Subject to conditions B2 and B3 the release of dust or particulate matter or both resulting from the mining activity must not cause an environmental nuisance, at any sensitive or commercial place. | To minimise the release of dust and particulate matter from mining activities the following abatement measures will be implemented:<br>• Unsealed roadways will be watered on an as required basis via the use of water truck/s, fixed water spray systems and or irrigation sprinklers<br>• Removal of topsoil shall only be undertaken as required to clear the immediate mine path. This will also minimise the area exposed at any one time<br>• Topsoil stockpiles will be seeded to maintain soil quality and minimise dust<br>• Avoidance of activities which produce dust during windy conditions. | A dust management program will be maintained during the term of the Plan of Operations to ensure that the mining activities do not cause environmental nuisance. Dust sampling when undertaken will be conducted in accordance with AS 3580 – method for sampling and analysis of ambient air – Determination of particulates – Deposited matter – Gravimetric method of 1991. |
| (B2) | When requested by the administering authority, dust and particulate monitoring must be undertaken within | When requested by the administering authority, dust and particulate monitoring is to be undertaken within a | Monitor the point located closest to the location of the complaint. Current dust sampling is to be conducted in accordance with AS 3580 – method |

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| | a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring. | reasonable and practicable timeframe as nominated by the administering authority to investigate any complaint. The results are to be provided to the administering authority within 14 days. | for sampling and analysis of ambient air – Determination of particulates – Deposited matter – Gravimetric method of.<br><br>The dust management program will be maintained and regularly reviewed during the term of the Plan of Operations to ensure that the mining activities do not cause an environmental nuisance. |
| (B3) | If the environmental authority holder can provide evidence through monitoring that the following limits are not being exceeded then the holder is not in breach of B1:<br>a) dust deposition of 120 milligrams per square metre per day, averaged over one month, when monitored in accordance with *AS 3580.10.1 Methods for sampling and analysis of ambient air -Determination of particulates - Deposited matter - Gravimetric method*; or<br>b) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM10) suspended in the atmosphere of 50 micrograms per cubic metre over a 24 hour averaging time, at a sensitive or commercial place downwind of the operational land, when monitored in accordance with;<br>i. particulate matter - Determination of suspended particulate PM10 high-volume sampler with size-selective inlet - Gravimetric method, when monitored in accordance with *AS 3580.9.6 Methods for sampling and analysis of ambient air - Determination of suspended particulate matter - PM (sub) 10 high volume sampler with size-selective inlet - Gravimetric method*; and | In relation to any complaint that is neither frivolous nor vexatious, as requested by the administering authority the site will seek to provide evidence that the limits in B3 (a) and (b) have not been exceeded.<br><br>When requested by the administering authority the site will monitor dust and particulate matter within a reasonable and practicable timeframe to investigate any complaint that is neither frivolous nor vexatious. | Should Condition B2 be triggered the site will seek to provide evidence that the limits in B3 (a) and (b) have not been exceeded. After monitoring the results will be provided to the administering authority within 14 days. |

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| | ii. any alternative method of sampling PM10, which may be permitted by the *Air Quality Sampling Manual* as published from time to time by the administering authority. | | |
| (B4) | If monitoring indicates exceedence of the relevant limits in condition B3, then the environmental authority holder must:<br>a) address the complaint including the use of appropriate dispute resolution if required; and<br>b) immediately implement dust abatement measures so that emissions of dust from the activity do not result in further environmental nuisance. | Should any monitoring indicate exceedance of the limits defined in Condition B3, the operation will address the complaint utilising appropriate dispute resolution techniques where required.<br><br>Dust abatement measures are to be employed to prevent further environmental nuisance and reduce or limit the emissions of dust from the activity. | Dust abatement measures have been implemented on site as detailed in the control strategies outlined in Condition B1 above.<br>Any complaints arising from dust will be handled promptly and in accord with the Sibelco Incident Cause Analysis Method (ICAM).<br><br>Additional dust abatement measures and control strategies will be implemented as required to prevent further environmental nuisance. |
| **Department Interest – Water** | | | |
| (C1) | **Contaminant release**<br>Contaminants that will, or have the potential to cause environmental harm must not be released directly or indirectly to any waters except as permitted under the conditions of this environmental authority. | • Control mobilisation of contaminants by diversion channels, sediment dams and water quality monitoring.<br>• Land disturbance to be restricted to that which is essential for mining purposes.<br>• Rehabilitate/revegetate disturbed land wherever available to minimise erosion and sediment transport<br>• Construct and maintain undisturbed catchment diversion drains as necessary ahead of advancing mining operations.<br>• Implement appropriate erosion prevention/controls to minimise | • Regular inspection and implementation of control measures as necessary including erosion and drainage maintenance.<br>• Desilt settling pond and implement improvements as necessary.<br>• Monitor sediment accumulation in settling ponds/sediment traps and implement regular cleanout and sediment disposal actions.<br>• Flammable and combustible liquids contained in bunded areas. |

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| | | sediment transportation by surface runoff.<br>• Implement and maintain an effective settling pond system, operating in closed circuit to the extent practicable, to accept water from processing plant operations<br>• Appropriate bunding of fuel storage and hydrocarbon areas. | |
| (C2) | The release of contaminants to waters must only occur from the release points specified in Table 1 and depicted in Figure 1 attached to this environmental authority. | Release of contaminants only to occur from release points in Table 1 (Figure 1 of the EA). | Ensure person collecting samples is trained and competent to do so and is familiar with the release points in Table 1. |
| (C3) | The release of contaminants to waters must not exceed the release limits stated in Table 2 when measured at the monitoring points specified in Table 1 for each quality characteristic. | Release of contaminants not to exceed the release limits stated in Table 2. Monitoring must occur during discharge of water from release point. | • Ensure person collecting samples is trained and competent to do so and is familiar with the release limits in Table 2.<br>• Keep a record of all monitoring results on site for 5 years.<br>• Ensure that all equipment is calibrated within manufacturer's specifications. |
| (C4) | **Water general**<br>All determinations of water quality must be:<br>a) performed by a person or body possessing appropriate experience and qualifications to perform the required measurements;<br>b) made in accordance with methods prescribed in the latest edition of the administering authority's *Monitoring and Sampling Manual;*<br>c) collected from the monitoring locations identified within this environmental authority, within 10 hours of each other where possible;<br>d) carried out on representative samples; and | All determinations of water quality to be performed by a person or body possessing appropriate experience and qualifications and made in accordance with methods prescribed in the latest edition of the administering authority's *Monitoring and Sampling Manual.*<br><br>Water quality samples must be collected from the monitoring locations identified within this environmental authority, within 10 hours of each other where possible; be representative | • Conduct water monitoring in accordance with EA conditions.<br>• Conduct regular visual surveillance of the quality of water (suspended solids/turbidity) pumped or otherwise released to the natural drainage system.<br>• Provide necessary training to site personnel in use and maintenance of field monitoring equipment and water sampling techniques. |

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| | e) laboratory testing must be undertaken using a laboratory accredited (e.g. NATA) for the method of analysis being used.<br><br>*Note: The Monitoring and Sampling Manual to be followed and where it is not followed because of exceptional circumstances this should be explained and reported with the results.* | samples; and sent to an accredited laboratory (e.g. NATA). | |
| (C5) | The release of contaminants directly or indirectly to waters:<br>a) must not produce any visible discolouration of receiving waters; and<br>b) must not produce any slick or other visible or odorous evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter or other objectionable matter. | Visual inspection of the release waters will be undertaken on a regular basis during discharge to identify visible discolouration and presence of contaminants e.g. oil, grease, hydrocarbon, litter. | Visual inspection of release waters to occur during water releases. |
| (C6) | **Annual water monitoring reporting**<br>The following information must be recorded in relation to all water monitoring required under the conditions of this environmental authority and submitted to the administering authority in the specified format with each annual return:<br>a) The date on which the sample was taken;<br>b) The time at which the sample was taken;<br>c) The monitoring point at which the sample was taken; d) The measured or estimated daily quantity of the contaminants released from all release points;<br>e) The release flow rate at the time of sampling for each release point;<br>f) The results of all monitoring and details of any exceedence with the conditions of this environmental authority; and | Water monitoring to be conducted in accordance with EA Condition C6 and an annual report submitted to the administering authority with the annual return. | Submit water monitoring report to the administering authority that meets the content requirements of EA Condition C6. |

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| | g) Water quality monitoring data must be provided to the administering authority in the specified electronic format upon request. | | |
| (C7) | **Temporary interference with waterways**<br>Temporarily destroying native vegetation, excavating, or placing fill in a watercourse, lake or spring necessary for and associated with mining operations must be undertaken in accordance with Department of Natural Resources and Mines *Guideline - Activities in a Watercourse, Lake or Spring associated with Mining Activities.* | No native vegetation, excavating or placing fill in a watercourse, lake or spring will occur on site without informing the environmental advisor. If this condition is triggered, the environmental advisor will assess the request and refer to the relevant Guideline. | No such requirement to interfere with waterways is expected to occur during the term of the plan of operations, however should it occur, the activities will be undertaken in accordance with the relevant Guideline. |
| (C8) | **Water Management Plan**<br>A Water Management Plan must be developed and implemented that provides for the proper and effective management of the actual and potential environmental impacts resulting from the mining activity and to ensure compliance with the conditions of this environmental authority. | Complete | Implement water management activities in consultation with the Water Management Plan, EA and relevant site operating procedures. |
| (C9) | The Water Management Plan must be developed in accordance with the department's *Guideline for Preparing a Water Management Plan* and must include at least the following components:<br>a) contaminant source study;<br>b) site water balance and model;<br>c) water management system;<br>d) saline drainage prevention and management measures;<br>e) acid rock drainage prevention and management measures (if applicable);<br>f) emergency and contingency planning; and<br>g) monitoring and review. | Complete | Review Water Management Plan per EA Condition C10 requirements. |
| (C10) | Each year the holder of the environmental authority must undertake a review of the water management plan prior to the wet season (i.e. by 1 November) and | Review Water Management Plan before wet season (by 1 November) and following wet season (by 1 May) | Review Water Management Plan before wet season (by 1 November) and following wet season |

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| | a further review following the wet season (i.e. by 1 May the following year) to ensure that proper and effective measures, practices or procedures are in place so that the mine is operated in accordance with the conditions of this environmental authority and that environmental harm is prevented or minimised. | | (by 1 May). If required consult with Environment and Mining Services Department as required. |
| (C11) | A copy of the water management plan and/or a review of the water management plan must be provided to the administering authority on request. | Make available a copy of the Water Management Plan for inspection/review by the administering authority as required. | Ensure that a copy of the Water Management Plan is available should the administering authority request it. |
| (C12) | **Saline drainage**<br>The holder of this environmental authority must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of saline drainage. | Surface and groundwater monitoring in accordance with this EA will alert site should the presence of saline drainage exist. | If the presence of saline drainage occurs, notify Environment and Mining Services Department so measures can be taken to avoid or otherwise minimise generation. |
| (C13) | **Acid rock drainage**<br>The holder of this environmental authority must ensure proper and effective measures are taken to avoid or otherwise minimise the generation and/or release of acid rock drainage. | Given the nature of the limestone formation and the geography of the site it is highly unlikely that acid rock drainage will be present. | If the presence of acid rock drainage occurs (e.g. low pH), notify Environment and Mining Services Department so measures can be taken to avoid or otherwise minimise generation. |
| (C14) | **Stormwater and water sediment controls**<br>An erosion and sediment control plan must be developed by an appropriately qualified person and implemented for all stages of the mining activities on the site to minimise erosion and the release of sediment to receiving waters and contamination of stormwater. | Complete | Implement erosion and sediment control measures in association with the erosion and sediment control plan, EA and relevant site operating procedures. |
| (C15) | The maintenance and cleaning of any vehicles, plant or equipment must not be carried out in areas from which contaminants can be released into any receiving waters. | Vehicles, plant and equipment to be cleaned in designated areas to prevent the release of contaminants to receiving waters. In the case of potential hydrocarbon spills, cleaning must be carried out in an area that is contained | Train personnel to clean vehicles, plant and equipment in designated areas to prevent the release of contaminants to receiving waters. In the case of potential hydrocarbon spills, cleaning must be carried out in an area that is contained and drains to an oil water separator e.g. humeceptor located near the workshop. |

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| | | and drains to an oil water separator e.g. humeceptor located near the workshop. | Regular EHS inspection of site for spills, contaminants or other waste materials. |
| (C16) | Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable to minimise the release of wastes, contaminants or materials to any stormwater drainage system or receiving waters. | Spill kits to be located strategically around site to enable fast spill response. | Staff to be trained in spill response through inductions and toolbox meetings. Signage to be placed on spill kits and instructions on how to appropriately clean up spills.<br><br>Regular EHS inspection of site for spills, contaminants or other waste materials. |
| (C17) | **Groundwater**<br>The holder of this environmental authority must develop and implement a groundwater monitoring and management program. The program must:<br>a) be able to detect a significant change to groundwater quality values due to activities that are part of this mining project;<br>b) include measures to minimise the impact of the mining activities on groundwater resources;<br>c) include contingency procedures for emergencies; and<br>d) include a program for monitoring and review of the effectiveness of the groundwater monitoring and management program. | A groundwater monitoring and management program has been developed per EA requirements. | Suitable person/s to implement groundwater monitoring and management program. Site currently utilises a 3rd party specialist to undertake monitoring and reporting as required by the EA. |
| (C18) | When requested by the administering authority, report the results and analysis of groundwater monitoring. | Ground water monitoring results will be maintained in a safe and secure location and be available to the administering authority when requested. | Site to keep accurate ground water monitoring records and be readily available for inspection. Ground water data to be compiled into annual reports that indicate trends and status of compliance. |
| (C19) | Subject to condition C20, groundwater levels must be monitored and groundwater draw down fluctuations in excess of two metres per year of previously observed maximum seasonal fluctuation, not resulting from the pumping of licensed bores, must be notified as per conditions A9 – A12. | Ground water levels will be monitored as per condition C19. | Site currently utilises a 3rd party specialist to undertake monitoring and reporting as required by the EA. |

