Plan of Operations

Bajool Marble Mine

2014 to 2019

Environmental Authority MIM800074702

Incorporating Mining Leases

ML 3663
ML 3638
ML 3662
ML 3666
ML 80028

Prepared by:

OMYA AUSTRALIA PTY LTD
SECTION 1: DESCRIPTION OF THE OPERATIONS

1.1 Introduction 4
1.2 The Operating Company 4
1.3 Location 5
1.4 Mining Tenements 5
1.5 The Land to Which the Plan Applies 8
1.6 Mine Development, Current Status 8
1.7 Activities During This Plan of Operations 9
1.7.1 Mining Activities 9
1.7.2 Mining Equipment 9
1.7.3 Processing 11
1.7.4 Production Waste Management 11
1.7.5 Exploration 12
1.7.6 Infrastructure 12
1.7.7 Sediment Dams / Water Management Structures 12
1.7.8 Roads 13
1.7.9 Fuel, Oil and Equipment Maintenance Areas 13

SECTION 2: ACTION PROGRAM

2.1 Introduction 14

SECTION 3: SCHEDULE OF REHABILITATION & REHABILITATION COSTS

3.1 Rehabilitation 22
3.1.2 Rehabilitation Plan Summary by Rehabilitation Area 23
3.2 Cycas Megacarpa Recovery Plan 24
3.2.1 Propagation Licence 25
3.2.2 Harvesting 25
3.2.3 Storage 25
3.2.4 Planting in Pots 25
3.2.5 Direct Seeding 25
3.2.6 Monitoring and Record Keeping 25
3.3 Weed Management 26
3.4 Schedule of Rehabilitation Costs 28

SECTION 4: COMPLIANCE STATEMENT

4.1 Auditor’s Details 29
4.2 Compliance Summary 29
4.3 Financial Assurance in Accordance with the Requirements of the EP Act. 31

TABLES

Table 1 Mining Tenements 6
Table 2 Mining Equipment 9
Table 3 Action Program 14-21
Table 4 Areas of Existing & Planned Disturbance & Rehabilitation 22
Table 5 Financial Assurance - Rehabilitation Costs

FIGURES

Figure 1 Local Setting 6
Figure 2 Mining Tenements 6
Figure 3 All Activities 10
Figure 4 Weed Zones 27
Section 1

DESCRIPTION OF THE OPERATIONS

1.1 INTRODUCTION

This Plan of Operations (PoO) has been prepared for the Bajool Marble Mine located 17km south of the village of Bajool in Central Queensland.

The PoO presents relevant information about the mine and describes the actions and programmes necessary to meet the conditions of the Non-Standard Environmental Authority (Mining Activities) Permit No.: MIM800074702. The PoO incorporates a proposed amount of financial assurance together with a Compliance Statement. The PoO has been compiled in accordance with Section 288 of the Queensland Environmental Protection Act 1994 (Feb 2014 Reprint).

The previous PoO for the Bajool Marble Mine was prepared in 2009 for a five year period, and similarly this PoO, describes the activities of the ongoing mining venture with no accurate closure date yet determined. This PoO proposed start date is the 2\textsuperscript{nd} of December 2014, and is intended to be in place until 2\textsuperscript{nd} December 2019, unless there are amendments or replacement of this PoO.

The Bajool Marble Mine is not required under Section 405 of the EP Act to have a Site Management Plan for the management of contaminated lands as there are no acid mine drainage, salinity or other contaminated land issues on the mining lease.

1.2 THE OPERATING COMPANY

Omya Australia Pty Limited is the owner and operator of the Bajool Marble Mine, and holder of the Environmental Authority.

Omya Australia Pty Ltd, previously Omya Southern Pty Ltd, was formed in Australia in1979, principally to manufacture and market high quality calcium carbonate functional fillers for the paint, plastics, paper and general building industries. The Company is 100\% owned by Omya AG of Switzerland (formerly Pluess-Staufner AG) and through Omya AG, has access to the world’s most advanced technology relating to the manufacture and marketing of calcite products. Since commencing operations, the Company has made Australia virtually self-sufficient in these important processed manufacturing materials as well as establishing significant export sales into South East Asia and New Zealand. Integration with the production and marketing facilities of Southern Limestone Pty Limited in 1988 extended the Company’s product range into almost every facet of calcium carbonate application, including glass making, coal mine stone dusting and agriculture.

The Company’s Group Operations head office is based in Bathurst, NSW and its registered office is in the Sydney suburb of Lindfield. Customers’ requirements are serviced through warehouses located in all mainland state capitals with sales offices in Brisbane, Sydney, Melbourne and Adelaide.

In addition to its comprehensive range of calcite products, the Company represents a number of major local and overseas industrial mineral suppliers.
1.3 LOCATION

The Bajool Marble Mine is located approximately 17 km south of Bajool (Figure 1) and incorporates 5 granted mining leases covering a total area of 232.94 ha.

1.4 MINING TENEMENTS

Details of the individual mining leases are presented in Table 1.

The tenements are shown on Figure 2.

<table>
<thead>
<tr>
<th>Mining Lease No.</th>
<th>Area (ha)</th>
<th>Expiry Date</th>
<th>Purpose</th>
<th>Prior Titles</th>
<th>Real Property Details</th>
<th>Landowners</th>
</tr>
</thead>
<tbody>
<tr>
<td>3663</td>
<td>79.49</td>
<td>30/11/2032</td>
<td>Mining for Lime (Limestone &amp; Marble)</td>
<td>ML 816</td>
<td>Lot 22, DS 142; Lot 119, DS 545; Lot 430, OL 168; Lot 50, USL 34948</td>
<td>Lease Application by Omya (67.30 ha); B&amp;H McCamley (0.21 ha); O,J&amp;G Stunzner (11.47 ha); VCL (0.51 ha)</td>
</tr>
<tr>
<td>3638</td>
<td>22.59</td>
<td>28/02/2024</td>
<td>Mining for Limestone</td>
<td>ML 750</td>
<td>Lot 22, DS 142; Lot 50, USL 34948</td>
<td>Lease Application by Omya (22.45 ha); VCL (0.14 ha)</td>
</tr>
<tr>
<td>3662</td>
<td>12.67</td>
<td>31/05/2032</td>
<td>Mining for limestone and dolomite and for all purposes to effectively carry out that operation</td>
<td>ML 815</td>
<td>Lot 430, OL 168; Lot 50, USL 34948</td>
<td>O,J&amp;G Stunzner (8.14 ha); VCL (4.53 ha)</td>
</tr>
<tr>
<td>3666</td>
<td>3.45</td>
<td>31/07/2032</td>
<td>Mining for limestone and dolomite and for all purposes to effectively carry out that operation</td>
<td>ML 819</td>
<td>Lot 22, DS 142; Lot 430, OL 168; Lot 50, USL 34948</td>
<td>Lease Application by Omya (2.49 ha); O,J&amp;G Stunzner (0.06 ha); VCL (0.09 ha)</td>
</tr>
<tr>
<td>80028*</td>
<td>114.74</td>
<td>30/09/2026</td>
<td>Mining for limestone and dolomite and for all purposes to effectively carry out that operation</td>
<td>ML 5810</td>
<td>Lot 22, DS 142; Lot 119, DS 545; Lot 40, DT 40133</td>
<td>Lease Application by Omya (0.74 ha); B&amp;H McCamley (0.27 ha); Omya Australia Pty Ltd; B&amp;H McCamley; B&amp;H McCamley; Omya Australia Pty Ltd; B&amp;H McCamley (24.5 ha); D&amp;C Wood (1.4 ha); Omya Australia Pty Ltd; O,J&amp;G Stunzner (9.2 ha); Road Reserve (1.89 ha)</td>
</tr>
<tr>
<td>MLA 80167</td>
<td>19.25</td>
<td>Pending Approval</td>
<td>Mine Waste/Spoil Dumps</td>
<td>None</td>
<td>Lot 37, DT 40128</td>
<td>O,J&amp;G Stunzner</td>
</tr>
</tbody>
</table>

Note *: ML 80028 represents a consolidation of mining leases 5810, 5811, 5812, 5814, 5825, 5827, 5884 and 5885.
1.5 THE LAND TO WHICH THE PLAN APPLIES

Five native plant communities have been identified within the lease (Figure 3). These are:

a. Semi evergreen vine thicket and forest growing on marble and adjacent metamorphic rock. This rainforest community is the predominant assemblage on the lease and dominates the two proposed rock dumps and proposed new marble extraction areas.

b. *Eucalyptus tereticornis*/*Eucalyptus crebra* shrubby woodland on minor drainage channels and associated valleys especially within the eastern rock dump.

c. *Eucalyptus crebra/Eucalyptus melanophloia/Corymbia erythrophloia* grassy open woodland on the western slopes of the lease. This is a heavily disturbed plant community affected by fire and clearing.

d. Stream fringing vine forest on drainage lines flowing generally east.

e. Stream fringing open forest on drainage lines flowing generally west.

