

CORAKI QUARRY ENVIRONMENTAL MANAGEMENT PLAN

Prepared for:
Quarry Solutions Pty Ltd

Date:
September 2016

Reference:
1837 610 002 r1

Document Control

Project/ Report Details

<i>Document Title:</i>	Coraki Quarry Environmental Management Plan
<i>Principal Authors:</i>	David Doolan and Rob Preslmaier
<i>Client:</i>	Quarry Solutions Pty Ltd
<i>Ref. No.</i>	1837_610_002 r1

Document Status

<i>Issue</i>	<i>Description</i>	<i>Date</i>	<i>Author</i>	<i>Reviewer</i>
0	Environmental Management Plan	29/09/2015	D. Doolan/ R. Preslmaier	C. Hill
1	Environmental Management Plan revised to reflect the Project approval and the Environmental Management Strategy.	September 2016	D. Doolan	J. Lawler

Distribution Record

<i>Recipient</i>	
Quarry Solutions Pty Ltd	1E

Groundwork Plus ABN: 80 829 145 906

Queensland
6 Mayneview Street, Milton Qld 4064
PO Box 1779, Milton BC, Qld 4064
P: +61 7 3871 0411
F: +61 7 3367 3317
E: info@groundwork.com.au

South Australia
2/1 First Street, Nuriootpa SA 5355
PO Box 854, Nuriootpa SA 5355
P: +61 8 8562 4158

Copyright ©

These materials or parts of them may not be reproduced in any form, by any method, for any purpose except with written permission from Groundwork Plus.

Table of Contents

1.	Introduction	3
1.1	Project Overview	3
1.2	Site Details.....	4
1.3	Relevant Legislation.....	4
1.4	Potential Environmental Impacts.....	4
1.5	Purpose of Environmental Management Plan.....	5
2.	Procedures and Policies.....	6
2.1	Environmental Policy	6
2.2	Implementation and Training	6
2.3	Incidents and Complaints Procedure.....	6
2.4	Monitoring Requirements.....	6
2.5	Records and Reporting.....	6
3.	Management Plans	7
3.1	Air Quality (Dust) Management Plan	7
3.2	Water Management Plan	7
3.3	Noise Management Plan	7
3.4	Blasting Management Plan.....	7
3.5	Hydrocarbons and Chemical Management Plan.....	7
3.6	Waste Management Plan	9
3.7	Fauna and Flora Management Plan	11
3.8	Weed Management Plan	11
3.9	Rehabilitation Management Plan	11
3.10	Cultural Heritage Management Plan.....	11
3.11	Emergency Response Plan / Pollution Incident Response Management Plan.....	11

DRAWINGS

Site Location Plan

Drawing No. 1837.DRG.007

Conceptual Site Layout Plan

Drawing No. 1837.DRG.027

Nearby Sensitive Receptors

Drawing No. 1837.DRG.037

1. Introduction

1.1 Project Overview

Groundwork Plus has been commissioned to prepare this Environmental Management Plan (EMP) on behalf of Quarry Solutions Pty Ltd (Quarry Solutions) as part of the Environmental Impact Statement (EIS) for the Coraki Quarry Project (the Project). The EMP has been prepared in relation to the Project, to be located at Seelems Road and Petersons Quarry Road, Coraki, New South Wales (refer Drawing 1837.DRG.007 – Site Location Plan). Extraction is proposed to primarily occur within Lot 401 DP633427 (Lot 401). Stockpiling and processing will occur on Lot 401 as well as the adjacent existing Petersons Quarry (refer Drawing 1837.027 – Conceptual Site Layout Plan) owned by Richmond Valley Council (RVC).

This EMP has been updated to reflect the recent approval of the Project. However, this EMP should be read in conjunction with the Environmental Management Strategy (EMS) (1837.610.006) for the Project. The EMS better describes all relevant management measures and contains the specific management plans for aspects of operations including blasting, noise, dust and water management.

Due to anticipated demand for construction materials associated with the Pacific Highway upgrade project, Quarry Solutions propose to establish the Project to supply materials on a project basis. It is anticipated that the project will extract a maximum of 1,000,000 tonnes per annum. Consent is being sought for a period of 7 years. As the Project is necessary to support the Pacific Highway upgrade, the proposed development constitutes a State Significant Development (SSD).