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| (C20) | Groundwater must be monitored at the locations and frequencies defined in Table 3 Groundwater monitoring locations and frequency and as shown in Figure 1 Surface and Groundwater monitoring locations. | Groundwater will be monitored as per condition C20. | Site currently utilises a 3rd party specialist to undertake monitoring and reporting as required by the EA. |
| (C21) | If the groundwater contaminant trigger levels defined in Table 4 Groundwater contaminant trigger values are exceeded, an investigation must be completed into the potential for environmental harm and notify the administering authority within 28 days of receiving the analysis results. | An investigation will be completed for values that are exceeded for contaminants in groundwater and notify the administering authority within 28 days. | Site to undertake investigation by appropriately qualified persons for trigger exceedance. Site will notify the administering authority within 28 days of receiving the results. |
| (C22) | **Background groundwater monitoring program**<br>A background groundwater monitoring program must be developed to include bore(s) that are located an appropriate distance from potential sources of impact from mining activities to provide the following:<br>a) representative groundwater samples from the aquifers potentially affected by mining activities;<br>b) at least eight sampling events (quarterly sampling) to determine background groundwater quality as practicable;<br>c) background groundwater quality in hydraulically isolated background bores(s) that have not been affected by any mining activities; and<br>d) the final groundwater contaminant parameters and trigger levels required for each bore type must be provided according to condition C24. | A groundwater monitoring program has been developed per condition C22. | Site currently utilises a 3rd party specialist to undertake monitoring and reporting as required by the EA. |
| (C23) | The groundwater monitoring data must be reviewed on an annual basis. The review must include the assessment of groundwater levels and water quality data, and the suitability of the monitoring network. The assessment must be submitted to the administering authority within 28 days of receiving the report. | Groundwater monitoring program will be reviewed on an annual basis. | Site currently utilises a 3rd party specialist to undertake monitoring and reporting as required by the EA. An annual groundwater monitoring report is to be submitted to the administering authority on an annual basis. |

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| (C24) | The following information must be recorded in relation to all groundwater water sampling:<br>a) the date on which the sample was taken;<br>b) the time at which the sample was taken;<br>c) the monitoring point at which the sample was taken; and<br>d) the results of all monitoring. | Ensure procedures are in place for recording information in relation to groundwater sampling as listed in condition C25. | Site currently utilises a 3rd party specialist to undertake monitoring and reporting as required by the EA. |
| **Department Interest – Noise and Vibration** | | | |
| (D1) | **Noise nuisance**<br>Subject to conditions D2 and D3 noise from the mining activity must not cause an environmental nuisance, at any sensitive or commercial place. | The following control strategies will be implemented to minimise noise-related impacts:<br>• all plant and equipment will be regularly maintained which will contribute to minimisation of noise emissions at the source;<br>• a complaint-based investigation and response system will be implemented which will include direct consultation with the complainant for the purpose of resolution, investigative monitoring (where a resolution cannot be achieved) and implementation of relevant mitigation where investigations warrant the need. | Take all reasonable action to ensure that noise from site activities does not cause an environmental nuisance, subject to condition (D2 and D3), at any sensitive place or commercial place. |
| (D2) | When requested by the administering authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or | Carry out noise monitoring within a reasonable and practical timeframe nominated by the administering authority to investigate any noise complaint at any sensitive or commercial place. | When requested by the administering authority the site will monitor for noise within a reasonable and practicable timeframe to investigate any complaint that is neither frivolous nor vexatious. Results will be sent to the administering authority within 14 days. |

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| | commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring. | | Any complaints arising from noise will be handled internally and in accord with the Sibelco Incident Cause Analysis Method (ICAM). |
| (D3) | If the environmental authority holder can provide evidence through monitoring that the limits defined in Table 5 and Table 6, are not being exceeded then the holder is not in breach of condition D1. Monitoring must include:<br>a) LA, max adj; T<br>b) relevant background sound level;<br>c) the level and frequency of occurrence of impulsive or tonal noise;<br>d) atmospheric conditions including wind speed and direction; and<br>e) location, date and time of recording. | Carry out noise monitoring to demonstrate that the limits in Tables 5 and 6 are not exceeded. | When requested by the administering authority noise monitoring will be undertaken to demonstrate that the limits defined in Tables 5 and 6 are not exceeded.<br>The noise monitoring program will be conducted in accordance with guidelines published by the administering authority. |
| (D4) | If monitoring indicates exceedence of the limits in Table 5 and Table 6, then the environmental authority holder must:<br>a) address the complaint including the use of appropriate dispute resolution if required; and<br>b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance. | Investigate any noise complaint and implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance. | Any complaints arising from noise will be handled internally and in accord with the Sibelco Incident Cause Analysis Method (ICAM).<br><br>Noise abatement measures will be implemented where required so that the emissions from noise will not result in further environmental nuisance. |
| (D5) | The method of measurement and reporting of noise levels must comply with the latest edition of the administering authority's *Noise Measurement Manual*. | Carry out measurement and reporting of noise levels in compliance with the administering authority's Noise Measurement Manual. | Perform measurements and reporting to comply with the latest version of the administering authority's Noise Measurement Manual. |
| (D6) | **Vibration nuisance**<br>Subject to Conditions D7 and D8 vibration from the mining activity must not cause an environmental nuisance, at any sensitive place. | The Project is situated in a remote location, with the nearest sensitive or commercial place located approximately 4km from the main quarry so it is anticipated the potential for vibration nuisance is extremely low. However, vibration monitoring will be | If requested by the administering authority conduct vibration monitoring to demonstrate that the limits defined in Schedule D – Table 3 are not exceeded. |

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| | | conducted at a sensitive place if requested by administering authority. | |
| (D7) | When requested by the administering authority, vibration monitoring must be undertaken within a reasonable and practicable timeframe nominated by the administering authority to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any sensitive or commercial place, and the results must be notified within 14 days to the administering authority following completion of monitoring. | Carry out vibration monitoring within a reasonable and practical timeframe nominated by the administering authority to investigate any complaint at any sensitive or commercial place. | If requested by the administering authority conduct vibration monitoring within a reasonable and practicable timeframe to investigate any complaint that is neither frivolous nor vexatious. Results are to be sent to the administering authority within 14 days.<br><br>Any complaints arising from vibration will be handled internally and in accord with the Sibelco Incident Cause Analysis Method (ICAM). |
| (D8) | If the environmental authority holder can provide evidence through monitoring that the limits defined in Table 7, are not being exceeded then the holder is not in breach of condition D6. Monitoring must include:<br>a) peak particle velocity (mm/s);<br>b) air blast overpressure level (dB linear peak);<br>c) location of the blast/s within the mining area (including which bench level);<br>d) atmospheric conditions including temperature, relative humidity and wind speed and direction; and<br>e) location, date and time of recording. | If requested by the administering authority conduct vibration monitoring at sensitive place to confirm compliance. | If requested by the administering authority conduct vibration monitoring at sensitive place to confirm compliance. |
| (D9) | For the purposes of condition D6 the mining activities will not cause environmental nuisance where noise from the mining activities does not exceed the criteria specified in Table 7. | If requested by the administering authority conduct vibration monitoring at sensitive place to confirm compliance. | If requested by the administering authority conduct vibration monitoring at sensitive place to confirm compliance. |
| (D10) | If monitoring indicates exceedance of the limits in Table 7, then the environmental authority holder must:<br>a) address the complaint including the use of appropriate dispute resolution if required; and | Investigate any vibration complaints and implement abatement measures so that the activity does not result in further environmental nuisance. | Any complaints arising from vibration will be handled internally and in accord with the Sibelco Incident Cause Analysis Method (ICAM).<br><br>Vibration abatement measures will be implemented |

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| | b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance. | | where required so that the activity will not result in further environmental nuisance. |
| (D11) | Every explosive blast for the mining activity shall be designed by a competent person to achieve the criteria specified in Table 6 and Table 7. | Ensure that every explosive blast for mining activity shall be designed by a competent person to achieve the criteria listed in Table 6 and 7. | Utilise licenced explosives contractor to design and conduct explosive blasting on site. |
| (D12) | All relevant information pertaining to the design of every explosive blast for the mining activity in relation to the criteria specified in Table 6 and Table 7 shall be kept in written and diagrammatic form. | All records shall be securely stored on site and maintain to comply with condition D12. | The site supervisor shall ensure that all relevant information pertaining to the design of every explosive blast for the mining activity is kept in a way that meets condition D12. |
| **Department Interest – Land** | | | |
| (F1) | **Preventing contaminant release to land**<br>Contaminants must not be released to land in manner which constitutes nuisance, material or serious environmental harm. | • Control mobilisation of contaminants by diversion channels, sediment dams and water quality monitoring.<br>• Land disturbance to be restricted to that which is essential for mining purposes.<br>• Rehabilitate/revegetate disturbed land wherever available to minimise erosion and sediment transport.<br>• Construct and maintain undisturbed catchment diversion drains as necessary ahead of advancing mining operations.<br>• Implement appropriate erosion prevention/controls to minimise sediment transportation by surface runoff.<br>• Implement and maintain an effective settling pond system, operating in closed circuit to the | • Regular inspection and implementation of control measures as necessary including erosion and drainage maintenance.<br>• Desilt settling pond and implement improvements as necessary.<br>• Monitor sediment accumulation in settling ponds/sediment traps and implement regular cleanout and sediment disposal actions.<br>• Flammable and combustible liquids contained in bunded areas. |

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| | | extent practicable, to accept water from processing plant operations.<br>• Appropriate bunding of fuel storage and hydrocarbon areas. | |
| (F2) | **Fire prevention**<br>All reasonable and practicable fire prevention measures must be implemented. | Fire prevention managed through Emergency Response Plan and general site-specific inductions. | • Appropriate fire safety equipment should be installed and maintained regularly.<br>• Signage erected and free from obstruction. |
| (F3) | **Topsoil**<br>Topsoil must be strategically stripped ahead of mining in accordance with a topsoil management plan. | Manage topsoil per EA and Plan of Operations requirements. | Ensure that earthworks and rehabilitation workers are familiar with the management of topsoil, including stripping, handling and storing of topsoil. |
| (F4) | A topsoil inventory which identifies the topsoil requirements for the Frost Enterprises Calliope Limestone Mine and availability of suitable topsoil on site must be detailed in the Plan of Operations. | Mining Services manages the topsoil inventory per EA and Plan of Operations requirements. | Manage topsoil inventory per EA and Plan of Operations requirements. |
| (F5) | **Rehabilitation landform criteria**<br>All areas significantly disturbed by mining activities must be rehabilitated to a stable landform with a self-sustaining vegetation cover in accordance with Table 8 and Table 9. | Mining Services manages mining disturbance and rehabilitation per EA and Plan of Operations requirements. | Monitoring of significantly disturbed land by mining activities to be undertaken by competent person (e.g. Mining Services). |
| (F6) | Progressive rehabilitation must commence when areas become available within the operational land. | Progressive rehab opportunities have been identified within this Plan of Operations. | Site to ensure that progressive rehab is undertaken on a regular basis as defined in the Plan of Operations. Progressive rehab is to occur in a timely manner.<br><br>Should further areas of disturbed land become available and deemed suitable, additional rehabilitation will occur. |
| (F7) | Areas which are to be rehabilitated to native ecosystem must achieve a self-sustaining native ecosystem with species composition and distribution similar to an analogue site or another suitable alternative approved by the administering authority. | Rehabilitate land to to achieve a self-sustaining native ecosystem with species composition and distribution similar to an analogue site. | Rehabilitate land to to achieve a self-sustaining native ecosystem with species composition and distribution similar to an analogue site. |