This land system is described as “hilly volcanic country with eucalypt woodlands”. Geology is described by Speck et al. (1968) as “relatively unweathered or deeply weathered, moderately to steeply dipping extrusive and pyroclastic volcanics, commonly andesitic but with a range of rock types including trachytic, dacitic, and basaltic types, and with interbedded sediments largely of andesitic provenance; mainly of lower Permian to Upper Carboniferous age, but locally Devonian or Mesozoic.”

1.6 MINE DEVELOPMENT - CURRENT STATUS

The existing status of mine development is shown on Figure 3 and comprises two principle mine excavations:

The Northern Mine; and
The Wells Mine.

All activities in the Northern Mine were placed on hold in May 1998 due to problems achieving consistency in raw materials quality, the nature of the topography surrounding the mine, the Company’s acquisition of ML’s 3638, 3666 and 3662 (Wells Mine) and the results of a geological assessment of those leases. No further development in the Northern Mine is envisaged in the medium term and the void currently acts as important water catchment and storage facility for the site. All water for the processing plant is currently sourced from this void.

The Wells Mine currently covers an area of 13.8 hectares. The mine area currently extends down to 110m AHD; the elevation of the pit perimeter varies between 145m and 160m AHD.

An additional small open cut quarry was located adjacent and to the east of the crusher. Development of this pit commenced in 1996 as part of the proposed lateral expansion of the Northern Mine identified in the 1996 PoO but was abandoned due to the extent of discolouration and dykes within the area. The small pit has since been backfilled and successfully revegetated.

In 2014, mine production consisted of 243,000 tonnes of crusher feed and 99,000 tonnes of pit waste. From the crusher feed, 159,853 tonnes of white marble was produced and despatched to plants in Geelong (Victoria), Boyer (Tasmania) and TeKuiti (New Zealand) by ship, via the Port of Gladstone. And, 36,871 tonnes of marble was milled on-site to produce stone dust for central Queensland coal mines. Approximately 22,000 tonnes of the crushed output was segregated by the photo-sorter and downgraded to waste.
1.7 ACTIVITIES DURING THIS PLAN OF OPERATIONS 2014 TO 2019

1.7.1 Mining Activities

During the term of this PoO, extraction activities will be confined to Wells Mine and involve the following activities, as illustrated on Figure 3.

(i) Cap rock blasting within the pre-strip area on the East side of the pit and inside the perimeter haul road. Approximately 12,000m³ will be blasted each year over the first two years of this PoO. All cap rock waste will be hauled to the Wells Waste Rock Emplacement.

(ii) Production blasting will continue from ten metre benches developed down to the 100,m AHD level in the centre of the pit.

   Blast Size  Between 10,000m³ and 15,000m³
   Blast Frequency Between 8 and 12 blasts per annum

(iii) Production marble extraction. An average of approximately 300,000tpa production rock will be mined each year over the five years of this PoO.

Approximately 150,000tpa will be high grade white product, 40,000tpa will be low grade product processed on-site into stone dust, 35,000tpa will constitute reject material from the crusher and photo-sorter and 75,000tpa will constitute quarry waste visually selected by the excavator operator for placement in the Wells Waste Rock Emplacement. Photo-sorter and crusher reject not required for road sheeting or maintenance activities will be placed within the new western access ramp into the quarry between the 142m AHD and 166m AHD contours (Figure 3).

1.7.2 Mining Equipment

Table 2 lists the numbers and types of mining equipment currently used at the Bajool Marble Mine together with its principal function. This table has been updated to reflect the new mining equipment bought to site by Omya Australia Pty Ltd in 2014. The same or similar numbers and types of equipment will be adequate for the planned activities during the term of this PoO.

**TABLE 2**

<table>
<thead>
<tr>
<th>Type</th>
<th>No.</th>
<th>Function</th>
<th>Ownership</th>
<th>Status On-Site (use)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Komatsu PC 450 Excavator</td>
<td>1</td>
<td>Loading mine material</td>
<td>Omya</td>
<td>FT</td>
</tr>
<tr>
<td>Komatsu HM400 Haul Truck</td>
<td>1</td>
<td>Haulage of mine material</td>
<td>Omya</td>
<td>FT</td>
</tr>
<tr>
<td>Caterpillar C730 Haul Truck</td>
<td>1</td>
<td>Haulage of mine material</td>
<td>Contractor</td>
<td></td>
</tr>
<tr>
<td>Mack R600 Truck</td>
<td>1</td>
<td>Water truck, dust suppression</td>
<td>Contractor</td>
<td>FT (PT)</td>
</tr>
<tr>
<td>Service Truck</td>
<td>1</td>
<td>Servicing Contractors mobile equipment</td>
<td>Contractor</td>
<td>FT (PT)</td>
</tr>
<tr>
<td>Hydraulic drill rig</td>
<td>1</td>
<td>Blast hole drilling</td>
<td>Contractor</td>
<td>PT (C)</td>
</tr>
</tbody>
</table>

FT = Full Time
PT = Part Time, < 50% of time
C = Campaign
1.7.3 Processing

The processing of production marble from the Bajool Marble Mine is dependent on the product sought, market and quality considerations. Primary and secondary crushing, screening and photosorting (optical sorting) of the crushed marble are undertaken at the processing facility within the Northern Mine area, while milling of products for coal mine dusting and agriculture are undertaken at the milling facilities adjacent to the mine office. All production marble is transported to the primary crusher (either directly by haul truck or indirectly via a ROM or oversize stockpile and front-end loader).

An on-site laboratory is adjacent to the crusher.

1.7.4 Production Waste Management

The Bajool Marble mine does not require any Dams containing hazardous waste, as all processing is dry crushing.

Wastes generated from the mining of marble to produce high-whiteness industrial fillers comprise cap rock (generally the upper 2m) of material overlying the high quality marble and production wastes selectively separated by the excavator within the open cut quarry and at the photo-sorter.

There are three existing waste rock emplacements at the mine as shown on Figure 3. The Northern Waste Rock Emplacement, within ML 80028, was formerly used for the storage of waste materials produced from the Northern Mine. This waste rock emplacement is no longer active.

The Southern Waste Rock Emplacement (Figure 3) within ML’s 80028 and 3663, formerly received waste material from the small pit east of the current crusher site. It has been successfully revegetated below the 142m AHD level. The crusher rejects are placed on the 142m AHD level and the ROM or oversize stockpiles are located on the 166m AHD level.

The Wells Waste Rock Emplacement is located near the southern boundary of the Company’s group of tenements. It is currently the only active Waste Rock Emplacement.

Where possible, the Company targets exhausted mining areas for backfill or re-contouring with waste rock. An example of this is the small pit east of the current crusher site (Rehab Area 2). It has been successfully backfilled with waste rock, re-profiled, top dressed with topsoil and revegetated.

At present, there is only one other mined out void, namely the Northern Mine. This void currently serves as an important clean water reservoir that supplies the operation with water for dust suppression. The Company has investigated alternative sources of water but, to date has not been able to identify an alternative. As such, disposal of waste rock in the Northern Mine void is not a suitable option at this time.

Construction of the Wells Waste Rock Emplacement near Wells Mine commenced in 2004. All waste rock from the Wells Mine is placed in this area. The site is a topographic low containing shrubby ironbark / bloodwood woodland within a small catchment area. It is a suitable place to construct a geotechnically stable waste rock emplacement within an economic haulage distance from the active (and potentially future active) mining areas, without sterilising any areas of resource. It has the least possible environmental impact of the sites that were considered, in particular, the impact on visual amenity and surface water. Its location is shown on Figure 3.

The expansion of the Wells Waste Rock Emplacement will continue with staged clearing, and topsoil removal up to the 145m AHD contour on the east side, followed by dumping waste rock in 10m to 20m high lifts. Development in this manner enables the earliest rehabilitation of the waste rock surface and minimizes the potential for sediment discharge.
The Wells Waste Rock Emplacement has the following final-design parameters:

- 1:3 (V:H) external batters, ie. 18°;
- 4m wide bench with contour bank at 10m vertical intervals; and
- a final height similar to the surrounding ridge lines.

