



ARDGLEN QUARRY

2017 Annual Environmental Management Report (AEMR)



PROJECT APPROVAL - MP 06_0264

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1. INTRODUCTION

1.1 Scope

This report has been prepared by Daracon Quarries, in accordance with Schedule 5 Condition 4 of the Project Approval MP 06_0264 to record the activities and environmental monitoring undertaken within and surrounding Ardglan Quarry during the period 1st January 2017 to 31st December 2017.



Figure 1: Quarry Location

On 2nd December 2008 Daracon was granted approval (Project Approval MP 06_0264) under part 3A of the Environmental Planning & Assessment Act 1979 to extend the existing quarry operations in a westerly direction into Lot 218 (DP 751028).

It should be noted that although MP 06_0264 was issued on 2nd December 2008, quarry activities continued to operate under the existing Development Consent issued by Murrumbidgee Shire Council DA1/1994/158 and "Existing Use Rights" that might have been applied to the Quarry.

Daracon ceased operations at Ardglan Quarry in February 2012 (when Project Approval MP 06_0264 came into effect) as we could not comply with a number of Consent Conditions and as such, did not commence operations within the extension area.

This document provides an overview of activities and environmental monitoring that occurred within the reporting period and also activities and environmental monitoring planned for 2018. This Annual Environmental Management Report (AEMR) contains the following:

- A description of activities that were carried out in 2017;
- A review of the environmental monitoring results that were carried out in 2017;
- Results of the Independent Environmental Audit that was carried out in 2017;
- A description of measures that will be implemented throughout 2018 to improve the environmental performance of the Quarry;

1.2 Standards and Performance Measures

The owner and operator of Ardglan Quarry, Daracon Quarries (Trading as Buttai Gravel Pty Ltd) is required to operate the approved activities within the Quarry site in accordance with MP 06_0624 and licences listed in **Table 1**

Table 1: Ardglen Quarry - Consents and Licences

Approval/Licence	Issue Date	Expiry Date
Project Approval MP 06_0624	2 December 2008	31 August 2038
Environment Protection Licence No.1115		1 January*

Relevant conditions with Project Approval MP 06_0624 which nominate specific environmental criteria are as follows:

- *Schedule 3 Condition 2: Noise*
- *Schedule 3 Condition 7: Blasting and Vibration*
- *Schedule 3 Condition 15: Air Quality*
- *Schedule 3 Condition 18: Meteorological Monitoring*
- *Schedule 3 Condition 19: Surface and Ground Water*

In addition to the specific environmental criteria, the following conditions within MP 06_0624 specifically request further information be included in each AEMR:

- *Schedule 3 Condition 33: Product Transport*
- *Schedule 3 Condition 46: Greenhouse Gas*
- *Schedule 3 Condition 47: Waste Minimisation*

1.3 Site Management And Responsibilities

The overall management of Ardglen Quarry is the responsibility of Daracon's Manager Quarries, Mr Paul Walker. While the Quarry is in a "Care & Maintenance" stage, environmental monitoring is conducted by Mr Luke Robinson (Systems Manager) and Mr Geoff Reeves (Quarry Supervisor). Other companies involved with quarry related documentation and monitoring data include:

- RCA Aust. Pty Ltd Laboratories

1.4 Document Preparation

The following information and data for this report has been drawn from documents commissioned or held by Daracon.

- Environmental Management Strategy Ardglen Quarry Extension - Major Project 06/0264, September 2010, Orogen Pty Ltd.
- Ardglen Quarry Environmental Monitoring Folders.

This document has been prepared by Mr Luke Robinson of Daracon Quarries.

2. OPERATIONS DURING THE REPORTING PERIOD

2.1 Introduction

During 2017 the Quarry has been in a "Care & Maintenance" phase with no operations conducted at the site. **Table 2** lists the activities that did occur at Ardglen Quarry throughout 2017.

Table 2: Operations During the Reporting Period

January	Weekly Site Inspections
February	Weekly Site Inspections
March	Weekly Site Inspections
April	Weekly Site Inspections
May	Weekly Site Inspections
June	Weekly Site Inspections
July	Weekly Site Inspections
August	Weekly Site Inspections
September	Weekly Site Inspections
October	Weekly Site Inspections
November	Weekly Site Inspections
December	Weekly Site Inspections

2.2 Extraction And Clearing Operations

Table 3 records the monthly/annual sales of various products produced at Ardglen Quarry during 2017.

Table 3: Ardglen Quarry Sales (tonnes)

2017 Month	Aggregates	Road Pavements	Other	Total
January	0	0	0	0
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	0	0
June	0	0	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	0
October	0	0	0	0
November	0	0	0	0
December	0	0	0	0
Total	0	0	0	0
Source: Ardglen				

Nil extraction operations took place during 2017.

2.3 Processing Operations

Nil processing operations took place during 2017.

2.4 Overburden and Silt Management

Nil overburden was removed during 2017.

Nil silt removal occurred during 2017.

2.5 Waste Management

No production took place during 2017, and as such there was no production waste generated as follows:

- General Demolition Waste – Nil;
- Recyclable Concrete – Nil;
- Paper & Cardboard – Nil;
- Scrap Steel – Nil;
- Recyclables – Nil;
- Waste Oil – Nil;
- Waste Oil Filters – Nil;
- Empty Drums – Nil;
- Grease – Nil;
- Oily Water – Nil;
- Batteries – Nil;
- Asbestos Containing Material – Nil;

2.6 Site Infrastructure And Services

No infrastructure and service work occurred during 2017.

2.7 Water Management

Figure 2 displays the current water management system in place at Ardglen Quarry. During the reporting period there was some minor maintenance to the various drainage and sedimentation control structures on site.



Figure 2: Water Management

2.8 Bushfire Management

No bushfire prevention activities occurred during this reporting period.

2.9 Hazardous Materials Management

Hazardous materials within the Quarry site are appropriately managed with diesel fuel and bitumen pre-coat storage areas located in above ground tanks appropriately bunded. During this reporting period there was no diesel fuel stored onsite.

Aerosols and weed poison are stored within the designated hazardous materials cabinets within the stores area.

2.10 Product Transportation

The transportation of products, both imported and exported is identified in *Schedule 3 Condition 33*.
Condition 33 - The Proponent shall:

(a) keep records of the:

- amount of quarry materials imported onto the site each year;
- amount of product transported from the site each year;
- number of truck movements generated by the project, on a weekly basis;
- number of train movements generated by the project, on a weekly basis;
- date and time of each train movement generated by the project;

(b) provide annual production data to the DPI using the standard form for that purpose; and

(c) include these records in the AEMR.

During this reporting period the Quarry was not operational and there was no material imported and exported by road or rail transport.

2.11 Rehabilitation

No specific rehabilitation occurred during the reporting period apart from targeted weed control and ongoing maintenance of offset areas. It is anticipated that no rehabilitation will occur for a number of years post recommencement of quarrying operations. Overburden will be placed in the "southern void" when overburden removal is required, and once adequate quantities of material are placed there, it is anticipated that rehabilitation will then occur in that area.

With respect to the specific aspects of the proposed rehabilitation measures, we provide the following status updates:

- The Offset Strategy (S3_C25) – The Offset Strategy as described within the approved Landscape Management Plan (September 2010) has been implemented and continues to be maintained regularly. Due to the fact that "*operations within the extension area*" have not yet commenced, this particular strategy remains unchanged at this time;
- The Landscape Management Plan (S3_C27) – The Landscape Management Plan (2010) was prepared by a suitably qualified expert and approved in September 2010. As far as was practical and necessary, the plan was implemented following this approval;
- The Doughboy Hollow Creek Rehabilitation Strategy (S3_C28) – As detailed within the approved Landscape Management Plan (2010) and due to the fact that this particular strategy "*shall commence prior to the start of quarry operations into the approved extension area*", this strategy remains incomplete at this stage;
- The Rehabilitation and Biodiversity Offset Management Plan (S3_C29) – The Rehabilitation and Biodiversity Offset Management Plan is an integral component of the Landscape Management Plan (2010). The status of the Rehabilitation and Biodiversity Offset Management Plan is still to be confirmed however we hope to have this information appropriately collated shortly;

2.12 Closure

Section 5 of the approved Landscape Management Plan (September 2010) was reviewed during the reporting period and at this stage no amendments were made to the details contained therein.

3. COMMUNITY RELATIONS

3.1 Surrounding Communities

Figure 3 displays the land ownership and residence surrounding the quarry. During the reporting period, it is understood that there were no changes to the land ownership within the area. Informal discussions have occurred with a number of residents in the area.

Residents of Ardglen



Figure 3: Land Ownership and Residents

Table 4: Land Owners and Residents

Land Owners and Residents	
County Property Holdings Pty Limited	Mr R G & Mrs A R Maxwell
County Property Holdings Pty Ltd	Mr R K Best & Ms T M Hall
E & J Taylor	Mr R S Blomeley
Land and Property Management Authority	Mr R W Hancock
Mr A W Harris	Mr W E & Mrs E A Avery
Mr D J Bates	Mrs J Taylor
Mr D J Burraston	Ms A Bojba-Lis
Mr G B Smith & Ms N E Ryder	Ms C M Thompson
Mr G N & Mrs M A Lewins	Ms E G Russell
Mr J Orr	Ms M Taylor
Mr K J & Mrs J Martin	Ms P Purtell & Mr S Harms
Mr P A Bojba	The State of New South Wales
Mr P Colbert	Hunter Industrial Rental Equipment Pty Ltd

3.2 Community Consultative Committee Meetings

In mid 2015 Daracon sought approval for an Independent Community Consultative Committee Chairperson. Approval was granted for PEP Consulting to undertake the Independent Chairperson position. Following the appointment, PEP Consulting engaged with the community to re-establish a Community Consultative Committee (CCC) and establish community representatives. This process was finally resolved in July 2016 with the first CCC meeting held 23rd August 2016. Refer to Section 3.4 for more information.

3.3 Environmental Complaints

Daracon received no complaints during the reporting period.

3.4 Community Involvement

PEP Consulting, Daracon and the CCC representatives agreed that the April 2017 CCC meeting should be cancelled as there was nothing further to report. However, with the agreement of all parties, a CCC meeting did occur on the 11th December 2017 and Appendix 3 contains the draft minutes of this meeting. This report was circulated to the CCC and uploaded onto the Daracon Website.

4. ENVIRONMENTAL MONITORING

4.1 Water Quality

4.1.1 Introduction

Ardglen Quarry operates under an approved Site Water Management Plan. The purpose of this plan is to ensure that Ardglen Quarry does not pollute any waters it may discharge into, in accordance with Environmental Protection Licence No. 1115. The water monitoring plan proposes that prior to any discharge from the sediment basin, the water be tested for turbidity using a probe and visually assessed for the presence of oil and grease. If turbidity is less than 20 NTU and a surface film is not present, water may be discharged.

Ardglen Quarry has two sediment basins onsite, the in-pit sump which is approximately 63ML and a final sediment basin which is approximately 3ML. Currently all water from the disturbed area is directed towards the in-pit sump and when this becomes full, water is then directed to the smaller (3ML) sediment basin for treatment and discharge.

4.1.2 Conclusion

During the reporting period, nil water was discharged from site.

4.2 Noise and Blasting

4.2.1 Introduction

Ardglen Quarry operates under an approved Noise Monitoring Program and Blast Monitoring program. These programs outline the measures which will mitigate the environmental effects of noise and blasting of the quarry activities on our neighbours; proposes noise monitoring programs to assess and report the levels of impact, in compliance with Schedule 3 of the Project Approval and provides a mechanism whereby any noise complaints can be dealt with quickly and effectively.

The Noise Monitoring Program calls for quarterly attended noise monitoring to take place at specified noise monitoring locations. The Blast Monitoring program requires monitoring to take place at specified locations, see **Figure 4**.



Figure 4: Blast Monitoring Locations

4.2.2 Noise Criteria

Table 5: Noise Criteria

TABLE 1 NOISE IMPACT ASSESSMENT CRITERIA dB(A)				
<i>Land</i>	<i>Day Leq (15 min)</i>	<i>Evening Leq (15 min)</i>	<i>Night</i>	
			<i>Leq (15 min)</i>	<i>L1 (1 min)</i>
1 Burraston	35	35	35	45
3 Rose	35	35	35	45
4 C M Thompson	44	35	35	45
5 M Taylor	45	35	35	45
6 S Thompson	45	35	35	45
9 Bates	37	35	35	45
10 Avery	38	35	35	45
11 Shipman	37	35	35	45
12 Hall	36	35	35	45
13 McGhie	35	35	35	45
14 Purtell	36	35	35	45
15 J Taylor	43	35	35	45
16 Bojba	40	35	35	45
All other privately owned land	35	35	35	45

4.2.3 Noise Monitoring Results

Ardglen quarry is currently non-operational and as such no activities are being taken place onsite. Regardless of this fact, noise monitoring of the site was undertaken in December 2017.



Figure 5: Noise Monitoring Locations

4.2.4 Blasting Criteria

Table 6: Blasting Criteria

Airblast overpressure level (dB(Lin Peak))		Allowable exceedance
115		5% of the total number of blasts over a period of 12 months
120		0%
Peak Particle Velocity (mm/s)		Allowable exceedance
5		5% of the total number of blasts over a period of 12 months
10		0%

4.2.5 Blasting Monitoring Results

Nil blasts were carried out in the reporting period.