Project operations are anticipated to comprise of the following basic elements:

- Clearing of vegetation and stripping of topsoil and overburden material via mechanical means (i.e. bulldozer or excavator) and stockpiling for later use as; saleable general fill, utilisation in production of processed material, incorporation into on-site rehabilitation works where required, or use in construction of stormwater controls (e.g. perimeter banks, bunds).
- Drilling and blasting the exposed underlying rock from the developed quarry benches to reduce the material into a manageable size for relocation of the materials to the quarry pit or bench below, ready for transfer to the processing area.
- Transferring raw material from the quarry face or pit floor to the designated crushing and screening plant / stockpile hardstand area using an off highway haul truck(s) loaded by an excavator or front-end loader.
- Crushing and screening the raw material using a crushing and screening processing plant.
- Stockpiling the final products using a front-end loader and / or off-road haul truck within designated stockpiling area(s) before the material is sold and loaded into road trucks for transportation off-site for use.
- Rehabilitating disturbed areas progressively once extraction is completed where practicable.

Quarry products produced on-site may include, but are not limited to: crushed rock, road base and sub base pavement materials, pre-coated aggregates, asphalt and sealing aggregates, concrete aggregates (fine and coarse) and other products such as armour rock, ballast, erosion control rock, processed fill, landscape materials, and drainage media. Blasting will typically occur on an 'as needs' basis and will be dependent upon the market demand and production requirements for the site. At the anticipated maximum rate of production of 1,000,000 tonnes per annum it is expected that there would be two (2) blasts per month. Explosives are not anticipated to be stored on site, but will be transported to the site for immediate use as required by a blasting contractor. Unsealed internal access roads will be utilised to facilitate the movement of personnel, plant, equipment, and light vehicles into and out of the site. Unauthorised vehicle access will be prevented by the use of a wire perimeter fence and clearly displayed signage at the access road entrance. Major plant and equipment to be used on site will include, but not be limited to the processing plant, drill rigs, excavators, front end loaders, off highway trucks, water trucks, light vehicles and on-road delivery trucks. Those plant and equipment will be supported by infrastructure including generators, a weighbridge, site office and workshop.

1.2 Site Details

The site is located at Seelems Road and Petersons Quarry Road, Coraki NSW 2471, including Lot 401 DP633427 and land associated with the existing Petersons Quarry. The site is located approximately 2.5 kilometres to the north-west of Coraki, on the Far North Coast of New South Wales (NSW).

Access:	Access to the project is via Seelems Road and Petersons Quarry Road.
Site:	Lot 401 DP633427, Lot 402 DP802985, Lot 403 DP802985, Lot 408 DP1166287, Lot A DP397946, Lot A DP389418, Lot 3 DP701197, Lot 2 DP954593, Lot 1 DP954592 and Lot 1 DP310756.
Area:	Site Area: 100 ha Project Area: 40.83 ha Extraction Area: 10.27 ha Stockpiling Area: 28.91 ha Processing Area: 1.65 ha
Tenure:	Freehold.
Registered Proprietor:	<ul style="list-style-type: none">Varoli Pty Ltd (ACN 003728229): Lot 401 DP633427.Richmond Valley Council: Lot 402 DP802985, Lot 403 DP802985, Lot 408 DP1166287, Lot A DP397946, Lot A DP389418, Lot 3 DP701197, Lot 2 DP954593, Lot 1 DP954592, and Lot 1 DP310756.
Current Land Use:	The site is currently used for cattle grazing and the existing Petersons Quarry.
Local Government Area:	Richmond Valley Council.

1.3 Relevant Legislation

A comprehensive assessment of the relevant legislation to which this project is required to comply with is detailed in Section 4.0 – Statutory Requirements of the EIS document and also the Environmental Management Strategy required to be prepared in accordance with the conditions of consent for the Project.

1.4 Potential Environmental Impacts

The identification of activities and potential impacts is fundamental to designing and implementing procedures and measures proposed in the EMP. Activities associated with carrying out extractive industry have been tabulated against potential environmental impacts to provide a focus for preparing the EMP, refer to Table 1 – Identification of Potential Environmental Impacts. An assessment of the Environmental Values has been undertaken and included in the overarching EIS document, and the accompanying specialist technical reports. Assessment of the potential environmental impacts has been provided in the EIS documents. The location of the nearest sensitive receptors is shown in Drawing 1837.DRG.037 – Nearby Sensitive Receptors.