The stripped vegetation and topsoil are directly placed on available rehabilitation areas where possible. If such areas are not available, the vegetation and topsoil are pushed up into windrows around the perimeter of the Wells Waste Emplacement Area and temporarily stockpiled. A rock drain has been installed along the drainage lines at the base of the waste rock emplacement disturbance area prior to waste placement.

The Wells Waste Rock Emplacement has been successfully rehabilitated between the toe at 110m AHD and 125m AHD (Rehab Area 3).

During the term of this PoO, it will be filled between the 125m AHD and 145m AHD levels

1.7.5 Exploration

Limited exploration activities are undertaken within the Company’s leases to delineate the extent of the resource, assess resource quality and assist mine planning. Depending on the purpose of the exploration, activities undertaken comprise limited amounts of clearing for drill rig access and drilling.

The Geological Resources at Bajool are large, but the proven reserves are small - they are confined to the area below the floor of the current pit.

During the term of this PoO, the company intends to increase the Proven Reserves. More specifically, it plans to drill a series of holes within the 4.0 hectares of outcropping marble located around the south west perimeter of Wells pit. The drilling will verify the continuity of white marble and the amount of inter-burden down to a depth of 50 metres.

The drilling data will be used to make an informed decision about the pit expansion.

1.7.6 Infrastructure

All existing infrastructure will be required and maintained for the term of this PoO. There will be no new areas of disturbance associated with infrastructure during the term of this PoO.

1.7.7 Sediment Dams / Water Management Structures

As no catchment areas will be completely rehabilitated during the term of this PoO, all existing sediment dams will be retained.

During the term of this PoO:

- Sediment Dams No. 1, 2, 4, 6 & 7 will be maintained through accumulated fines removal and assessment of wall integrity and remedial action of any issues noted.
- Some additional re-profiling of the Northern Waste Rock Emplacement (Rehab Area 4) will be done prior to revegetation works so as to direct more surface drainage water back into the emplacement where it will percolate through the waste rock and filter sediment;
1.7.8 Roads

All existing roads will be maintained for the term of this PoO.

1.7.9 Fuel, Oil and Equipment Maintenance Areas

Omya maintains a workshop and two fuel tanks, a bunded above ground fuel tank (40,000L) and an above ground fuel tank (13,500L) inside a storage shed with a concrete floor and sump. The fuel storage shed has been constructed and is maintained to meet the requirements of AS 1940 and is also used to store lubricants in drums on bunded pallets.

Waste oil and maintenance consumables are removed off-site by the Company’s equipment maintenance contractor and disposed of in accordance with the contractor’s Environmental Authority. Waste oil is currently stored in drums and is collected by a waste oil recycling contractor while maintenance consumables are drained of any residual oil and stored in dumpsters for subsequent disposal by a Licensed Contractor; currently Cleanaway.

A mobile fuel trailer is used for in-situ refuelling of the excavator, water pump and blast hole drill rig.
Section 2

ACTION PROGRAM

2.1 INTRODUCTION

The following tabulated action programme (Table 3) for the period from December 2014 to December 2019 identifies the Company’s environmental management program and how it complies with the conditions of the Environmental Authority. The Company’s Senior Site Executive, Mr Gary Hetherington, is responsible for monitoring of the planned actions.

Where relevant, cross-referencing to text and or figures is provided to avoid unnecessary duplication of information contained elsewhere in this PoO.

<table>
<thead>
<tr>
<th>ENVIRONMENTAL AUTHORITY CONDITION</th>
<th>CONTROL STRATEGY</th>
<th>ACTION PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>G:1 Provide a financial assurance in the amount and form required by the administering authority prior to the commencement of activities proposed under this environmental authority.</strong></td>
<td>Submit the financial assurance in the amount and form required by the administering authority.</td>
<td>The amount of financial assurance has been calculated in accordance with the EPA Guideline and based on the rehabilitation costs presented in Section 3 of this Plan of Operations.</td>
</tr>
<tr>
<td><strong>G:2 The financial assurance is to remain in force until the administering authority are satisfied that no claim on the assurance is likely.</strong></td>
<td>The financial assurance will remain in force until otherwise advised by the administering authority.</td>
<td>No action – financial assurance to remain in force.</td>
</tr>
<tr>
<td><strong>G:3 The holder must:</strong></td>
<td>Plant and equipment and control measures (as specified in the EMP will be implemented across site and maintained to ensure compliance with the conditions of the Environmental Authority.</td>
<td>During the term of this Plan of Operations, all plant, equipment and management controls implemented across the site will be implemented, operated and maintained in accordance with the manufacturer’s directions, or where this does not apply, with recognised best practice.</td>
</tr>
<tr>
<td>(a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(b) maintain such measures, plant and equipment in a proper condition; and</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(c) operate such measures, plant and equipment in a proper manner.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G:4 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.</strong></td>
<td>Record all monitoring results and keep all monitoring records for a minimum of five years.</td>
<td>All monitoring records will be recorded and retained as defined by the company’s accredited Environmental Management System. The monitoring records will be maintained by the Site Senior Executive for the period of this Plan of Operations for five years.</td>
</tr>
<tr>
<td><strong>G:5 Where monitoring is a requirement of this environmental authority, ensure that a competent person(s) conducts all monitoring.</strong></td>
<td>Appropriate training is to be undertaken to ensure that monitoring is carried out by a competent person. Where contractors are used for monitoring, evidence of their competence will be sought.</td>
<td>Persons conducting monitoring for EA conditions will be trained using documented procedures that detail the background, methods, documentation and corrective actions associated with the EA monitoring condition.</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL AUTHORITY CONDITION</strong></td>
<td><strong>CONTROL STRATEGY</strong></td>
<td><strong>ACTION PROGRAM</strong></td>
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<tr>
<td>--------------------------------------</td>
<td>----------------------</td>
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</tr>
<tr>
<td></td>
<td>Competency will be assessed by way of verbal interview by Site manager or Group SEQ Manager.</td>
<td></td>
</tr>
<tr>
<td>G:6 Spillage of all chemicals and fuels 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 Section 5.9 of AS 1940 - Storage and Handling of Flammable and Combustible Liquids of 1993.</td>
<td>Spillages of flammable and combustible liquids will be contained within an on-site containment system in accordance with AS 1940.</td>
<td>Maintain current infrastructure. Spills to be managed following site spill response procedure. Conduct a regular audit of fuel and chemical handling practices and storage facilities. Audit based on Section 5.9 of AS 1940. Action improvement findings.</td>
</tr>
</tbody>
</table>

**AGENCY INTEREST: LAND**

**L:1** All areas significantly disturbed by mining activities must be rehabilitated to the final land description as defined in Attachment 1 Table L1 Final land use and rehabilitation approval schedule.  
Note: See Attachment 1 for Table L1 Final land use and rehabilitation approval schedule

- Identify rehabilitation species mix from surveys of undisturbed areas.
- Re-introduce pre-existing species through a variety of seeding and planting methods.
- Develop and implement techniques to facilitate natural invasion by surrounding native vegetation.
- Design and construct final landforms on disturbed areas to facilitate rehabilitation.
- Erosion to be reduced by isolation of upslope runoff, reduction of slope and drainage control installation where possible.
- Diversion of water from easily erodible batter slopes.
- Topsoil will be stripped ahead of disturbance and soil direct replaced where possible or stockpiled in stable 2m high structures.

Refer to Section 1.5 of this Plan of Operations.

**L:2** Progressive rehabilitation must commence when areas become available within the operational land.

- Progressive rehabilitation will commence on areas that are available for rehabilitation within a reasonable time after they become available.

Annual review of rehabilitation progress will be conducted. This review will include assessment of disturbed areas where mining activities have been completed and are available for rehabilitation.