4.2.6 Analysis of Results

The results of the noise monitoring undertaken in December 2017 are included in Appendix 2. These results were all below the specified criteria (as expected due to the fact that the quarry was not operational).

No quarry operations have taken place within the reporting period, so therefore no blast monitoring has been undertaken.

4.2.7 Conclusion

The noise monitoring results were within the specified limits and when operations recommence blast monitoring will then recommence.

4.3 Air Quality

4.3.1 Introduction

Ardglen Quarry operates under an approved Air Quality Management Plan. The objectives of this plan is to comply with all statutory requirements, minimise air quality impacts on surrounding residents and properties, maintain reasonable levels of amenity for surrounding residents, to keep the local community and regulators informed and to respond quickly and effectively to issues and complaints and to ensure that air quality is measured according to best practice and results are presented in a timely and transparent manner to stakeholders.

4.3.2 Meteorological Station

Condition 18 (32) requires that a meteorological station to operate in the vicinity of the project site for the life of the project. Daracon has installed a meteorological station (Figure 6), ensuring that the meteorological station complies with the requirements in the "Approved Methods for Sampling of Air Pollutants in New South Wales Guideline".

The meteorological station currently monitors the following parameters as per EPL 1115:

- Rainfall;
- Wind Speed and Direction;
- Temperature (at 2m and 10m above ground level);
- Sigma theta;
- Solar Radiation;

4.3.3 Air Quality Monitoring Locations and Frequency

The current air quality monitoring network consists of three deposited dust gauges (DDG), two HVAS units and one TSP unit (see **Figure 6**).

The location of the air quality monitoring equipment (primarily to the North-East and East of the Quarry) was deduced from the location of the surrounding residences.



Figure 6: Air Quality Monitoring and Weather Station Locations

4.3.4 Air Quality Criteria

The air quality criteria for the quarry, as outlined with condition 15 (10) of the approval are provided in the below table.

Table 7: Air Quality Criteria

Parameter	Frequency	Locations	Limit/Guideline	Sampling Method
Deposited dust	Monthly.	DG-1 located at Receptor 2 (EPL point 2). DG-2 located at Receptor 5 (EPL point 3). DG-3 located at Receptor 6 (EPL point 4).	Deposition Rate* Maximum total deposited dust level: 4 g/m ² .month - as an annual average	AM-19 AS3580.10.1 – 2003
Total suspended particulate (TSP) matter	24 hours every 6 days for 12 months.	TSP-1 located at Receptor 2. Removed after 12 months.	Concentration 90 µg/m ³ - as an annual average	AM-15 AS3580.9.3 – 2003
Particulate matter < 10 µm (PM ₁₀)	24 hours every 6 days.	PM10-1 located at Receptor 2. PM10-2 located at Receptor 6.	Concentration 50 µg/m ³ - as a 24 hour average 30 µg/m ³ - as an annual average	AM-16 AS3580.9.6 - 2003
Visible air pollution	Weekly. In response to any visible emissions complaint.	Weekly site inspection. At the location of any reported emission.	Project Approval Schedule 3, Condition 16 The Proponent shall ensure any visible air pollution generated by the project is assessed regularly, and that quarrying operations are relocated, modified, and/or stopped as required to minimise air quality impacts on privately-owned land, to the satisfaction of the Director-General.	No required sampling methodology. Actions required if visual impact is suspected or confirmed, are detailed in Section Error! Reference source not found..
Meteorological station	Continuous.	On site near the weighbridge.	Project Approval Schedule 3, Condition 18 The Proponent shall ensure the project has a suitable meteorological station in the vicinity of the site that complies with the requirements in <i>Approved Methods for Sampling of Air Pollutants in New South Wales</i> guideline.	AM-1 to AM-4 USEPA (2000) EPA 454/R-99-005
Greenhouse gases (electricity and fuel consumption)	Upon purchase of electricity or fuel.	Entire site.	Project Approval Schedule 3, Condition 46(a) The proponent shall monitor the greenhouse gas emissions generated by the project.	No required sampling methodology. Records of purchase and storage used to determine consumption.

4.3.5 Air Quality Monitoring Results

The following information presents the results of the deposited dust, HVAS and TSP monitoring program.

4.3.5.1 Depositional Dust Gauges

Table 8: Depositional Dust Gauge Results

	Insoluble Solids (g/m ² .month)			Insoluble Solids Annual Average (g/m ² .month)		
	EPA2	EPA3	EPA4	EPA2	EPA3	EPA4
Jan-17	0.7	0.7	1.1	0.5	0.7	1.1
Feb-17	1.1	1.4	1.3	0.6	0.7	0.6
Mar-17	0.5	0.5	0.6	0.6	0.7	0.6
Apr-17	0.4	0.5	0.3	0.6	0.7	0.6
May-17	0.7	1.8	0.4	0.6	0.8	0.6
Jun-17	0.4	0.4	0.4	0.6	0.8	0.6
Jul-17	0.2	0.4	0.4	0.6	0.8	0.7
Aug-17	0.4	0.4	0.4	0.6	0.8	0.7
Sep-17	0.8	0.8	1.2	0.6	0.8	0.7
Oct-17	0.3	0.9	0.4	0.6	0.8	0.7
Nov-17	0.3	0.5	0.4	0.6	0.8	0.7
Dec-17	0.3	0.3	0.5	0.5	0.7	0.6

4.3.5.2 HVAS Unit 1 (PM10-1)

Table 9: HVAS Unit 1 Results

		Sample #	Run Date	PM10	Filter #	Date Off	Time Off	Tech	Hrs
Jan-17	PM ₁₀₋₁	1179733018	6/01/2017	5	9326484	11/01/2017	11:29	Client	24.02
	PM ₁₀₋₁	1179733021	12/01/2017	16	9326487	16/01/2017	8:21	Client	24.00
	PM ₁₀₋₁	1179733024	18/01/2017	11	9326343	23/01/2017	7:14	Client	24.02
	PM ₁₀₋₁	1179733027	24/01/2017	16	9326346	27/01/2017	7:22	Client	24.01
	PM ₁₀₋₁	1179733030	30/01/2017	11	9326349	1/02/2017	8:38	Client	24.00
Feb-17	PM ₁₀₋₁	2179733014	5/02/2017	12	9326352	7/02/2017	13:01	Client	24.03
	PM ₁₀₋₁	2179733017	11/02/2017	17	9326355	14/02/2017	12:44	Client	24.00
	PM ₁₀₋₁	2179733020	17/02/2017	8	9326358	20/02/2017	8:25	Client	24.02
	PM ₁₀₋₁	2179733023	23/02/2017	24	9326361	24/02/2017	10:16	Client	24.01
	PM ₁₀₋₁	3179733018	1/03/2017	6	9326364	3/03/2017	7:04	Client	24.01
Mar-17	PM ₁₀₋₁	3179733021	7/03/2017	10	9326367	9/03/2017	13:02	Client	24.11
	PM ₁₀₋₁	3179733024	13/03/2017	10	9326370	15/03/2017	12:15	Client	24.03
	PM ₁₀₋₁	3179733027	19/03/2017	6	9326639	22/03/2017	13:06	Client	24.01
	PM ₁₀₋₁	3179733030	25/03/2017	4	9326644	28/03/2017	14:05	Client	24.02
	PM ₁₀₋₁	3179733033	31/03/2017	9	9326647	4/04/2017	12:42	Client	24.02
Apr-17	PM ₁₀₋₁	4179733018	6/04/2017	<1	9326650	11/04/2017	11:16	Client	24.00
	PM ₁₀₋₁	4179733021	12/04/2017	1	9326653	13/04/2017	10:48	Client	24.01

	PM ₁₀₋₁	4179733024	18/04/2017	7	9326656	20/04/2017	10:36	Client	24.02
	PM ₁₀₋₁	4179733027	24/04/2017	6	9326659	28/04/2017	11:03	Client	24.03
	PM ₁₀₋₁	4179733030	30/04/2017	4	9326662	5/05/2017	8:29	Client	24.17
May-17	PM ₁₀₋₁	5179733018	6/05/2017	3	9417065	9/05/2017	12:02	Client	24.04
	PM ₁₀₋₁	5179733021	12/05/2017	3	9417068	17/05/2017	13:09	Client	24.01
	PM ₁₀₋₁	5179733024	18/05/2017	11	9417071	22/05/2017	8:31	Client	24.01
	PM ₁₀₋₁	5179733027	24/05/2017	3	9417801	25/05/2017	13:09	Client	24.04
	PM ₁₀₋₁	5179733030	30/05/2017	2	9417804	2/06/2017	7:31	Client	24.01
Jun-17	PM ₁₀₋₁	6179733018	5/06/2017	4	9417807	6/06/2017	10:58	Client	24.02
	PM ₁₀₋₁	6179733021	11/06/2017	4	9417810	16/06/2017	9:31	Client	24
	PM ₁₀₋₁	6179733024	17/06/2017	6	9420583	22/06/2017	11:00	Client	24.02
	PM ₁₀₋₁	6179733027	23/06/2017	3	9420586	27/06/2017	13:04	Client	24.03
	PM ₁₀₋₁	6179733030	29/06/2017	1	9420589	30/06/2017	9:15	Client	24.01
Jul-17	PM ₁₀₋₁	7179733018	5/07/2017	2	9420592	10/07/2017	9:32	Client	24.16
	PM ₁₀₋₁	7179733021	11/07/2017	1	9520595	14/07/2017	9:08	Client	24.03
	PM ₁₀₋₁	7179733024	17/07/2017	<1	9420598	18/07/2017	10:04	Client	24
	PM ₁₀₋₁	7179733027	23/07/2017	4	9326602	26/07/2017	8:22	Client	24.02
	PM ₁₀₋₁	7179733030	29/07/2017	3	9326634	1/08/2017	9:01	Client	24.04
Aug-17	PM ₁₀₋₁	8179733018	4/08/2017	1	9326654	8/08/2017	10:40	Client	24.01
	PM ₁₀₋₁	8179733021	10/08/2017	1	9326685	14/08/2017	8:29	Client	24.01
	PM ₁₀₋₁	8179733024	16/08/2017	6	9326694	21/08/2017	10:31	Client	24.02
	PM ₁₀₋₁	8179733027	22/08/2017	5	9417007	25/08/2017	10:45	Client	24.03
	PM ₁₀₋₁	8179733030	28/08/2017	2	9417024	29/08/2017	10:47	Client	24.01
Sep-17	PM ₁₀₋₁	9179733014	3/09/2017	8	9410931	6/09/2017	10:54	Client	24.2
	PM ₁₀₋₁	9179733017	9/09/2017	2	9410934	13/09/2017	9:56	Client	24.03
	PM ₁₀₋₁	9179733020	15/09/2017	2	9410937	18/09/2017	8:28	Client	24.02
	PM ₁₀₋₁	9179733023	21/09/2017	3	9410940	22/09/2017	10:22	Client	24.04
	PM ₁₀₋₁	9179733026	27/09/2017	23	9410943	28/09/2017	11:37	Client	24.01
Oct-17	PM ₁₀₋₁	10179733018	3/10/2017	5	9410946	6/10/2017	7:27	Client	24.01
	PM ₁₀₋₁	10179733021	9/10/2017	5	9410949	10/10/2017	12:54	Client	24.04
	PM ₁₀₋₁	10179733024	15/10/2017	3	9410952	19/10/2017	10:50	Client	24.01
	PM ₁₀₋₁	10179733027	21/10/2017	7	9410955	25/10/2017	8:52	Client	24.02
	PM ₁₀₋₁	10179733030	27/10/2017	6	9410958	1/11/2017	9:12	Client	24.01
Nov-17	PM ₁₀₋₁	11179733018	2/11/2017	12	9410413	7/11/2017	10:23	Client	24.28
	PM ₁₀₋₁	11179733021	8/11/2017	5	9410416	10/11/2017	8:05	Client	24.02

	PM ₁₀₋₁	11179733024	14/11/2017	7	9410419	15/11/2017	9:24	Client	24.03
	PM ₁₀₋₁	11179733027	20/11/2017	3	9410422	24/11/2017	8:13	Client	24
	PM ₁₀₋₁	11179733030	26/11/2017	10	9518261	28/11/2017	12:08	Client	24.03
Dec-17	PM ₁₀₋₁	12179733018	2/12/2017	8	9518264	5/12/2017	11:50	Client	24.03
	PM ₁₀₋₁	12179733021	8/12/2017	8	9518267	11/12/2017	9:30	Client	24.01
	PM ₁₀₋₁	12179733024	14/12/2017	17	9518270	18/12/2017	8:41	Client	24.01
	PM ₁₀₋₁	12179733027	20/12/2017	2	9518273	21/12/2017	10:23	Client	24.03
	PM ₁₀₋₁	12179733030	26/12/2017	5	9518276	27/12/2017	7:29	Client	24.01
	PM ₁₀₋₁	1179733018	6/01/2017	5	9326484	11/01/2017	11:29	Client	24.02

