



10 May 2016

Karuah East Quarry (MP 09_0175)

Company Report and Overview of Activities

Introduction of Approved Project

The Karuah East Quarry was approved by the NSW Planning Assessment Commission as a Part 3A Major Project on 18 June 2014 (Project Approval 09_0175). The project also received approval from the Australian Government Department of Environment on 20 March 2015 (EPBC 2014/7282).

The key elements of the approved project are as follows:

- Extraction of up to 1.5 million tonnes of andersite material per year from a total resource of approximately 29 million tonnes.
- Removal and stockpiling an estimated 380,000m³ of overburden from the quarry extraction area. Overburden is not included in the extraction rate of 1.5 million tonnes of andersite per annum.
- Construction of quarry plant (crushing plant, wash plant, pug mill, workshop and weighbridge), stockpile areas, and haulage road.
- Quarry Lands – Pt Lot 12 and Part Lot 13 DP 1024564.
- Disturbance Area of proposed works – 31.63ha (actual vegetation disturbance 28.09ha).
- Environmental Offset Lands – Pt. Lot 13 & 14 DP 1024564 and Lot 5 DP 838128. Total environmental offset 138.22ha. These offset lands were confirmed acceptable by NSW OEH and the Federal Department of Environment.
- Upgrade and extension of Blue Rock Lane (RMS owned land) to provide access to the quarry.
- Haulage of product from site to market by 25 – 30 tonne haul trucks via the Pacific Highway.
- Approximately 216 laden truckloads per day at maximum production.
- Drilling & Blasting Activity.
- Crushing and screening of extracted material.
- Loading and hauling of extracted material.
- Employment of 28 staff to operate the quarry. 56 construction jobs will be created.
- The Karuah East Quarry is a stand-alone operation, separate to the existing Karuah Quarry. All environmental modelling undertaken (eg, air quality and noise) considered the cumulative impacts of both quarries combined and results satisfied legislative goals.

All Project Approval documents and Environmental Reporting are available on the Hunter Quarries website at www.hunterquarries.com.au (see 'Karuah East Documents' at the bottom of the web page).

Prior to the commencement of vegetation clearing and construction, the Project Approval and EPBC Approval required the preparation of a number of important management plans inclusive of environmental safeguards. These management plans (prepared by experts endorsed by the NSW DPE) include:

- Biodiversity Offset Area Management Plan.
- Tetratheca Juncea Translocation Management Plan.
- Noise Management Plan.
- Air Quality and Greenhouse Gas Management Plan.
- Blast Management Plan.
- Water Management Plan.
- Traffic Management Plan (including Construction Management and Operational Traffic Management).
- Heritage Management Plan.
- Landscaping and Rehabilitation Management Plan.
- Environmental Management Strategy.

All of the abovementioned Management plans have been endorsed by the NSW DPE. In addition, the Biodiversity Management Plan was also endorsed by the Federal Department of the Environment.

Each of the Management Plans are available on the abovementioned Hunter Quarries website.

Progress of the Project

The tasks that have been completed in 2016 include:

- **8 February 2016** - *Yalimbah Creek Ecological and Water Assessment* finalised.
- **3 March 2016** - Extraction limits and boundaries surveyed and marked.
- **16 March 2016** - Condition 9 of the EPBC signed off by the Department of the Environment
- **4 April 2016** - 30 Nest Boxes installed in the approved Biodiversity Offset Area as per the *Biodiversity Offset Management Plan* (Kleinfelder, 2015).
- **4 April 2016** - Pre-clearing ecological surveys completed. Habit trees were also identified and marked per the *Biodiversity Offset Management Plan* (Kleinfelder, 2015).
- **30 March 2016** - Groundwater sampling completed. Groundwater levels will be monitored quarterly and water quality will be tested bi-annually from this time forward.
- **27 April 2016** - High Volume Air Samplers for monitoring Total Suspended Particulates (TSP) and PM10 were installed at receiver location B.

Clearing of the approved disturbance area commenced on the 27th of April, 2016.

It is expected that the following tasks will commence over the next quarter:

- The translocation of *Tetratheca Juncea* as per the *Tetratheca Juncea Translocation Management Plan* (Firebird, 2015);
- A Meteorological station will be installed;
- A 5th dust deposition gauge will be installed;
- The construction of the internal and external haul roads;
- Construction of site buildings and plant will commence; and
- Construction of two aerial fauna bridges.

Construction Schedule

Construction associated with the project is expected to take approximately 7-9 months to complete and will be staged as follows:

- The initial clearing of approved disturbance area which commenced on 27 April 2016 is anticipated to take 4 to 5 weeks;
- Site preparation works and construction of haul road is anticipated to take 3 months to complete; and
- Construction of site buildings and plant will commence shortly after haul road is completed and is anticipated to take approximately 4-6 months.

Monitoring and Environmental Performance

Ongoing environmental monitoring will be undertaken during the life of the Karuah East Quarry. Monitoring of groundwater, surface water, noise, air quality (dust) and ecological monitoring has commenced. The monitoring results will be reported monthly commencing from May 2016. The monitoring that has been completed is listed below.