**L:3** Areas which are to be progressively rehabilitated to grazing pasture must comply with the following outcomes;
(a) generate a self-sustaining

Rehabilitation vegetation works to be designed to ultimately deliver the objective outlined in success criteria of the document “Monitoring Rehabilitation Performance -
<table>
<thead>
<tr>
<th>ENVIRONMENTAL AUTHORITY CONDITION</th>
<th>CONTROL STRATEGY</th>
<th>ACTION PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>vegetation with projective cover, species composition and species distribution similar to analogue site 3 (BAJOM3) on Map L1; and (b) all areas significantly disturbed by mining activities must be rehabilitated to a stable landform and comply with the design criteria defined in Attachment 1 Table L2 Landform design; and (c) a measure of productivity (e.g., sustainable dry matter production, stock live weight gain) are comparable to analogue sites 3 (BAJOM3). Note: See Attachment 1 for Table L2 Landform design.</td>
<td>Bajool Marble Quarry - November 2003&quot; a CQU document by A.Melzer. Rehabilitation works are to use these design criteria in the final landform design, and comparisons to analogue sites.</td>
<td></td>
</tr>
<tr>
<td>L:4 Areas which are to be progressively rehabilitated to native ecosystem must comply with the following outcomes: (a) achievement of a self-sustaining native ecosystem with species composition and distribution similar to analogue site 1 (BAJOM1) or analogue site 2 (BAJOM2) on Map L1; and (b) all areas significantly disturbed by mining activities must be rehabilitated to the landform design criteria defined in Attachment 1 Table L2 Landform design; and (c) landforms are stable and have been reshaped as close as practicable to the aspect orientation of analogue sites 1 and 2. Note: See Attachment 1 for Table L2 Landform design.</td>
<td>Rehabilitation vegetation works to be designed to ultimately deliver the objective outlined in success criteria of the document &quot;Monitoring Rehabilitation Performance - Bajool Marble Quarry - November 2003&quot; a CQU document by A.Melzer. Rehabilitation works are to use these design criteria in the final landform design, and comparisons to analogue sites.</td>
<td></td>
</tr>
<tr>
<td>L:5 Complete an investigation into rehabilitation of disturbed areas and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in conditions L3 and L4 and landform design criteria in Attachment 1 Table L2 Landform design. Note: See Attachment 1 for Table L2 Landform design.</td>
<td>Continue managing rehabilitation of significantly disturbed areas, and reviewing rehabilitation acceptance criteria and landform design criteria.</td>
<td>An investigation on significantly disturbed areas to define rehabilitation acceptance criteria and landform design criteria has been completed. Acceptance criteria have been established with relation to vegetation cover and species diversity, stability (erosion rates) and the acceptability of the final landform and rehabilitation to the landowner and final land use.</td>
</tr>
<tr>
<td>L:6 Complete an investigation into the potential impact on rehabilitation outcomes in Condition L3 and Condition L4 of declared plants and other plants that have the potential to become serious environmental weeds including, but not limited to, Fountain Grass (Pennisetum setaceum), Lantanas (Lantana camara &amp; L. montevidensis); Tree</td>
<td>Continue management of environmental weeds on site.</td>
<td>An investigation into environmental weeds on the site and their management has been completed and the resultant Weed Management Report was submitted to the EPA in December 2003. A Weed Management Plan has been developed and implemented.</td>
</tr>
<tr>
<td>ENVIRONMENTAL AUTHORITY CONDITION</td>
<td>CONTROL STRATEGY</td>
<td>ACTION PROGRAM</td>
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</tr>
<tr>
<td>Tobacco (Nicotiana glauca); Mother of Millions (Bryophyllum tubiflorum) and Rubber Vine (Cryptostegia grandiflora) and develop and implement site management plans for their control and monitoring.</td>
<td>During the term of this Plan of Operations, the residual voids will comply with the specifications of Table L3.</td>
<td>During the term of this Plan of Operations, the only residual void on site will be the Northern Mine. It is used for water capture and storage. Future extraction of additional resources from the Northern Mine is a distinct possibility. Active extraction areas in the Wells Mine will continue to comply with the specifications of Table L3.</td>
</tr>
<tr>
<td>L:7 Residual voids must comply with the following outcomes; (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 b) residual voids must comply with Attachment 1 Table L3 Residual void design.</td>
<td>Complete an investigation into the residual voids on site with respect to final landform design and acceptance criteria and submit a report to the EPA. Note: Acid mine drainage and salinity are not issues for the Bajool Marble Mine site.</td>
<td>This EA condition was fully met during the term of the previous PoO. Dr David Newton from WRM Water &amp; Environmental Pty Ltd completed an investigation of the existing voids.</td>
</tr>
<tr>
<td>L:8 Complete an investigation into residual voids and submit a report to the administering authority proposing acceptance criteria to meet the outcomes in condition L7 and landform design criteria in Attachment 1 Table L3 Residual void design.</td>
<td>All infrastructure will be removed from site, unless agreed otherwise with the landowner, on completion of the mining operation.</td>
<td>No action required during the term of this Plan of Operations.</td>
</tr>
<tr>
<td>L:9 All infrastructure, constructed by or for the environmental authority holder during the mining activities, including water storage structures, must be removed from the site prior to mining lease surrender, except where agreed in writing by the post mining land owner / holder.</td>
<td>AGENCY INTEREST: NOISE</td>
<td></td>
</tr>
<tr>
<td>N:1 Subject to requirement of conditions N2 and N3 noise from the mining activity must not cause an environmental nuisance, at any sensitive place.</td>
<td>Carry out routine maintenance on equipment, including mufflers to minimise noise. Limit the hours of blasting. Conduct noise monitoring when requested by Administering Authority.</td>
<td>To conduct noise monitoring as requested by Administering Authority during the term of this Plan of Operations and to conduct blasting within the hours prescribed in the Environmental Authority.</td>
</tr>
<tr>
<td>N:2 When requested by the Administering Authority, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the</td>
<td>To comply with N2.</td>
<td>Comply with N2.</td>
</tr>
<tr>
<td>Environmental Authority Condition</td>
<td>Control Strategy</td>
<td>Action Program</td>
</tr>
<tr>
<td>-----------------------------------</td>
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</tr>
<tr>
<td>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 place, and the results must be notified within 14 days to the administering authority following completion of monitoring.</td>
<td>If the environmental authority holder can provide evidence through monitoring that the limits defined in Attachment 1 Table N1 Noise limits and Table N2 Air blast overpressure level are not being exceeded then the holder is not in breach of condition N1. Monitoring must include:</td>
<td>If the environmental authority holder can provide evidence through monitoring that the limits defined in Attachment 1 Table N1 Noise limits and Table N2 Air blast overpressure level are not being exceeded then the holder is not in breach of condition N1.</td>
</tr>
<tr>
<td><strong>N:3</strong> If the environmental authority holder can provide evidence through monitoring that the limits defined in Attachment 1 Table N1 Noise limits and Table N2 Air blast overpressure level are not being exceeded then the holder is not in breach of condition N1. Monitoring must include:</td>
<td><strong>N:3</strong> If the environmental authority holder can provide evidence through monitoring that the limits defined in Attachment 1 Table N1 Noise limits and Table N2 Air blast overpressure level are not being exceeded then the holder is not in breach of condition N1. Monitoring must include:</td>
<td>If a requested monitoring event, identifies an exceedance of the noise and air blast over pressure limits, a review of environmental noise management across the operation would be undertaken, following a second confirmatory monitoring event.</td>
</tr>
<tr>
<td><strong>N:4</strong> If monitoring indicates exceedence of the relevant limits in Attachment 1 Table N1 Noise limits and Table N2 Air blast overpressure level, then the environmental authority holder must: (a) address the complaint including the use of appropriate dispute resolution if required; or (b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance. Note: See Attachment 1 for Table N1 Noise limits and Table N2 Air blast overpressure level.</td>
<td><strong>N:4</strong> If monitoring indicates exceedence of the relevant limits in Attachment 1 Table N1 Noise limits and Table N2 Air blast overpressure level, then the environmental authority holder must: (a) address the complaint including the use of appropriate dispute resolution if required; or (b) immediately implement noise abatement measures so that emissions of noise from the activity do not result in further environmental nuisance. Note: See Attachment 1 for Table N1 Noise limits and Table N2 Air blast overpressure level.</td>
<td>Should the limits in Table N1 and N2 be exceeded, following a second confirmatory monitoring event Omya will undertake a review of environmental noise management across the site to identify appropriate noise abatement opportunities.</td>
</tr>
<tr>
<td><strong>N:5</strong> The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency’s Noise Measurement Manual.</td>
<td><strong>N:5</strong> The method of measurement and reporting of noise levels must comply with the latest edition of the Environmental Protection Agency’s Noise Measurement Manual.</td>
<td>Any noise measurements and reporting undertaken during the term of this Plan of Operations will be undertaken in accordance with the EPA Noise Measurement Manual.</td>
</tr>
<tr>
<td><strong>N:6</strong> Subject to requirements of conditions N7 and N8 vibration from the mining activity must not cause an environmental nuisance, at any sensitive place.</td>
<td><strong>N:6</strong> Subject to requirements of conditions N7 and N8 vibration from the mining activity must not cause an environmental nuisance, at any sensitive place.</td>
<td>Limit the hours of blasting and when requested by the Administering Authority conduct vibration monitoring to ensure that environmental nuisance is not caused by vibration resulting from the mining activities. During the term of this Plan of Operations, the hours of blasting will be limited to the hours prescribed in the Environmental Authority.</td>
</tr>
<tr>
<td><strong>N:7</strong> 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</td>
<td><strong>N:7</strong> 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</td>
<td>Conduct vibration monitoring if requested by the Administering Authority at the next blast event if reasonably possible. Provide report within 14 days. Conduct vibration monitoring if requested by the Administering Authority at the next blast event if reasonably possible. Provide report within 14 days.</td>
</tr>
<tr>
<td><strong>ENVIRONMENTAL AUTHORITY</strong></td>
<td><strong>CONTROL STRATEGY</strong></td>
<td><strong>ACTION PROGRAM</strong></td>
</tr>
<tr>
<td>-----------------------------</td>
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<td>-------------------</td>
</tr>
<tr>
<td><strong>CONDITION</strong></td>
<td></td>
<td></td>
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<tr>
<td>mistaken belief in the opinion of the authorised officer of environmental nuisance at any sensitive place, and the results must be notified within 14 days to the administering authority following completion of monitoring.</td>
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</tbody>
</table>