4.3.5.3 HVAS Unit 2 (PM10-2)

Table 10: HVAS Unit 2 Results

		Sample #	Run Date	PM10	Filter #	Date Off	Time Off	Tech	Hrs
Jan-17	PM ₁₀₋₂	1179733019	6/01/2017	7	9326485	11/01/2017	10:15	Client	24.05
	PM ₁₀₋₂	1179733022	12/01/2017	25	9326486	16/01/2017	7:36	Client	24.01
	PM ₁₀₋₂	1179733025	18/01/2017	10	9326344	23/01/2017	6:26	Client	24.03
	PM ₁₀₋₂	1179733028	24/01/2017	16	9326347	27/01/2017	6:10	Client	24.02
	PM ₁₀₋₂	1179733031	30/01/2017	13	9326348	1/02/2017	7:49	Client	23.99
Feb-17	PM ₁₀₋₂	2179733015	5/02/2017	12	9326353	7/02/2017	12:40	Client	24.08
	PM ₁₀₋₂	2179733018	11/02/2017	19	9326354	14/02/2017	12:55	Client	24.00
	PM ₁₀₋₂	2179733021	17/02/2017	17	9326359	20/02/2017	8:44	Client	24.00
	PM ₁₀₋₂	2179733024	23/02/2017	27	9326362	24/02/2017	10:21	Client	24.04
	PM ₁₀₋₂	3179733019	1/03/2017	7	9326365	3/03/2017	7:10	Client	24.02
Mar-17	PM ₁₀₋₂	3179733022	7/03/2017	11	9326368	9/03/2017	13:05	Client	24.26
	PM ₁₀₋₂	3179733025	13/03/2017	10	9326371	15/03/2017	11:55	Client	24.05
	PM ₁₀₋₂	3179733028	19/03/2017	7	9326372	22/03/2017	13:09	Client	24.02
	PM ₁₀₋₂	3179733031	25/03/2017	4	9326645	28/03/2017	14:21	Client	24.03
	PM ₁₀₋₂	3179733034	31/03/2017	9	9326648	4/04/2017	12:17	Client	24.03
Apr-17	PM ₁₀₋₂	4179733019	6/04/2017	1	9326649	11/04/2017	11:25	Client	24.00
	PM ₁₀₋₂	4179733022	12/04/2017	2	9326654	13/04/2017	10:53	Client	24.01
	PM ₁₀₋₂	4179733025	18/04/2017	9	9326657	20/04/2017	10:46	Client	24.03
	PM ₁₀₋₂	4179733028	24/04/2017	5	9326660	28/04/2017	11:21	Client	24.06
	PM ₁₀₋₂	4179733031	30/04/2017	5	9326663	5/05/2017	8:34	Client	24.25
May-17	PM ₁₀₋₂	5179733019	6/05/2017	8	9417066	9/05/2017	11:40	Client	24.04
	PM ₁₀₋₂	5179733022	12/05/2017	15	9417067	17/05/2017	13:18	Client	24.01
	PM ₁₀₋₂	5179733025	18/05/2017	11	9417072	22/05/2017	8:36	Client	24.03
	PM ₁₀₋₂	5179733028	24/05/2017	3	9417802	25/05/2017	12:49	Client	24.05

	PM ₁₀₋₂	5179733031	30/05/2017	3	9417803	2/06/2017	7:41	Client	24.02
Jun-17	PM ₁₀₋₂	6179733019	5/06/2017	5	9417808	6/06/2017	11:26	Client	24.02
	PM ₁₀₋₂	6179733022	11/06/2017	2	9420581	16/06/2017	9:54	Client	24.03
	PM ₁₀₋₂	6179733025	17/06/2017	5	9420584	22/06/2017	10:32	Client	24.03
	PM ₁₀₋₂	6179733028	23/06/2017	7	9420587	27/06/2017	13:11	Client	24.05
	PM ₁₀₋₂	6179733031	29/06/2017	2	9420590	30/06/2017	9:28	Client	24.04
	PM ₁₀₋₂	7179733019	5/07/2017	3	9420593	10/07/2017	9:36	Client	24.15
Jul-17	PM ₁₀₋₂	7179733022	11/07/2017	3	9420596	14/07/2017	9:14	Client	24
	PM ₁₀₋₂	7179733025	17/07/2017	1	9420599	18/07/2017	10:30	Client	24.03
	PM ₁₀₋₂	7179733028	23/07/2017	10	9326628	26/07/2017	8:31	Client	24.03
	PM ₁₀₋₂	7179733031	29/07/2017	7	9326642	1/08/2017	9:07	Client	24.03
	PM ₁₀₋₂	8179733019	4/08/2017	<1	9326663	8/08/2017	10:51	Client	24.02
Aug-17	PM ₁₀₋₂	8179733022	10/08/2017	5	9326692	14/08/2017	8:42	Client	24.04
	PM ₁₀₋₂	8179733025	16/08/2017	10	9326699	21/08/2017	10:39	Client	24.04
	PM ₁₀₋₂	8179733028	22/08/2017	7	9417014	25/08/2017	10:24	Client	24.05
	PM ₁₀₋₂	8179733031	28/08/2017	4	9417019	29/08/2017	11:08	Client	24.01
	PM ₁₀₋₂	9179733015	3/09/2017	15	9410932	6/09/2017	11:07	Client	24.26
Sep-17	PM ₁₀₋₂	9179733018	9/09/2017	2	9410935	13/09/2017	10:17	Client	24.06
	PM ₁₀₋₂	9179733021	15/09/2017	1	9410938	18/09/2017	8:41	Client	24.03
	PM ₁₀₋₂	9179733024	21/09/2017	11	9410941	22/09/2017	10:26	Client	24.05
	PM ₁₀₋₂	9179733027	27/09/2017	21	9410944	28/09/2017	12:00	Client	24.07
	PM ₁₀₋₂	10179733019	3/10/2017	4	9410947	6/10/2017	7:41	Client	24.02
Oct-17	PM ₁₀₋₂	10179733022	9/10/2017	5	9410950	10/10/2017	12:28	Client	24.06
	PM ₁₀₋₂	10179733025	15/10/2017	5	9410951	19/10/2017	10:57	Client	23.52
	PM ₁₀₋₂	10179733028	21/10/2017	6	9410956	25/10/2017	9:00	Client	24.05
	PM ₁₀₋₂	10179733031	27/10/2017	8	9410959	1/11/2017	9:19	Client	24.02
	PM ₁₀₋₂	11179733019	2/11/2017	20	9410414	7/11/2017	10:07	Client	24.57
Nov-17	PM ₁₀₋₂	11179733022	8/11/2017	4	9410415	10/11/2017	8:19	Client	24.02
	PM ₁₀₋₂	11179733025	14/11/2017	7	9410420	15/11/2017	9:05	Client	24.04
	PM ₁₀₋₂	11179733028	20/11/2017	2	9410421	24/11/2017	8:29	Client	24
	PM ₁₀₋₂	11179733031	26/11/2017	11	9518262	28/11/2017	11:44	Client	23.99
	PM ₁₀₋₂	12179733017	2/12/2017	8	9518263	5/12/2017	11:34	Client	24.07
Dec-17	PM ₁₀₋₂	12179733020	8/12/2017	12	9518266	11/12/2017	8:53	Client	24.06
	PM ₁₀₋₂	12179733025	14/12/2017	18	9518271	18/12/2017	8:52	Client	24.01
	PM ₁₀₋₂	12179733028	20/12/2017	2	9518274	21/12/2017	10:07	Client	24.03
	PM ₁₀₋₂	12179733031	26/12/2017	5	9518275	27/12/2017	7:40	Client	24.04
	PM ₁₀₋₂	1179733019	6/01/2018	7	9326485	11/01/2018	10:15	Client	24.05
	PM ₁₀₋₂	1179733019	6/01/2018	7	9326485	11/01/2018	10:15	Client	24.05

4.3.5.4 TSP Unit 1

Table 11: TSP Unit 1 Results

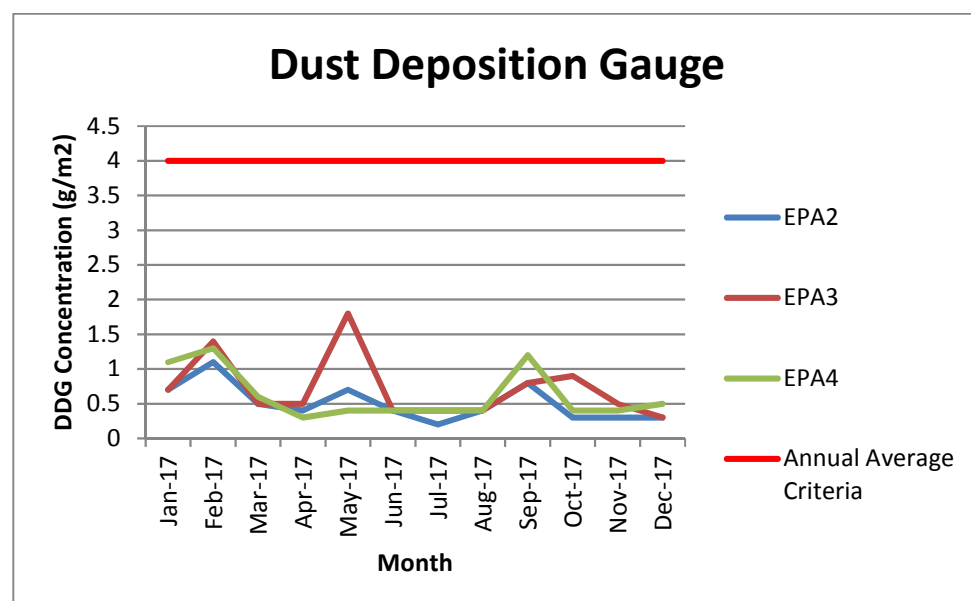
		Sample #	Run Date	PM10	Filter #	Date Off	Time Off	Tech	Hrs
Jan-17	TSP	1179733017	6/01/2017	14	9326483	11/01/2017	11:42	Client	24.04
	TSP	1179733020	12/01/2017	44	9326488	16/01/2017	8:10	Client	24.04
	TSP	1179733023	18/01/2017	24	9326489	23/01/2017	7:01	Client	24.03
	TSP	1179733026	24/01/2017	34	9326345	27/01/2017	7:20	Client	24.01
	TSP	1179733029	30/01/2017	24	9326350	1/02/2017	8:28	Client	24.00
Feb-17	TSP	2179733013	5/02/2017	25	9326351	7/02/2017	13:07	Client	24.06
	TSP	2179733016	11/02/2017	41	9326356	14/02/2017	12:40	Client	24.01
	TSP	2179733019	17/02/2017	20	9326357	20/02/2017	8:19	Client	24.01
	TSP	2179733022	23/02/2017	39	9326360	24/02/2017	10:11	Client	24.02
	TSP	3179733017	1/03/2017	14	9326363	3/03/2017	7:00	Client	24.02
Mar-17	TSP	3179733020	7/03/2017	17	9326366	9/03/2017	12:57	Client	24.33
	TSP	3179733023	13/03/2017	18	9326369	15/03/2017	12:18	Client	24.05
	TSP	3179733026	19/03/2017	10	9326640	22/03/2017	13:03	Client	24.02
	TSP	3179733029	25/03/2017	10	9326643	28/03/2017	14:01	Client	24.03
	TSP	3179733032	31/03/2017	20	9326646	4/04/2017	12:47	Client	24.02
Apr-17	TSP	4179733017	6/04/2017	5	9326651	11/04/2017	10:40	Client	24.01
	TSP	4179733020	12/04/2017	5	9326652	13/04/2017	10:37	Client	24.02
	TSP	4179733023	18/04/2017	15	9326655	20/04/2017	10:29	Client	24.03
	TSP	4179733026	24/04/2017	14	9326658	28/04/2017	10:59	Client	24.04
	TSP	4179733029	30/04/2017	10	9326661	5/05/2017	8:25	Client	24.21
May-17	TSP	5179733017	6/05/2017	8	9417064	9/05/2017	12:13	Client	24.02
	TSP	5179733020	12/05/2017	4	9417069	17/05/2017	13:06	Client	24.03
	TSP	5179733023	18/05/2017	6	9417070	22/05/2017	8:26	Client	24
	TSP	5179733026	24/05/2017	5	9417073	25/05/2017	13:13	Client	24.04
	TSP	5179733029	30/05/2017	9	9417805	2/06/2017	7:32	Client	24.04
Jun-17	TSP	6179733017	5/06/2017	6	9417806	6/06/2017	10:57	Client	24.02
	TSP	6179733020	11/06/2017	6	9417809	16/06/2017	9:24	Client	24.02
	TSP	6179733023	17/06/2017	10	9420582	22/06/2017	10:56	Client	24.03
	TSP	6179733026	23/06/2017	10	9420585	27/06/2017	13:03	Client	24.08
	TSP	6179733029	29/06/2017	1	9420588	30/06/2017	9:15	Client	23.97
Jul-17	TSP	7179733017	5/07/2017	7	9420591	10/07/2017	9:28	Client	24.19
	TSP	7179733020	11/07/2017	5	9420594	14/07/2017	9:07	Client	24.03
	TSP	7179733023	17/07/2017	1	9420597	18/07/2017	10:03	Client	23.93
	TSP	7179733026	23/07/2017	5	9420600	26/07/2017	8:17	Client	24.11
	TSP	7179733029	29/07/2017	5	9326629	1/08/2017	9:00	Client	24.03
Aug-17	TSP	8179733017	4/08/2017	1	9326653	8/08/2017	10:35	Client	24.01
	TSP	8179733020	10/08/2017	6	9326664	14/08/2017	8:25	Client	24.04
	TSP	8179733023	16/08/2017	19	9326693	21/08/2017	10:29	Client	24.03
	TSP	8179733026	22/08/2017	11	9417002	25/08/2017	10:50	Client	24.04