Table 1 – Identification of Potential Environmental Impacts

ACTIVITY/EQUIPMENT											
	Noise	Air Quality	Water Quality	Traffic	Visual Amenity	Social and Economic Factors	Land Contamination	Soils	Stormwater and Soil Erosion	Fauna and Flora	Waste
Vegetation Clearing		
Construction		
Topsoil Stripping		
Overburden Stripping
Raw Material Extraction	.		.						.		
Raw Material Stockpiling and Loading	.		.						.		
Raw Material Hauling		
Raw Material Unloading	.		.						.		
Washing and Screening
Product Stockpiling		
Product Handling		
Maintenance Activities
Handling and storage of oils, greases, fuels and chemicals		
Rehabilitation Activities
Stormwater Management			.						.		
Waste Management			.				.				
Extracting water from extraction pit for dust control and wash plant use	.										
Front End Loader		
Excavator		
Miscellaneous Stationary Motors	.		.						.		
Haul Truck		
Product Delivery Trucks		
Light Vehicles		
Stormwater Discharge		

. potential risk if inappropriately managed

1.5 Purpose of Environmental Management Plan

This EMP is a management document that links the potential environmental impacts with commitments and measures to safeguard the surrounding environment.

However, the principal management tool for guiding environmental management at the site is the Environmental Management Strategy. In the event of any inconsistency the content of the Environmental Management Strategy and supporting management plans apply.

The objective of the EMP is to meet anticipated conditions likely to be prescribed in the relevant approval documentation; i.e. the Environment Protection Licence. The structure of the EMP comprises a series of procedures for ease of implementation. The elements of the EMP are based on a standard format (that may be adapted for a particular issue or activity) addressing the, purpose, performance targets, relevant conditions, strategies/mitigation measures and monitoring.

2. Procedures and Policies

2.1 Environmental Policy

Site management is committed to being environmentally responsible and to conduct activities in compliance with environmental legislation, and will strive to achieve a sound practice of environmental management. In the process of implementing this policy, management shall:

- implement work programs to protect the surrounding environment.
- meet the requirements of all laws, acts, regulations and standards relevant to its operations and activities.
- make the most efficient use of natural resources taking due regard of environmental issues and ensuring land maintains long term productivity.
- implement a program to train all employees in general environmental issues and individual workplace environmental responsibilities.
- continually improve environmental practices to reflect changing legislation, new technology and scientific advances, lessons learned from environmental incidents and increasing knowledge and experience of site specific issues.
- allocate necessary resources to ensure the implementation of the environmental policy.

2.2 Implementation and Training

Implementation of the EMP will require, commitment by the Owners, Managers and employees of the site and access to technical expertise for tasks such as environmental monitoring, modelling or assessment, as needed. Management shall ensure that sufficient funding is provided to implement the EMP. All employees and sub-contractors will be inducted on the environmental management procedures and practices to be carried out at the quarry and be informed of the environmental management objectives and the specifics of the EMP including protection of buffer areas, impact minimisation measures, operational practices, maintenance measures, reporting measures, and individual responsibilities. They shall also be made aware of penalties if development conditions are breached and reporting requirements for incidents involving environmental harm and safety in accordance with the relevant environmental legislation. A record of all employee training/inductions will be maintained on site. Each employee shall be responsible for implementing environmental policies within the scope of their duty statement or job description. The currency of the EMP should be checked regularly (at least every three years) or as a result of significant change(s) to operations, to ensure up-to-date versions are available and to avoid confusion and mistakes.

2.3 Incidents and Complaints Procedure

Refer to the Environmental Management Strategy for a description of the Incidents and Complaints Procedure.

2.4 Monitoring Requirements

Refer to the Environmental Management Strategy for a summary of the monitoring requirements for the Project.

2.5 Records and Reporting

All environmentally relevant documentation, including policies, procedures, forms, records, and reports required to be kept as per this EMP shall be available at the approved/licensed premises for a period of at least five (5) years and be available for inspection by an authorised person. If monitoring is required following a complaint or incident, the report shall:

- record the date and time of sampling.
- be endorsed by a person or body possessing appropriate experience and qualifications to perform the required measurements on all records of analysis results.
- record the results of all analyses, measurements and observations and interpretations (if appropriate).
- be made available on request to any authorised person who must be permitted to make copies thereof.

3. Management Plans

3.1 Air Quality (Dust) Management Plan

Refer to the Air Quality Management Plan prepared by MWA Environmental forming part of the Environmental Management Strategy for the Project.