19 January, 2016 – Surface water sampling of Yalimbah and Bulga Creek was undertaken as required for the *Yalimbah Creek Ecological and Water Assessment*.

30 March, 2016 – Groundwater quality and levels were measured.

27 April, 2016 – High Volume Air Samplers were installed at receiver location B, 64 Mill Hill Close. These sample total suspended particulates (TSP) and 10 micron particulate matter (PM10) continuously on a 1 in 6 day cycle.

29 April, 2016 – Attended noising monitoring was conducted at receiver location F and G.

In addition to the above, dust deposition is monitored continuously at four locations surrounding the Karuah East and Hunter Quarries project area.

The number of parameters that will be monitored will increase as the Karuah East Quarry progresses from construction to operation. A summary of the monitoring program for the Karuah East project is attached to this report.

Prior to the commencement of clearing, the boundaries of the extraction area and extraction limits were surveyed and pegged by a registered surveyor. The remaining boundaries of the disturbance areas were flagged with pink marking tape.

Clearing of the approved disturbance area commenced on the 27th of April. In addition to the pink flagging tape and pegging, barrier tape has been erected along the boundaries as a visible marker during the clearing process. Refer to Photo 1 for an example of these boundary markings.

Silt fencing will be installed along exposed drain lines in order to prevent sediment from entering into the Yalimbah and Bulga creek catchments.

Photo 1



Barrier tape and pink flagging tape is used to define the boundaries during the clearing process.

Community Complaints & Company Response to Complaints

No complaints relating to the Karuah East project have been received.

Complaints relating to the Karuah East project can be made via telephone or through the Hunter Quarries website. Once a complaint has been received, the following procedure is followed:

- The details of the complaint will be recorded and investigated once received;
- Acknowledgement of the complaint will be made to the complainant within 24 hours of receiving the complaint;
- The complainant will receive notification within 3 working days of the outcome of the investigation; and
- Where applicable, a written response will be provided within 10 working days.

All complaints will be recorded and kept for at least 4 years in accordance with Condition M5 of the EPL. A complaints register will also be provided on the website, which will be updated quarterly in accordance with the Project Approval.

At this present time, contact phone numbers are advertised on the gates of Lots 12 and 13 of the Karuah East project site. Contact details will be advertised at the main entry once the haul road is complete.

Information Provided to the Community and Any Feedback

Since Project Approval, no information has been provided to the community other than the notice for expressions of interest for the Community Consultative Committee.

It is noted that during the Project Approval phase a range of public consultations occurred including:

- 2 x open Community 'Drop In' sessions.
- The Project Application was publicly advertised for comment.
- The project was determined by the Planning Assessment Commission. This process included a public meeting.
- The EPBC application was publicly advertised for comment.

Environmental Monitoring Program for Karuah East Quarry

Parameter		PA 09_0175 Condition	Monitoring location(s)	Responsibility	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Air Quality	Deposited Dust	3(13)	DDG1, DDG2, DDG3, DDG4, DDG5	SLR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	TSP	3(13)	B	KEQ / RCA	Sampled on a continual 1 in 6 day cycle as per AQMP												
	PM10	3(13)	B	KEQ / RCA	Sampled on a continual 1 in 6 day cycle as per AQMP												
	Meteorological Monitoring	3(17)	HQ Weighbridge	KEQ	Monitored continuously via an automatic weather station												
Blasting	Airblast Overpressure	3(12 (f))	B	Premier Drill & Blast	Blast monitoring will be undertaken at every blast.												
	Ground Vibration	3(12 (f))	B	Premier Drill & Blast													
Noise	Construction Noise Attended	3 (7 (e))	F, G	SLR	At the commencement of any new activities and a minimum of once per quarter												
	Operations Noise Attended	3 (7 (e))	F, G	SLR			✓			✓			✓			✓	
	Operations Noise Unattended	3 (7 (e))	G	SLR			✓			✓			✓			✓	
Water	Surface Water - Bulga Creek ¹	3 (21)	SW1, SW2	KEQ / SLR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Surface Water - Yalimbah Creek ¹	3 (21)	SW3, SW4	KEQ / SLR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Surface Water - Sediment Dams ²	3 (21)	LDP1, LDP2, LDP3	KEQ / SLR	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
	Eco Assesment - Yalimbah Creek	3 (21)	MP14 to MP18	Klienfelder	Prior to commencement of quarrying and annually												
	Groundwater levels	3 (21)	BH205, BH207, BH208, BH303	RCA			✓			✓			✓				✓
	Groundwater quality	3 (21)	BH205, BH207, BH208, BH303	RCA			✓						✓				
Heritage	Aboriginal objects	3 (36 (c))	Disturbance Area	RPS	Monitoring to be undertaken during initial surface disturbance.												
Ecology	Biodiversity Offset Area	3 (33)	MP1 to MP13	Klienfelder	Prior to commencement of quarrying and annually.												
	Tetratheca Translocation	3 (27)	Within Lot 14	Firebird	Annually after translocation.												

Note 1: Surface water in Yalimbah & Bulga Creeks will be monitored only when in flow. Locations SW2 & SW3 will also be monitored during discharge.

Note 2: Water monitoring of the sediment dams will also be monitored during discharge.