

CORAKI QUARRY
PRELIMINARY ENVIRONMENTAL ASSESSMENT

Prepared for:
Quarry Solutions Pty Ltd

Date:
17/04/2015

Reference:
1837.DA1.001

Document Control

Project/ Report Details

Document Title:	Preliminary Environmental Assessment
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Client:	Quarry Solutions Pty Ltd
Ref. No.	1837.DA1.001

Document Status

Issue	*Description*	*Date*	*Author*	*Reviewer*
1	Preliminary Environmental Assessment	April 2015	Jim Lawler	Clayton Hill

Distribution Record

Recipient	
Quarry Solutions Pty Ltd	Issue 1 - 1h, 1e
NSW Planning and Environment	Issue 1 – 1e

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Table of Contents

TABLES

FIGURES

1.0 Introduction

Groundwork Plus has been commissioned to prepare this Preliminary Environmental Assessment (PEA) on behalf of Quarry Solutions Pty Ltd (Quarry Solutions). The PEA has been prepared in relation to the proposed Coraki Quarry, to be located at Seelems Road, Coraki, New South Wales, being described as Lot 401 DP633427 (refer **Drawing No. 1837.DRG.002 – Site Location Plan**).

It is proposed to extract, on average 800,000 tonnes of hard rock material per annum and therefore the proposed development constitutes State Significant Development (SSD). Accordingly, the PEA accompanies an application seeking the Secretary's Environmental Assessment Requirements (EARs) for the preparation of an Environmental Impact Statement (EIS) to seek approval for the establishment of the proposed quarry.

2.0 The Proposed Project

The proposed development seeks to establish a quarry within Lot 401 DP633427 to realise the full potential of a known extractive resource (hard rock) to extract, on average 800,000 tonnes of hard rock material per annum primarily for the planned upgrade of the Pacific Highway and thereby support and enhance the economic viability of the region. The Site is ideally situated for a quarry, being centrally located within the Site, well separated from sensitive receivers and adjacent to an existing quarry operated by Richmond Valley Council.

2.1 Site and Project Details

Location:	The Site is located at Seelems Road, Coraki New South Wales, approximately 2.5 kilometres north west of the township of Coraki, and 16 kilometres south-south west of Lismore.
Property Description:	The Site comprises Lot 401 DP633427.
Access:	Access to the Site is through Lot 403 DP802985 and Lot 1 DP1165893, via Seelems Road and Petersons Quarry Road.
Area:	Approximate area of Lot 401 DP633427 is 23.06 hectares
Tenure:	Freehold
Registered Proprietor:	Varoli Pty Ltd ACN 003728229
Current Land Use:	The Site is currently utilised for cattle grazing.
Local Environmental Plan:	The land is administered by the Richmond Valley Council, and subject to the Richmond Valley Local Environmental Plan (LEP). The land is in the RU1 Primary Production Zone of the LEP.
Landform:	The Site has an elevation of approximately 4m-41m AHD. Toward the east where the investigations were focused and where proposed extraction is planned, the area is elevated from the areas to the west and north with elevations between 32m-40m AHD.
Annual Extraction:	Average of 800,000 tonnes per annum, but potentially more than 1,000,000 tonnes in any calendar year dependant on project demand and timing.
Operating Life:	The expected operating life of the quarry is 5 to 7 years subject to the duration of the upgrade works to the Pacific Motorway.

Purpose of Quarry: The quarry is proposed to supply materials to scheduled upgrade works on the Pacific Motorway. It is understood the NSW Roads and Maritime Services plan to undertake the scheduled upgrade works between 2015 and 2020. It is noted that the adjoining quarry operated by Richmond Valley Council currently supplies to the general market with an existing approval allowing up to 100,000t per annum to be produced.

Rehabilitation: The Site is currently utilised for cattle grazing. At the conclusion of the operation the Site will be rehabilitated with pasture grasses suitable to return the land to cattle grazing.

Quarry Development Plan: The quarry will utilise the receding rim technique to minimise impacts to the surrounding environment to the greatest practicable extent (refer **Drawing No 1837.DRG.005 – Conceptual Site Layout Plan**).

Haulage Route: The anticipated haulage route to the Pacific Highway is via Peterson Quarry Road to Lagoon Road to Queen Elizabeth Drive to Coraki Woodburn Road to the Pacific Highway at Woodburn.

Haulage Vehicles: It is anticipated that haulage to the Pacific Highway will be via 30t truck and dog configuration.