**N:8** If the environmental authority holder can provide evidence through monitoring that the limits defined in Attachment 1 Table N3 Vibration limits, are not being exceeded then the holder is not in breach of condition N6. Monitoring must include:

(a) location of the blast/s within the mining area (including which bench level); and
(b) atmospheric conditions including temperature, relative humidity and wind speed and direction; and
(c) location, date and time of recording.

Note: See Attachment 1 for Table N3 Vibration limits

Any monitoring conducted in response to the Administering Authorities request will include details outlined.

Any monitoring conducted in response to the Administering Authorities request will include details outlined.

**N:9** If monitoring indicates exceedence of the relevant limits in Attachment 1 Table N3 Vibration limits, then the environmental authority holder must:

(a) address the complaint including the use of appropriate dispute resolution if required; or
(b) immediately implement vibration abatement measures so that vibration from the activity does not result in further environmental nuisance.

Note: See Attachment 1 for Table N3 Vibration limits

Should the limits in Table N3 be exceeded, following a second confirmatory monitoring event Omya will undertake an assessment of opportunities for the reduction of vibration arising from mining activities at the operation.

If monitoring identifies an exceedance of the vibration limits, an assessment of opportunities for the reduction of vibration arising from mining activities at the operation will be undertaken following a second confirmatory monitoring event.

**AGENCY INTEREST: SOCIAL**

**S:1** All complaints received must be recorded including details of complainant, reasons for the complaint, investigations undertaken, conclusions formed and actions taken. This information must be made available for inspection by the administering authority on request

Establish a complaints recording and investigation system to record all complaints received, investigations undertaken, conclusions and corrective actions.

A complaints system is managed through the sites Environmental Management System.

**AGENCY INTEREST: WASTE**

**W:1** Tyres stored awaiting disposal or transport for take-back and, recycling, or waste-to-energy options - should be stockpiled in volumes less than 3m in height and 200 m² in area and at least 10m from any other tyre storage area.

- To store all tyres before disposal / recycle in volumes less than 3m in height and 200m² in area to ensure compliance with Environmental Protection (Interim)

Scale of operation would see it difficult to accumulate enough tyres to breach this condition.

Item to be added to annual Environmental Management Audit.
<table>
<thead>
<tr>
<th>ENVIRONMENTAL AUTHORITY CONDITION</th>
<th>CONTROL STRATEGY</th>
<th>ACTION PROGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>W:2 All reasonable and practicable fire prevention measures must be implemented, including removal of grass and other materials within a 10m radius of the scrap tyre storage area.</td>
<td>Implement fire measures within a 10m radius of the nominated tyre storage area.</td>
<td>Fire prevention measures will be implemented as detailed in the EMP.</td>
</tr>
<tr>
<td><strong>AGENCY INTEREST: WATER</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WA:1 Receiving waters affected by the release of process water or storm water contaminated by the mining activities or both must be monitored at the locations and frequencies defined in Attachment 1 Table WA1. Receiving water monitoring locations and frequency and Locations of Water Monitoring Points Map WA1 and comply with the contaminant limits defined in Attachment 1 Table WA2. Receiving water contaminant limits.</td>
<td>To conduct water monitoring in accordance with Table WA1 and WA2, when safe access to the site allows.</td>
<td>To continue to sample BQW-1 and BQW-2 every time there is a rainfall event more than 50mm in 24 hours during the term of this Plan of Operations. Samples will be analysed in the field where possible or will be measured back in the office as soon as possible within the 24 hour holding period. All monitoring will be undertaken by a competent person. Any exceedance of the limits in Table WA2 will be investigated on site.</td>
</tr>
<tr>
<td>WA:2 End of pipe release limits for process water and storm water contaminated by mining activities must be monitored at the locations and frequencies defined in Attachment 1 Table WA3. End of pipe monitoring locations and frequencies, and Locations of Water Monitoring Points Map WA1 and comply with the contaminant limits defined in Attachment 1 Table WA4. End of pipe contaminant release limits.</td>
<td>To conduct water monitoring in accordance with Table WA3 and WA4 when safe access to the site allows.</td>
<td>To continue to sample BQW-3 and BQW-4 every time there is a rainfall event more than 50mm in 24 hours and BQW-4 at the commencement and daily during pit dewatering during the term of this Plan of Operations. Samples will be analysed in the field where possible or will be measured back in the office as soon as possible within the 24 hour holding period. All monitoring will be undertaken by a competent person. Any exceedance of the limits in Table WA4 will be investigated on site.</td>
</tr>
</tbody>
</table>
| WA:3 All reasonable and practicable erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment. | Ensure that land disturbance is minimised. Where land disturbance is unavoidable, implement and maintain appropriate erosion and sediment controls. | During the term of this Plan of Operations, the following water and sediment controls will continue to be implemented and maintained:  
- sediment traps at the base of waste rock dumps;  
- maintenance of haul road drainage through diversion and/or sediment traps as appropriate; |
<table>
<thead>
<tr>
<th><strong>Environmental Authority Condition</strong></th>
<th><strong>Control Strategy</strong></th>
<th><strong>Action Program</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>• diversion of clean water from the crusher/loading area;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• diversion of sediment laden water to waste rock dumps for filtration or open pits for containment; and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• overland flow across a designated grassy area (between two sediment traps) for run off from the stonedust plant / bagging area.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Water monitoring will continue to be undertaken to monitor the amount of sediment discharged from the site. Any exceedances would be investigated as a matter of priority.</td>
</tr>
</tbody>
</table>
Section 3

SCHEDULE OF REHABILITATION & REHABILITATION COSTS

3.1 REHABILITATION

During the term of this PoO rehabilitation works will continue to be undertaken at Rehab Area 3 and Rehab Area 4.

The areas of rehabilitation for the term of this PoO are presented in Table 4

Table 4 shows that the total disturbed area will remain unchanged at around 40 ha over the term of this plan. No significant clearing is forecast. There will be ongoing rehabilitation works, and the expected positive assessment of the previous rehabilitation site (Rehab 1 & 2) against the critical success criteria of the EA. Areas of mining during the term of this PoO have already been disturbed during the term of the previous PoO.

The Company has a policy for the progressive rehabilitation of mined or otherwise disturbed areas, where such activities can be undertaken in a cost-efficient manner and not jeopardise the future utilisation of the resource. The purpose of the rehabilitation is to ensure that as far as practicable, the areas of disturbance are returned to a land use and land use capability classification similar to that prior to the commencement of mining activities with a self-sustaining vegetative cover appropriate to the land use and land capability.

The process of facilitated rehabilitation is adopted on the site as the most natural and cost effective method of returning the land to a stable self-sustaining state. Rehabilitation consists of profiling the land area to, as much as possible, blend with the surrounding landscape and provide for appropriate drainage, respreading of stored topsoil, seeding or planting with local species, and watering and weed control where necessary.

For ease of reference, each separate rehabilitation site has been given a Rehabilitation Area number, which roughly reflects the order in which the area has become available for rehabilitation works. Future references to Rehabilitation Areas may be abbreviated to “Rehab 1” for example.