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| (F8) | Areas to be rehabilitated must be rehabilitated to the landform design criteria defined in Table 9 and the landforms must be stable. | Mining Services manages rehabilitation and landform design criteria per EA and Plan of Operations requirements. | Mining Services manages rehabilitation and landform design criteria per EA and Plan of Operations requirements. |
| (F9) | Where reasonable and practicable, areas of the site where grazing is nominated as the post-mine land use must include native grass species endemic to the area. | Where reasonable and practicable, include native grass species endemic to the area for nominated post mine land use. | Rehabilitate areas of the site where grazing is nominated as the post-mine land use with native grass species endemic to the area, once the area becomes available for rehabilitation. |
| (F10) | **Residual void outcome**<br>Residual voids must comply with the following outcomes:<br>a) Residual voids must not cause any serious environmental harm to land, surface waters or any recognised groundwater aquifer, other than the environmental harm constituted by the existence of the residual void itself and subject to any other condition within this environmental authority; and<br>b) Residual voids must comply with Table 10. | Mining Services manages mining disturbance and rehabilitation per EA and Plan of Operations requirements, including design of residual voids.<br><br>Ensure that residual voids comply with the outcomes in F12 and are managed through the Plan of Operations. | No final residual void will be created during the term of this Plan. |
| (F11) | **General**<br>The environmental management plan and plan of operations must be consistent with the geotechnical and erosivity assessment within three months of the completion of the assessment outlined in condition F10. | Complete | Mining Services manages mining disturbance and rehabilitation per EA and Plan of Operations requirements, including geotechnical and erosivity assessments. |
| (F12) | Cleared vegetation from the site must be managed in accordance with the following hierarchy:<br>a) reuse, e.g. use of logs and tree stumps as shelter for fauna in rehabilitated areas;<br>b) recycle, e.g. mulching of vegetation and use in rehabilitation on the site; and<br>c) other alternative management options implemented in a way that causes the least amount of environmental harm. | Manage clearance activities in accordance with EA Condition F12 requirements. | Train operators in the management of clearance activities in accordance with EA Condition F12 requirements. |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| (F13) | A weed management plan must be developed and implemented. The weed management plan must describe how the weeds are to be managed in accordance with the *Land Protection (Pest and Stock Route Management) Act 2002* and/or local government requirements for weeds not declared under state legislation. | Perform weed management activities in association with the weed management plan. | Implement weed management plan. |
| (F14) | **Infrastructure**<br>All infrastructure constructed by or for the environmental authority holder during the licensed activities including water storage structures, must be removed from the site prior to surrender, except where agreed in writing by the post mining land owner / holder.<br>Note: *This is not applicable where the landowner / holder is also the environmental authority holder.* | The Project is not anticipated to close during the term of this Plan of Operations. However, if this occurs the removal of infrastructure will occur in conjunction with EA Condition F14.<br><br>The environmental authority holder is the landowner where current infrastructure is located. Any future mine closure plan will address site infrastructure decommissioning and removal issues. | The environmental authority holder is the landowner where current infrastructure is located. Any future mine closure plan will address site infrastructure decommissioning and removal issues. |
| (F15) | **Exploration**<br>Disturbance due to exploration activities in areas not authorised to be mined must be rehabilitated in accordance with provisions detailed in the Code of Environmental Compliance for Exploration and Mineral Development Projects. | Disturbance to be rehabilitated in accordance with the code as per EA Condition F18. | Disturbance to be rehabilitated in accordance with the code as per EA Condition F18. |
| **Department Interest – Waste** | | | |
| (E1) | **Storage of tyres**<br>Scrap tyres stored awaiting disposal or transport for take-back and recycling, or waste-to-energy options must be stored in stable stacks and at least 10 metres from any other scrap tyre storage area, or | Implement tyre storage measures as required by EA conditions. | Regular inspection and implementation of control measures as necessary. Establish dedicated tyre stores areas. Storage to align with EA Condition requirements |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| | combustible or flammable material, including vegetation. | | |
| (E2) | All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10-metre radius of the scrap tyre storage area. | Implement fire prevention measures as required by EA condition. | Regular inspection and implementation of control measures as necessary to ensure a minimum of 10m between tyres and other materials. |
| (E3) | Where no feasible recycling or waste-to-energy options are available, disposing of scrap tyres resulting from the mining activities in spoil emplacements is acceptable, provided tyres are placed as deep in the spoil as reasonably practicable. | Manage tyre disposal to avoid using control strategy condition E3 where possible. | If necessary dispose of tyres in accordance with condition E3. |
| (E4) | Scrap tyres resulting from the mining activities disposed within the operational land must not impede saturated aquifers or compromise the stability of the consolidated landform. | Consult with appropriately qualified persons to ensure that scrap tyres that are disposed of within the operational land do not impede saturated aquifers or compromise the stability of the consolidated landform. | Site to ensure that condition E4 is complied with in respect to saturated aquifers and stability of the consolidated landform. |
| (E5) | Where possible and practical, vegetation waste from clearing shall be spread on rehabilitated areas. Vegetation waste only may be burnt as a last resort and only if there is minimal risk of causing nuisance to the neighbouring sensitive receptors. General waste must not be burnt or allowed to burn on the licensed site unless permitted by the administering authority. | Where possible and practical spread vegetation waste on rehabilitated areas. If burning vegetation waste consider this as a last resort and manage activities to minimise risk of causing nuisance to the neighbouring sensitive receptors. | Where possible and practical spread vegetation waste on rehabilitated areas. If burning vegetation waste consider this as a last resort and manage activities to minimise risk of causing nuisance to the neighbouring sensitive receptors. |
| (E6) | All regulated waste removed from the site must be removed by a person who holds a current approval to transport such waste under the provisions of the *Environmental Protection Act 1994*. | Engage licenced waste contractor to remove regulated waste. | Licenced waste contractor manages the removal of regulated waste. |
| (E7) | Regulated waste must only be removed to a facility licensed under the *Environmental Protection Act 1994* to receive such waste. | Engage licenced waste contractor to remove regulated waste. | Licenced waste contractor manages the removal of regulated waste. |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| **Department Interest – Dams** | | | |
| (G1) | **All dams**<br>The holder of this environmental authority must ensure that dams are designed, constructed, operated and maintained in accordance with accepted engineering standards. | Dam design, construction and maintenance is managed in consultation with Mining Services. Silt ponds are inspected regularly e.g. monthly and drain internally to prevent runoff from site. | Silt ponds inspected regularly e.g. monthly and desilted as required. |
| (G2) | Except for dams affected by condition G3, the hazard category of dams must be assessed by a suitably qualified and experienced person prior to their construction, and then not less frequently than on an annual basis. | SKM was commissioned in November 2013 to undertake an assessment of the hazard and consequence category of all existing structures at the Project. The assessment was undertaken by Registered Professional Engineers Queensland (RPEQ) from SKM (SKM 2013).<br><br>All existing structures on the mine site were assessed as low consequence category. | All future structures to be designed using the same principals as those used for existing structures and as assessed by SKM. |
| (G3) | The hazard category of dams constructed prior to grant of this environmental authority, must be assessed by a suitably qualified and experienced person within six months of this environmental authority taking effect, and not less frequently than on an annual basis. | Completed by SKM in 2013. | Completed by SKM in 2013. |
| (G4) | Where the hazard category of a dam is assessed as significant or high, the holder of the environmental authority must act immediately to ensure:<br>a) the administering authority is advised of the current location and details of that dam, and | SKM assessed in 2013 that there are no significant or high hazard category dams on site. | There are no significant or high hazard category dams on site. |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| | b) that dam meets the hydraulic performance required of the assessed hazard category within six months of that assessment. | | |
| (G5) | The condition of dams must be monitored for early signs of loss of structural or hydraulic integrity, based on the advice of a suitably qualified and experienced person. The methods of monitoring and frequency of monitoring shall be as assessed by that suitably qualified and experienced person, based on the hazard category and particular circumstances of each dam. | Mining Services and site monitors dams for early signs of loss of structural or hydraulic integrity. In 2013 SKM assessed that there are no significant or high hazard category dams on site. | Mining Services and site to monitor dams for early signs of loss of structural or hydraulic integrity. |
| (G6) | In the event of early signs of loss of structural or hydraulic integrity, the holder of this environmental authority must immediately take action to prevent or minimise any actual or potential environmental harm and report in writing any findings and actions taken to the administering authority within 28 days. | Should early signs of loss of structural or hydraulic integrity be identified immediate action is to be taken to prevent or minimise actual or potential harm with the findings and actions reported to the administering authority within 28 days. | Should early signs of loss of structural or hydraulic integrity be identified immediate action is to be taken to prevent or minimise actual or potential harm with the findings and actions reported to the administering authority within 28 days. |
| (G7) | The holder of this environmental authority must decommission each dam to a situation where ongoing environmental harm is prevented. | The Project is not anticipated to close during the term of this Plan of Operations. However, if this occurs the decommissioning of dams are to occur to ensure environmental harm is prevented. | If dams are decommissioned consult Environment and Mining Services departments to ensure environmental harm is prevented. |
| (G8) | As a minimum, dams must be decommissioned such that they:<br>a) no longer contain flowable substances<br>b) become stable landforms; and<br>c) comply with the rehabilitation requirements of this environmental authority. | The Project is not anticipated to close during the term of this Plan of Operations. However, if this occurs the decommissioning of dams are to occur to ensure compliance with EA Condition G8 and environmental harm is prevented. | If dams are decommissioned consult Environment and Mining Services departments to ensure compliance with EA Condition G8 occurs and environmental harm is prevented. |
| (G9) | The holder of this environmental authority must ensure that, where a current operational plan covers | The Project is not anticipated to close during the term of this Plan of Operations. | The Project is not anticipated to close during the term of this Plan of Operations. |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| | decommissioning and rehabilitation, those operations are consistent with the objectives in any design plan for the dam. | | |
| (G10) | The annual inspection may be conducted as early as 1 September each year, but not later than 1 November each year, except that the assessment of adequacy of available storage in a dam must be based on dam levels observed within the month of October in the year that the inspection is conducted. | Advice on the requirement of this condition was sought from the administering authority in 2014, due to the issue of new guideline EM634. Feedback from the administering authority indicated the current structures guideline and model conditions (em634) only requires annual reporting for 'regulated structures'; i.e. those with a consequence category of significant or high and that the model conditions only require existing dams be re-assessed should there be a change in purpose or the nature of stored contents.<br><br>In 2013 SKM assessed that there are no significant or high hazard category dams on site. There has been no change in purpose of the stored contents. | Should there be a change in purpose or the nature of stored contents of dams reassessment by a 3rd party needs to occur.<br><br>All future structures to be designed using the same principals as those used for existing structures and as assessed by SKM. |
| **Department Interest – Community** | | | |
| (H1) | **Complaint response**<br>All complaints received must be recorded including investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request. | The Sibelco Incident Cause Analysis Method (ICAM) is in place and will be utilised to record all complaints received, investigations undertaken, conclusions formed and action taken. | The Sibelco Incident Cause Analysis Method (ICAM) is in place and will be utilised to record all complaints received including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information will be made |

| Condition # | Environmental Authority Condition | Control Strategy | Action Program |
|---|---|---|---|
| | | | available to the administering authority upon request. |
| (H2) | The holder of this environmental authority must record the following details for all complaints received and provide this information to the administering authority on request:<br>a) time, date, name and contact details of the complainant;<br>b) reason for the complaint;<br>c) conclusions formed; and<br>d) any actions taken. | If a complaint is received the information required by EA Condition H2 is to be provided to the administering authority upon request. | If a complaint is received record the information required by EA Condition H2 and provide to the administering authority upon request. |

# 5 REHABILITATION PROGRAM

## 5.1 SCHEDULE OF REHABILITATION WORKS

This section provides a general outline to the method and schedule of annual rehabilitation works and the financial assurance required by the administering authority for this Plan of Operations.

Due to the current disturbance footprint and continued expansion of the working mine pits, there is limited availability to complete significant areas of rehabilitation during the term of this Plan. However, 1.45ha has been scheduled to have topsoil spread and be seeded on ML3595 and ML80190 during Years 1 and 2 of this Plan of Operations period.

Should further areas of disturbed land become available and deemed suitable, additional rehabilitation will occur.

## 5.2 TOPSOIL

Topsoil is stripped ahead of mining and is generally used to create safety bunds on the pit edge. Topsoil is also stored in stockpiles shown in Appendix 2. Stockpiles are built less than 2 metres in height and are seeded if they are to be stored for a long period.

Areas requiring topsoil at the end of the operation's life include the stockpile areas, infrastructure areas and spoil dumps. The total estimate tonnage required is around 50,000bcm. It should be noted there are a number of spoil dumps on site which contain a high proportion of clay and soil. It is anticipated that these dumps can be processed to recover enough material to cover the required areas. The recovered material is considered to be a good growing medium with regrowth already established on a number of areas.

## 5.3 AREAS AND TYPES OF DISTURBED LAND

The current disturbance types and areas of disturbance for each of the project leases are summarised in Table 4, as well as the projected disturbance types and areas to be disturbed for the project through the period covered by this Plan of Operations. The maximum year of disturbance has been calculated to be Year 5 (2022-2023).

## Table 4: Summary of Projected Disturbance Types and Rehabilitation

| Area Category | Year 0: as at June 2018 | Year 1: 1/07/18 - 30/06/19 | Year 2: 1/07/19 - 30/06/20 | Year 3: 1/07/20 - 30/06/21 | Year 4: 1/07/21 - 30/06/22 | Year 5: 1/07/22 - 30/06/23 |
|---|---|---|---|---|---|---|
| **Combined Mining Leases** | **Area (ha)** | **Area (ha)** | **Area (ha)** | **Area (ha)** | **Area (ha)** | **Area (ha)** |
| **A. Total Lease Area (A = B + C + D)** | | | | | | |
| ML3594 | 32.37 | 32.37 | 32.37 | 32.37 | 32.37 | 32.37 |
| ML3595 | 13.49 | 13.49 | 13.49 | 13.49 | 13.49 | 13.49 |
| ML3596 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 | 9.1 |
| ML3597 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 |
| ML3598 | 12.448 | 12.448 | 12.448 | 12.448 | 12.448 | 12.448 |
| ML3599 | 6.798 | 6.798 | 6.798 | 6.798 | 6.798 | 6.798 |
| ML3600 | 8.093 | 8.093 | 8.093 | 8.093 | 8.093 | 8.093 |
| ML3604 | 4.85 | 4.85 | 4.85 | 4.85 | 4.85 | 4.85 |
| ML80036 | 18.73 | 18.73 | 18.73 | 18.73 | 18.73 | 18.73 |
| ML 3602 | 10.23 | 10.23 | 10.23 | 10.23 | 10.23 | 10.23 |
| ML 3603 | 8.34 | 8.34 | 8.34 | 8.34 | 8.34 | 8.34 |
| ML 3605 | 9.45 | 9.45 | 9.45 | 9.45 | 9.45 | 9.45 |
| ML 3606 | 5.61 | 5.61 | 5.61 | 5.61 | 5.61 | 5.61 |
| ML 3608 | 57.14 | 57.14 | 57.14 | 57.14 | 57.14 | 57.14 |
| ML 3609 | 43 | 43 | 43 | 43 | 43 | 43 |
| ML 80189 | 36.05 | 36.05 | 36.05 | 36.05 | 36.05 | 36.05 |
| ML 80190 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 |
| ML 80191 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 |
| ML 80192 | 121.5 | 121.5 | 121.5 | 121.5 | 121.5 | 121.5 |
| **Total** | **424.129** | **424.129** | **424.129** | **424.129** | **424.129** | **424.129** |
| **B. Undisturbed Area** | | | | | | |
| ML3594 | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 | 2.67 |
| ML3595 | 2.16 | 2.16 | 2.16 | 2.16 | 2.16 | 2.16 |
| ML3596 | 8.85 | 8.85 | 8.85 | 8.85 | 8.85 | 8.85 |
| ML3597 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 | 2.83 |
| ML3598 | 12.448 | 12.448 | 12.448 | 12.448 | 12.448 | 12.448 |
| ML3599 | 6.798 | 6.798 | 6.798 | 6.798 | 6.798 | 6.798 |
| ML3600 | 8.093 | 8.093 | 8.093 | 8.093 | 8.093 | 8.093 |
| ML3604 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 | 0.76 |
| ML80036 | 10.41 | 10.41 | 10.41 | 10.41 | 10.41 | 10.41 |
| ML 3602 | 7.47 | 7.47 | 7.47 | 7.47 | 7.47 | 7.47 |
| ML 3603 | 2 | 2 | 2 | 2 | 2 | 2 |
| ML 3605 | 9.45 | 9.45 | 9.45 | 9.45 | 9.45 | 9.45 |
| ML 3606 | 5.61 | 5.61 | 5.61 | 5.61 | 5.61 | 5.61 |
| ML 3608 | 39.41 | 39.41 | 39.41 | 39.41 | 39.41 | 39 |
| ML 3609 | 42.36 | 42.36 | 42.36 | 42.36 | 42.36 | 42.36 |
| ML 80189 | 27.88 | 27.88 | 27.88 | 27.88 | 27.88 | 27.88 |
| ML 80190 | 5.66 | 5.65 | 5.66 | 5.63 | 5.65 | 5.39 |