	TSP	8179733029	28/08/2017	7	9417025	29/08/2017	10:45	Client	24.02
Sep-17	TSP	9179733013	3/09/2017	22	9410930	6/09/2017	10:53	Client	24.17
	TSP	9179733016	9/09/2017	9	9410933	13/09/2017	9:55	Client	24.03
	TSP	9179733019	15/09/2017	5	9410936	18/09/2017	8:22	Client	24.03
	TSP	9179733022	21/09/2017	14	9410939	22/09/2017	10:22	Client	24.03
	TSP	9179733025	27/09/2017	40	9410942	28/09/2017	11:35	Client	24.02
	TSP	10179733017	3/10/2017	6	9410945	6/10/2017	7:21	Client	24.02
Oct-17	TSP	10179733020	9/10/2017	7	9410948	10/10/2017	12:57	Client	24.04
	TSP	10179733023	15/10/2017	9	9410953	19/10/2017	10:38	Client	24.03
	TSP	10179733026	21/10/2017	12	9410954	25/10/2017	8:42	Client	24.03
	TSP	10179733029	27/10/2017	19	9410957	1/11/2017	9:02	Client	24.02
	TSP	11179733017	2/11/2017	26	9410412	2/11/2017	10:28	Client	24.49
Nov-17	TSP	11179733020	8/11/2017	8	9410417	8/11/2017	8:01	Client	24.02
	TSP	11179733023	14/11/2017	13	9410418	14/11/2017	9:28	Client	24.03
	TSP	11179733026	20/11/2017	7	9410423	20/11/2017	8:09	Client	24.02
	TSP	11179733029	26/11/2017	16	9518260	26/11/2017	12:12	Client	24.04
	TSP	12179733019	2/12/2017	14	9518265	5/12/2017	11:55	Client	24.03
Dec-17	TSP	12179733022	8/12/2017	24	9518268	11/12/2017	9:25	Client	24.01
	TSP	12179733023	14/12/2017	32	9518269	18/12/2017	8:38	Client	24.03
	TSP	12179733026	20/12/2017	35	9518272	21/12/2017	10:27	Client	24.03
	TSP	12179733029	26/12/2017	12	9518277	27/12/2017	7:25	Client	24.02
	TSP	1179733017	6/01/2017	14	9326483	11/01/2017	11:42	Client	24.04
	TSP								

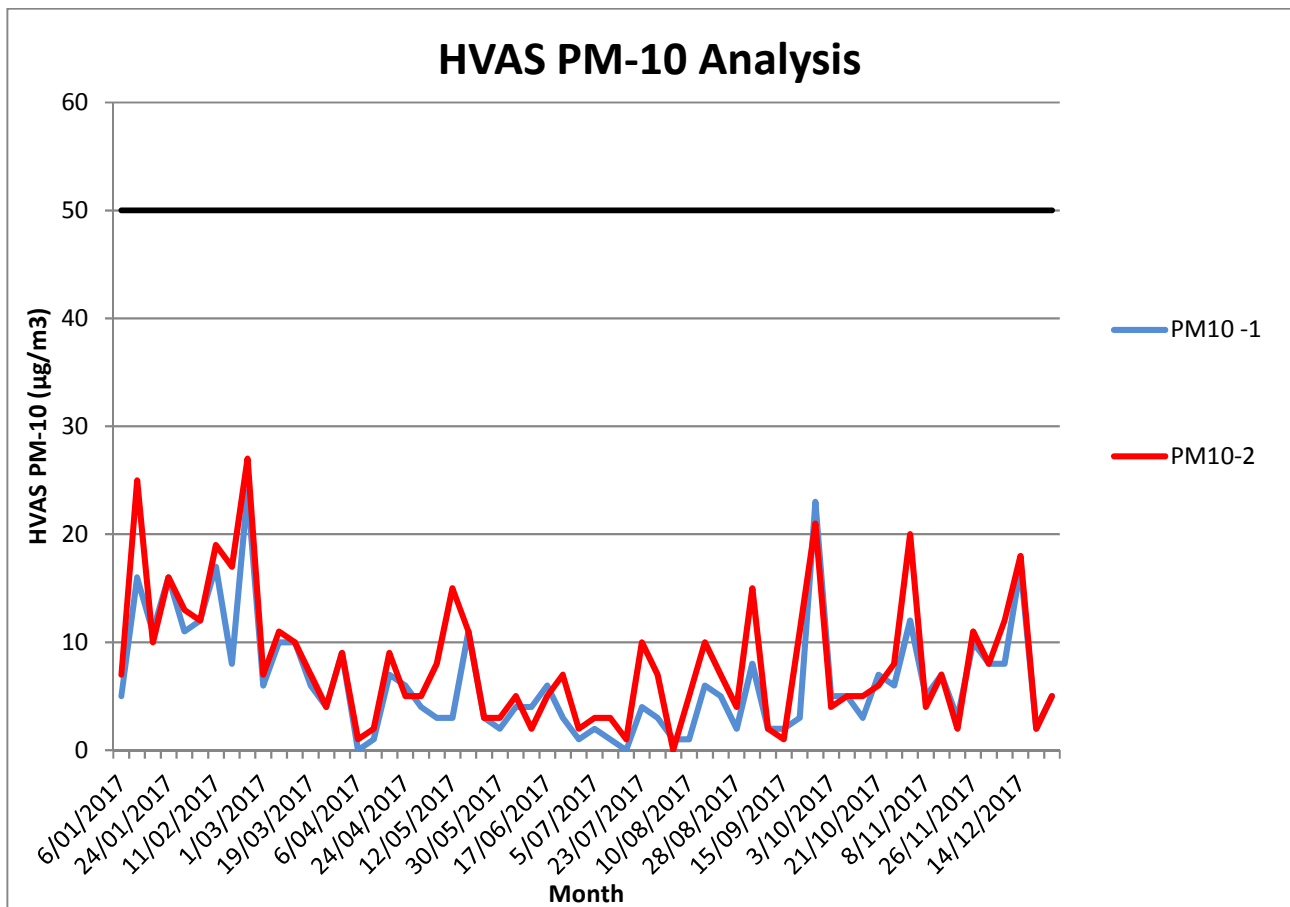
4.3.6 Analysis of Results

Deposited, HVAS and TSP dust levels monitored during the reporting period indicated the quarry is compliant with the relevant air quality criteria. Please refer to sections 4.3.6.1 to 4.3.6.3 for a further breakdown of monitoring data.

4.3.6.1 Depositional Dust Gauges



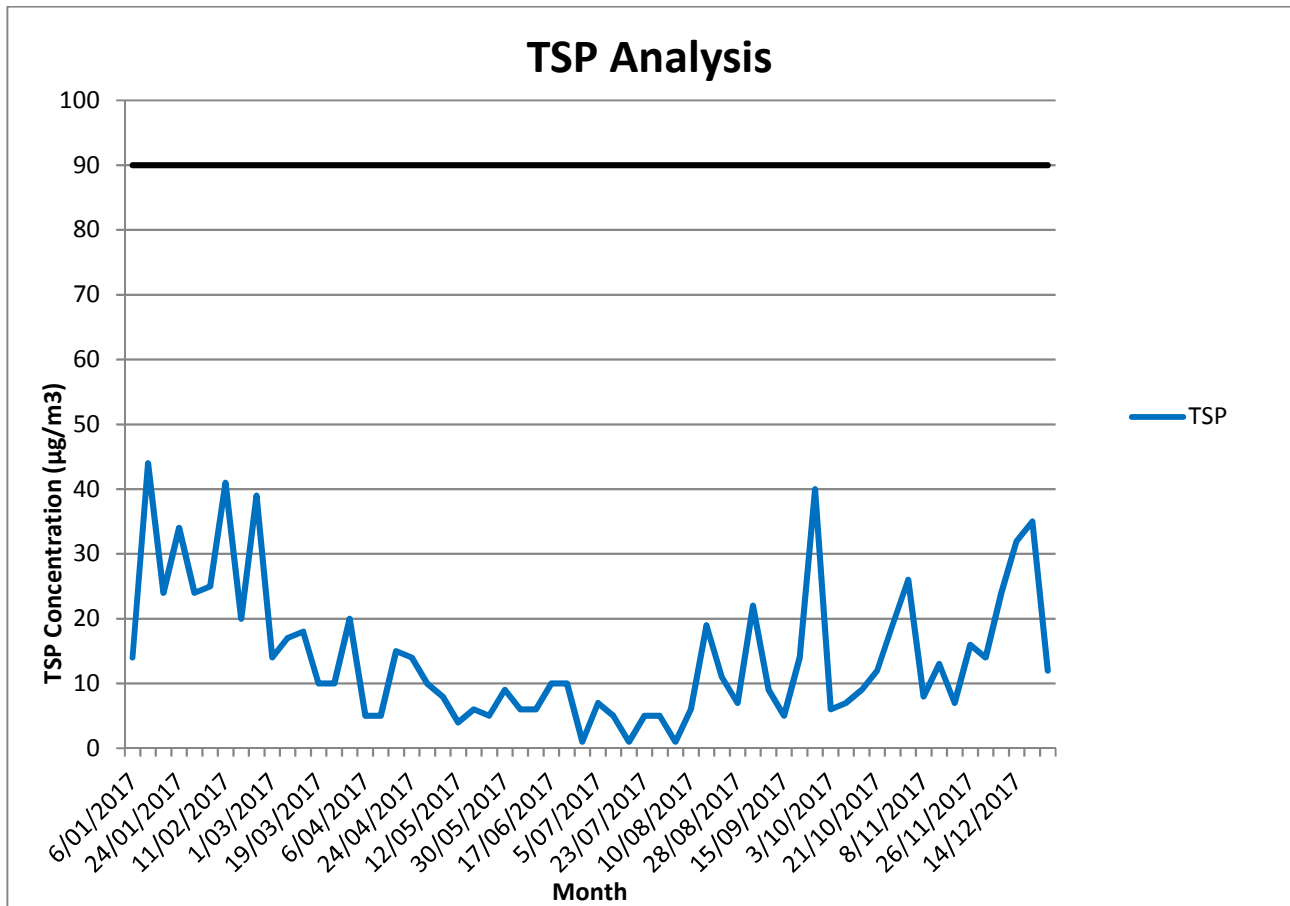
4.3.6.2 HVAS Unit 1 and 2



*The HVAS PM10 Annual average of 30µg/m3 is based on the short term impact assessment criterion for particulate matter. The 24hr average is the long term impact assessment criteria for deposited dust. Clause 15 (10) of approval.

Unit	Ardglen HVAS Annual Average	Annual Average Criterion (Short Term)	Annual Average Criterion (Long Term)
PM10-1	6.71	30	50
PM10-2	8.37	30	50

4.3.6.3 TSP Unit 1



4.3.7 Discussion

No follow-up actions were required as all deposited and monitored dust levels remained well below the nominated annual average criteria.

4.3.8 Conclusion

The quarry was compliant with the air quality criteria throughout the reporting period.

4.4 Fauna Habitat

4.4.1 Introduction

Nesting boxes were installed in April 2012 on Lot 187 DP 751028 as identified in the sites Landscape Management Plan. It is a requirement of the plan that annual springtime inspections of the nesting boxes are conducted for the life of the quarry.

4.4.2 Nest Box Usage

The report attached in **Appendix 6**.

5. COMPLIANCE ASSESSMENT

5.1 Environmental Protection Licence

Daracon hold Environmental protection Licence 1115 for a 'land based' extractive industry. The licence has an anniversary date of 1 January. The annual return covering the reporting period identified no non-compliances with the conditions of the licence and was submitted to the EPA in February 2018.

5.2 Discrepancies With Predicted And Actual Quarry Operations

Nil to report.

6. ACTIVITIES PROPOSED DURING THE NEXT REPORTING PERIOD**6.1 Introduction**

The following section provides a brief summary of operational & non operational activities planned throughout the 2017 reporting period. **Table 12** provides a summary of the proposed quarry activities.

Table 12: Proposed Activities for 2018

January - December 2018	<ul style="list-style-type: none">• Ongoing review of Management Plans• Noise monitoring• Regular Site Inspections• Ongoing Air Quality Monitoring• Addressing corrective actions identified in independent environmental audits as required• Mine Planning• Application for a Section 75W modification
-------------------------	---

6.2 Extraction Operations

No extraction will take place during the reporting period. The quarry is likely to remain in care and maintenance.

6.3 Processing

No processing will take place during the reporting period. The quarry is likely to remain in care and maintenance.

6.4 Overburden And Silt Management

No overburden clearing will be undertaken. Current controls for overburden and silt management to remain in place and monitored.