3.2 Water Management Plan

Refer to the Water Management Plan prepared by Calibre Consulting forming part of the Environmental Management Strategy for the Project.

3.3 Noise Management Plan

Refer to the Noise Management Plan prepared by MWA Environmental forming part of the Environmental Management Strategy for the Project.

3.4 Blasting Management Plan

Refer to the Blast Management Plan prepared by Groundwork Plus forming part of the Environmental Management Strategy for the Project.

3.5 Hydrocarbons and Chemical Management Plan

Purpose	<p>The Hydrocarbons and Chemicals Management Plan has been prepared to control the potential for spills or leaks from chemicals and hydrocarbons associated with the extraction activities. Site operations have the potential to contaminate land and water in and surrounding the site by the release of various chemicals used and/or stored on site. These chemicals could include:</p> <ul style="list-style-type: none"> • distillate (e.g. fuel for stationary and mobile engines) • oils and greases (e.g. lubricants and hydraulic oils for stationary and mobile equipment) • miscellaneous chemicals (e.g. weedicide, paint, solvents).
Performance Targets	<p>The following performance targets are relevant:</p> <ul style="list-style-type: none"> • No land contamination that would require notification to the EPA. • No serious spills of oils, greases, fuels or other hazardous chemicals (for this purpose, hydrocarbon spill incidents have been classified as follows: minor spill ≤5 L, major spill 5 L to 20 L, and serious spill ≤20 L). • No preventable release of hydrocarbons and chemicals to the environment.
Strategies/mitigation measures	<p>Strategies/mitigation measures for the management of hydrocarbons and chemicals at the site will be implemented in accordance with the relevant conditions of development and may include the following:</p>

3.5 Hydrocarbons and Chemical Management Plan

General

- Spills are to be cleaned up immediately.
- Undertake refuelling and equipment maintenance within designated hardstand or paved areas where practicable.
- Maintain all Safety Data Sheets (SDSs) and information relating to the storage, use and handling of chemicals at the site office.
- Ensure employees are familiar with proper fuelling and spill clean-up procedures.
- Induct all new employees on the use of handling of chemicals used on site.
- Maintain the site in a neat and tidy condition.
- Discourage "topping off" of fuel tanks.
- Use drip pans during refuelling and equipment maintenance.

Spill Kits

- Maintain appropriate spill kits at locations known to all employees (e.g. refuelling locations, chemical storage facilities, mobile equipment).
- Ensure employees are familiar with proper spill clean-up procedures.

Bunding and Storage

- All chemical storage facilities on site must meet specifications of Australian Standard AS 1940 - *The storage and handling of flammable and combustible liquids*.
- Bunding will be constructed of material which is impervious to the material stored and transferred therein.
- Bunds will be kept in good condition (e.g. no cracks, gaps or leaks).
- Roofed storage facilities will be provided where practicable.
- Stormwater captured within bunding is to be removed as soon as practicable and disposed of as contaminated water. Prior to removal, the water is to be free from contaminants.
- Empty hydrocarbon and chemical containers are to be stored with closures in place on a concrete hardstand or within a bunded area.
- Where vehicle access to the bunded area is required, access must be by way of a rollover bund.
- Bunds and/or drains are to be in place to exclude surface waters from washing/degreasing areas.

Disposal

- Hydrocarbon contaminated materials are to be appropriately disposed of at a licensed facility.
- If the material is a Classified Liquid Waste, it will be transported and disposed of by a licenced transport contractor.
- Oily waste materials, including liquid hydrocarbons, should be segregated from general wastes for disposal off-site by a licensed contractor.
- Records are to be kept on disposal of waste for all Hazardous Waste Materials.

Monitoring

Areas where handling of hydrocarbons and chemicals occur (e.g. refuelling or minor on site servicing) shall be regularly inspected by the Quarry Manager. All employees will be responsible for the safe day-to-day handling, use and temporary storage of chemicals being used on site.

3.6 Waste Management Plan

Purpose

This Waste Management Plan has been prepared to ensure wastes produced on Site are appropriately managed. Unmanaged wastes can detract from the amenity of the Site and locality and can increase operational costs. The principal wastes that may be generated from the site operations may include, but are not necessarily limited to:

- Classified Liquid and Non-Liquid Wastes (e.g. batteries, oil filters, waste oil/hydrocarbons and containers, oil/water emulsions and tyres)
- metal and used or faulty parts and equipment
- food scraps, packaging and consumables (e.g. paper, cardboard)
- green waste.