Table 4 summarises the areas of current and future disturbance for the term of the PoO, from December 2014 to December 2019

<table>
<thead>
<tr>
<th>TABLE 4</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Areas of Existing and Planned Disturbance and Rehabilitation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area Category</strong></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>All in hectares</td>
</tr>
<tr>
<td><strong>A: Total Lease Area</strong></td>
</tr>
<tr>
<td><strong>B: Undisturbed Area</strong></td>
</tr>
<tr>
<td><strong>C: Cleared Area</strong></td>
</tr>
<tr>
<td><strong>D: Total Disturbed Area</strong></td>
</tr>
<tr>
<td><strong>D1 Disturbance Category</strong></td>
</tr>
<tr>
<td><strong>Active Pit (Wells Mine) (Zone 17)</strong></td>
</tr>
</tbody>
</table>
### Plan of Operations

#### Bajool Marble Mine 2014 - 2019

<table>
<thead>
<tr>
<th>Area Category</th>
<th>April 2014</th>
<th>April 2015</th>
<th>April 2016</th>
<th>April 2017</th>
<th>April 2018</th>
<th>April 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Old Northern Mine (Zone 10)</td>
<td>3.65</td>
<td>3.65</td>
<td>3.65</td>
<td>3.65</td>
<td>3.65</td>
<td>3.65</td>
</tr>
<tr>
<td>Infrastructure (Zone 9 &amp; 13)</td>
<td>9.27</td>
<td>9.27</td>
<td>9.27</td>
<td>9.27</td>
<td>9.27</td>
<td>9.27</td>
</tr>
<tr>
<td>Roads (Zone 1, 2 &amp; 3)</td>
<td>5.14</td>
<td>5.14</td>
<td>5.14</td>
<td>5.14</td>
<td>5.14</td>
<td>5.14</td>
</tr>
<tr>
<td>Maintenance Areas (Part of Zone 2 &amp; 13)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Soil Stockpiles (Part of Zone 17 &amp; 15)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Sediment Dams (Zones Various)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>D2 Rehabilitation Category</td>
<td>6.5</td>
<td>5.57</td>
<td>4.35</td>
<td>4.35</td>
<td>3.45</td>
<td>3.45</td>
</tr>
<tr>
<td>Southern Waste Rock Emplacement (Zone 7) (Rehab 1)</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Backfilled Void (Zone 8) Rehab 2</td>
<td>1.83</td>
<td>0.90</td>
<td>0.90</td>
<td>0.90</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Wells Waste Rock Emplacement (Zone 16) (Rehab 3)</td>
<td>1.70</td>
<td>1.70</td>
<td>0.48</td>
<td>0.48</td>
<td>0.48</td>
<td>0.48</td>
</tr>
<tr>
<td>Northern Waste Rock Emplacement (Zone 4) (Rehab 4)</td>
<td>2.97</td>
<td>2.97</td>
<td>2.97</td>
<td>2.97</td>
<td>2.97</td>
<td>2.97</td>
</tr>
<tr>
<td>D3 Successfully Rehabilitated</td>
<td>1.72</td>
<td>2.65</td>
<td>3.87</td>
<td>3.87</td>
<td>3.87</td>
<td>3.87</td>
</tr>
<tr>
<td>Southern Waste Rock Emplacement (Zone 7) (Rehab 1)</td>
<td>1.72</td>
<td>1.72</td>
<td>1.72</td>
<td>1.72</td>
<td>1.72</td>
<td>1.72</td>
</tr>
<tr>
<td>Backfilled Void (Zone 8) Rehab 2</td>
<td>0.00</td>
<td>0.93</td>
<td>0.93</td>
<td>0.93</td>
<td>1.83</td>
<td>1.83</td>
</tr>
<tr>
<td>Wells Waste Rock Emplacement (Zone 16) (Rehab 3)</td>
<td>0.00</td>
<td>0.00</td>
<td>1.22</td>
<td>1.22</td>
<td>1.22</td>
<td>1.22</td>
</tr>
</tbody>
</table>

**Disturbance Zones**

- **D1** = Disturbed and to remain disturbed for the term of this PoO.
- **D2** = Disturbed and in the process of rehabilitation during the term of this PoO
- **D3** = Successful rehabilitation demonstrated to success criteria in the EA during the term of this PoO

#### 3.1.2 Rehabilitation Plan Summary by Rehabilitation Area

Dr. Alistair Melzer of Central Queensland Environmental Surveys will continue to be hired by Omya to design and monitor the rehabilitation and weed management program for the Mine.

The general design of the program and the overall approach to rehabilitation is based on the idea that it is not possible to reconstruct the pre-existing environment following the major changes associated with clearing of vegetation, topsoil harvesting, blasting, marble and waste rock removal and emplacement of waste rock and other waste materials over new areas. The rehabilitation strategy is therefore to develop new, sustainable plant assemblages and habitat for fauna that will include key elements of the pre-mining environment. Eventually, the rehabilitated landscape will evolve towards an acceptable ecological endpoint over an agreed time period.

Ongoing monitoring of rehabilitation performance has been undertaken at the Mine and suggests current rehabilitation practices have been successful in recreating the elements of a functioning ecosystem.

- **Rehab 1** has been successfully rehabilitated and will continue to be monitored.

- **Rehab 2** has developed well and germination of species from seeds deposited by birds is occurring under the rainforest patch canopies. The planting of the second stage of Rehab 2 has been completed and these plants have persisted through their first spring. The site will continue to be monitored.
Rehab 3 has developed well with open woodland of acacia and eucalypts becoming established. This site has two elements. One element was based on red topsoil and was direct seeded with a mixture of seed that included eucalypt. The second element was based on grey topsoil with a good native seed bank and was allowed to develop naturally. The resultant growth did not include eucalypts. A supplementary planting of narrow leafed ironbark was undertaken earlier in 2013. This has been successful and the most plantings are growing well.

Rehab 4 had been treated by hydro-seeding in 2012. There has been a very limited germination response to date with a few eucalypt seedlings evident in this latest inspection. It is hoped that the planting of advanced stock on the 170m AHD bench will attract seed dispersing fauna and facilitate re-vegetation during the life of this PoO. Also, efforts will be made to safely re-establish vegetation on the steep batters.

An incidental list of fauna seen to be using the rehabilitation has been maintained since 2009. To date 21 species have been recorded in the sites. Of these four are known seed dispersers. A more formal wildlife survey would identify a more extensive suite of fauna using the restored ecosystems.

The successful flowering, fruiting and suckering of species planted in the rehabilitation sites is an indication of the maturation of the developing new ecosystems. For example the Acacias produce long lived seeds that are stored in the soil and may germinate following future soil disturbance or fire. The flowering and fruiting attracts fauna that may bring seed from the adjacent natural communities or simply add to the biodiversity of the developing sites.

All rehab areas and weed management will continue to be a priority of Omya Bajool during the period of this PoO.

Trees planted are all local dry-rainforest species which occur in the surrounding scrub on the mining lease area. These species include, but are not limited to:

- Acacia aulacocarpa
- Alphiotnia excelsa
- Alyxia ruscifolia
- Cissus oblonga
- Cissus repens
- Citrobatus spinescens
- Corymbia tesselaris
- Cupaniopsis anacardioide
- Cupaniopsis wadsworthii
- Drypetes deplanchei
- Euroschinus falcata
- Ficus opposita
- Ficus virens
- Ficus obliqua
- Geijera salicifolia
- Glochidion ferdinandi
- Harpulia pendula
- Hibiscus heterophyllus
- Jasminium simplicifolium
- Mallotus philippensis
- Pipturus argentes
- Pleiogynium timorense
- Smilax australis
- Sterculia quadrifida
- Terminalia porphyrocarpa
- Trophus scandens

3.2 CYCAS MEGACARPA RECOVERY PLAN

Cycas megacarpa occurs throughout the lands owned and leased by Omya Australia at the Bajool Marble Mine. The species is listed as *endangered* under the Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act) and the Queensland Nature Conservation Act 1992 (NCA). A Commonwealth recovery plan was prepared by the Queensland Herbarium in 2007 (Queensland Herbarium 2007). Threats to the species are:

1. Destruction due to land clearing,
2. Legal harvesting and commercial salvage,
3. Illegal harvesting,
4. Loss of genetic variation and insect pollinators, and
5. Land management practices.