| Area Category | Year 0: as at June 2018 | Year 1: 1/07/18 - 30/06/19 | Year 2: 1/07/19 - 30/06/20 | Year 3: 1/07/20 - 30/06/21 | Year 4: 1/07/21 - 30/06/22 | Year 5: 1/07/22 - 30/06/23 |
|---|---|---|---|---|---|---|
| ML 80191 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| ML 80192 | 98.4 | 98.4 | 98.4 | 98.4 | 98.4 | 98.4 |
| **Total** | **293.489** | **293.479** | **293.489** | **293.459** | **293.479** | **292.809** |
| **C. Cleared Area** | | | | | | |
| ML3594 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3595 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3596 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3597 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3598 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3599 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3600 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3604 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML80036 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 3602 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 3603 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 3605 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 3606 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 3608 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 3609 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 80189 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 80190 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 80191 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML 80192 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Total** | **0** | **0** | **0** | **0** | **0** | **0** |
| **D. Total Area of Significant Disturbance** | | | | | | |
| **(D = D1 + D2 + D3)** | **130.64** | **130.65** | **130.64** | **130.67** | **130.65** | **131.32** |
| ML3594 | 29.7 | 29.7 | 29.7 | 29.7 | 29.7 | 29.7 |
| ML3595 | 11.33 | 11.33 | 11.33 | 11.33 | 11.33 | 11.33 |
| ML3596 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| ML3597 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3598 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3599 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3600 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3602 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 | 2.76 |
| ML3603 | 6.34 | 6.34 | 6.34 | 6.34 | 6.34 | 6.34 |
| ML3604 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 | 4.09 |
| ML3605 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3606 | 0 | 0 | 0 | 0 | 0 | 0 |
| ML3608 | 17.73 | 17.73 | 17.73 | 17.73 | 17.73 | 18.14 |
| ML3609 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 | 0.64 |
| ML80036 | 8.32 | 8.32 | 8.32 | 8.32 | 8.32 | 8.32 |
| ML80189 | 8.17 | 8.17 | 8.17 | 8.17 | 8.17 | 8.17 |

| Area Category | Year 0: as at June 2018 | Year 1: 1/07/18 - 30/06/19 | Year 2: 1/07/19 - 30/06/20 | Year 3: 1/07/20 - 30/06/21 | Year 4: 1/07/21 - 30/06/22 | Year 5: 1/07/22 - 30/06/23 |
|---|---|---|---|---|---|---|
| ML80190 | 16.84 | 16.85 | 16.84 | 16.87 | 16.85 | 17.11 |
| ML80191 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 | 1.37 |
| ML80192 | 23.1 | 23.1 | 23.1 | 23.1 | 23.1 | 23.1 |
| **Total** | **130.64** | **130.65** | **130.64** | **130.67** | **130.65** | **131.32** |
| | | | | | | |
| **D1 Disturbance Category** | | | | | | |
| **Active Pit - Above water** | **6.01** | **6.01** | **6.01** | **6.01** | **6.01** | **6.01** |
| ML3603 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 | 0.58 |
| ML3604 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 | 0.23 |
| ML3608 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 | 0.55 |
| ML80192 | 4.65 | 4.65 | 4.65 | 4.65 | 4.65 | 4.65 |
| **Active Pit - Below water** | **51.9** | **53.21** | **53.21** | **54.27** | **54.99** | **55.82** |
| ML3594 | 26.9 | 26.9 | 26.9 | 26.9 | 26.9 | 26.9 |
| ML3604 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 | 3.79 |
| ML3608 | 12.25 | 12.25 | 12.25 | 12.25 | 12.25 | 12.72 |
| ML80190 | 5.43 | 6.74 | 6.74 | 7.8 | 8.52 | 8.88 |
| ML80192 | 3.53 | 3.53 | 3.53 | 3.53 | 3.53 | 3.53 |
| **Infrastructure** | **4.88** | **4.88** | **4.88** | **4.88** | **4.88** | **4.88** |
| ML3603 | 4.31 | 4.31 | 4.31 | 4.31 | 4.31 | 4.31 |
| ML 80192 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 | 0.57 |
| **Roads** | **20.82** | **20.53** | **20.53** | **20.34** | **19.94** | **19.86** |
| ML3594 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 | 0.74 |
| ML3595 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 | 2.6 |
| ML3596 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 |
| ML3602 | 1.46 | 1.46 | 1.46 | 1.46 | 1.46 | 1.46 |
| ML3603 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 | 0.84 |
| ML3608 | 3.9 | 3.9 | 3.9 | 3.9 | 3.9 | 3.84 |
| ML3609 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 | 0.56 |
| ML80036 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 | 0.82 |
| ML80189 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 | 0.79 |
| ML80190 | 2.86 | 2.57 | 2.57 | 2.38 | 1.98 | 1.96 |
| ML80191 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 | 0.47 |
| ML80192 | 5.53 | 5.53 | 5.53 | 5.53 | 5.53 | 5.53 |
| **Spoil Piles** | **25.7** | **25.68** | **25.67** | **25.07** | **24.73** | **24.72** |
| ML3595 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 | 6.25 |
| ML3608 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 | 1.03 |
| ML3609 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| ML80036 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 | 7.5 |
| ML80189 | 7.38 | 7.38 | 7.38 | 7.38 | 7.38 | 7.38 |
| ML80190 | 1.71 | 1.69 | 1.68 | 1.08 | 0.74 | 0.73 |
| ML80191 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 | 0.9 |
| ML80192 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |

| Area Category | Year 0: as at June 2018 | Year 1: 1/07/18 - 30/06/19 | Year 2: 1/07/19 - 30/06/20 | Year 3: 1/07/20 - 30/06/21 | Year 4: 1/07/21 - 30/06/22 | Year 5: 1/07/22 - 30/06/23 |
|---|---|---|---|---|---|---|
| **Stockpile Areas** | **13.7** | **11.26** | **11.26** | **11.02** | **11.02** | **10.95** |
| ML3594 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 | 2.06 |
| ML3595 | 2.07 | 1.09 | 1.09 | 1.09 | 1.09 | 1.09 |
| ML3602 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 |
| ML3603 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 | 0.61 |
| ML80190 | 6.32 | 4.86 | 4.86 | 4.62 | 4.62 | 4.55 |
| ML80192 | 1.34 | 1.34 | 1.34 | 1.34 | 1.34 | 1.34 |
| **Tailings Dam** | **0.73** | **0.73** | **0.73** | **0.73** | **0.73** | **0.73** |
| ML80192 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 | 0.73 |
| **Top Soil Stockpiles** | **1** | **1** | **1** | **1** | **1** | **1** |
| ML3604 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| ML3595 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 | 0.41 |
| ML80190 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 | 0.52 |
| **Contaminated Land Remediation** | **0.3** | **0.3** | **0.3** | **0.3** | **0.3** | **0.3** |
| ML80192 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| | | | | | | |
| **D2 Rehabilitation Category** | | | | | | |
| **Recontoured** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Topsoiled** | **0** | **1.45** | **0** | **0** | **0** | **0** |
| ML3595 | | 0.98 | | | | |
| ML80190 | | 0.47 | | | | |
| **Seeded** | **0** | **0** | **1.45** | **0** | **0** | **0** |
| ML3595 | | | 0.98 | | | |
| ML80190 | | | 0.47 | | | |
| **Established - Year 1** | **0** | **0** | **0** | **1.45** | **0** | **0** |
| ML3595 | | | | 0.98 | | |
| ML80190 | | | | 0.47 | | |
| **Year 2** | **0** | **0** | **0** | **0** | **1.45** | **0** |
| ML3595 | | | | | 0.98 | |
| ML80190 | | | | | 0.47 | |
| **Year 3** | **6.17** | **6.17** | **6.17** | **6.17** | **6.17** | **7.62** |
| ML3595 | | | | | | 0.98 |
| ML80190 | | | | | | 0.47 |
| | | | | | | |
| **D3 Successfully Rehabilitated** | **0** | **0** | **0** | **0** | **0** | **0** |

## 5.4 THIRD PARTY QUOTE FOR REHABILITATION OF WORKSHOP & LAYDOWN AREAS

A third-party quote has been received to determine the financial assurance cost liability to clean up the workshop and laydown areas at site. This amount has been allocated within the financial assurance calculations provided with this Plan of Operations submission.

ZEBRA METALS
Environmental Services

**Quote**

13nd April 2018

To Whom It May Concern,

Zebra Metals & Environmental Services will clean up the10,100 sq m. Sibelco graveyard site and workshop area. The project would be estimated to be completed within two week after the site inductions are completed as long as there are not outside factors prohibiting work to be completed. During the duration of the clean-up Zebra Metals & Environmental Services will have one excavator, two trucks, equalling two employees on site. All scrap metal will be removed from site and recycled under Zebra Metals & Environmental Services(EPA # 0540000017). The Total cost of this job is $19,500+gst. This cost covers labour, equipment, trucking, fuel, accommodation and any other incidentals.
The quote is valid from Jan 1st 2018 till Dec 31st 2019. If there are any questions please do not hesitate to ask.

Labour Cost $6,000 + gst
Equipment Hire and Fuel $8,000 + gst
Trucking and Fuel $5,500 + gst

Kind Regards

William P Ross
Trading and Marketing Manager

*Masters Of Metal Management*
PO Box 70, Gracemere, QLD 4702 | 227 Somerset Road, Gracemere, QLD 4702
Telephone: (07) 4933 3333 | Fax: (07) 4933 1544 | Email: info@zebrametals.com.au
www.zebrametals.com.au
ABN: 89 108 897 445

**Figure 2: Quote from 3rd Party to Rehabilitate Workshop and Laydown Areas**

## 5.5 FINANCIAL ASSURANCE REQUIRED

The estimated total gross financial assurance liability for the period covered by this Plan of Operations is summarised in Table 5 using the administering authority's FA calculator for an open cut mine. The full calculations can be found in spreadsheet included with this submission.

In accordance with the DEHP Guideline - *Financial Assurance under the Environmental Protection Act 1994,* ESR/2015/1758 – Version 3.00, the gross financial assurance liability is determined from the cost of rehabilitation of all outstanding significantly disturbed areas after decommissioning of infrastructure not otherwise approved to remain. All current disturbance types have been included for the purpose of this financial assurance calculation as types of infrastructure to remain on site (if any) is yet to be determined. Prior to surrender of disturbed areas, SAL is required to decommission and remove all infrastructure associated with its operations (EA condition F14) except where agreed in writing by the post mining land owner/holder.

The total rehabilitation liability has:

- Been calculated on a project basis;
- Been calculated for all land that has been or is proposed to be significantly disturbed;
- Been based on the rehabilitation costs for the year in which the maximum liability is incurred within the nominated disturbance period;
- Costs from the administering authority's FA calculator have been used; and
- Includes the following activities;
    - Terminate, decommission and remove all infrastructure and services;
    - Constituent tasks or activities required for rehabilitation;
    - Project management costs of 10%;
    - Maintenance and monitoring costs of 5%; and
    - The cost of a site investigation report.

**Table 5: Cost to Rehabilitate all Mining Leases during the period of the Plan of Operations.**

## Summary Report of Financial Assurance Estimator

| | |
|---|---|
| **Environmental Authority Num** | EPML00969013 |
| **Tenure Numbers:** | ML3594, ML3595, ML3596, ML3597, ML3598, ML3599, ML3600, ML3604, ML80036, ML3602, |
| **Site Name (if applicable):** | Frost Enterprises Pty Ltd |
| **EA Holder:** | Frost Enterprises Pty Ltd |
| **Current Financial Assurance Amount:** | $2,488,700.00 |
| **Date of Last Financial Assurance Revie** | 7 August 2013 |
| **Site Contact:** | Mr Simon Havis |
| **Position:** | Operations Superintendent |
| **Address:** | MS 24 Taragoola Road<br>Calliope QLD 4680 |
| **Phone:** | 07 4975 7144 |
| **Email:** | Simon.Havis@sibelco.com.au |

| Domain | Rehabilitation Liability |
|---|---|
| Domain 1: Infrastructure | $2,286,121 |
| Domain 2: Waste | $255,169 |
| Domain 3: Other Management Issues | $0 |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| **Subtotal** | **$2,541,290** |

| Contingencies | | Rehabilitation Liability |
|---|---|---|
| Project Management | 10% | $254,129 |
| Environmental Maintenance and Monitoring | 5% | $127,064 |
| **Subtotal** | | **$381,193** |

| | |
|---|---|
| **Total Rehabilitation Liability for the Operation (excl. GST)** | **$2,922,483** |

This is an accurate assessment of the rehabilitation liability for the site.

| | | |
|---|---|---|
| Mathew Stewart Ross | Senior Mine Planner | 30/05/2018 |
| **Assessment Completed By** | **Title** | **Date:** |
| Simon Havis | Operations Superintendent | 30/05/2018 |
| **Site Manager** | **Title** | **Date:** |

A discount on the financial assurance is available under particular circumstances. The environmental performance criteria for mining lease projects are found in the DEHP Guideline - *Financial Assurance under the Environmental Protection Act 1994,* ESR/2015/1758 – Version 3.00. SAL is applying for a discounted Financial Assurance during the term of this plan. The following is submitted to address the requirements in Tables 1-4 of Appendix B of the guideline to determine the appropriate level of discount.