Vegetation: The land consists of mainly open grassland with minor patchy scrub at lower elevations towards Seelems Creek. No vegetation other than grassland and some weeds were encountered during resource exploration (refer **Plate 1** below). An area of lowland rainforest exists on the adjoining Petersons Quarry to the south of the Site and extending into Lot 403 on DP802985 (access). This vegetation and associated habitat has been previously identified as requiring appropriate mitigation strategies in development of the adjoining quarry and the access road built for Lot 401 on DP633427. Whilst not impacting the proposed quarry, any access or changes to access adjoining this area should be carefully considered.

Plate 1 – Open grassland looking south east towards the adjoining Petersons Quarry

Sensitive Receivers: Approximately – South 680m, East 830m, North 345m, West 2.1km.

Hours of Operation:	The proposed hours of operation are, 6am to 7pm Monday to Saturday, 9am to 3pm Monday to Friday for blasting and no work on Sundays or public holidays.
Staff Numbers:	Up to 15 staff are anticipated to be required for the operation of the quarry. Staff will arrive by light vehicle. Staff will live or be accommodated locally.
Fuel and Chemical Storage:	Fuel and chemical storage may include a 10,000L bunded above ground fuel tank plus oils for minor servicing on Site.
Facilities:	Facilities for staff will include a temporary demountable site office and ablution block (pump out facility). A temporary workshop will also be constructed. Shipping containers may also be located on Site for secure storage of materials and equipment. A temporary weighbridge may also be established. All facilities will be removed from the Site at the cessation of the operations.
Equipment:	Equipment to be used include but are not necessarily limited to mobile crushing, screening and blending plants, drill rigs, excavators and wheel-loaders, dump trucks, water trucks and on road delivery trucks.
Blasting:	The resource is a hard rock resource which will require blasting. Suitably qualified drill and blast contractors will be relied upon for all drill and blast activities.

2.2 Justification

The planned upgrade of the Pacific Highway in proximity of Coraki will require significant volumes of quarry materials. The NSW Roads and Maritime Services anticipate undertaking the planned upgrade works between Woolgoolga to Ballina between 2015 and 2020. It is noted that construction timeframes will be subject to weather conditions and may extend beyond the project timeframes. The Peterson Quarry operated by Richmond Valley Council, holds approval for extraction of less than 100,000 tonnes per annum which will not be sufficient to cater to the project demands in addition to the existing local market demand for quarry materials. Accordingly, it is considered that there is an economic need for the proposed development. The proposed development is located adjacent to an existing quarry, in land previously disturbed by cattle grazing, thereby avoiding areas of conservation value and will implement measures to minimise and mitigate potential environmental impacts. Therefore, it is unlikely to have a significant detrimental impact on the values of the surrounding environment whilst supporting the economic potential and viability of the region.

2.3 Consultation

Relevant Local State and Commonwealth Government bodies would be consulted as part of the preparation of the Environmental Impact Statement (EIS) in addition to relevant service providers, local community groups, Aboriginal parties and nearby residents. A summary of the consultation activities will be included in the EIS.

2.4 Capital Investment Value

The capital investment value of the proposed development is estimated to be $950,000 excluding GST consisting of the following estimated costs:

- Site establishment works: $500,000
- Site amenities and buildings (site office, weighbridge, temporary workshops etc): $200,000
- Application fees and consultant fees for the development application process: $250,000

3.0 Planning Considerations

This chapter outlines the strategic planning policies and statutory provisions likely to apply to the subject site.

3.1 Environmental Planning and Assessment Act 1979

The EP&A Act provides the basis for planning in NSW. Division 4.1 of Part 4 outlines the requirements for SSD including those related to a State Environmental Planning Policy. SSD is assessed and determined by the Minister following public consultation. It is proposed to extract more than 500,000 tonnes of hard rock material per annum. Therefore the proposed development constitutes SSD.

3.2 Protection of the Environment Operations Act 1997

The Protection of the Environment Act (POEO Act) aims to *'protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development' and 'reduce risks to human health and prevent the degradation of the environment'*. It is proposed to extract more than 30,000 tonnes of hard rock material per annum, therefore triggering the need for a Environment Protection Licence (EPL).

3.3 State Environmental Planning Policy – State and Regional Development 2011

Pursuant to Schedule 1 of the State Environmental Planning Policy (SEPP) – State and Regional Development 2011 the proposed development constitutes SSD as it is proposed to extract more than 500,000 tonnes of hard rock material per annum.

3.4 State Environmental Planning Policy – (Mining, Petroleum Production and Extractive Industries) 2007

The objectives and requirements of the SEPP – Mining, Petroleum Production and Extractive Industries 2007 are applicable to the proposed development of the Coraki Quarry. Part 3 of the Policy provides the matters that should be considered during the assessment of the application, including but not limited to the significance of the resource, compatibility with other land uses, transport and rehabilitation. These items will be investigated and discussed as part of the EIS.