The *Protection of the Environment Operations (Waste) Regulation 2014* is the legislation governing waste management in NSW and the *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes (EPA, 1999)* guide the classification and management of wastes. The waste management hierarchy nominates a preferred order of waste management as follows:

- (a) *AVOID unnecessary resource consumption;*
- (b) *REDUCE waste generation and disposal;*
- (c) *RE-USE waste resources without further manufacturing;*
- (d) *RECYCLE waste resources to make the same or different products;*
- (e) *RECOVER waste resources, including the recovery of energy;*
- (f) *TREAT waste before disposal, including reducing the hazardous nature of waste; and*
- (g) *DISPOSE of waste only if there is no viable alternative.*

Performance Targets

The following performance targets are relevant:

- Apply the waste management hierarchy to the minimisation of waste.
- Maintain a record of any disposal of Classified Wastes in accordance with the *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes 1999*.
- No unlawful disposal of wastes on or off site.

Strategies/mitigation measures

Strategies/mitigation measures for the management of waste materials at the site will be implemented in accordance with the relevant conditions of the EPL and may include the following:

Waste Re-use

Waste re-use refers to re-using waste, without first substantially changing its form. Reasonable and practicable measures for reusing waste may include, but are not necessarily limited to:

- Recovering and separating solvents, metals, oil, or components or contaminants and reusing separated solvents for degreasing plant and equipment.
- Applying waste processing fines to land in a way that gives agricultural and ecological benefits (using fine sediments in rehabilitation activities).
- Using overburden for constructing bunds and landforming.
- Reusing silt/sediment on site to the maximum practicable extent.

3.6 Waste Management Plan

Waste Recycling

Waste recycling refers to treating waste that is no longer useable in its present form and using it to produce new products. Reasonable and practicable measures may include, but are not necessarily limited to:

- Recovering oils, greases and lubricants for collection by a licensed oil recycling contractor, recovering, separating and recycling packaging (including paper, cardboard, steel and recyclable plastics).
- Recycling used plant and equipment to the maximum practicable extent.
- Finding alternatives to disposal of non-recyclable materials (using conveyor belts for noise attenuation, mudflaps, utility vehicle tray liners).
- Providing suitable receptacles and storage areas for collection of materials for recycling.

Energy Recovery from Waste

This refers to recovering and using energy generated from waste. Due to the small scale of the operation, energy recovery is not considered viable.

Waste Disposal

This refers to disposing of waste which cannot otherwise be reused, recycled or used for energy recovery. Reasonable and practicable measures may include, but are not necessarily limited to:

- Regulated wastes must be transported and disposed of in accordance with the *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes*.
- Disposal to a licensed waste disposal facility (i.e. landfill or transfer station).

Waste Storage

Waste storage containers or areas to be provided and located at safe and convenient locations at the site. Each container will be identified with the type of wastes which may be disposed of in each container. Each container or area will be designed to prevent the escape of materials.

Classified Waste and Licenced Waste Transport

Classified waste is commercial or industrial waste, whether or not it has been immobilised or treated and is of a type or contains a constituent of a type listed in *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes 1999*.

The *Environmental Guidelines: Assessment, Classification and Management of Liquid and Non-Liquid Wastes* sets out the process by which wastes are classified. These will be followed for Classified Wastes.

All Classified Wastes will be transported by a licensed commercial transporter.

Monitoring

The Quarry Manager will undertake a monthly visual inspection to ensure the waste management hierarchy is being effectively implemented.

3.6 Waste Management Plan

All employees and contractors shall be responsible for ensuring wastes are stored and removed from the site on a regular basis (e.g. daily or weekly). The Quarry Manager shall ensure that required waste treatment measures are implemented at the site.

The Quarry Manager shall ensure waste receptacles are provided and the waste type identified and that temporary waste storage areas are signed, recycling bins are emptied when full and materials which may cause land contamination are not disposed of on the site.

The Quarry Manager shall keep a record of Classified Waste generated at the site, treatment and disposal methods, licenced contractors for transporting and disposing of waste and the location of the facility for accepting the waste.

3.7 Fauna and Flora Management Plan

Refer to the Biodiversity and Rehabilitation Management Plan forming part of the Environmental Management Strategy for the Project.

3.8 Weed Management Plan

Refer to the Biodiversity and Rehabilitation Management Plan forming part of the Environmental Management Strategy for the Project.