**FA Guideline – Table 1 Mandatory pre-requisite - Responses**

| Mandatory Pre-requisites | Response |
|---|---|
| General | • FA has been calculated using the EHP financial assurance calculator in accordance with Appendix A of the Guideline – *Financial Assurance under the Environmental Protection Act 1994,* ESR/2015/1758 – Version 3.00.<br>• The conditions in Environmental Authority EPML00969013 - Department Interest General are worded in such a way to trigger review of the FA as a result of an event or change in circumstances. |
| Financial Standing | • The latest annual fees for EA EPML00969013 were paid in April 2018 and are up to date.<br>• The EA holder is solvent. ASIC company search results for the EA holder Frost Enterprises Pty Ltd is supplied to accompany this Plan of Operations. ASIC search results for the parent company of the EA holders, Sibelco Australia Limited is also supplied.<br>• The Sibelco Australia Limited (owner of the EA holders) Financial Reports for the years ending 31 December 2015 and 31 December 2016 demonstrating the financial standing of the group is supplied. |
| Environmental Performance | • In the past two years there have been no relevant compliance actions as defined in the guideline. |

**FA Guideline – Table 2 Financial Discount Responses**

| Discount Description | Response | Discount eligibility confirmed and discount claimed |
|---|---|---|
| **1. Financial** | | |
| A 10% discount for demonstrating sound financial health and adequate budgeting for the scheduled rehabilitation in the forthcoming FA period. | • Previous two years financial statements for the year ended 31 December 2015 and 31 December 2016, which have been audited by *a suitably qualified financial auditor* are supplied.<br>• A Statutory Declaration (EM1266) signed by the company Chief Financial Officer is supplied stating that:<br>1. The information provided is accurate, complete and not misleading; | YES<br>10% |

| | | |
|---|---|---|
| | 2. The costs of scheduled rehabilitation (in the upcoming FA period) have been budgeted for; and<br>3. The entity can pay its debts if and when they fall due. | |
| **2. Progressive rehabilitation & certification** | | |
| (AVOID) A 10% discount for avoiding any impacts to remnant vegetation. | • No impacts to remnant vegetation are proposed during the term of the Plan of Operations, therefore no impacts to remnant vegetation will occur.<br>• The EA does not have a condition relating to impacts to remnant vegetation | NO |
| (STABILISE) A 10% discount for undertaking proactive rehabilitation work to reduce the total area of disturbance (irrespective of final land use). | • All areas disturbed for mining production that have not been designated to service current or future operational requirements have been re-vegetated. Remaining disturbed areas can only be rehabilitated as they are released from ongoing operational requirements and deemed to be available for re-vegetation. | NO |
| (RESTORE) A 10% discount for undertaking proactive revegetation of a woody regional ecosystem. | • There has been no proactive revegetation of woody regional ecosystem. | NO |
| (CERTIFY) A 10% discount for progressive certification. | • Progressive certification has not been sought to date. | NO |
| **3. Waste Management** | | |
| (LOW RISK) A 10% discount for only undertaking activities that are considered to have a low environmental risk. | • Not Applicable | NO |
| (HIGH RISK) A 10% discount for undertaking activities that reduce the amount of waste stored | • Not Applicable | NO |

| | | |
|---|---|---|
| onsite (10% discount for each waste management measure). | | |

The responses above to the requirements of Appendix B of the guideline have been used to determine the total level of discount that is applied for the financial assurance that will be lodged based on the calculation in this Plan of Operations. A 10% discount is being claimed for the term of the Plan of Operations.

Consequently, the financial assurance required is calculated in accordance with the following formula (from DEHP Guideline – *Financial Assurance under the Environmental Protection Act 1994,* ESR/2015/1758 – Version 3.00*:*

**Financial Assurance (FA) Required = Gross FA Liability x (100-Discount Rate) / 100**
**= $2,922,483 x (100-10)/100**
**= $2,630,234.7**

# 6 ENVIRONMENTAL COMPLIANCE STATEMENT

## 6.1 INTRODUCTION

This compliance statement has been prepared in accordance with Section 288 (3) of the EP Act to state the extent to which this replacement Plan of Operations complies with the conditions of Environmental Authority EPML00969013 and to confirm that the calculation method for the financial assurance is in accordance with section 295 (3) of the EP Act. This compliance statement has been prepared in two parts.

Part A deals with the extent that the 2018 - 2023 replacement Plan of Operations complies with the conditions of Environmental Authority EPML00969013 (excluding Schedule A – Financial Assurance Conditions A1 to A2). Part A was completed by Chris Mann.

Part B confirms that the calculation method for the financial assurance is in accordance with the DEHP Guideline - *Financial Assurance under the Environmental Protection Act 1994*, ESR/2015/1758 – Version 3.00. Part B was completed by Chris Mann.

## 6.2 COMPLIANCE STATEMENT – PART A

I, the auditor (Part A), confirm the documentation and evidence considered in this Audit demonstrate that this Plan of Operations generally conforms with the Environmental Authority Conditions for EPML00969013 to the extent that the conditions are relevant to the activities to be undertaken during the term of this Plan of Operations.

| | |
|---|---|
| **Auditor's Name:** | **Chris Mann** |
| **Auditor's Credentials:** | Bachelor of Engineering (Environment) and Bachelor of Science, Degree qualified with over 8-years environmental management experience in Australia. |
| **Relationship to EA Holder:** | **Sibelco Australia Limited - Senior Environmental Advisor** |
| **Date of Audit:** | 30 May 2018 |
| **Method of Audit:** | Review of supporting documentation (Environmental Authority Monitoring Data and other records) |
| **Mining Project Name:** | Frost Enterprises Pty Ltd Taragoola Limestone Project, managed by Sibelco Australia Limited |
| **EA Number/s:** | EPML00969013 |
| **Mining Lease Numbers:** | ML3594, ML3595, ML3596, ML3597, ML3598, ML3599, ML3600, ML3602, ML3603, ML3604, ML3605, ML3606, ML3608, ML3609, ML80036, ML80189, ML80190, ML80191, ML80192 |

### AUDIT PROCESS – PART A

#### Action Program

The documentation and evidence considered in this Audit demonstrate that the Action Program within this Plan of Operations conforms with the Environmental Authority Conditions to the extent

that the conditions are relevant to the activities to be undertaken during the term of this Plan of Operations.

**Rehabilitation Program**

The type and areas of disturbance listed in this Plan of Operations are consistent with the Environmental Authority. The estimates in this Plan of Operations of the areas to be disturbed appear to be correct. Sibelco Australia Limited have calculated the areas that have been disturbed and will be rehabilitated.

The EA conditions for EPML00969013 are included sequentially and have individually addressed the corresponding action or actions related to the particular EA conditions.

*Financial Assurance Discount System*

The DEHP Guideline - *Financial Assurance under the Environmental Protection Act 1994*, ESR/2015/1758 – Version 3.00 has been consulted to determine a discount in financial assurance. SAL is applying for a discounted Financial Assurance during the term of this plan and has supplied the relevant evidence to support this discount.

**CONCLUDING REMARKS AND CERTIFICATION**

I Chris Mann, being aware that it is an offence under Section 480 of the *Environmental Protection Act 1994* to provide false or misleading information, state that:

- I am authorised to sign on behalf of the person (meaning a corporation or individual) holding the Environmental Authority;
- All information provided is true and complete; and
- I understand that information given with this Plan of Operations and Audit Statement could become available to the public in accordance with the *Environmental Protection Act 1994* and *Freedom of Information Act 1992*.

Signed:  Date: 30 May 2018

## 6.3 COMPLIANCE STATEMENT – PART B

I, the auditor (Part B), confirm the documentation and evidence considered in this Audit demonstrate that the calculation method used for the financial assurance is in accordance with the DEHP Guideline - *Financial Assurance under the Environmental Protection Act 1994*, ESR/2015/1758 – Version 3.00.

| | |
|---|---|
| **Auditor's Name:** | **Chris Mann** |
| **Auditor's Credentials:** | Bachelor of Engineering (Environment) and Bachelor of Science, Degree qualified with over 8-years environmental management experience in Australia. |
| **Relationship to EA Holder:** | **Sibelco Australia Limited - Senior Environmental Advisor** |
| **Date of Audit:** | 30 May 2018 |

| | |
|---|---|
| **Method of Audit:** | Review of supporting documentation (Environmental Authority Monitoring Data and other records) |
| **Mining Project Name:** | Frost Enterprises Pty Ltd Taragoola Limestone Project, managed by Sibelco Australia Limited |
| **EA Number/s:** | EPML00969013 |
| **Mining Lease Numbers:** | ML3594, ML3595, ML3596, ML3597, ML3598, ML3599, ML3600, ML3602, ML3603, ML3604, ML3605, ML3606, ML3608, ML3609, ML80036, ML80189, ML80190, ML80191, ML80192 |

**AUDIT PROCESS – PART B**

**Rehabilitation Program**

In accordance with the DEHP Guideline - *Financial Assurance under the Environmental Protection Act 1994*, ESR/2015/1758 – Version 3.00, the gross financial assurance liability is determined from the cost of rehabilitation of all outstanding significantly disturbed areas after decommissioning of infrastructure not otherwise approved to remain. Prior to rehabilitation of disturbed areas, Sibelco Australia Limited is required to decommission and remove all equipment and infrastructure associated with its operations unless written agreement is held with the landholder.

The total cost to complete final rehabilitation is the highest total rehabilitation cost during the period covered by this Plan of Operations.

**Net Financial Assurance**

Calculation of net financial assurance for the Environmental Authority has been conducted in accordance with the requirement of DEHP Guideline - *Financial Assurance under the Environmental Protection Act 1994*, ESR/2015/1758 – Version 3.00. The total rehabilitation liability has:

- Been calculated on a project basis;
- Been calculated for all land that has been or is proposed to be significantly disturbed;
- Been based on the rehabilitation costs for the year in which the maximum liability is incurred within the nominated disturbance period;
- Costs from the administering authority's FA calculator have been used and includes the following activities:
    - Terminate, decommission and remove all infrastructure and services;
    - Constituent tasks or activities required for rehabilitation;
    - Project management costs of 10%;
    - Maintenance and monitoring costs of 5%;
    - The cost of a site investigation report; and

*Maximum Rehabilitation Cost*

I have checked the calculation and confirm the maximum cost estimate for rehabilitation (including decommissioning of infrastructure) of **$2,922,483** for the period covered by this Plan of Operations is correct.

*Financial Assurance Discount System*

Frost Enterprises is applying for a 10% performance discount for financial performance on Financial Assurance during the term of this plan. I have checked the evidence supplied to demonstrate eligibility with both the mandatory pre-requisites and discount criteria and was satisfied that the criteria for a 10% discount for financial performance has been met.

*Net Financial Assurance*
The net financial assurance calculated is as follows:
*Net Financial Assurance* = **$2,630,234.7**

**CONCLUDING REMARKS AND CERTIFICATION**

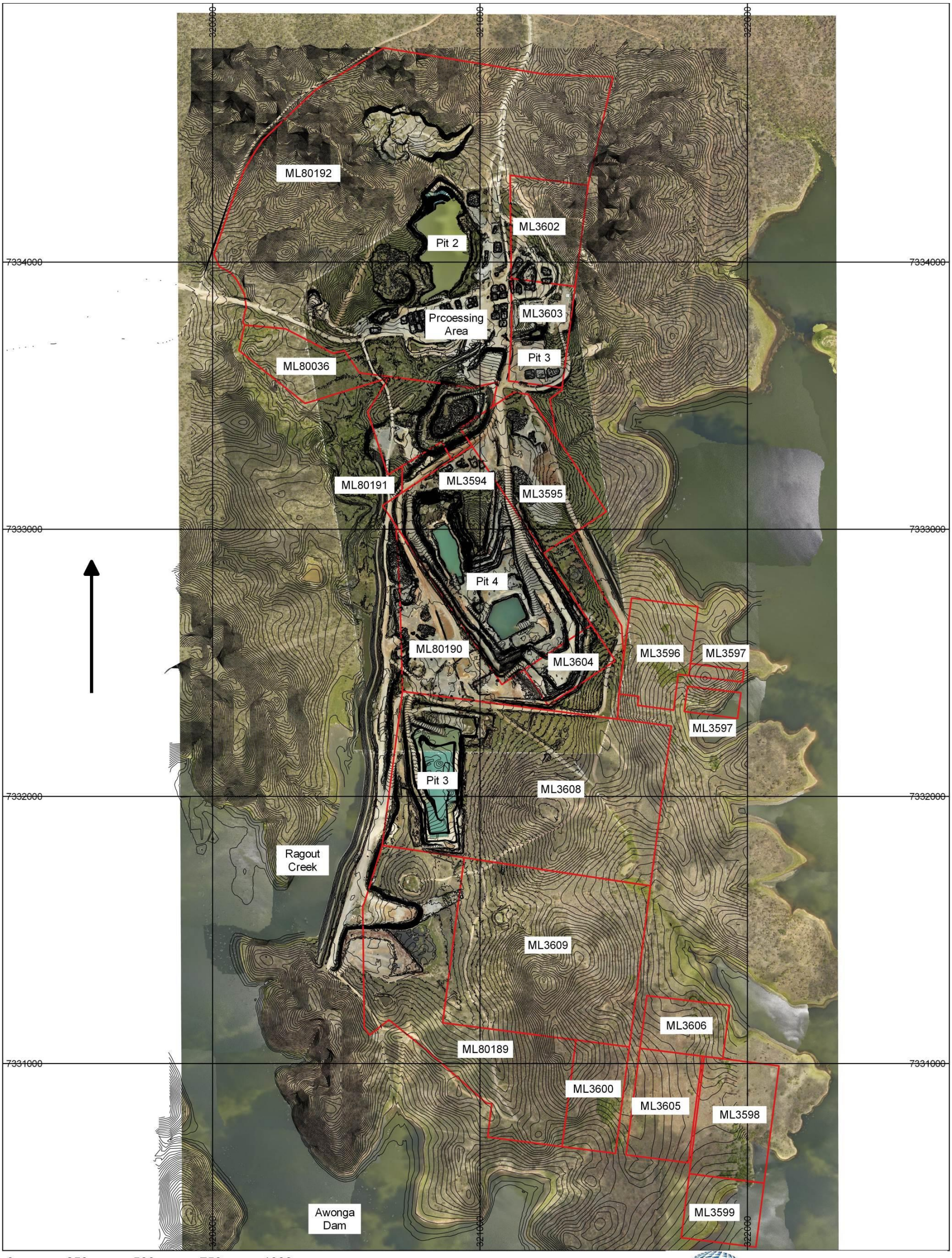
I Chris Mann, being aware that it is an offence under Section 480 of the *Environmental Protection Act 1994* to provide false or misleading information, state that:

- I am authorised to sign on behalf of the person (meaning a corporation or individual) holding the Environmental Authority;
- All information provided is true and complete; and
- I understand that information given with this Plan of Operations and Audit Statement could become available to the public in accordance with the *Environmental Protection Act 1994* and *Freedom of Information Act 1992*.