6.5 Waste Management

The quarry will remain in care and maintenance and it is expected that no waste will be produced at the quarry.

6.6 Site Infrastructure And Services

No changes are expected to the site infrastructure and services during the reporting period. The quarry is likely to remain in care and maintenance.

6.7 Water Management

It is expected that no changes will be made to the current water management practices and will continue to be monitored.

6.8 Bushfire Management

Bush fire management practices will remain in place and monitored.

6.9 Hazardous Materials Management

There will be no importation or disposing of hazardous materials on site.

6.10 Product Transportation

The quarry is likely to remain in care and maintenance and consequently there will be no product transported off or on site.

6.11 Rehabilitation and landscape management

As the quarry is in care and maintenance it is expected that no rehabilitation will take place. Monitoring of Off-Set areas will be conducted on a regular basis.

7. REFERENCES

1. ANZECC (2000) – Australian and New Zealand Guidelines Fresh and Marine Water Quality
2. DEC (2007) Approved Methods for Sampling of Air Pollutants in New South Wales
3. DECCW (2007) Methods for the Sampling and Analysis of Air Pollutants in New South Wales
4. EPA (2000) New South Wales Industrial Noise Policy

8. APPENDICES

Appendix 1 Project Approval MP 06_0264

Project Approval

Section 75J of the *Environmental Planning and Assessment Act 1979*

I approve the application referred to in schedule 1, subject to the conditions in schedules 2 to 5.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.



The Hon Kristina Keneally MP
Minister for Planning

Sydney

~~2 NOVEMBER~~

2008

- 2 DEC 2008

SCHEDULE 1

Application Number:	06_0264
Proponent:	Buttai Gravel Pty Limited (Daracon Quarries)
Approval Authority:	Minister for Planning
Land:	Lot 1 DP 1001734 Lot 218 DP 751028
Project:	Ardglen Quarry Extension

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DEFINITIONS

AEMR	Annual Environmental Management Report
BCA	Building Code of Australia
CCC	Community Consultative Committee
Council	Liverpool Plains Shire Council
Day	The period from 7.00am to 6.00pm on Monday to Saturday, and 8.00am to 6.00pm on Sundays and Public Holidays
DECC	Department of Environment and Climate Change
Department	Department of Planning
Director-General	Director-General of Department of Planning, or delegate
DPI	Department of Primary Industries
DWE	Department of Water and Energy
EA	Environmental assessment titled <i>Ardglen Quarry Extension Environmental Assessment</i> , dated June 2007, including the response to submissions, dated November 2007
EEC	Endangered Ecological Community as defined under the NSW <i>Threatened Species Conservation Act 1995</i>
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence
Evening	The period from 6.00pm to 10.00pm
Land	Land means the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Minister	Minister for Planning, or delegate
Night	The period from 10.00pm to 7.00am on Monday to Saturday, and 10.00pm to 8.00am on Sundays and Public Holidays
Privately-owned Land	Land that is not owned by a public agency, or a quarrying company (or its subsidiary)
Project	The development as described in the EA
Proponent	Buttai Gravel Pty Limited (Daracon Quarries), or its successors
Reasonable and Feasible	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements. Feasible relates to engineering considerations and what is practical to build
RTA	Roads and Traffic Authority
Site	The land referred to in Schedule 1 and shown in Appendix 1 as the project application area
Statement of Commitments	The Proponent's commitments in Appendix 3

SCHEDULE 2 ADMINISTRATIVE CONDITIONS

Obligation to Minimise Harm to the Environment

1. The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.

Terms of Approval

2. The Proponent shall carry out the project generally in accordance with the:
 - (a) EA;
 - (b) statement of commitments; and
 - (c) conditions of this approval.

Note: The general layout of the project is shown in Appendix 1.

3. If there is any inconsistency between the above documents, the conditions of this consent shall prevail to the extent of any inconsistency.
4. The Proponent shall comply with any reasonable and feasible requirement/s of the Director-General arising from the Department's assessment of:
 - (a) any reports, plans, programs, strategies or correspondence that are submitted in accordance with this approval; and
 - (b) the implementation of any actions or measures contained in these reports, plans, programs, strategies or correspondence.

Limits on Approval

5. This approval expires on 31 August 2038.

Note: Under this approval, the Proponent is required to rehabilitate the site and implement biodiversity offsets to the satisfaction of the Director-General. Consequently, this approval will continue to apply in all other respects other than the right to conduct extractive operations until the site has been rehabilitated and the biodiversity offset provided to a satisfactory standard.

6. The Proponent shall not extract or process more than 500,000 tonnes of material on the site each year.
7. The Proponent shall not transport more than:
 - (a) 250,000 tonnes of product from the site by rail a year; or
 - (b) 250,000 tonnes of product from the site by road a year.
8. The Proponent shall not import more than 80,000 tonnes of materials for the purposes of blending and product quality improvement each year.

Surrender of Consents

9. Within 3 years of this approval, the Proponent shall surrender all development consents or continuing use rights for the Ardglen Quarry, to the satisfaction of the Director-General.

Management Plans/Monitoring Programs

10. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

Structural Adequacy

11. The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of development.

Demolition

12. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

Operation of Plant and Equipment

13. The Proponent shall ensure that all plant and equipment used at the site is:
 - (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

Protection of Public Infrastructure

14. The Proponent shall:
 - (a) repair, or pay all reasonable costs associated with repairing any public infrastructure that is damaged by the project; and
 - (b) relocate, or pay all reasonable costs associated with relocating any public infrastructure that needs to be relocated as a result of the project.
-

SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS

HOURS OF OPERATION

- The Proponent shall comply with the hours of operation in Table 1.

Table 1: Hours of Operation

Activity	Day	Time
Topsoil/overburden removal/emplacement	Monday-Saturday	7.00am to 5.00pm
	Sunday	None
Blasting	Monday-Friday	10:00pm to 3.00pm
	Saturdays, Sundays and Public Holidays	None
In-pit activities (including drilling, extraction, and transfer of material out of the pit)	Monday-Saturday	7.00am to 5:30pm
	Sundays and Public Holidays	None
Out-of-pit activities (including processing, and stockpiling)	Monday-Saturday	7.00am to 5:30pm
	Sundays and Public Holidays	None
Maintenance (if inaudible at nearby residences)	Monday-Sunday	Any time
Truck loading and distribution	Monday-Saturday	6.30am to 5.30pm
	Sundays and Public Holidays	None
Rail loading	Monday-Sunday	7:00am to 10:00pm

Note:

- The Proponent may load no more than 2 trains each year outside the hours listed in Table 1 (see condition 41).
- The Proponent may carry out blasting operations outside the hours listed in Table 1 for safety reasons provided the Proponent has notified DECC and the local community about the proposed blast.

NOISE

Noise Impact Assessment Criteria

- The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 2 at any residence on privately-owned land, or on more than 25 percent of any privately-owned land.

Table 2: Noise impact assessment criteria dB(A)

Land	Day	Evening	Night	
	$L_{Aeq}(15 \text{ min})$	$L_{Aeq}(15 \text{ min})$	$L_{Aeq}(15 \text{ min})$	$L_{A1}(1 \text{ min})$
1 – Burraston	35	35	35	45
3 – Rose	35	35	35	45
4 – CM Thompson	44	35	35	45
5 – M Taylor	45	35	35	45
6 – S Thompson	45	35	35	45
9 – Bates	37	35	35	45
10 – Avery	38	35	35	45
11 – Shipman	37	35	35	45
12 – Hall	36	35	35	45
13 – McGhie	35	35	35	45
14 – Purtell	36	35	35	45
15 – J Taylor	43	35	35	45

Land	Day	Evening	Night	
	L_{Aeq(15 min)}	L_{Aeq(15 min)}	L_{Aeq(15 min)}	L_{A1(1 min)}
16 - Bojba	40	35	35	45
All other privately-owned land	35	35	35	45

However, if the Proponent has a written negotiated noise agreement with any landowner of the land listed in Table 2, and a copy of this agreement has been forwarded to the Department and DECC, then the Proponent may exceed the noise limits in Table 2 in accordance with the negotiated noise agreement. The Proponent may also exceed the L_{A1(1 min)} and L_{Aeq(15 min)} noise impact assessment criteria during out of hours rail loading activities provided they are conducted in accordance with condition 41 below.

Notes:

- For information on the numbering and identification of properties used in this approval see Appendix 5.
- To determine compliance with the L_{Aeq(15 minute)} noise limits, noise from the project is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.
- To determine compliance with the L_{A1(1 minute)} noise limits, noise from the project is to be measured at 1 metre from the dwelling façade. Where it can be demonstrated that direct measurement of noise from the project is impractical, the DECC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy).
- The noise emission limits identified in the above table apply under meteorological conditions of:
 - wind speeds of up to 3 m/s at 10 metres above ground level; or
 - temperature inversion conditions of up to 3°C/100m, and source to receiver gradient wind speeds of up to 2 m/s at 10 metres above ground level.

Land Acquisition Criteria

3. If the noise generated by the project exceeds the criteria in Table 3 at any residence on privately-owned land or on more than 25 percent of any privately-owned land, the Proponent shall, upon receiving a written request for acquisition from the landowner, acquire the land in accordance with the procedures in conditions 7-9 of Schedule 4.

Table 3: Land acquisition criteria dB(A)

Land	Day	Evening	Night
	L_{Aeq(15 min)}	L_{Aeq(15 min)}	L_{Aeq(15 min)}
1 – Burraston	40	40	40
3 – Rose	46	40	40
4 – CM Thompson	46	40	40
5 – M Taylor	46	40	40
6 – S Thompson	46	40	40
9 – Bates	46	40	40
10 – Avery	46	40	40
11 – Shipman	46	40	40
12 – Hall	46	40	40
13 – McGhie	40	40	40
14 – Purtell	46	40	40
15 – J Taylor	46	40	40
16 - Bojba	46	40	40
All other privately-owned land	40	40	40

However, if the Proponent has a written negotiated noise agreement with any landowner of the land listed in Table 3, and a copy of this agreement has been forwarded to the Department and DECC, then the Proponent may exceed the noise limits in Table 3 in accordance with the negotiated noise agreement. The Proponent may also exceed the land acquisition criteria during out of hours rail loading activities provided they are conducted in accordance with condition 41 below.

Note: Noise generated by the project is to be measured in accordance with the notes to Table 2.

Additional Noise Mitigation

4. Upon receiving a written request from the owner of any privately-owned residence where subsequent noise monitoring shows the noise generated by the project is greater than the relevant criteria in Table 4, the Proponent shall implement additional noise mitigation measures such as double glazing, insulation, and/or air conditioning at any residence on the land in consultation with the landowner.

Table 4: Additional Noise Mitigation Criteria dB(A)

Land	Day	Evening	Night
	$L_{Aeq}(15\text{ min})$	$L_{Aeq}(15\text{ min})$	$L_{Aeq}(15\text{ min})$
1 – Burraston	38	38	38
3 – Rose	44	38	38
4 – CM Thompson	44	38	38
5 – M Taylor	44	38	38
6 – S Thompson	44	38	38
9 – Bates	44	38	38
10 – Avery	44	38	38
11 – Shipman	44	38	38
12 – Hall	44	38	38
13 – McGhie	38	38	38
14 – Purtell	44	38	38
15 – J Taylor	44	38	38
16 – Bojba	44	38	38
All other privately-owned land	38	38	38

Note: Noise generated by the project is to be measured in accordance with the notes to Table 2.

These additional mitigation measures must be reasonable and feasible.

If within 3 months of receiving this request from the landowner, the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Director-General for resolution.

Within 3 months of this approval, the Proponent shall notify all applicable landowners of their rights under this condition, to the satisfaction of the Director-General.

Continuous Improvement

5. The Proponent shall:
- (a) implement all reasonable and feasible noise mitigation measures;
 - (b) investigate ways to reduce the noise generated by the project, including off-site road and rail noise and maximum noise levels which may result in sleep disturbance; and
 - (c) report on these investigations and the implementation and effectiveness of these measures in the AEMR,
- to the satisfaction of the Director-General.

Monitoring

6. Prior to carrying out any extraction under this approval, the Proponent shall prepare and implement a Noise Monitoring Program for the project, in consultation with DECC, and to the satisfaction of the Director-General. The program must include:
- (a) a combination of attended and unattended noise monitoring measures; and
 - (b) a noise monitoring protocol for evaluating compliance with the noise impact assessment and land acquisition criteria in this approval.

BLASTING AND VIBRATION

Airblast Overpressure Criteria

7. The Proponent shall ensure that the airblast overpressure level from blasting at the project does not exceed the criteria in Table 5 at any privately-owned residence.

Table 5: Airblast overpressure impact assessment criteria

Airblast overpressure level (dB(Lin Peak))	Allowable exceedance
115	5% of the total number of blasts over a period of 12 months
120	0%

Ground Vibration Impact Assessment Criteria

8. The Proponent shall ensure that the ground vibration level from blasting at the project does not exceed the criteria in Table 6 at any privately-owned residence.

Table 6: Ground vibration impact assessment criteria

Peak particle velocity (mm/s)	Allowable exceedance
5	5% of the total number of blasts over a period of 12 months
10	0%

Blasting Frequency

9. The Proponent shall not carry out more than 30 blasts a year, or more than 1 blast per day, without the written approval of the Director-General.