3.9 Rehabilitation Management Plan

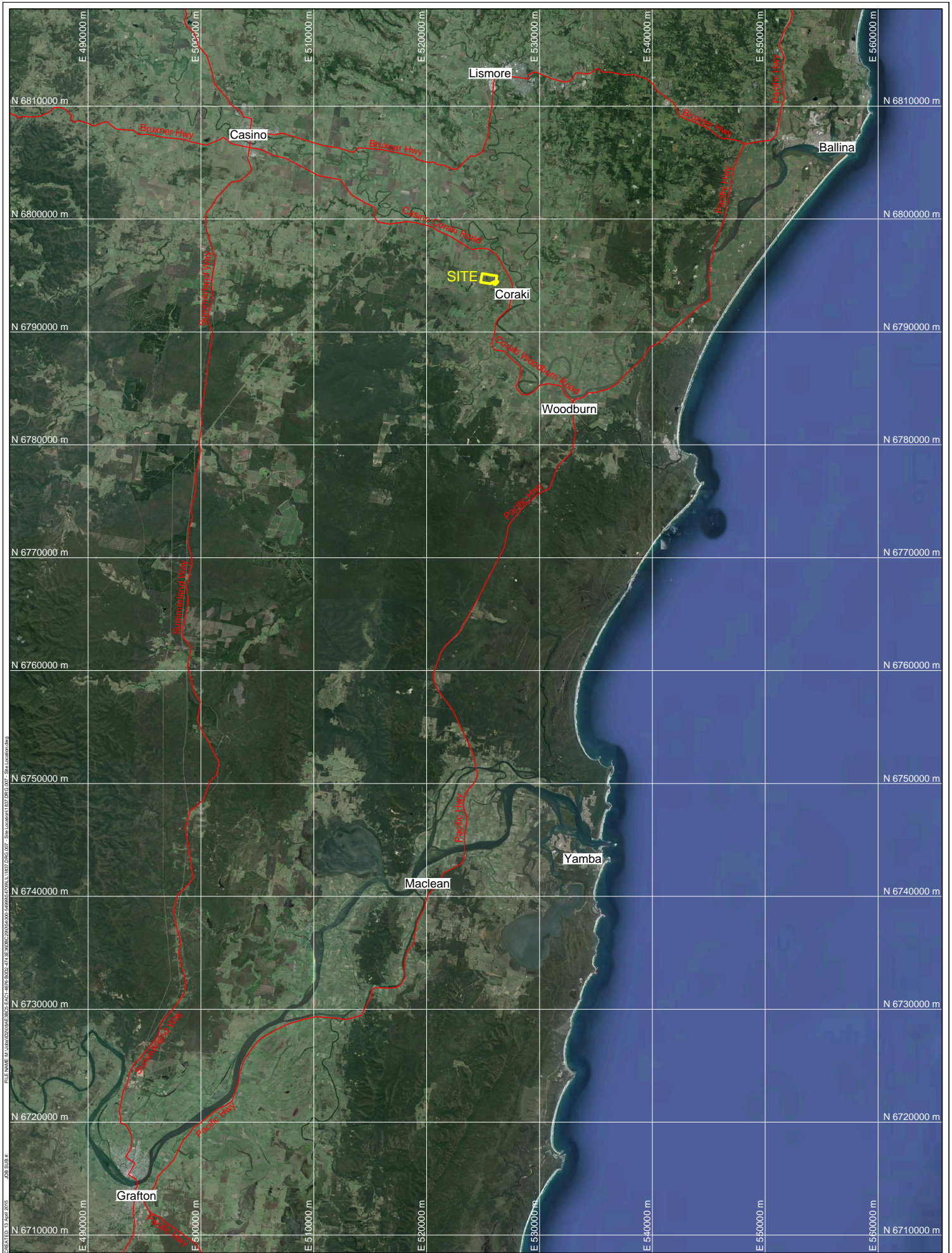
Refer to the Biodiversity and Rehabilitation Management Plan forming part of the Environmental Management Strategy for the Project.