Signed:  Date: 30 May 2018

# APPENDICES

## APPENDIX 1 – FROST ENTERPRISES MINING TENURE LAYOUT



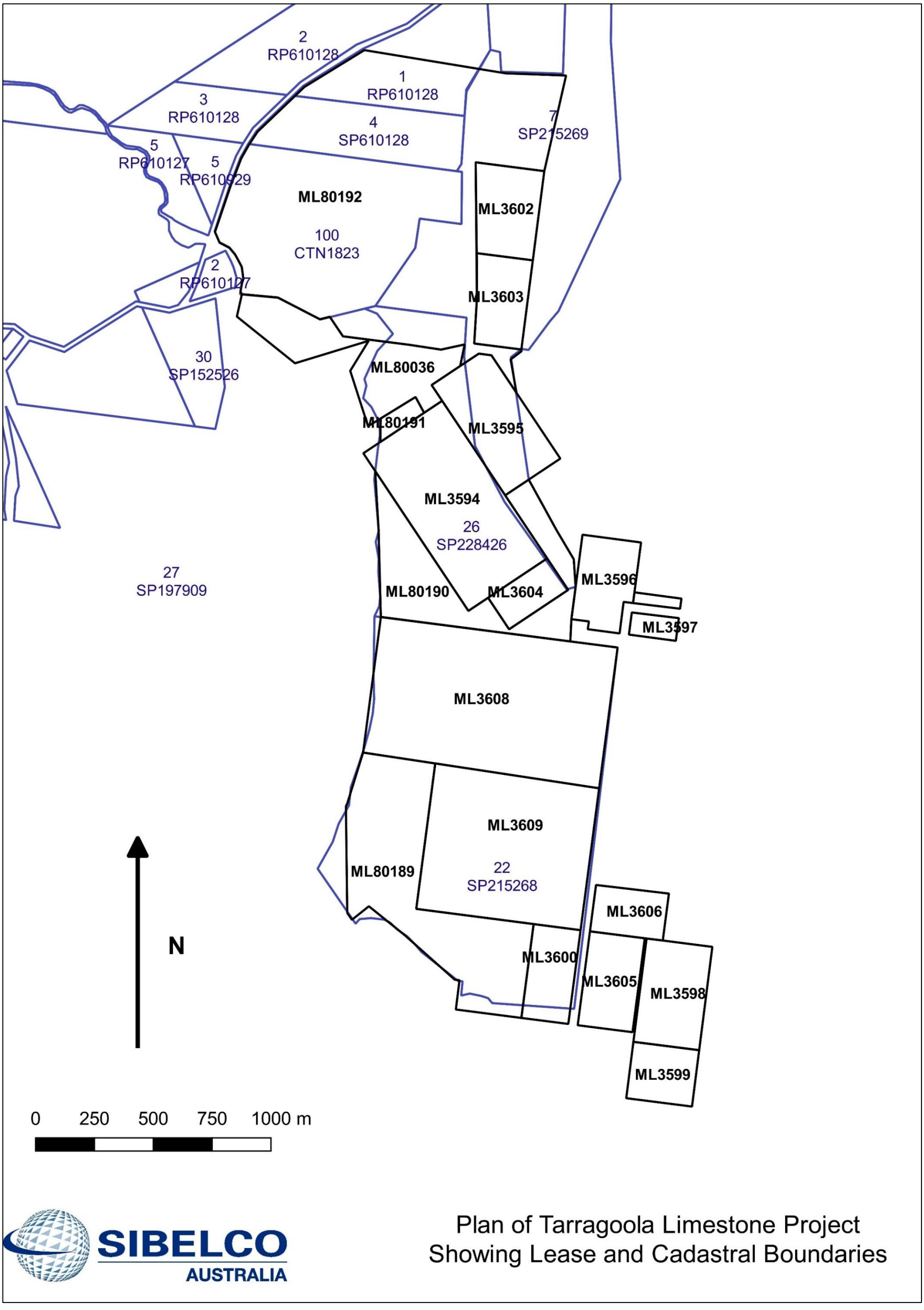

**Taragoola Limestone Project**

Plan of Operations
Lease Boundaries

SIBELCO AUSTRALIA

**Figure 2**

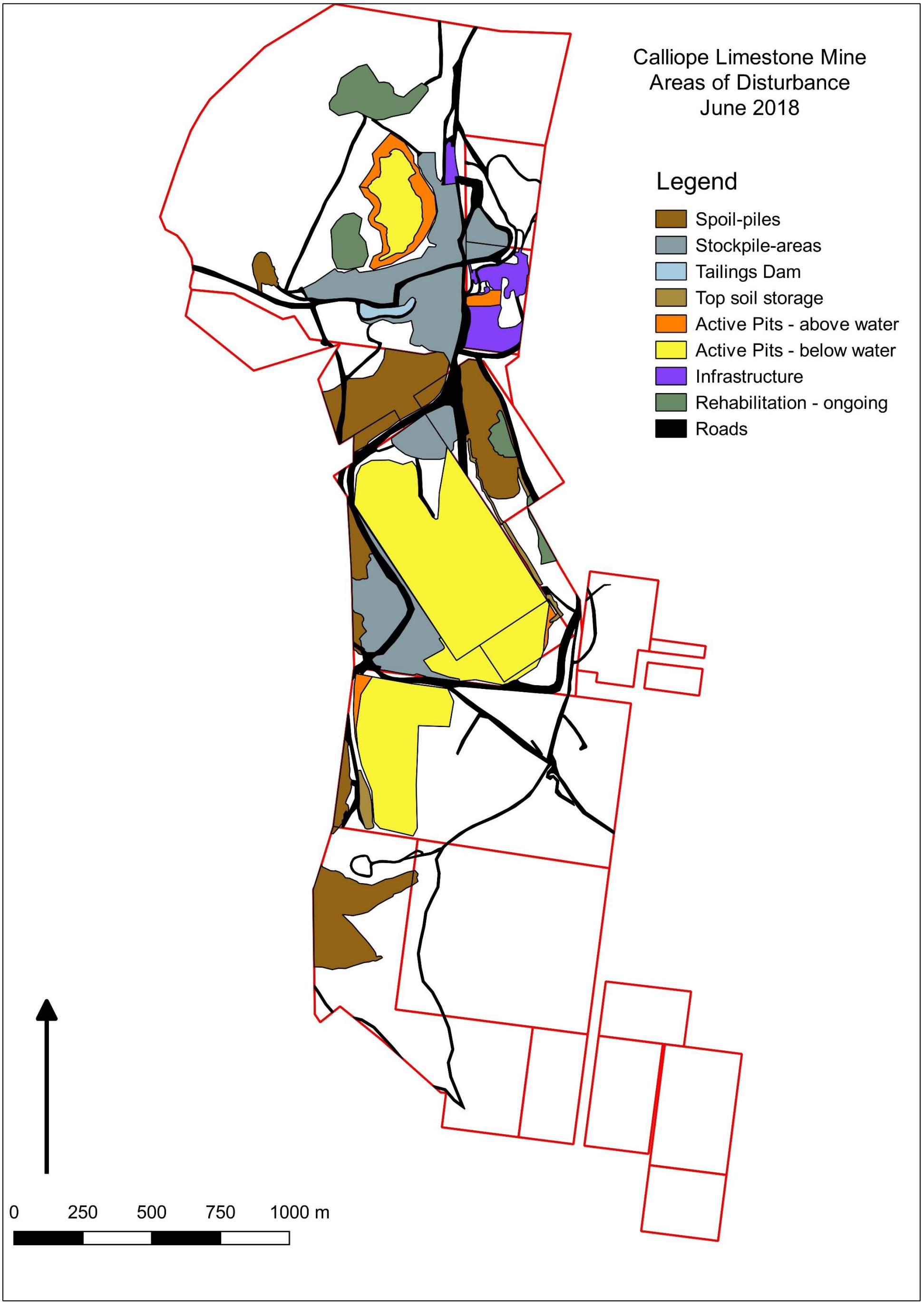
## APPENDIX 1B – PLAN OF LEASE AND CADASTRAL BOUNDARIES



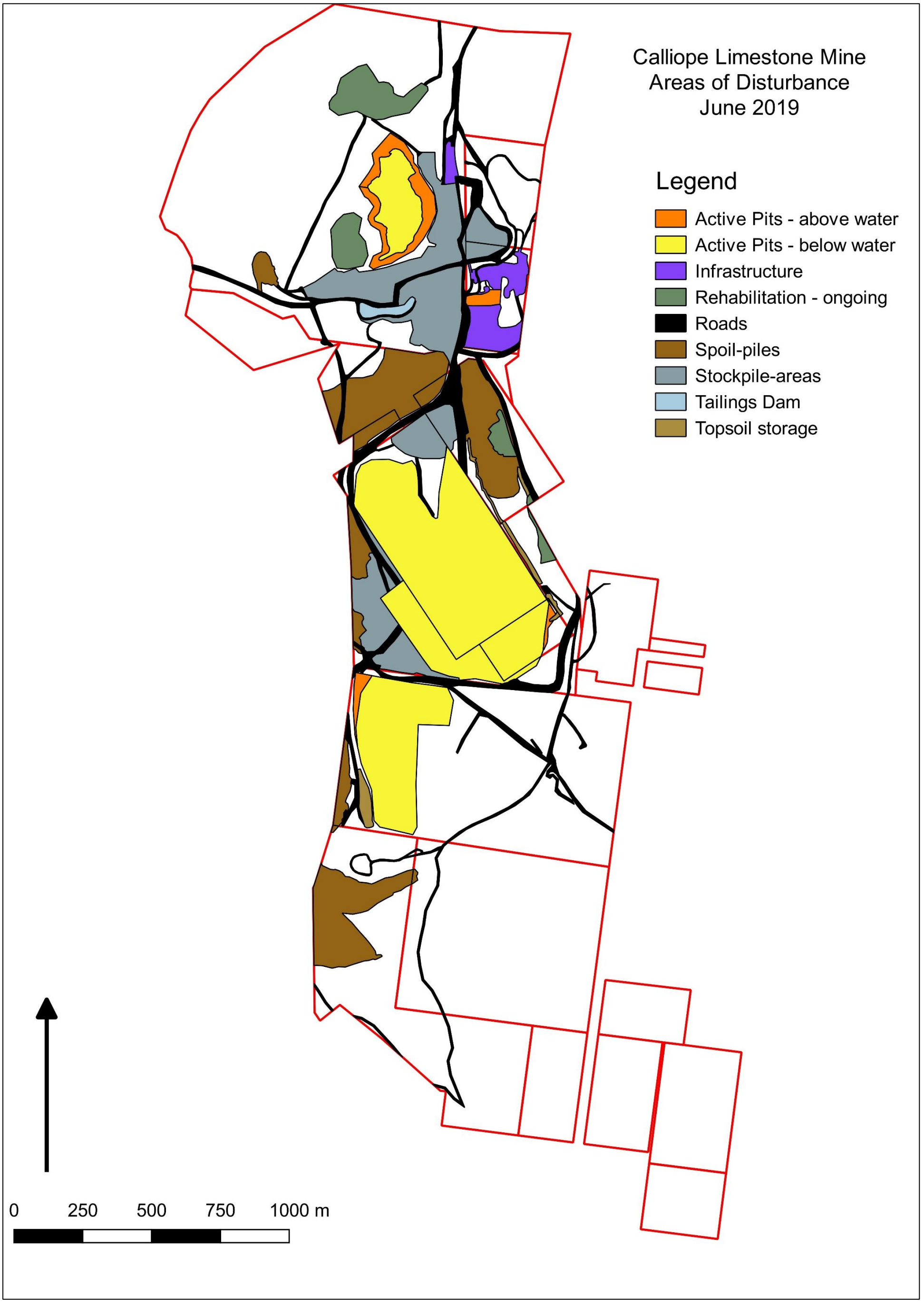

SIBELCO AUSTRALIA

Plan of Tarragoola Limestone Project
Showing Lease and Cadastral Boundaries

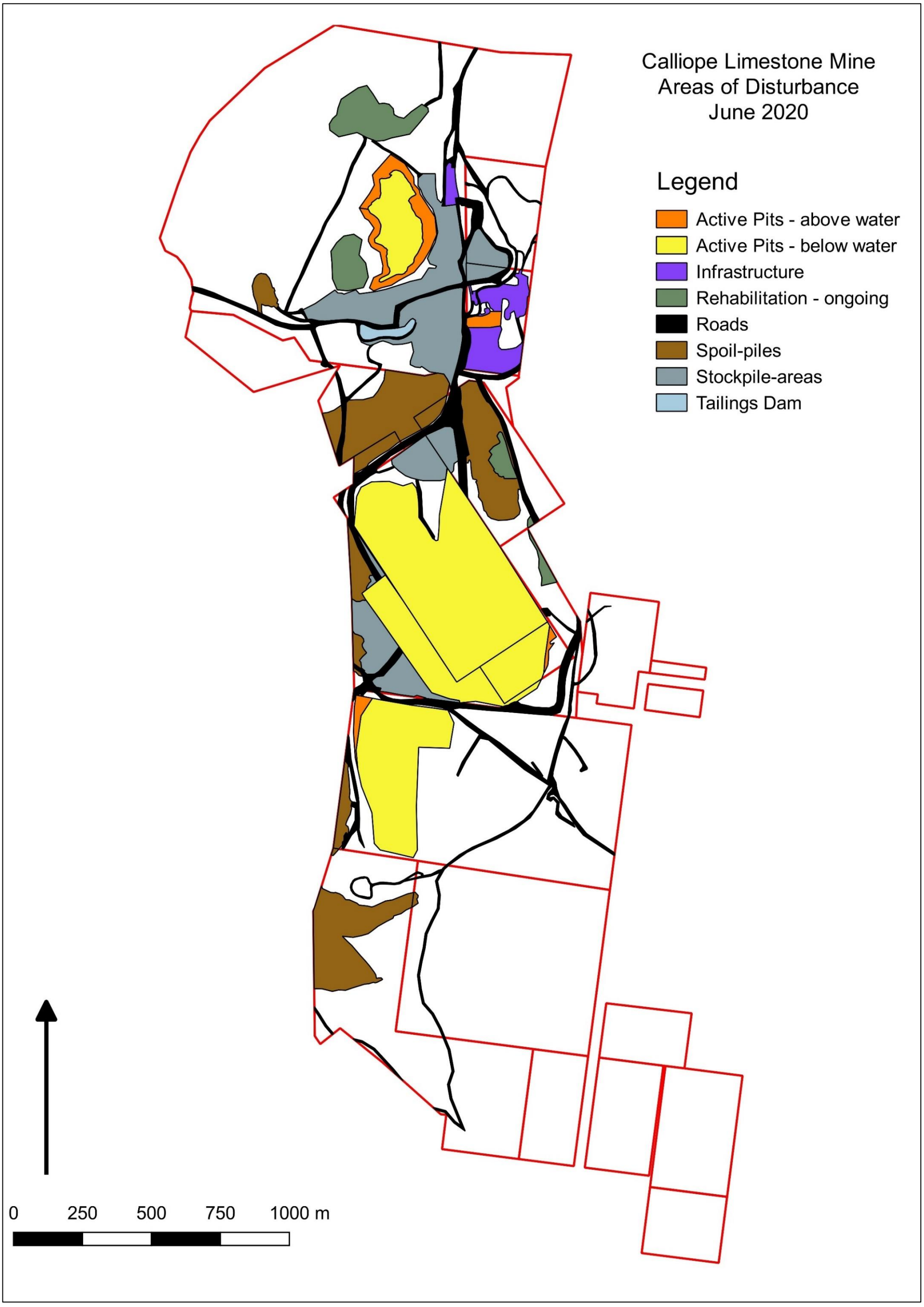
**APPENDIX 2A – SUMMARY OF DISTURBANCE AND REHABILITATION AT JUNE 2018**



**APPENDIX 2B – SUMMARY OF DISTURBANCE