Operating Conditions

10. The Proponent shall implement best blasting practice to:
- protect the safety of people, property, public infrastructure and livestock; and
 - minimise the dust and fume emissions from blasting at the project, to the satisfaction of the Director-General.
11. The Proponent shall not undertake blasting within 500 metres of any privately-owned land or any land not owned by the Proponent, unless suitable arrangements have been made with the landowner and any tenants to minimise the risk of flyrock-related impact to the property to the satisfaction of the Director-General.

Public Notice

12. The Proponent shall:
- notify the landowner/occupier of any residence within 1 kilometre of the quarry pit who registers an interest in being notified about the blasting schedule at the quarry;
 - operate a Blasting Hotline, or alternate system agreed to by the Director-General, to enable the public to get up-to-date information on the blasting schedule at the quarry;
 - keep local residents informed about this hotline (or any alternative notification protocols), to the satisfaction of the Director-General.

Property Investigations

13. If any landowner of privately-owned land within 1 kilometre of the site claims that buildings and/or structures on his/her land have been damaged as a result of blasting at the site, following commencement of operations within the extension area, then he/she may ask the Director-General in writing to investigate the claim.

If the Director-General is satisfied that an independent property investigation is warranted, the Proponent shall within 3 months of the Director-General's determination:

- commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to investigate the claim; and
- give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Proponent shall repair the damages to the satisfaction of the Director-General.

If the Proponent or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Director-General for resolution.

If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 6).

Blast Monitoring Program

14. Prior to carrying out any extraction under this approval, the Proponent shall prepare and implement a Blast Monitoring Program for the project, in consultation with the DECC, and to the satisfaction of the Director-General. This program must include a protocol for demonstrating compliance with the blasting criteria in this approval.

AIR QUALITY

Impact Assessment Criteria

15. The Proponent shall ensure that the dust emissions generated by the project do not cause additional exceedances of the air quality impact assessment criteria listed in Tables 8, 9 and 10 at any residence, on privately-owned land, or on more than 25 percent of any privately-owned land.

Table 8: Long term impact assessment criteria for particulate matter

Pollutant	Averaging period	Criterion
Total suspended particulate (TSP) matter	Annual	90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	30 µg/m ³

Table 9: Short term impact assessment criterion for particulate matter

Pollutant	Averaging period	Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	50 µg/m ³

Table 10: Long term impact assessment criteria for deposited dust

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
Deposited dust	Annual	2 g/m ² /month	4 g/m ² /month

Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.

Operating Conditions

16. The Proponent shall ensure any visible air pollution generated by the project is assessed regularly, and that quarrying operations are relocated, modified, and/or stopped as required to minimise air quality impacts on privately-owned land, to the satisfaction of the Director-General.

Monitoring

17. Within 6 months of this approval, the Proponent shall prepare and implement an Air Quality Monitoring Program for the project, in consultation with DECC, and to the satisfaction of the Director-General. This program must:
 - (a) use a combination of high volume air samplers and dust deposition gauges to monitor the dust emissions from the project; and
 - (b) include a protocol for demonstrating compliance with the air quality impact assessment criteria in this approval.

METEOROLOGICAL MONITORING

18. The Proponent shall ensure the project has a suitable meteorological station in the vicinity of the site that complies with the requirements in *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline, to the satisfaction of the DECC and the Director-General.

SURFACE AND GROUND WATER

Surface Water Discharges

19. The Proponent shall only discharge water from the site in accordance with the provisions of an EPL.

Site Water Management Plan

20. Prior to carrying out any extraction under this approval, the Proponent shall prepare and implement a Site Water Management Plan for the project, in consultation with DECC and DWE, and to the satisfaction of the Director-General. This plan must be prepared by suitably qualified expert/s whose appointment/s have been approved by the Director-General, and must include:
- (a) a Site Water Balance;
 - (b) an Erosion and Sediment Control Plan; and
 - (c) a Water Monitoring Program.

Note: The Site Water Management Plan must incorporate the existing quarry operations and operations within the extension area.

Site Water Balance

21. The Site Water Balance must include details of:
- (a) sources and reliability of water supply;
 - (b) water management;
 - (c) water use; and
 - (d) any off-site discharges.

Erosion and Sediment Control

22. The Erosion and Sediment Control Plan must:
- (a) be consistent with the requirements of the *Managing Urban Stormwater: Soils and Construction Manual* (Landcom 2004, or its latest version);
 - (b) identify activities that could cause soil erosion and generate sediment;
 - (c) describe measures to minimise soil erosion and the potential for the transport of sediment to downstream waters;
 - (d) describe the location, function, and capacity of erosion and sediment control structures; and
 - (e) describe what measures would be implemented to maintain the structures over time.

Water Monitoring

23. The Water Monitoring Plan must include:
- (a) water quality assessment criteria;
 - (b) a program to monitor water flows and quality in creeks and other waterbodies that could potentially be affected by the project;
 - (c) a protocol for the investigation, notification, and mitigation of identified exceedances of the water quality assessment criteria; and
 - (d) the procedures that would be followed if any unforeseen impacts are detected during the project.

REHABILITATION AND LANDSCAPE MANAGEMENT

Rehabilitation

24. The Proponent shall progressively rehabilitate the site in a manner that is generally consistent with the conceptual rehabilitation principles and proposed rehabilitation strategy in the EA (shown conceptually in Appendix 2), to the satisfaction of the Director-General.

Offset Strategy

25. Prior to starting operations in the extension area, the Proponent shall revise the Biodiversity Offset Strategy described in the EA and Response to Submissions (shown conceptually in Appendix 3), to the satisfaction of the Director-General. The revised strategy must be prepared in consultation with the DECC, and include additional areas where Yellow Box White Box Blakely's Red Gum Woodland EEC would be actively re-established within the identified biodiversity offset areas shown in Appendix 3.
26. Within 3 years of this approval, the Proponent shall make suitable arrangements to provide appropriate long term security for the offset areas to the satisfaction of the Director-General.

Landscape Management Plan

27. The Proponent shall prepare and implement a detailed Landscape Management Plan for the project to the satisfaction of the Director-General. This plan must:
- (a) be prepared by suitably qualified expert/s whose appointment/s have been approved by the Director-General;
 - (b) submitted to the Director-General for approval prior to extraction under this approval; and
 - (c) include a:
 - Doughboy Hollow Creek Rehabilitation Strategy;
 - Rehabilitation and Biodiversity Offset Management Plan; and
 - Quarry Closure Plan.

Note: The Department accepts that the initial Landscape Management Plan may not include the detailed Quarry Closure Plan. However, if this occurs, the Proponent will be required to seek approval from the Director-General for an alternative timetable for the completion and approval of the Quarry Closure Plan.

Doughboy Hollow Creek Rehabilitation Strategy

28. The Doughboy Hollow Creek Rehabilitation Strategy must:
- (a) be prepared in consultation with the DPI and DWE;
 - (b) describe the measures that would be implemented to:
 - remove the weir from Doughboy Hollow Creek;
 - rehabilitate the creek; and
 - rehabilitate and/or re-establish riparian vegetation.

Rehabilitation and Biodiversity Offset Management Plan

29. The Rehabilitation and Biodiversity Offset Management Plan must:
- (a) be prepared by suitably qualified expert/s whose appointment/s have been approved by the Director-General;
 - (b) describe in general the short, medium, and long term measures that would be implemented to:
 - rehabilitate the site;
 - implement the Biodiversity Offset Strategy and Doughboy Hollow Creek Rehabilitation Strategy; and
 - manage the remnant vegetation and habitat on the site;
 - (c) include a detailed description of what measures would be implemented over the next 3 years to implement the Biodiversity Offset Strategy and Doughboy Hollow Creek Rehabilitation Strategy;
 - (d) include a detailed description of what measures would be implemented over the next 5 years to rehabilitate the site, including the procedures to be implemented for:
 - progressively rehabilitating areas disturbed by quarrying;
 - implementing revegetation and regeneration within the disturbance areas, including establishment of canopy, sub-canopy (if relevant), understorey and ground strata;
 - managing the remnant vegetation and habitat on site;
 - managing impacts on fauna;
 - reducing the visual impacts of the project;
 - landscaping the site to minimise visual impacts;
 - protecting areas outside the disturbance areas;
 - conserving and reusing topsoil;
 - collecting and propagating seeds for rehabilitation works;
 - salvaging and reusing material from the site for habitat enhancement;
 - controlling weeds and feral pests;
 - controlling access; and
 - bushfire management;
 - (e) detailed performance and completion criteria for the rehabilitation of the site and implementation of the Biodiversity Offset Strategy and Doughboy Hollow Creek Rehabilitation Strategy;
 - (f) a detailed description of how the performance of the rehabilitation of the site and implementation of the Biodiversity Offset Strategy and Doughboy Hollow Creek Rehabilitation Strategy would be monitored over time to achieve the relevant objectives and completion criteria;
 - (g) a description of the potential risks to successful revegetation and/or rehabilitation in the offset areas and project area, and a description of the contingency measures that would be implemented to mitigate these risks; and
 - (h) details of who is responsible for monitoring, reviewing and implementing the plan.

Quarry Closure Plan

30. The Quarry Closure Plan must:
- define the objectives and criteria for quarry closure;
 - investigate options for the future use of the site, including any final void(s);
 - describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the development; and
 - describe how the performance of these measures would be monitored over time.

Rehabilitation Bond

31. Within 3 months of the approval of the Landscape Management Plan, the Proponent shall lodge a rehabilitation bond with the Director-General to ensure that the rehabilitation and biodiversity offset obligations required in this approval are implemented in accordance with the performance and completion criteria in the Rehabilitation and Biodiversity Offset Management Plan. The rehabilitation bond may in the form of a bank guarantee or security bond. The sum of the bond shall be calculated by:
- a suitably qualified quantity surveyor at \$2.50/m² for the area to be disturbed over the next 5 year period at the quarry; and
 - a suitably qualified rehabilitation expert for land within the biodiversity offset areas where re-establishment of the EEC is proposed,
- to the satisfaction of the Director-General.

Notes:

- If the rehabilitation and biodiversity offset is completed to the satisfaction of the Director-General, the Department will release the rehabilitation bond.*
 - If the rehabilitation and biodiversity offset is not completed to the satisfaction of the Director-General, all or part of the rehabilitation bond will be used to ensure the satisfactory completion of the relevant works.*
32. Every 5 years, the Proponent shall review, and if necessary revise, the sum of the bond to the satisfaction of the Director-General. This review must consider:
- the effects of inflation;
 - any changes to the total area of disturbance; and
 - the performance of the rehabilitation against the completion criteria of the Rehabilitation, Biodiversity Offset Management Plan.

TRANSPORT

Product Transport

33. The Proponent shall:
- keep records of the:
 - amount of quarry materials imported onto the site each year;
 - amount of product transported from the site each year;
 - number of truck movements generated by the project, on a weekly basis;
 - number of train movements generated by the project, on a weekly basis;
 - date and time of each train movement generated by the project;
 - provide annual production data to the DPI using the standard form for that purpose; and
 - include these records in the AEMR.

Road Safety and Condition Audit

34. Prior to commencement of extraction under this approval, the Proponent shall undertake a Road Safety and Condition Audit for the project, to the satisfaction of the Director-General. This audit must:
- be prepared by a suitably independent and qualified expert/s whose appointment has been approved by the Director-General;
 - be prepared in consultation with the RTA and Council;
 - assess the safety, performance and condition of the Ardglen Street-New England Highway intersection and the quarry access route from the New England Highway to the quarry entrance (Ardglen Street, High Street (Swinging Bridges Road), St Stephen Street and Warra Street); and
 - identify any road works that are required to comply with relevant AUSROAD standards or other relevant RTA requirements.
35. Within 12 months of completing the Road Safety and Condition Audit, the Proponent shall undertake (and complete) any road works recommended in the Audit, to the satisfaction of the relevant roads authority (i.e. RTA or Council). If there is a dispute about the implementation of these measures, then the Proponent may refer the matter to the Director-General for resolution.

Road Signage

36. Within 3 months of this approval, the Proponent shall install warning signs ("Truck Turning") on the northern and southern approaches to the quarry access route on the New England Highway, to the satisfaction of the RTA.

Road Maintenance

37. The Proponent shall maintain the quarry access route from the New England Highway to the quarry entrance (Ardglen Street, High Street (Swinging Bridges Road), St Stephen Street and Warra Street) until the cessation of quarrying on the site, to the satisfaction of Council.

If the Proponent and the Council fail to reach agreement on the road maintenance requirements, then either party may refer the matter to the Director-General for resolution. Any determination by the Director-General's on this matter will be binding on the Proponent and the Council.

Road Haulage

38. The Proponent shall ensure that truck movements associated with the project do not exceed 50 movements on average per day.
39. The Proponent shall not use trucks with a capacity of greater than 35 tonnes to transport product from the site, unless otherwise agreed in writing by the RTA.
40. The Proponent shall ensure that all loaded vehicles entering or leaving the site are covered, and are cleaned of materials that may fall onto public roads.