Threats 1, 4 and 5 occur at Bajool as a consequence of routine quarry activities and land management practices. Threats 2 and 3 are highly unlikely as a consequence of access and visitor management at the quarry.

The Bajool Marble Mine *Cycas Megacarpa* Recovery Plan prepared by Dr A Melzer plan seeks to ensure that there is no net loss or reduction in distribution of *Cycas megacarpa* as a consequence of Omya’s quarrying activities or of the management of surrounding lands controlled by Omya. It is consistent with and complements the national recovery plan. As implemented, the Bajool recovery plan will increase the knowledge of the local *Cycas megacarpa* population and result in a net benefit by increasing the understanding of this species. A brief description of the tasks to be undertaken is provided in the following sections.

### 3.2.1 Propagation License

Omya Bajool has a propagation license and the Senior Site Executive is the license holder. Authorisation to Propagate Permit WIPQ14224214 is valid from 13 June 2014 to 12 June 2019. Cycas propagated under this permit must be used solely to address impacts from development.

### 3.2.2 Harvesting

Seeds are green when first produced. When mature they change to a mango colour (yellow-orange-red) and the flesh softens to some extent. The fruit will fall to the ground when ripe. They can then be harvested. There will be competition for fallen fruit from native animals that naturally eat the flesh and disperse the seeds so vigilance will be required. However, some of these animals will conveniently strip the flesh leaving the bone-coloured seed ready for planting. The flesh and sap of the cycad is toxic – so protective gloves should be worn when defleshing the seed.

### 3.2.3 Storage

Seeds are stored in a cool dry location away from native rodents. Some of these will eat the seed. Seeds are not ready to germinate for nine months after seed fall.

### 3.2.4 Planting in Pots

James Wetzler of Wetzler Contracting will be responsible for the collection and planting of the seeds. Seeds will be planted to half their diameter in a 50:50 mix of moss and perlite. Seeds will be planted in a relatively deep pot and watered regularly in full or part sun.

### 3.2.5 Direct Seeding

Seeds can be planted directly into the reformed landscape after defleshing. Seeds can be shallowly buried or part planted as in pots. Direct seeding should occur soon after harvesting and defleshing to mimic the natural dispersal process. Seeds should be planted in clusters to allow for some losses and to mimic the stands occurring naturally.

### 3.2.6 Monitoring and Record Keeping

Pots and field plantings should be monitored at most quarterly to detect predation and, eventually, germination. The date of germination should be recorded and marked on the pots. In the field planting, once germination has occurred the sites should be monitored to follow survivorship and to note any seasonal changes in foliage.
Beyond the Mine footprint, no adverse impacts are expected and the environmental effects of the clearing are unlikely to damage ecological processes, cause land degradation, or cause the loss of biodiversity to the regional ecosystem.

3.3 Weed Management

A comprehensive Weed Management Program operates on the mining lease. Details are available in the companies Weed Management Plan document which undergoes an intensive review every five years in line with the Plan of Operations for the site.

Integral parts of the plan are:
- Inclusion of weed awareness, prevention and management in site inductions,
- Control of weed transport through site management,
- Collective management of weed issues with neighbours,
- Control or eradication of priority weeds through a weed control schedule.

A Systematic approach to the control of weeds using Weed Control Zones is utilized on site by the company. Weed Control Zones are units of land which are divided to discrete landform/land-use elements. These zones are also used to refer to different areas of the mining lease for rehabilitation and other purposes. Refer Figure 4 “Weed Control Zones”.

3.4 SCHEDULE OF REHABILITATION COSTS

In accordance with Section 288 (2) of the EP Act 1994 a proposed amount of Financial Assurance has been calculated.

The unit rates for the activities are based on the Table of Values contained within the Mining Financial Assurance Calculator for Small Mines or Quarry Operations, an Excel Workbook produced by the State of Queensland, URS Australia Pty Ltd and Windaf Pty Ltd.


The Gross Financial Assurance (GFA) = $ 730,000, including GST

The Financial Assurance has been developed in accordance with Appendix A of EPA Guideline EM1010 • Version 2 – Financial assurance under the Environmental Protection Act 1994. Third party rehabilitation costs for each component have been calculated assuming:

- The old Northern Quarry void, that currently serves as a water supply for the operations will be agreed to remain on closure of the mine as a water supply for future land use options.

- Some access roads will be left as such, by request of the land owner, to allow for maintenance and for future land uses.

- Soil application thickness of 10cm. It is noted that inadequate soil material is currently available for this purpose and in areas, the application thickness may be reduced to 5cm or less. In these circumstances, where possible, thickness would be laid down proportionate to that of the relevant analogous sites. Recommendations with respect to best practice topsoil utilisation will be sought from the Company’s rehabilitation / revegetation consultants.

- Success rates for rehabilitation are similar to that demonstrated in Rehabilitation Area 1 & 2, and require little augmentation/supplementation following the initial revegetation campaign.

- Successful rehabilitation during the period of the previous PoO has reduced the area of disturbance from 41.6 hectares to 40.0 hectares. This has had the effect of reducing the GFA from $750,199 to $730,000.
SECTION 4

COMPLIANCE STATEMENT

A compliance statement is required under Section 288(1)(d) of the EP Act. The purpose of the compliance statement is to state the extent to which the Plan of Operations complies with the conditions of the EA and to confirm the calculation method for the Financial Assurance is in accordance with the requirements of the EP Act.

4.1 AUDITOR'S DETAILS

Auditor's Name: Mr Ian Baillie

Auditor's Credentials: B.Sc (Hons); Regional Geologist for Omya Asia Pacific. In excess of 30 years’ experience in geological and environmental management of mining and exploration projects in Australia, New Zealand and elsewhere throughout the Asia Pacific region.

Relationship to Leaseholder: Regional Geologist (Employee)

Date of Audit: 18 May 2015 and 20 May 2015

Method of Audit: Discussion with company employees and management based on and off site; review of the 2014-2019 Plan of Operations; review of Environmental Authority Permit MIM800074702 (26-07-04); review of lease documents, monitoring results; inspection of site records, site employee interview.

Mining Project Name: Bajool Marble Mine

Environmental Authority: Permit number MIM800074702

Mining Lease Numbers: ML No’s 3663, 3638, 3662, 3666, 80028

4.2 COMPLIANCE SUMMARY

a. The proposed Action Program for the Plan of Operations for 2014 – 2019 is structured in accordance with Section 288 (1)(c)(ii) of EP Act. All the conditions stated in the EA are present in the PoO.

b. All the conditions stated in the EA are directly addressed with a control strategy and action program commitment.

c. EA General conditions (G1-G6): 6 of the 6 conditions were fully met. Interviews with site management verify monitoring records are kept: Complies.

d. EA Land conditions (L1 – L9): 9 of the 9 conditions were fully met; Independent monitoring of the effectiveness of the progressive rehabilitation is done several times each year. A random selection of land area figures contained in the calculations was verified against geospatial software figures: Complies

e. EA Noise conditions (N1 – N9): 9 of the 9 conditions were fully met; General comment on Noise conditions: Complies.

f. EA Social conditions (S1): 1 of the 1 condition was fully met; General comment on Social conditions: Complies.
g. EA Waste conditions (W1 – W2): 2 of the 2 conditions were fully met; General comment on Waste (W) conditions: Complies.

h. EA Water conditions (WA1 – WA3): Water monitoring within 24 hour period of 50mm rain events not always possible, due to access to sampling points cut off by flood waters: Complies when safe to do so.

i. Evidence of planning to meet the conditions is present by way of existence of policies, procedures and previously completed records for each of conditions where they would be reasonably be expected to be required, or are explicitly stated in the control strategy or action program.

j. Evidence of equipment and infrastructure required to enable compliance to all EA conditions was noted by way of discussion with on-site management. Test equipment is on site, water run-off control structures are in place, bunded areas are in place etc.

k. Interviews with site management verify an understanding of the conditions.

l. Interviews with off site management verify a commitment to meet the conditions.

Section Conclusion:
The conditions in the EA are adequately addressed and provided for. The site staff appear to have the knowledge and the resources to meet the conditions of the EA.

Conditions WA1 and WA2 require water sampling, testing and recording. There exists a major issue with site access following significant rain events. In the interests of employee safety, site management have not allowed vehicle access across swollen creeks to access the mine site for sampling purposes. Anecdotal evidence of compliance is noted following rain events when access is safe

Audit of the Rehabilitation Program in the Plan
Audit of the Rehabilitation Program contained in the Plan of Operations 2014 to 2019 in order to verify the rehabilitation cost and financial assurance required to complete the rehabilitation of the site from the point of the maximum disturbance predicted for the term of the PoO, to the rehabilitated standard stated in the EA.