3.5 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

SEPP No.33 seeks to determine whether a development is a hazardous or offensive industry and if so directs that measures be implemented to reduce the impact of the development are considered. These matters will be investigated and discussed as part of the EIS.

3.6 State Environmental Planning Policy No. 44 – Koala Habitat Protection

SEPP No. 44 seeks to encourage conservation and management of potential koala habitat to reverse the current trend of koala population decline. The Site is primarily grazing land with little vegetation cover likely to be considered habitat for populations of koala. Nevertheless, this will still be investigated as part of the EIS.

3.7 State Environmental Planning Policy No. 55 – Remediation of land

SEPP No. 55 seeks to provide for a consistent Statewide planning approach to the remediation of contaminated land. Given the current use of the land for cattle grazing, contamination is unlikely, and as such remediation is also unlikely to be required. Nevertheless, this will be investigated as part of the EIS.

3.8 North Coast Regional Environmental Plan

The North Coast Regional Environmental Plan applies to the Richmond Valley Council Local Government Area and contains a number of relevant clauses to be considered as part of the EIS, including but not limited to the following:

12 Development control—impact of development on agricultural activities

The council shall not consent to an application to carry out development on rural land unless it has first considered the likely impact of the proposed development on the use of adjoining or adjacent agricultural land and whether or not the development will cause a loss of prime crop or pasture land.

15 Development control—wetlands or fishery habitats

The council shall not consent to an application to carry out development for any purpose within, adjoining or upstream of a river or stream, coastal or inland wetland or fishery habitat area or within the drainage catchment of a river or stream, coastal or inland wetland or fishery habitat area unless it has considered the following matters:

a) the need to maintain or improve the quality or quantity of flows of water to the wetland or habitat,
b) the need to conserve the existing amateur and commercial fisheries,
c) any loss of habitat which will or is likely to be caused by the carrying out of the development,
d) whether an adequate public foreshore reserve is available and whether there is adequate public access to that reserve,
e) whether the development would result in pollution of the wetland or estuary and any measures to eliminate pollution,
f) the proximity of aquatic reserves dedicated under the Fisheries Management Act 1994 and the effect the development will have on these reserves,
g) whether the watercourse is an area of protected land as defined in section 21AB of the Soil Conservation Act 1938 and any measures to prevent soil erosion, and
h) the need to ensure that native vegetation surrounding the wetland or fishery habitat area is conserved, and
i) the recommendations of any environmental audit or water quality study prepared by the Department of Water Resources or the Environment Protection Authority and relating to the river, stream, wetland, area or catchment.

18 Development control—extractive industry

1) The council shall not consent to a development application for an extractive industry unless it includes any necessary conditions of consent to require implementation both during and after extractive operations of an erosion and sediment control plan and rehabilitation plan.

3.9 Richmond Valley Local Environmental Plan 2012

The Site is located within the Richmond Valley Council Local Government Area. The relevant Local Environmental Plan (LEP) is the Richmond Valley Local Environmental Plan 2012. The proposed quarry is located within land zoned RU1 Primary Production. Extractive industry is a permissible use with consent in the RU1 zone. It is considered the proposed development is consistent with the objectives of the RU1 zone which are:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To ensure that development does not unreasonable increase the demand for public services or public facilities.*

3.10 Other Statutory Considerations

There will be a number of other statutory Acts and Regulations that will be considered in preparing the EIS. These may include, but are not necessarily limited to:

- Rural Fire Act 1997 and Rural Fires Regulation 2008.
- Native Vegetation Act 2003 and Native Vegetation Regulation 2005.
- Noxious Weeds Act 1993.
- Heritage Act 1977 and Heritage Regulation 2005.
- Threatened Species Conservation Act 1995 and Threatened Species Conservation Regulation 2010.
- National Parks and Wildlife Act 1974 and National Parks and Wildlife Regulation 2009.
- Environment Protection and Biodiversity Conservation Act 1999.
- Native Title Act 1993.
- Water Management Act 2000.

4.0 Potential Environmental Impacts

The environmental issues requiring assessment within the EIS will be identified and prioritised as follows:

- A comprehensive list of all relevant environmental issues would be assembled through consultation with the local community and local and State government agencies, completion of environmental studies and a review of relevant legislation, planning documents and environmental guidelines.
- A review of the proposed development would be undertaken based on the identified environmental issues to identify risk sources and potential environmental impacts for each identified issue.
- A qualitative analysis of risk for each potential environmental impact would be undertaken with corresponding mitigation and management measures identified to minimise potential for environmental harm to result from the proposed development.

Identification of environmental issues relevant to the proposed development based upon the findings of the work undertaken to date include Aboriginal archaeology, Biodiversity, Noise, Air quality, Surface water and Groundwater, Traffic, Visual amenity and Heritage. These issues of potential risk are summarised below in **Table 1 – Summary of Risk of Potential Impacts**.