3.10 Cultural Heritage Management Plan

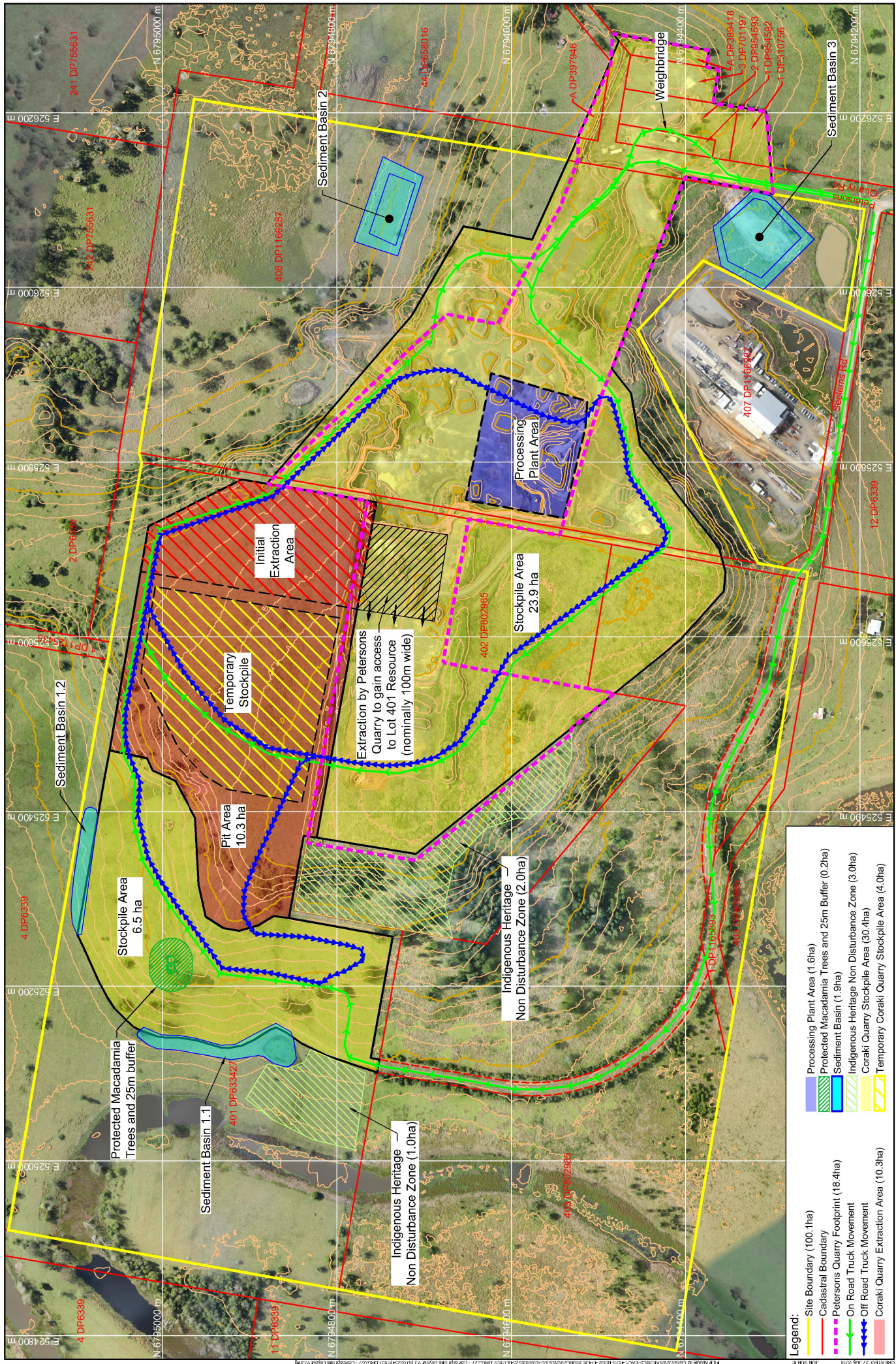
Refer to the Aboriginal Cultural Heritage Management Plan forming part of the Environmental Management Strategy for the Project.

3.11 Emergency Response Plan / Pollution Incident Response Management Plan

The existing Petersons Quarry Pollution Incident Response Management Plan (PIRMP) will be revised and updated to reflect the change in operator to Quarry Solutions. The fundamental elements of the previously approved PIRMP will remain unchanged.