Rail Loading

41. The Proponent may only load a maximum of 2 trains outside the rail loading and distribution hours in Table 1 in any 12 month period, unless agreed to in writing by the Director-General.
42. If the Proponent intends to undertake out of hours rail loading, it must use its best endeavours to notify all local residents at least 12 hours prior to the proposed rail loading, to the satisfaction of the Director-General.

Traffic and Transport Management Plan

43. Prior to commencement of extraction under this approval, the Proponent shall prepare and implement a Traffic and Transport Management Plan, to the satisfaction of the Director-General. The plan must include:
- (a) a driver code of conduct for the project to minimise the impacts of trucks on local residents;
 - (b) the measures that would be put in place to ensure compliance with the driver code of conduct;
 - (c) the measures that would be taken to avoid night time train loading operations; and
 - (d) the procedures for notifying local residents about night time train loading activities when these occur.

VISUAL IMPACT

44. The Proponent shall:
- (a) take all practicable measures to mitigate off-site lighting impacts from the project; and
 - (b) ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*, to the satisfaction of the Director-General.

ABORIGINAL CULTURAL HERITAGE

45. The Proponent shall not destroy any known Aboriginal objects (as defined in the *National Parks and Wildlife Act 1974*) without the written approval of the Director-General.

GREENHOUSE GAS

46. The Proponent shall:
- (a) monitor the greenhouse gas emissions generated by the project;
 - (b) investigate ways to reduce greenhouse gas emissions generated by the project; and
 - (c) report on greenhouse gas monitoring and abatement measures in the AEMR, to the satisfaction of the Director-General.

WASTE MINIMISATION

47. The Proponent shall:
- (a) monitor the amount of waste generated by the project;
 - (b) investigate ways to minimise waste generated by the project;
 - (c) implement reasonable and feasible measures to minimise waste generated by the project;
 - (d) ensure irrigation of treated wastewater is undertaken in accordance with DECC's *Use of Effluent by Irrigation*; and
 - (e) report on waste management and minimisation in the AEMR, to the satisfaction of the Director-General.
48. The Proponent shall ensure that all waste generated or stored on site is assessed, classified and managed in accordance with the DECC's *Waste Classification Guidelines Part 1: Classifying Waste*.
-

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. If the results of monitoring required in Schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, then the Proponent shall notify the Director-General and the affected landowners and/or existing or future tenants (including tenants of quarry owned properties) accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the relevant criteria.

INDEPENDENT REVIEW

2. If a landowner (excluding quarry owned properties) considers that the operations of the project are exceeding the impact assessment criteria in Schedule 3 then he/she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land.

If the Director-General is satisfied that an independent review is warranted, the Proponent shall within 3 months of the Director-General's decision:

- (a) consult with the landowner to determine his/her concerns;
 - (b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to conduct monitoring on the land to:
 - determine whether the project is complying with the relevant impact assessment criteria in Schedule 3; and
 - identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and
 - (c) give the Director-General and landowner a copy of the independent review.
3. If the independent review determines that the project is complying with the relevant impact assessment criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General.
 4. If the independent review determines that the project is not complying with the relevant impact assessment criteria in Schedule 3, and that the project is primarily responsible for this non-compliance, then the Proponent shall:
 - (a) take all reasonable and feasible measures, in consultation with the landowner, to ensure that the project complies with the relevant criteria; and
 - (b) conduct further monitoring to determine whether these measures ensure compliance.

If the additional monitoring referred to above subsequently determines that the project is complying with the relevant criteria in Schedule 3, or the Proponent and landowner enter into a negotiated agreement to allow these exceedances, then the Proponent may discontinue the independent review with the approval of the Director-General.

5. If the independent review determines that the relevant criteria in Schedule 3 are being exceeded, then the Proponent shall:
 - (a) take all reasonable and feasible measures, in consultation with the landowner, to ensure that the relevant criteria are complied with; and
 - (b) conduct further monitoring to determine whether these measures ensure compliance; or
 - (c) secure a written agreement with the landowner to allow exceedances of the criteria in Schedule 3.

If the additional monitoring referred to above subsequently determines that the project is complying with the relevant criteria in Schedule 3, then the Proponent may discontinue the independent review with the approval of the Director-General.

6. If the landowner disputes the results of the independent review, either the Proponent or the landowner may refer the matter to the Director-General for resolution.

If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 6).

LAND ACQUISITION

7. Within 3 months of receiving a written request from a landowner with acquisition rights, the Proponent shall make a binding written offer to the landowner based on:
- (a) the current market value of the landowner's interest in the property at the date of this written request, as if the property was unaffected by the project the subject of the project application, having regard to the:
 - existing and permissible use of the land, in accordance with the applicable planning instruments at the date of the written request; and
 - presence of improvements on the property and/or any approved building or structure which has been physically commenced at the date of the landowner's written request, and is due to be completed subsequent to that date, but excluding any improvements that have resulted from the implementation of the additional noise mitigation measures in conditions 5 and 6 of Schedule 3;
 - (b) the reasonable costs associated with:
 - relocating within the Liverpool Plains local government area, or to any other local government area determined by the Director-General;
 - obtaining legal advice and expert advice for determining the acquisition price of the land, and the terms upon which it is required; and
 - (c) reasonable compensation for any disturbance caused by the land acquisition process.

However, if at the end of this period, the Proponent and landowner cannot agree on the acquisition price of the land, and/or the terms upon which the land is to be acquired, then either party may refer the matter to the Director-General for resolution.

Upon receiving such a request, the Director-General shall request the President of the NSW Division of the Australian Property Institute to appoint a qualified independent valuer or Fellow of the Institute, to consider submissions from both parties, and determine a fair and reasonable acquisition price for the land, and/or terms upon which the land is to be acquired.

Within 14 days of receiving the independent valuer's determination, the Proponent shall make a written offer to purchase the land at a price not less than the independent valuer's determination.

If the landowner refuses to accept this offer within 6 months of the Proponent's offer, the Proponent's obligations to acquire the land shall cease, unless otherwise agreed by the Director-General.

8. The Proponent shall bear the costs of any valuation or survey assessment requested by the independent valuer, or the Director-General, and the costs of determination referred above.
9. If the Proponent and landowner agree that only part of the land shall be acquired, then the Proponent shall pay all reasonable costs associated with obtaining Council approval for any plan of subdivision (where permissible), and registration of the plan at the Office of the Registrar-General.
-

SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING & REPORTING

ENVIRONMENTAL MANAGEMENT STRATEGY

1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must be submitted to the Director-General within 6 months of this approval, and:
 - (a) provide the strategic framework for environmental management of the project;
 - (b) identify the statutory requirements that apply to the project;
 - (c) describe in general how the environmental performance of the project would be monitored and managed;
 - (d) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the course of the project;
 - respond to any non-compliance; and
 - respond to emergencies; and
 - (e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the project.

ENVIRONMENTAL MONITORING PROGRAM

2. The Proponent shall prepare and implement an Environmental Monitoring Program for the project to the satisfaction of the Director-General. This program must be submitted to the Director-General within 6 months of this approval, and consolidate the various monitoring requirements in Schedule 3 of this approval into a single document, and be submitted to the Director-General concurrently with the submission of the relevant monitoring programs/plans.

REPORTING

Incident Reporting

3. Within 7 days of detecting an exceedance of the limits/performance criteria in this approval or the occurrence of an incident that causes (or may cause) harm to the environment, the Proponent shall report the exceedance/incident to the Department and any relevant agencies. This report must:
 - (a) describe the date, time, and nature of the exceedance/incident;
 - (b) identify the cause (or likely cause) of the exceedance/incident;
 - (c) describe what action has been taken to date; and
 - (d) describe the proposed measures to address the exceedance/incident.

Annual Reporting

4. Within 12 months of this approval, and annually thereafter, the Proponent shall submit an AEMR to the Director-General and relevant agencies. This report must:
 - (a) identify the standards and performance measures that apply to the project;
 - (b) describe the works carried out in the last 12 months;
 - (c) describe the works that will be carried out in the next 12 months;
 - (d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;
 - (e) include a summary of the monitoring results for the project during the past year;
 - (f) include an analysis of these monitoring results against the relevant:
 - limits/criteria in this approval;
 - monitoring results from previous years; and
 - predictions in the EA;
 - (g) identify any trends in the monitoring results over the life of the project;
 - (h) identify and discuss any non-compliance during the previous year; and
 - (i) describe what actions were, or are being, taken to ensure compliance.

INDEPENDENT ENVIRONMENTAL AUDIT

5. Within 2 years of extraction under this approval, and every 5 years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
 - (a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been endorsed by the Director-General;

- (b) assess the environmental performance of the project, and its effects on the surrounding environment;
- (c) assess whether the project is complying with the relevant standards, performance measures, and statutory requirements;
- (d) review the adequacy of any strategy/plan/program required under this approval; and, if necessary,
- (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under this approval.

Note: This audit team must be led by a suitably qualified auditor, and include experts in the field of noise and rehabilitation.

- 6. Within 6 weeks of completing this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General with a response to any recommendations contained in the audit report.
- 7. Within 3 months of submitting the audit report to the Director-General, the Proponent shall review and if necessary revise the strategies/plans/programs required under this approval, to the satisfaction of the Director-General.

COMMUNITY CONSULTATIVE COMMITTEE

- 8. The Proponent shall operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Director-General, in general accordance with the *Guideline for Establishing and Operating Community Consultative Committees for Mining Projects*.

ACCESS TO INFORMATION

- 9. Within 3 months of the approval of any plan/strategy/program required under this approval (or any subsequent revision of these plans/strategies/programs), or the completion of the audits or AEMRs required under this approval, the Proponent shall:
 - (a) provide a copy of the relevant document/s to the relevant agencies and CCC; and
 - (b) put a copy of the relevant document/s on its website.
- 10. During the development, the Proponent shall:
 - (a) include a copy of this approval, as may be modified from time to time, on its website;
 - (b) provide a full summary of monitoring results required under this approval on its website; and
 - (c) update these results on a regular basis (at least every 6 months).

The map displays an aerial view of a rural area with various land parcels. A yellow dashed line outlines the 'Extension Area', which includes Lot 7, Lot 115, Lot 137, Lot 139, Lot 218, and Lot 219. A red dashed line outlines the 'Project Application Area'. A legend in the top right corner identifies the yellow dashed line as the 'Extension Area' and the red dashed line as the 'Project Application Area'. The map also shows a road labeled 'HUTCHINSON ROAD' and a 'PRIVATE DRAINAGE' area. Other labels include 'LOT 7', 'LOT 115', 'LOT 137', 'LOT 139', 'LOT 218', 'LOT 219', 'HUTCHINSON ROAD', and 'PRIVATE DRAINAGE'.

APPENDIX 2 CONCEPTUAL REHABILITATION PLAN

JobNo20050038419/Draft Project Approval/ Appendix 2/Rehabilitation/Final Landform.cdr 08/07/05 2005 JD Environmental Resources Management Australia Pty Ltd