Documents selected by the auditor and EA holder for review:
2. Final version of the MS Excel spreadsheet used to calculate the rehabilitation liabilities for random selected formula verification.
3. Geospatial drawings of the affected areas for random selected verification of land areas.
4. Latest aerial photography (November 2014) for verification of cleared areas against geospatial representations.
5. Reports on rehabilitation activities conducted previously for comparison to activities proposed.
6. Reports on the success of rehabilitation works conducted previously for verification of effectiveness of the activities proposed.

Section Audit Summary:
a. A random selection of formula on the MS Excel spread sheet was checked to verify formula and base data. Formula checked resulted in no significant errors.
b. A random selection of land area figures contained in calculations was verified against geospatial software figures. Some minor errors were detected, but changes proved to be insignificant on ultimate financial assurance figures.
c. Geospatial drawings depicting affected areas were compared to the latest Orthophotomap (Aerial Photography, dated 30th November 2014) for validation of disturbed and undisturbed geospatial depictions.
d. The Reviews of Revegetation Projects – Dr A.Melzer were reviewed. These demonstrated that techniques described in the Rehabilitation Program were delivering
results that are positive. Melzer observes many elements that match the acceptance criteria. Techniques costed in the Rehabilitation Program have a high chance of delivering against the acceptance criteria and achieving the required rehabilitation as described in the EA. A significant weed control programme to prevent fountain grass from becoming established has produced very encouraging results.

Section Conclusion:
The Progressive Rehabilitation Program has been successful to date. Ongoing monitoring of rehabilitation performance has been undertaken at the Mine and suggests current rehabilitation practices have been successful in recreating elements of a functioning ecosystem.


The Financial Assurance has been calculated in accordance with Appendix A of EPA Guideline EM1010 • Version 2 – Financial assurance under the Environmental Protection Act 1994.

The amount of Financial Assurance is based on the potential cost to government of having to undertake works to rehabilitate or restore and protect the environment. The proposed amount does not take into account any discounts being applied for.

The total rehabilitation liability has been:
- calculated on a project basis (Bajool Marble Mine);
- calculated for all land that has been or is proposed to be significantly disturbed during the period of this Plan of Operations;
- based on the rehabilitation costs for the year in which the maximum liability is incurred within the nominated disturbance period

The costs have not been independently certified. No third party quote has been obtained to undertake the full extent of work necessary to meet all EA conditions. Instead, the unit rates for the activities are based on the Table of Values contained within the Mining Financial Assurance Calculator for Small Mines or Quarry Operations.

The following activities are included:
- terminate, decommission and remove all infrastructure and services;
- constituent tasks or activities required for rehabilitation;
- project management costs of 10% of the total rehabilitation liability;
- maintenance and monitoring costs of 5% of the total rehabilitation liability;

The total rehabilitation liability does not assume the liability can be reduced or offset by deducting the value of on-site infrastructure or other assets (including scrap metal).

There is a low incidence of non-compliance, low risk of default, good environmental performance and a lower risk of environmental harm at the Bajool Marble Mine than at a coal or metallic mining operations.

Allowances have been made in the accounts of Omya Australia Pty Limited for quarry rehabilitation. The costs are recognised on a discounted cash flow basis in the year the obligations arise and as the obligation varies over time. The Statement of Comprehensive Income (P & L), Statement of Financial Position (Balance Sheet) and Cash Flow Statements show Omya Australia Pty Limited is solvent and not in external administration.
From the evidence requested and presented for audit, the estimates to complete the rehabilitation of the site from the point of the maximum disturbance predicted during the term of the PoO, to the rehabilitated acceptance criteria stated in the EA are valid.

Acknowledgment of Section 480 of the Environmental Protection Act of 1994

I, Ian Baillie, 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) I am authorised to sign on behalf of the person (meaning a corporation or individual) holding the Environmental Authority; (ii) all information provided is true and complete; and (iii) I understand that information given with this plan of operations and compliance statement could become available to the public in accordance with the Environmental Protection Act 1994 and Freedom of Information Act 1992.

Signed: 

Ian Baillie
Regional Geologist
Omya Asia Pacific
Environmental Authority Registration

Complete the following fields prior to calculating the Rehabilitation Liability.

Environmental Authority Number: MIM800074702
Tenure Numbers: 3638, 3662, 3663, 3666, 80028
Site Name (if applicable): Bajool Marble Mine
EA Holder: Omya Australia Pty Limited
Current Financial Assurance: $564,120.00
Date of Last FA Review (DD/MM/YYYY): 1 March 2009
Site Contact: Gary Hetherington
Position: Senior Site Executive
Address: 1879 South Ulam Road
Bajool
Queensland 4699
Phone: (07) 4934 6233
Email: gary.hetherington@omya.com

Activity Description

The following information is requested to provide a background description of activities subject to the calculation of this FA.

Summary of Activities

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Total Annual Production (Operations only)</td>
<td>190000</td>
</tr>
<tr>
<td>Lease / Tenement Area (ha)</td>
<td>232.94</td>
</tr>
<tr>
<td>Disturbance Area During FA Period</td>
<td>40</td>
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<tr>
<td>Period of FA</td>
<td>Dec’14 to Dec’19</td>
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<tr>
<td>Approved maximum disturbance area (if applicable)</td>
<td></td>
</tr>
<tr>
<td>Year of Maximum Disturbance</td>
<td>2015</td>
</tr>
<tr>
<td>Approval / Completion Criteria (as per the EA condition):</td>
<td></td>
</tr>
<tr>
<td>Self sustaining ecosystems to have structures approaching that in analogous sites.</td>
<td></td>
</tr>
<tr>
<td>The number and identity of species is similar to, or approaching that in, analogous situations.</td>
<td></td>
</tr>
<tr>
<td>Contribution of exotic species to total assemblages does not exceed that in undisturbed analogous sites.</td>
<td></td>
</tr>
<tr>
<td>Functional processes are present and that they respond to environmental influences in a manner similar to analogous sites.</td>
<td></td>
</tr>
<tr>
<td>Waste Rock Emplacement Areas to be restored to Self sustaining ecosystem on a stable and benign landform.</td>
<td></td>
</tr>
<tr>
<td>Infrastructure Areas to be restored to Self sustaining ecosystem on a stable and benign landform.</td>
<td></td>
</tr>
<tr>
<td>Quarries to be left as voids with exposed rock faces and benches.</td>
<td></td>
</tr>
</tbody>
</table>
# Summary Report of Financial Assurance Estimator

**Environmental Authority Number:** MIM800074702  
**Tenure Numbers:** 3638, 3662, 3663, 3666, 80028  
**Site Name (if applicable):** Bajool Marble Mine  
**EA Holder:** Omya Australia Pty Limited  
**Current Financial Assurance Amount:** $564,120.00  
**Date of Last Financial Assurance Review:** 1 March 2009  
**Site Contact:** Gary Hetherington  
**Position:** Senior Site Executive  
**Address:** 1879 South Ulam Road  
Bajool  
Queensland 4699  
**Phone:** (07) 4934 6233  
**Email:** gary.hetherington@omya.com

<table>
<thead>
<tr>
<th>Domain</th>
<th>Rehabilitation Liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain 1: Infrastructure</td>
<td>$474,855.00</td>
</tr>
<tr>
<td>Domain 2: Waste</td>
<td>$60,209.50</td>
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<tr>
<td>Domain 3: Other Management Issues</td>
<td>$42,300.00</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$577,424.50</strong></td>
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</table>

<table>
<thead>
<tr>
<th>Contingencies</th>
<th>Rehabilitation Liability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management (10%)</td>
<td>$57,742.45</td>
</tr>
<tr>
<td>Environmental Maintenance and Monitoring (5%)</td>
<td>$28,871.23</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>$86,613.68</strong></td>
</tr>
</tbody>
</table>

| **Total Rehabilitation Liability for the Operation (excl. GST)** | $664,038.18 |
| **Total GST**                                                   | $66,403.82   |

**Recommended Bond (incl. GST):** $730,000.00

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

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**Ian Baillie**  
Regional Geologist (Asia Pacific)  
**Assessment Completed By**  
**Date:** 18-May-15

**Gary Hetherington**  
Quarry Manager (Bajool)  
**Date:** 21-May-15