REV		DESCRIPTION	DATE	BY
1		Revised site boundary	07/09/15	LT
Data Sources:				
Photography: Google, Image date: 2013-04-10				
Topography: Cadastre				
Ecosystem: Other				
OTHER PERSONS AND ORGANISATIONS MUST NOT BE USED FOR ANY PURPOSES WITHOUT THE WRITTEN PERMISSION OF GROUNDWORK PLUS. ABN: 89 829 140 865				
Legend:			PROJECT	
— Site Boundary			Coraki Quarry	
— Major Road			CLIENT	
			Quarry Solutions Pty Ltd	
			TITLE	
			Site Location Plan	
			SCALE	
			1:300,000 0 6km	
			DRAWING NUMBER	
			1837.DRG.007	
			REVISION	
			1	
			DATE	
			7 September 2015	
			DRAWN	
			LT	
			CHECKED	
			JA	
			DATUM: HORIZONTAL / VERTICAL / ZONE	
			MGA / / 56	



REV		DESCRIPTION	DATE	BY
1	2016/06/01	Initial Design	2016/06/01	101
2	2016/06/01	Final Design	2016/06/01	101

Project Name	Coraki Quarry
Client	Quarry Solutions Pty Ltd
Scale	1:4,000
North Arrow	True North
Scale Bar	0 40 80 Meters
Drawn	101
Checked	101
Printed	2016/06/01
Project Number	1837.027
Revision Number	2

Area of New Disturbance Associated with Coraki Quarry:
Coraki Quarry Extraction Area (Including Temporary Coraki Quarry Stockpile Area) (9.9ha)
Coraki Quarry Stockpile Area Outside of the Petersons Quarry Footprint (7.7ha + 6.5ha on Lot 401 = 14.2ha)
Sediment Basin (1.9ha)

Legend:

- Site Boundary (100.1ha)
- Cadastal Boundary
- Petersons Quarry Footprint (18.4ha)
- On Road Truck Movement
- Off Road Truck Movement
- Coraki Quarry Extraction Area (10.3ha)
- Processing Plant Area (1.6ha)
- Protected Macadamia Trees and 25m Buffer (0.2ha)
- Sediment Basin (1.9ha)
- Indigenous Heritage Non Disturbance Zone (3.0ha)
- Coraki Quarry Stockpile Area (30.4ha)
- Temporary Coraki Quarry Stockpile Area (4.0ha)

Indigenous Heritage Non Disturbance Zone (1.0ha)

Indigenous Heritage Non Disturbance Zone (2.0ha)

Extraction by Petersons Quarry to gain access to Lot 401 Resource (nominally 100m wide)

Stockpile Area 23.9 ha

Pit Area 10.3 ha

Stockpile Area 6.5 ha

Protected Macadamia Trees and 25m buffer

Sediment Basin 1.1

Sediment Basin 1.2

Initial Extraction Area

Temporary Stockpile

Processing Plant Area

Sediment Basin 2

Sediment Basin 3

Weighbridge

401 DP6339

402 DP802985

403 DP83427

404 DP83427

405 DP83427

406 DP83427

407 DP83427

408 DP83427

409 DP83427

410 DP83427

411 DP83427

412 DP83427

413 DP83427

414 DP83427

415 DP83427

416 DP83427

417 DP83427

418 DP83427

419 DP83427

420 DP83427

421 DP83427

422 DP83427

423 DP83427

424 DP83427

425 DP83427

426 DP83427

427 DP83427

428 DP83427

429 DP83427

430 DP83427

431 DP83427

432 DP83427

433 DP83427

434 DP83427

435 DP83427

436 DP83427

437 DP83427

438 DP83427

439 DP83427

440 DP83427

441 DP83427

442 DP83427

443 DP83427

444 DP83427

445 DP83427

446 DP83427

447 DP83427

448 DP83427

449 DP83427

450 DP83427

451 DP83427

452 DP83427

453 DP83427

454 DP83427

455 DP83427

456 DP83427

457 DP83427

458 DP83427

459 DP83427

460 DP83427

461 DP83427

462 DP83427

463 DP83427

464 DP83427

465 DP83427

466 DP83427

467 DP83427

468 DP83427

469 DP83427

470 DP83427

471 DP83427

472 DP83427

473 DP83427

474 DP83427

475 DP83427

476 DP83427

477 DP83427

478 DP83427

479 DP83427

480 DP83427

481 DP83427

482 DP83427

483 DP83427

484 DP83427

485 DP83427

486 DP83427

487 DP83427

488 DP83427

489 DP83427

490 DP83427

491 DP83427

492 DP83427

493 DP83427

494 DP83427

495 DP83427

496 DP83427

497 DP83427

498 DP83427

499 DP83427

500 DP83427