Table 1 – Summary of Risk of Potential Impacts

Issue	Potential Impact
Aboriginal archaeology	Risk of potential impacts to sites or landscapes of significance. A desktop search of Lot 401 DP633427 with a 200 metre buffer in the NSW Office of Environment and Heritage (OEH) Aboriginal Heritage Information Management System (AHIMS), has returned one record near the Site. It is understood this record of Aboriginal significance is described as "*Twin Pines Birth Place*" which is located south of the proposed extractive industry.
Biodiversity	Risk of potential impacts to native vegetation from direct clearing and introduction or spread of noxious and environmental weeds.
Noise	Risk of potential impacts to nearby residences and along haulage routes from noise generated by extraction, processing, stockpiling and loading of the resource.
Air quality	Risk of potential impacts to nearby residences from dust emissions resulting from extraction, processing, stockpiling and loading of the resource.
Surface water	Risk of potential impacts resulting from sedimentation to riparian habitats.
Traffic	Risk of potential impacts to local roads currently utilised by the existing Peterson Quarry due to increased heavy vehicle traffic albeit for a limited period of time of 5 to 7 years.
Visual amenity	Risk of potential impacts to visual amenity and rural character of the area to areas to the north of the Site.

Further investigation is proposed involving specialist reports for a number of matters including, Aboriginal archaeology, Biodiversity, Noise, Air Quality, Surface water and Traffic. A summary of the proposed approach to each of these matters is provided on the following page in **Table 2 – Further Assessments**.

Table 2 – Further Assessments

Issue	Methodology
Aboriginal archaeology	A specialist assessment is recommended to review relevant environmental information, past Aboriginal cultural heritage investigations and any relevant statutory registers and inventories to identify potential and known archaeological sites. Subject to findings of those initial investigations further detailed assessments will be conducted as set out in the OEH Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW, the Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010, the Due Diligence Code of Practice for protection of Aboriginal objects in NSW and other relevant guides and codes of practice.
Biodiversity	A specialist assessment is recommended to investigate the potential impacts of the proposed development on the biodiversity values of the area. The comprehensive assessment will include conducting and documenting field studies in accordance with the relevant guidelines to identify existing biodiversity values including native vegetation communities and habitats as well as aquatic and or riparian habitats that may be impacted by the proposed development. The assessment will identify potential impacts and assess the risk and severity of those impacts at a local and regional context and then identify potential mitigation measures to avoid, minimise or offset those potential impacts.
Noise	A specialist assessment is recommended to investigate potential noise impacts from the proposed development on nearby sensitive receivers. The comprehensive assessment will include an analysis of the existing noise environment, prediction of noise emissions from the proposed development and modelling of the potential impacts on surrounding sensitive receivers (including cumulative impacts). The assessment will also identify potential mitigation measures to avoid and or minimise potential noise impacts.
Air quality	A specialist assessment is recommended to investigate the potential air quality impacts from the proposed development on the receiving environment. The comprehensive assessment will assess the existing air quality in the area and model all activities forming part of the proposed development likely to result in potential environmental nuisance from dust emissions. The assessment will then identify potential mitigation measures to avoid and or minimise potential impacts from dust emissions.
Surface Water	A specialist assessment is recommended and will assess the potential impacts of the proposed development on surface water and investigate measures to manage surface water captured within the disturbed area of the quarry prior to its release. The assessment will also consider the likelihood of interaction with groundwater and investigate if specific management or operational measures are required to avoid or minimise potential impacts to groundwater.
Traffic	A specialist assessment is recommended to assess the impact of the proposed development on the local traffic network. The comprehensive assessment will include an assessment of the existing road network and traffic volumes and likely traffic growth rates. The assessment will determine the amount of traffic likely to be generated by the proposed development and what potential impacts may result on the existing road network. The assessment will also consider whether upgrades to existing intersections or roads are required to accommodate the proposed development and identify potential mitigation measures to avoid and or minimise potential impacts to the existing road network.
Visual amenity	In this instance a specialist visual assessment is not recommended as the design of the quarry will utilise the 'receding rim' technique. This will ensure the northern slope of the site is retained until the final stage of the operation as a physical screen minimising views into the working area of the quarry. However, matters of visual amenity will be broadly addressed as part of the EIS.

5.0 Conclusion

This Preliminary Environmental Assessment summarises the scope and nature of the proposed development and the corresponding key potential environmental impacts to be considered as part of the preparation of the EIS. We look forward to the receipt of the EARs that will confirm the scope of work for the proposed development and allow the preparation of the necessary reports and studies to adequately inform the future assessment of the application by the consent authority.

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