AND REHABILITATION AT JUNE 2019**



**APPENDIX 2C – SUMMARY OF DISTURBANCE AND REHABILITATION AT JUNE 2020**

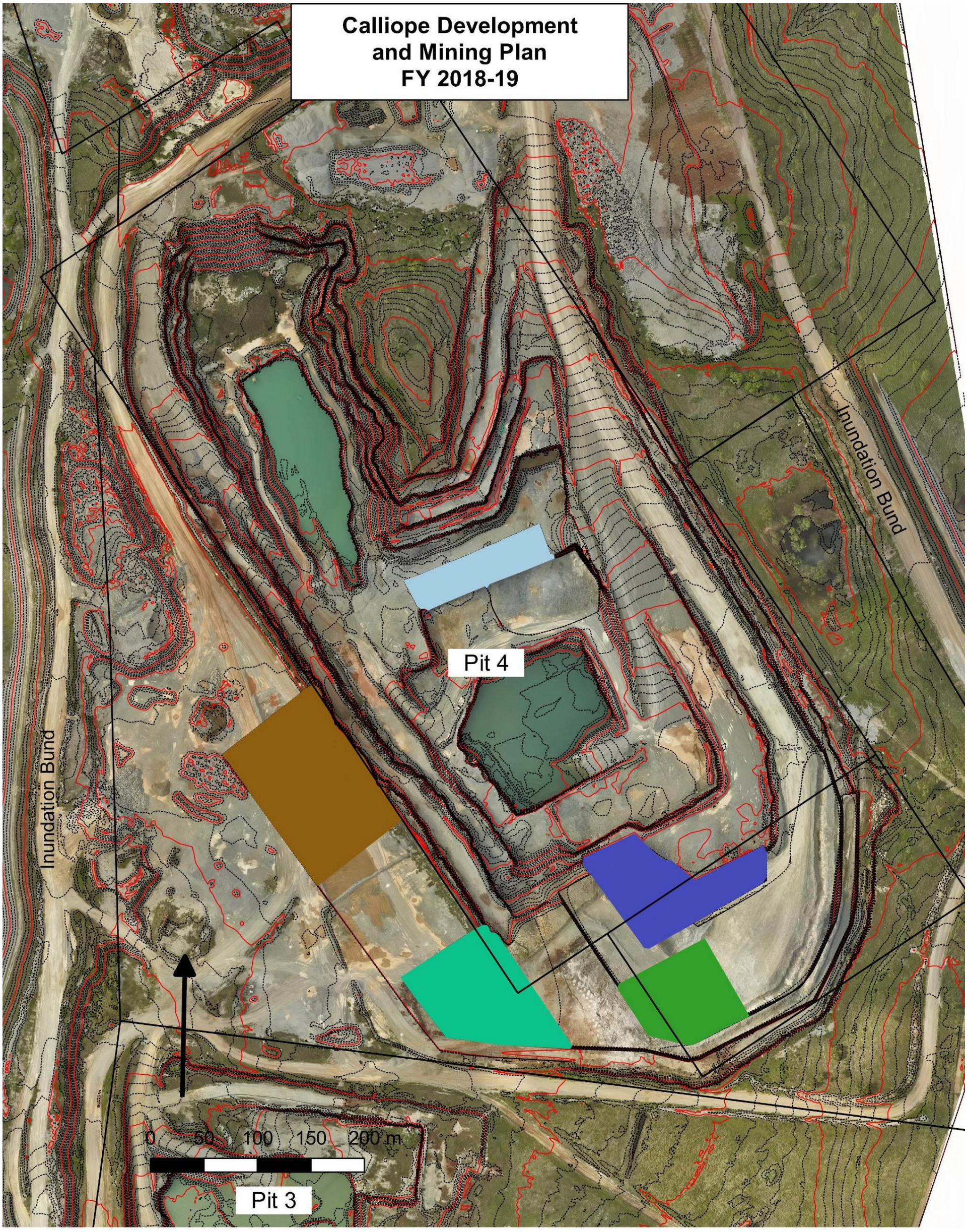


**APPENDIX 2D – SUMMARY OF DISTURBANCE AND REHABILITATION AT JUNE 2021**

**APPENDIX 2E – SUMMARY OF DISTURBANCE AND REHABILITATION AT JUNE 2022**

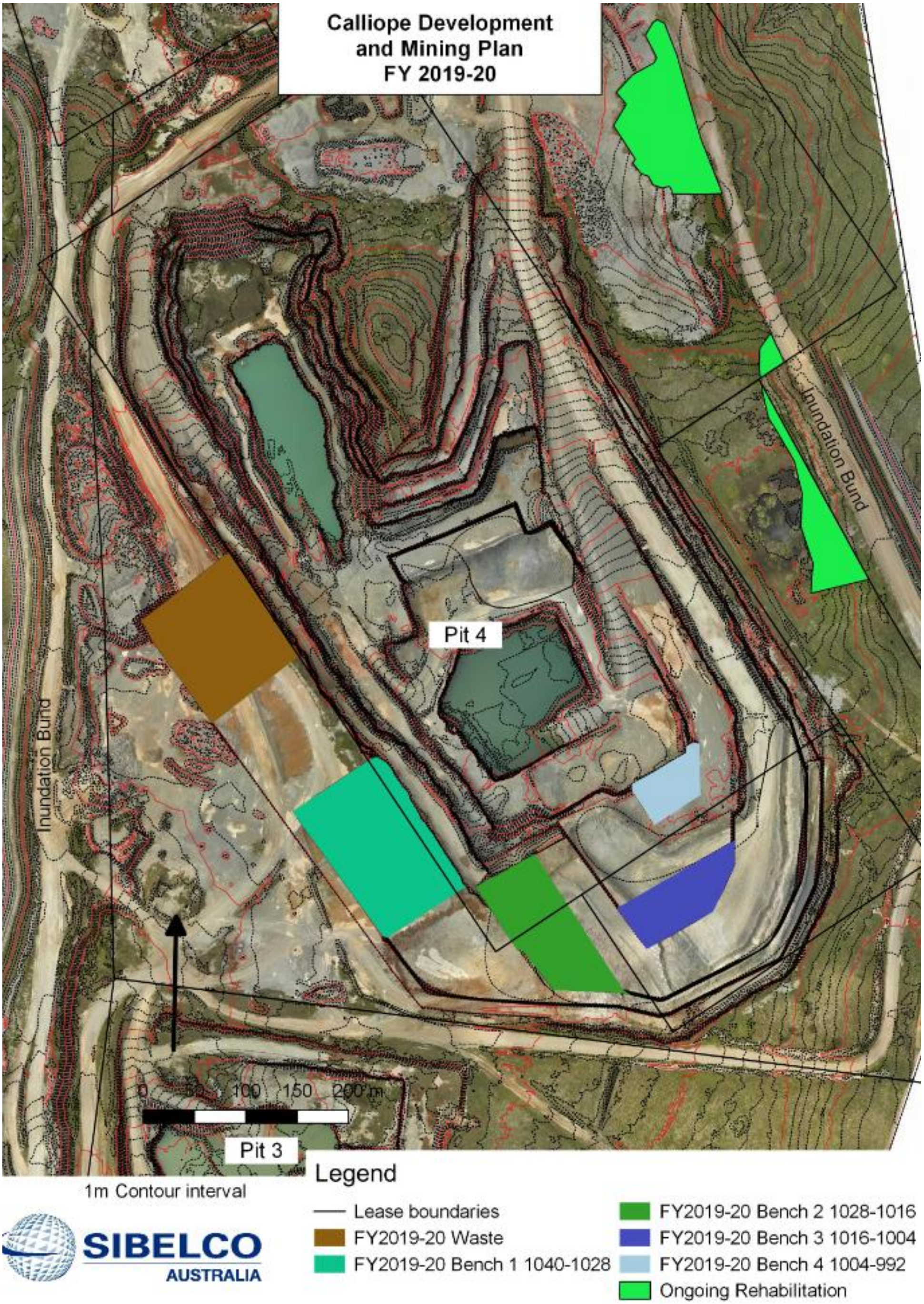
**APPENDIX 2F – SUMMARY OF DISTURBANCE AND REHABILITATION AT JUNE 2023**

## APPENDIX 3 - DEVELOPMENT AND MINING PLAN FY2018-19

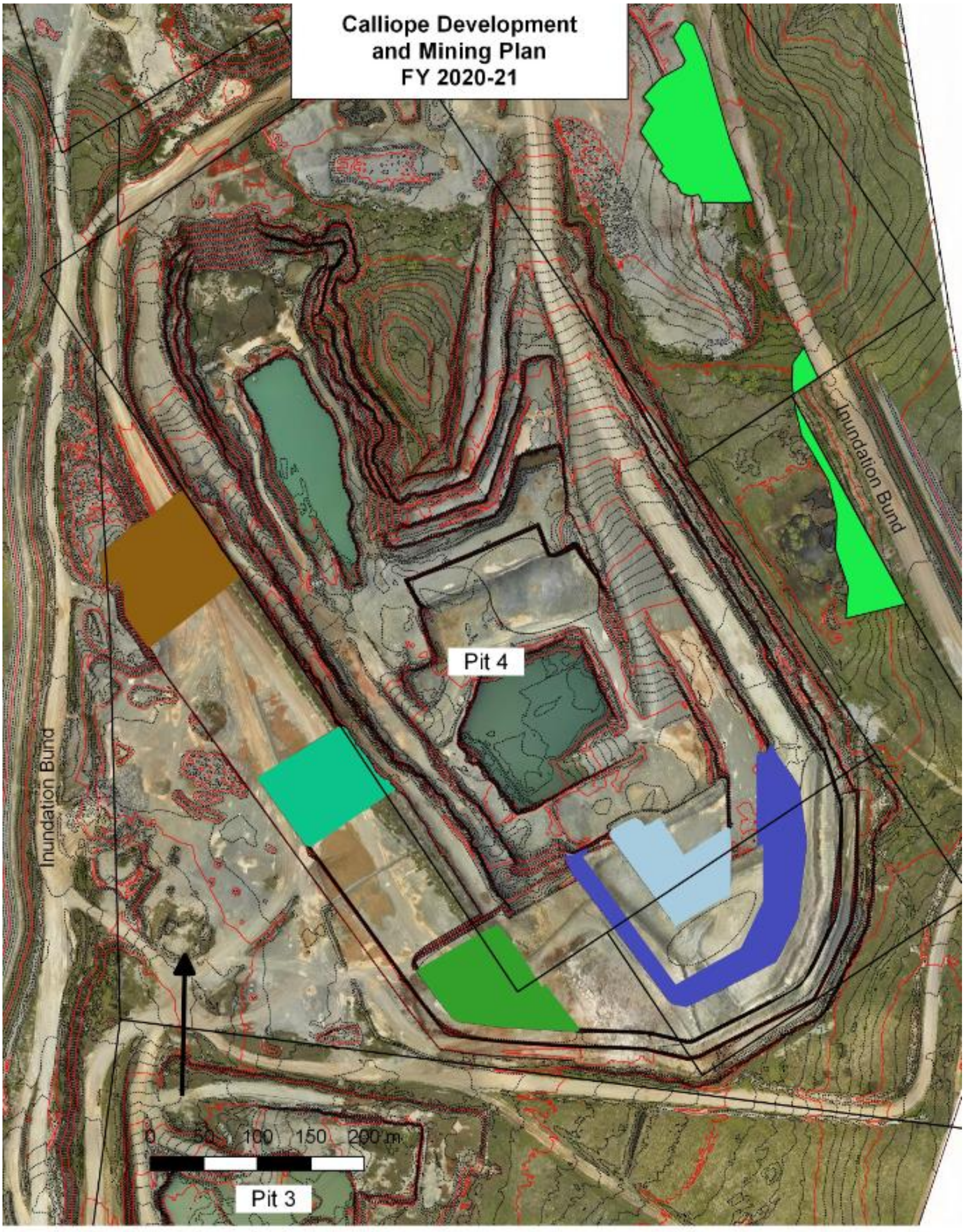



SIBELCO AUSTRALIA

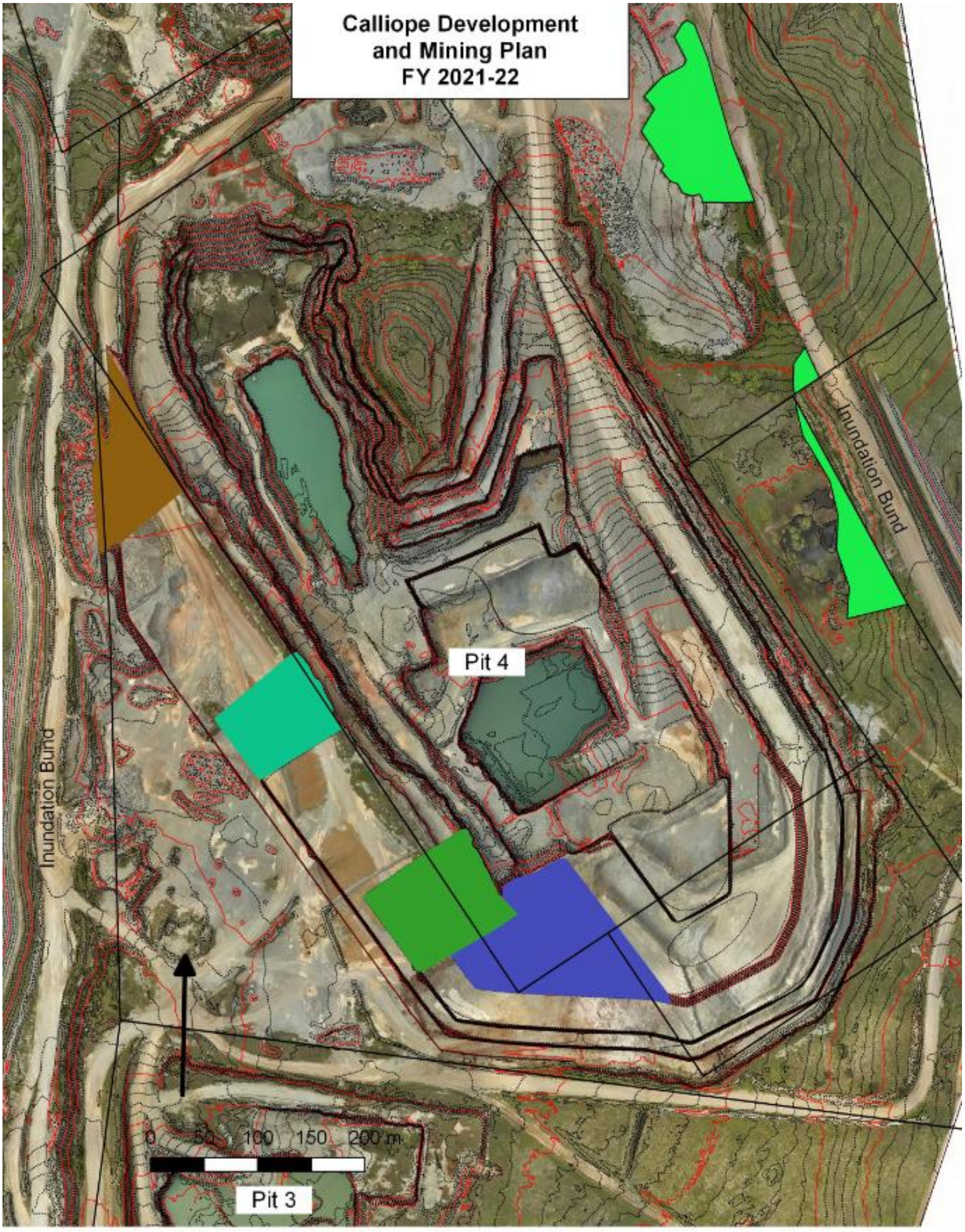
## APPENDIX 4 – DEVELOPMENT AND MINING PLAN FY2019-20



