ARDMORE PARK QUARRY

ANNUAL ENVIRONMENTAL MANAGEMENT REPORT 2016

APRIL 2017
ABN: 44 101 930 714

CEAL LIMITED

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1. INTRODUCTION

Ardmore Park Quarry (the quarry) is owned and managed by CEAL Australia operating as Multiquip Aggregates (Multiquip). The quarry is located approximately 5km south of the township of Bungonia, at the intersection of Lumley and Oallen Ford Roads.

While still in the development phase, the quarry will produce washed sand and basalt aggregate products for the Goulburn region. The Project Approval 07_0155 gives Ardmore Park license to produce up to 400,000 tons of quarry products each year via 44 trucks loads each year.

The Annual Environmental Management Report (AEMR) provides a summary of the environmental performance and regulatory compliance of the quarry for the period between 1st January 2016 to the 31st December 2016. It has been prepared in accordance with the requirements set out in Schedule 5 of PA 07_0155 and the Environmental Guidelines for Industry (NSW DPI, V3-2006).

1.1 REGULATORY APPROVAL

Ardmore Park operates under the following regulatory approvals.

Project Approval	PA 07_0155 (2005), amended in 2010.
NSW EPA Environmental Protection License	13213. For crushing, grinding or separating and extractive activities.
Water License	10CA102637

1.2 PROJECT CONTACTS

Name	Position	Company	Phone Number	Email Addresses
Steve Mikosic	Managing director	CEAL	0418 221 386	steve@multiquip.com.au
Michael Cox	Director and company secretary	CEAL	0424 818 288	michael@multiquip.com.au
Darrin Lewis	Civil Works Manager	Multiquip Aggregates	0499 588 956	darrin.l@multiquip.com.au
Alexander Cox	Environmental Officer	Multiquip Aggregates	0450 751 618	alexander.c@multiquip.com.au

2. SUMMARY OF OPERATIONS

2.1 CONSTRUCTION

A significant amount of construction work was undertaken both within the quarry site and with respect to the roadworks on public roads associated with the project.

Within Ardmore Park work included:
- Construction of the sand processing pad.
- Construction of the sand processing pad access road.
- Construction of the primary sediment dam for the hard rock processing area.
- Construction of the primary haulage road to the basalt extraction area.
- Commencement of construction of the dam network to support the sand processing area.
- Commencement of construction of the main heavy vehicle servicing area.
- Commencement of construction of the future staff facilities area.
- Commencement of construction of the future weigh bridge pad.

The Bungonia bypass road located at 5513 Oallen Ford Road was completed in March. Works included the application of a two-coat seal.

In December, Multiquip commenced the widening of Oallen Ford and Jerrara Roads as per the program outlined by the Traffic Management Plan (TMP). At the conclusion of 2016, the western side of Oallen Ford Road had been widened and work on the Jerrara Road/Mountain Ash Road intersection had begun.

2.2 PLANT

Table 1. contains a list of plant on site at Ardmore Park over the 12 month period. These vehicles do not represent a permanent fleet and have been periodically relocated to other jobs during the reporting period.

Table 1. Plant fleet based at Ardmore Park in 2016.

Equipment	**Number**
Excavator	6
Dozer	2
Grader	2
Roller (padfoot and flat drum)	4
Moxies (haul trucks)	4
Semi trailers	4
Heavy vehicle floats	2
Light vehicles	12
Scraper	1
Backhoe	1
Crushers	5

Scalpers	2
Screens	5
Profiler	1

2.3 QUARRYING ACTIVITIES

The quarrying activities were constrained to basalt extraction for the duration of the period. This extracted material was used in the construction of haulage roads, processing pads, access roads throughout the quarry site as well as the roadworks on the Bungonia bypass and Oallen Ford Road. Total extraction for 2016 was approximately 30,000T.

3. ENVRIONMENTAL MANAGEMENT AND PERFORMANCE

3.1 Meteorological monitoring

A meteorological station was installed at Ardmore Park in 2013 in compliance with schedule 3 of the project approval. The rainfall records for each month of the reporting period are shown in table 2.

Table 2.

Month	Rainfall (mm)
January	199
February	38.4
March	33.6
April	17.4
May	45
June	218
July	48
August	66
September	81.6
October	32.4
November	81.4
December	72.6
TOTAL	933.4

3.2 Traffic control management

Heavy vehicles used on public roads were restricted to the transportation of plant and the movement of quarry materials to the Bungonia bypass road and stockpile sites along Jerrara Road.

It is Multiquip's policy not to use King Street Bungonia for any company vehicle (in addition to the standing restriction on heavy vehicle traffic passing through Bungonia).

3.3 Erosion and sediment control

During 2016, a sediment dam and accompanying rock lined drain ways was constructed to catch dirty water coming off the hard rock processing and stockpile area.

The construction of additional drainage structures around the sand processing area were commenced during the reporting period.

All drainage structures are inspected periodically as well as following rainfall events by the Quarry's Environmental Officer.

On the 6th of June, following an exceptionally heavy rain event of 152ml of rain over a three day period, a 4ML dam associated with the sand washing plant ruptured. At the time of the incident, the dam was still under construction and had not been clay lined. A significant quantity of water was discharged downhill and any sediment was contained by a series of silt fences and the significant ground cover. No runoff was detected entering the western spring and its accompanying waterway.

This incident was reported to the Environmental Protection.

3.4 Surface water management

There were no scheduled or unscheduled discharges of water during the reporting period. Given this, there was no need to assess water quality in the dams at the lower end of the project site.

3.5 Groundwater

There are 9 bores on the Ardmore Park Quarry. These include the main production bore, 2 bores in the hard rock aquifer on the north of the property and 6 shallow bores throughout the sand extraction area.

Surveys of the groundwater bores are conducted quarterly by an independent hydrologist. Quarrying operations had no observed impact on groundwater quality during the reporting period.

Very limited water was extracted from the production bore reflecting the limited level of production and the fact that no sand was washed during the period.

3.6 Spring monitoring

An independent hydrologist monitors of two springs located to the east of the quarry on a quarterly basis. There was no observed deterioration in Phils Spring or the southern spring over the reporting period.

3.7 Air quality

The dust management controls implemented for the quarry include:

- Regular wetting of internal roads.
- Minimising exposed areas.
- Prompt revegetation of disturbed areas when appropriate.
- Application of water to crushing units when in operation.

Multiquip operates 4 dust deposition monitors along the boundary of the project site to the north-west, west, south-west and east. Recording is continuous and samples are collected on a monthly basis. The recorded scores for each monitor over the reporting period are given in table 4. Shaded cells indicate an exceedance of the allowable monthly limit for total dust deposition.

Table 4. Monthly dust deposition (g/m^2/month).

	Monitor 1 (entrance)	Monitor 2 (western boundary)	Monitor 3 (south-western boundary)	Monitor 4 (neighbouring eastern property)
Jan	0.7	22	0.7	13
Feb	1.2	0.4	0.6	2.7
Mar	2.2	1.2	1.4	1.6
Apr	4.6	5	10	0.1
May	1.3	21	4.6	0.1
Jun	1	1.1	0.3	0.6
Jul				
Aug				
Sep				
Oct				
Nov	0.3	1.3	1.2	1.7
Dec				
Average	1.61	7.43	2.69	2.83

Dust monitor 2 (Lockmore Lodge) was the only monitor which showed an average monthly deposition above the allowable limit. This higher average was distorted by two particular recordings in January and May. In both of these months, two separate monitors also recorded exceedances (monitor 4 in January and monitor 3 in May). Wind rose data collected from the meteorological station on site indicates quarry related activities is unlikely to have contributed to these higher than average scores.

Multiquip received a show cause notice in December from the Environmental Protection Authority regarding the high level of dust deposition recorded in the months of September 2015 and April 2016. Wind rose data pointed to a plausible link in quarrying activities and the deposition of dust in these months. In response to this, Multiquip undertook a review the internal dust collection protocols and initiated a 3 month study of dust deposition. This review ran from December 2016 to March 2017. The results of this review will be published in the 2017 AEMR.

3.8 Noise management

No noise management policies are in place.

3.9 Visual amenity

No visual amenity policies are in place.

3.10 Aboriginal heritage

No work with respect to Aboriginal heritage has been undertaken during the reporting period. No artefacts were encounter either from roadworks or within the main quarry site.

3.11 Bushfire

No significant fire control measures were undertaken during 2016. Vegetation located near houses and permanent structures is regularly maintained as part of general property maintenance.

3.12 Waste management

There have been no significant waste management issues during the reporting period.

3.13 Weed control

As part of the Landscape Management Plan, Multiquip takes reasonable action to contain weeds listed under the Noxious Weeds Act, both at Ardmore Park and the Bungonia bypass road.

Every 6 months, the designated environmental officer surveys the premises of the quarry and the Bungonia bypass road for noxious weeds. Necessary remedial action is then pursued, e.g. spraying or slashing.

During the reporting period, blackberries and St Johns Wort were sprayed on the Bungonia bypass road.

4. REHABILITATION ACTIVITIES

There has been ongoing rehabilitation work in association with roadworks and the installation of site infrastructure. This has focused on ensuring adequate ground cover is developed on exposed surfaces promptly after the conclusion of earthworks, typically through revegetation.

5. COMMUNITY RELATIONS

Two CCC meetings were conducted throughout the reporting period. These meetings were held at the Ardmore Park quarry premises during April and September. The topics recorded in the minutes include:

- Resolution of concerns raised in the previous year about vibrations from quarry related activities.
- Discussion of the possibility of installing an additional dust monitor to the eastern boundary.
- Discussion of ways that Multiquip could over time organise crushing activities to reduce the noise generated by crushing plant.
- Discussion of concerns regarding dust emissions from quarry related activities.
- Updates on ongoing construction and quarrying related activities.

Multiquip maintains a general complain register to respond to community concerns regarding environmental and other performance criteria. Contact details of Multiquip are prominently displayed on signage at the quarry entrance and both the Oallen Ford and Mountain Ash entrances to the Bungonia bypass road.

Multiquip received two formal complaints over this reporting period. The details of these complaints and the responses undertaken by Multiquip are summarised in table 5.

Table 5. Complaints received during the 2016 reporting period.

Date	Description of complaint	Response taken
28/12/2016	A neighbouring residence had shared with Multiquip a flow rate record from a bore showing what appeared to be continually declining flow rates to an internal spring dating back to 2003. Concern was raised that Multiquip's use of groundwater from 2005-2016 could be contributing to the declining flow rates.	An independent hydrologist was contracted to conduct an investigation. It was found that quarry related use of the bore was unlikely to be the contributing to the declining flow rates. This conclusion was reached by taking into account the low rates of water use by Multiquip prior to 2015 and the aquifer the bore accesses is not geologically connected to the bore on the neighbouring property which is experiencing a declining flow rate. Multiquip continues to monitor the health of the spring on a quarterly basis.
March 2016	A Neighbour complained of excess vibrations.	Whilst it was difficult to identify the way these vibrations travelled to cause the disturbance, it appears that the vibrations were being caused by one particular piece of equipment. The use of this machine was discontinued and the problem appears to have ceased.

Representatives from Multiquip frequently attend meetings of the Bungonia Progress Association.

This provides an additional forum to discuss quarry activities and further Multiquip's relationship with local residents.