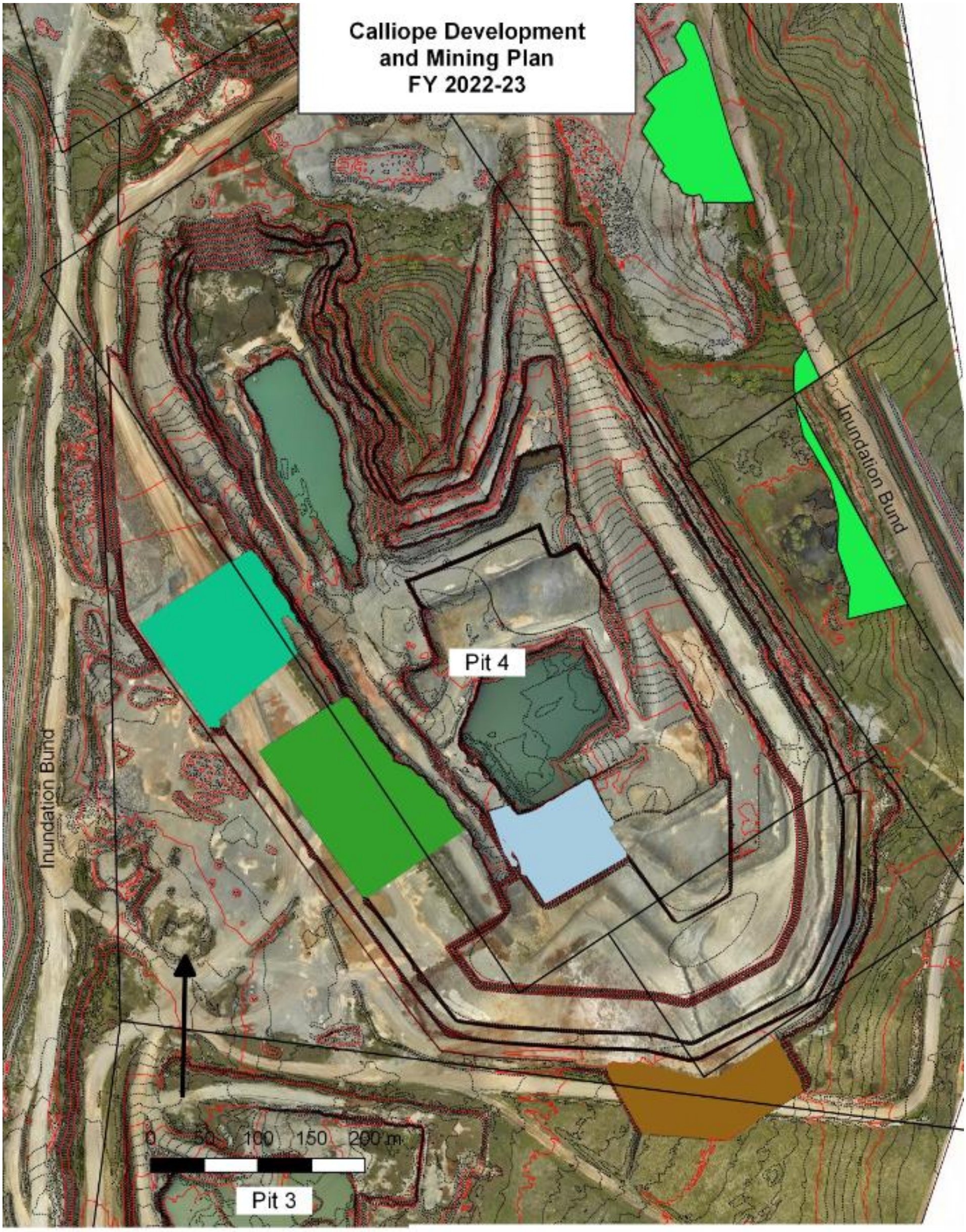
## APPENDIX 5 – DEVELOPMENT AND MINING PLAN FY2020-21



## APPENDIX 6 – DEVELOPMENT AND MINING PLAN FY2021-22



## APPENDIX 7 – DEVELOPMENT AND MINING PLAN FY2022-23



## APPENDIX 8 – TABLES FROM ENVIRONMENTAL AUTHORITY EPML00969013

**Table 1 - Contaminant release points, sources and receiving waters**

| Release point (RP) | Easting (GDA94) | Northing (GDA94) | Contaminant source and location | Monitoring point | Receiving waters |
|---|---|---|---|---|---|
| F1 | 321 432 | 733 2026 | Pit 3 and Pit 4 | End of pipe F1 (Discharge Monitoring Point) | Lake Awoonga Dam |
| F2 | 320 399 | 733 1469 | Undisturbed natural flow and/or Pit 3 | Raggote Ck at F2 (Downstream Monitoring Point) | Farmers Dam |
| C1 | 320 757 | 733 3601 | Pit 1, Pit 2 and Pit 4 | C1 dam spillway (Discharge Monitoring Point) | Pit 2 and/or Recycled Water Storage Dam |
| C2 | 320 102 | 733 3854 | Undisturbed natural stormwater flow | C2 creek adjacent to rail siding road (Upstream Monitoring Point) | Raggote Creek |

**Table 2 - Contaminant release limits**

| Quality characteristic | Release limits | Monitoring frequency |
|---|---|---|
| Electrical conductivity (uS/cm) | 900 | Weekly during discharge |
| pH (pH Unit) | 6.5 (minimum)<br>8.5 (maximum) | Weekly during discharge |
| Total Suspended solids (mg/L) | 100 (maximum)<br>Or when measured at C1, F2 or F1 not more than 110% of value at monitoring point C2 | Weekly during discharge |

**Table 3 - Groundwater monitoring locations and frequency**

| Monitoring point | Easting (GDA 94) | Northing (GDA 94) | Monitoring frequency | | | |
|---|---|---|---|---|---|---|
| | | | Groundwater level | EC, TSS, pH and Major Anions | Metal Screen | Hydrocarbon |
| FM5 | 321430 | 7332650 | Quarterly (Jan, Mar, Jul, Sep) | Six monthly (Jan, Jul) | Annual (Jul) | Annual (Jul) |
| FM6 | 321080 | 7334350 | | | | |

**Table 4 – Groundwater contaminant trigger values**

| Water Quality Indicator | Unit | Trigger Value |
|---|---|---|
| Calcium | µg/L | 250 |
| Chloride | µg/L | 200 |
| $CO_3$ | µg/L | 500 |
| Electrical Conductivity | µS/cm | 1500 |
| $HCO_3$ | µg/L | 500 |
| Magnesium | µg/L | 35 |
| Petroleum Hydrocarbons (Total) | µg/L | 1.0 |
| pH | pH units | 6.5 – 8.5 |
| Potassium | µg/L | 5.0 |
| $SO_4$ | µg/L | 20 |
| Sodium | µg/L | 100 |
| Total Suspended Solids | µg/L | 1500 |

**Table 5 - Noise limits**

| Noise level dB(A) | Monday to Sunday (including public holidays) | | |
|---|---|---|---|
| | 7am - 6pm | 6pm - 10pm | 10pm - 7am |
| | Noise measured at a 'sensitive or commercial place' | | |
| $L_{A10, adj, 10 mins}$ | Background + 5 | Background + 5 | Background + 3 |
| $L_{A1, adj, 10 mins}$ | Background + 10 | Background + 10 | Background + 5 |

*Note: Where "Background" means background sound pressure level measured in accordance with the latest edition of the administering authority's Noise Measurement Manual. Table 5 does not purport to set operating hours for the mining activities.*

**Table 6 – Airblast overpressure level**

| Parameter | Airblast overpressure measured at a sensitive or commercial place | |
|---|---|---|
| | Monday to Sunday 9am - 7pm | Other times and public holidays |
| Air blast overpressure level (dB [Lin] Peak) | Maximum 115 dB for 4 out of 5 consecutive blasts | No blasting to occur |
| Air blast overpressure level (dB [Lin] Peak) | 120 dB maximum | No blasting to occur |

*Note: * Table 6 does not purport to set limits applicable to any particular explosive blast, rather sets design criteria for every explosive blast.*

**Table 7 - Vibration limits**

| Vibration parameter | Vibration measured at a sensitive place | |
|---|---|---|
| | Monday to Sunday 9am - 7pm | Other times and public holidays |
| Peak particle velocity (mm/s) | Maximum 5 mm/s for 4 out of 5 consecutive blasts | No blasting to occur |
| Peak particle velocity (mm/s) | 10 mm/s maximum | No blasting to occur |

## Table 8 - Final land use and rehabilitation approval schedule

| Tenure ID | Disturbance Type | Projective Surface Area (ha) | Post-Mine Land Description | Post-Mine Land Capability/Sustainability Classification |
|---|---|---|---|---|
| ML3602 | Roadways | 0.7 | Roads maintained for land management and access | VIII |
| | Infrastructure | 1.5 | Plants/stockpile area rehabilitate with natural vegetation | |
| ML3603 | Infrastructure | 4.5 | Plants/stockpile area rehabilitate with natural vegetation | VII - VIII |
| | Mine faces above water level | 1.9 | Grasses | |
| | Mine faces below water level | 1.6 | Water reserve | VIII |
| ML3605 | Mining | 17.5 | Livestock, grazing | III |
| ML3606 | Mining | 3.3 | Livestock, grazing | III |
| ML3609 | Mining | 43 | Livestock, grazing | III |
| ML3608 | Infrastructure | 2.4 | Plant/stockpile area rehabilitate with natural vegetation | VIII |
| | Mine faces above water level | 4.4 | Grasses | VIII |
| | Mine faces below water level | 8.8 | Water reserve | VIII |
| | Mining | 42 | Livestock, grazing | III |
| | Topsoil areas | 0.35 | Stockpile area rehabilitate with natural vegetation | III |

| Tenure ID | Disturbance Type | Projective Surface Area (ha) | Post-Mine Land Description | Post-Mine Land Capability/Sustainability Classification |
|---|---|---|---|---|
| ML800036 | Infrastructure | 1.1 | Plants/stockpile area rehabilitate with natural vegetation | VIII |
| | Spoil areas | 18.7 | Grasses | VIII |
| ML3595 | In/roads | 2.1 | Roads retained for access | III |
| | Mining | 12.7 | Livestock, grazing | III |
| ML3594 | Infrastructure | 0.3 | Plant/stockpile area rehabilitate with natural vegetation | VIII |
| | Mine faces above water level | 7.4 | Grasses | VIII |
| | Mine faces below water level | 18.1 | Water reserve | |
| | Mining | 4.4 | Livestock, grazing | III |
| | Product stockpile areas | 1.1 | Plant/stockpile area rehabilitate with natural vegetation | VIII |
| ML3604 | Mine faces above water level | 1.6 | Grasses | VIII |
| | Mining | 3 | Livestock, grazing | III |
| ML3596 | Mining | 6.3 | Livestock, grazing | III |
| ML3597 | Mining | 0.8 | Livestock, grazing | III |
| ML3600 | Native bush | | | |
| ML3598 | Mining | 1.8 | Livestock, grazing | VIII |
| ML3599 | Mining | 5.3 | Livestock, grazing | VIII |
| ML80189 | Spoil areas | 1.1 | Grasses | VIII |

| Tenure ID | Disturbance Type | Projective Surface Area (ha) | Post-Mine Land Description | Post-Mine Land Capability/Sustainability Classification |
|---|---|---|---|---|
| ML80190 | Roadways | 2.9 | Roads maintained for land management and access | VIII |
| ML80191 | Roadways | 0.4 | Roads maintained for land management and access | VIII |
| ML80192 | Roadways | 0.4 | Roads maintained for land management and access | VIII |
| | Infrastructure | 17.6 | Plant/stockpile area rehabilitate with natural vegetation | VIII |
| | Mine faces above water level | 5.8 | Grasses | VIII |
| | Mine faces below water level | 5.8 | Water reserve | |

**Table 9 - Landform design criteria**

| Disturbance type | Maximum slope range % | Projective surface area (ha) |
|---|---|---|
| Residual void(s) | < = 128% (52°) | 30 ha Approximate values +/- 20% |
| Rejects | 25% | |

**Table 10 - Residual void design**

| Void identification | Void wall – competent rock slope (%) | Void low wall – incompetent rock slope (%) | Void maximum surface area (ha) |
|---|---|---|---|
| ML3602 | < = 128% (52°) | < = 70% (35°) | |
| ML3603 | < = 128% (52°) | < = 70% (35°) | 3.6 |
| ML3608 | < = 128% (52°) | < = 70% (35°) | 12.3 |
| ML3594 | < = 128% (52°) | < = 70% (35°) | 35 |
| ML3604 | < = 128% (52°) | < = 70% (35°) | 3 |
| ML80192 | < = 128% (52°) | < = 70% (35°) | 11.6 |