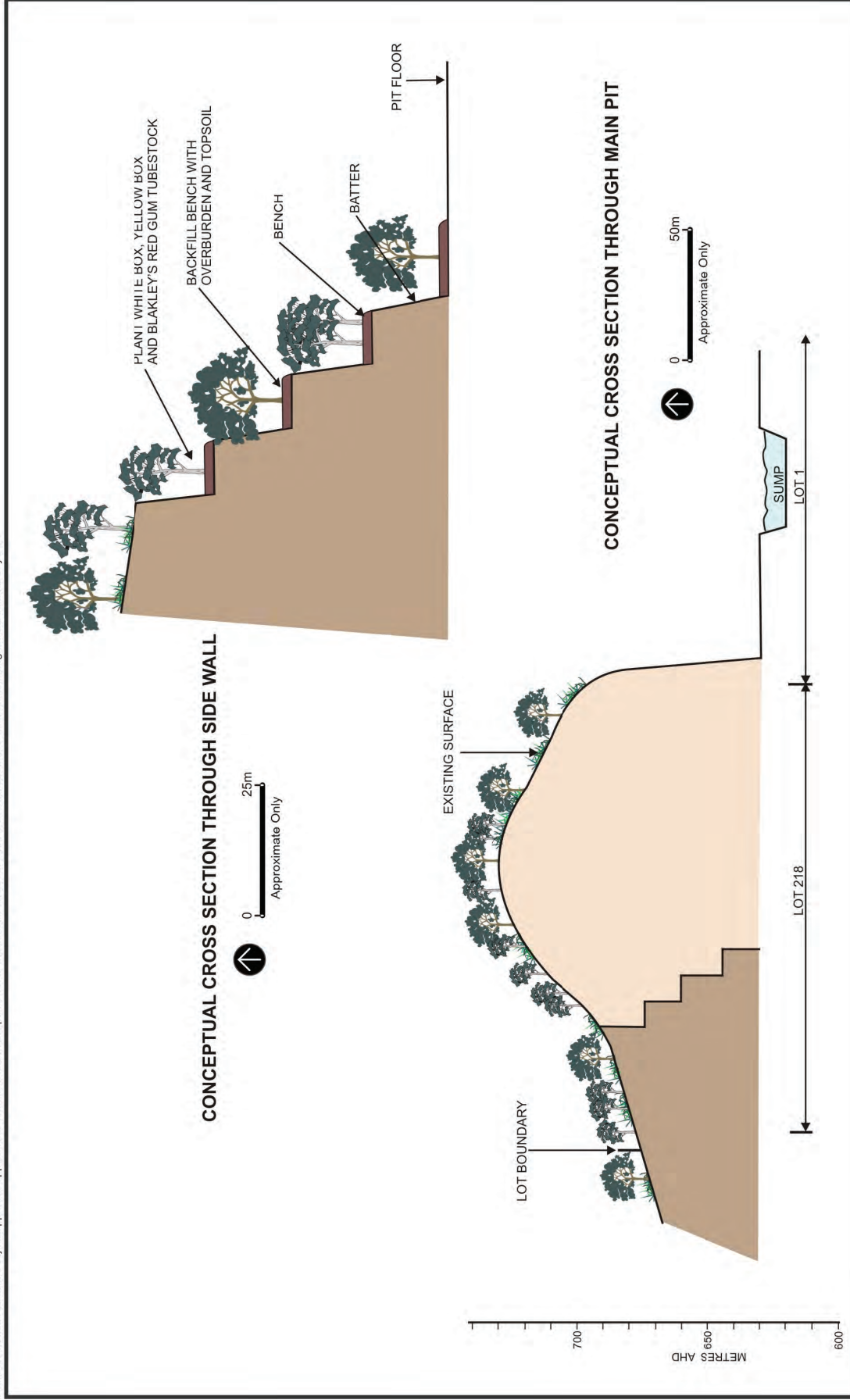


Source: Neil Charters Pty Ltd 100145 14-11-05



Appendix 2
Final Landform

Danicon Engineering - Adglen Quarry, NSW - Draft Project Approval



APPENDIX 3 CONCEPTUAL OFFSET PLAN



**APPENDIX 4
STATEMENT OF COMMITMENTS**

Table 1: Statement of Commitments

Item Number	Item	Commitment	Responsibility	Timing
1	Scope of Development	<p>The project will be carried out generally in accordance with the following plans and documentation, except where amended by the conditions of the project approval:</p> <ul style="list-style-type: none"> the Environmental Assessment (EA) prepared by ERM (June, 2007) and accompanying specialist reports; the Response to Submissions report prepared by ERM (November, 2007); and this revised Statement of Commitments. 	Daracon Quarries	Ongoing for the duration of the project.
2	Statutory Requirements	All necessary licences, permits and approvals will be obtained and maintained for the project.	Daracon Quarries	Ongoing for the duration of the project.
3		In accordance with section 104A of the EP&A Act, the proponent will surrender the existing development consent applying to Lot 1 DP 1001734, issued by Murrurundi Shire Council in May 1994.	Daracon Quarries	Within 2 years of work commencing within the extension area.
4	General	<p>The proponent will prepare and implement an Environmental Management System (EMS) based on the AS/NZS ISO 14001:2004 - Environmental Management Systems.</p> <p>The EMS will:</p> <ul style="list-style-type: none"> incorporate an operational Environmental Management Plan (EMP); detail potential environmental risks due to operation of the proposed quarry; provide measures for the prevention, minimisation and management of these impacts to within acceptable limits; and provide a means for the project to improve environmental performance and move towards environmental sustainability. 	Daracon Quarries	EMS to be submitted for approval prior to work commencing within the extension area.
5	Water Management	<p>The proponent will prepare and implement a Surface Water Management Plan for the project that will include:</p> <ul style="list-style-type: none"> an Erosion and Sediment Control Plan (including procedures to minimise erosion, capture of sediment on-site, and maintenance of control structures); 	Daracon Quarries	Plan to be submitted for approval prior to work commencing within the extension area.

Item Number	Item	Commitment	Responsibility	Timing															
6	Biodiversity	<ul style="list-style-type: none">• a Site Water Balance; and• a Water Quality Monitoring Program	Daracon Quarries	Ongoing for the duration of the project.															
		The proponent will implement the biodiversity offset strategy outlined in the EA, which includes the conservation and long term protection of the areas described in <i>Table 1</i> .																	
		<i>Table 1 Biodiversity Offset Areas</i>																	
		<table><tr><th>Land Description</th><th>Area (ha)</th><th>Proposed Management Strategy</th></tr><tr><td>Lot 187 DP 751028</td><td>8.2</td><td>stock removal, weed control, planting of EEC trees, transport of logs and rocks, provision of nest boxes</td></tr><tr><td>Lot 39 DP 751028</td><td>11.65</td><td>stock removal, weed control, major planting of EEC trees and grasses, transport of logs and rocks</td></tr><tr><td>Lot 49 DP 751028</td><td>16.3</td><td>stock removal, weed control</td></tr><tr><td>Total</td><td>36.15</td><td></td></tr></table>			Land Description	Area (ha)	Proposed Management Strategy	Lot 187 DP 751028	8.2	stock removal, weed control, planting of EEC trees, transport of logs and rocks, provision of nest boxes	Lot 39 DP 751028	11.65	stock removal, weed control, major planting of EEC trees and grasses, transport of logs and rocks	Lot 49 DP 751028	16.3	stock removal, weed control	Total	36.15	
		Land Description			Area (ha)	Proposed Management Strategy													
Lot 187 DP 751028	8.2	stock removal, weed control, planting of EEC trees, transport of logs and rocks, provision of nest boxes																	
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Lot 49 DP 751028	16.3	stock removal, weed control																	
Total	36.15																		
7		<p>The proponent will prepare a detailed biodiversity offset management plan in consultation with the DECC and submit it for approval by the Director-General. The plan will include:</p> <ul style="list-style-type: none">▪ proposed staging;▪ planting details such as final density, species mix, sowing rates, fertiliser;▪ proposed maintenance schedule;▪ weed control;▪ importation of rock and log shelter;▪ topsoil handling;▪ fencing;	Daracon Quarries	Plan to be submitted for approval prior to work commencing within the extraction area.															

Item Number	Item	Commitment	Responsibility	Timing
		<ul style="list-style-type: none"> pre-clearing surveys of all hollow bearing trees within the proposed quarry extension area; herbivore control; and number and location of nest boxes. 		
8		The proponent will make suitable arrangements to provide appropriate long term security for the offset areas.	Daracon Quarries	Within 3 years of work commencing within the extraction area.
9	Noise	<p>The proponent will continue to implement the following measures, which are currently in place at Ardglan Quarry, to mitigate noise impacts:</p> <ul style="list-style-type: none"> quarry hours are restricted to between 6am and 5.30pm; noise created by the haul trucks, both empty and loaded, is reduced by imposing a speed limit of 50 km/h when travelling on local roads between the quarry and the highway. Trucks on site are limited to a speed of 25 km/h; all on-site, fixed and mobile diesel-powered plant, excluding road vehicles, are correctly fitted and maintained to manufacturer specifications. Particular attention is given to engine exhaust systems and the care and maintenance of mufflers. <p>Further noise control is nominated through the implementation of the following measures:</p> <ul style="list-style-type: none"> reduction of equipment through the separation of site activities to overburden stripping and extraction, whereby they do not occur simultaneously; rail loading will be limited to the day period (7am to 6pm) as much as practicable; the surge bin will be lined with latex or polymer liners to reduce impulsive noise; a sheet metal enclosure will be built around the rail loader discharge and extend to include the rail wagon being loaded. The enclosure will be constructed of sheet metal and will cover the length of a minimum of three wagons whereby the wagon being loaded will be in the centre of the enclosure. The enclosure will be open at the ends and will contain a roof which will be connected to the rail loader discharge. 	Daracon Quarries	Ongoing for the duration of the project.

Item Number	Item	Commitment	Responsibility	Timing
10		<p>Gaps between the loader discharge and the roof will be sealed;</p> <ul style="list-style-type: none"> the two scrapers initially assigned for overburden stripping will be replaced by one excavator and two articulated dump trucks; the existing three crushers will be acoustically treated by extending the metal cladding on the crushing and screening station building to ground level with no gaps or openings; the existing screens will be located behind earth bunds; and mobile acoustic barriers or earth mounds will surround the drill rig and any mobile plant situated on the surface during initial stripping; and where land slopes away from stripping activities to receivers, barriers will be raised to a height of 4 metres, so there is no direct line of sight to receivers. 	Daracon Quarries	Ongoing for the duration of the project.
		<p>Except during night-time rail loading activities, the proponent will ensure that the noise generated by the project does not exceed the levels set out in <i>Table 2</i>, at any privately-owned residence, unless a specific agreement is reached with the landholder, in which case the proponent may exceed the noise limits set out in <i>Table 2</i> in accordance with the negotiated noise agreement.</p>		

Table 2 Noise Criteria

Land	Noise Level LAeq dB(A)
1 - Burraston	35
2 - Rose	35
4 - CM Thomson	44
5 - M Taylor	45
6 - S Thompson	45
9 - Bates	37
10 - Avery	38

Item Number	Item	Commitment	Responsibility	Timing
		11 - Shipman 37 12 - Hall 36 13 - McGhie 35 14 - Purtell 36 15 - J Taylor 43 16 - Bojba 40		
11	Blasting and Vibration	<p>The proponent will implement the following measures to mitigate the impacts of blasting and vibration:</p> <ul style="list-style-type: none"> blasting will be limited to between the hours of 10am and 4pm, Monday to Friday and residents in the vicinity of the quarry will be given adequate notification of forthcoming blasts; air-blast overpressure from any blast will not exceed 120 dB(L-peak) at any privately-owned residence for more than 5% of all blasts over a 12 month period. It will not exceed 115 dB(L-peak) at any time, unless specific prior agreement is reached with the affected landholder; peak particle velocity (ppv) from ground vibration will not exceed 5 mm/s at any privately-owned residence for more than 5% of the total number of blasts over a 12 month period. The maximum level will not exceed 10 mm/s at any time; the existing blast management strategy will continue to be implemented to ensure appropriate charge masses are used to avoid excessive air blast overpressure and ground vibrations; and a Blast Monitoring Program will be prepared and submitted to the Director-General for approval 	Daracon Quarries	Ongoing for the duration of the project.

Item Number	Item	Commitment	Responsibility	Timing
12	Air Quality	<p>In addition to the dust mitigation measures currently employed, the proponent will implement the following measures to ensure particulate matter emissions are minimised:</p> <ul style="list-style-type: none"> ▪ revegetation of exposed surfaces where possible; ▪ sealing the haul road; ▪ limiting the speed limit on unpaved surfaces to 15 km/hr; ▪ high level watering of unpaved road surfaces (greater than 2L/ m2/hr); ▪ covering all loads leaving the site; ▪ building a wheel wash at the end of the unpaved section of the haul road (after the weighbridge); and ▪ wet suppression or chemical coating of static stockpiles. 	Daracon Quarries	Ongoing for the duration of the project.
13		<p>The proponent will prepare and implement an air quality monitoring program for the project. The program will include:</p> <ul style="list-style-type: none"> ▪ a series of dust deposition gauges operated in accordance with Australian/New Zealand Standard AS/NZS 3580.10.1:2003; and ▪ a series of high volume or low volume air samplers to monitor levels of PM10, operated in accordance with Australian/New Zealand AS/NZS 3580.9.6:2003 and AS/NZS 3580.9.6:2003. 	Daracon Quarries	Program to be submitted for approval prior to work commencing within the extension area.
14	Rehabilitation	The proponent will prepare a detailed biodiversity offset plan to provide an integrated plan for the whole site, considering the existing quarry areas, the western extension, the areas of box-gum woodland to be preserved and the areas to be planted as offsets. This plan will be prepared in liaison with the DECC and lodged for approval by the Director-General.	Daracon Quarries	Plan to be submitted for approval prior to work commencing within the extension area.
15		The proponent will progressively rehabilitate the site, generally in accordance with the rehabilitation strategy outlined in the EA.	Daracon Quarries	Ongoing for the duration of the project.

Item Number	Item	Commitment	Responsibility	Timing
16		The proponent will lodge a rehabilitation bond with the Director-General to ensure that rehabilitation of the site is satisfactorily completed, generally in accordance with the rehabilitation strategy outlined in the EA.	Daracon Quarries	Within 6 months of work commencing within the extension area.
17	Traffic Management and Access	The proponent will not transport more than 500,000 tonnes of product from the site each year.	Daracon Quarries	Ongoing for the duration of the project.
18		<p>The proponent will keep daily records of:</p> <ul style="list-style-type: none"> the type and amount of product transported from the site and the method of transportation i.e. road or rail; and the type and amount of quarry material imported onto the site and the method of transportation i.e. road or rail. 	Daracon Quarries	Ongoing for the duration of the project.
19		The proponent will maintain the quarry access route from the New England Highway to the quarry entrance, to at least its present standard (two lane rural road), to the satisfaction of Council.	Daracon Quarries	Ongoing for the duration of the project.
20	Visual Amenity	<p>The proponent will implement the following mitigation measures to reduce the potential visual impacts of the project:</p> <ul style="list-style-type: none"> those areas of the quarry in which the resource has been exhausted will be progressively rehabilitated and revegetated; and further planting will be undertaken along the ridgeline to the west of the proposed extension area. 	Daracon Quarries	Further planting to be undertaken prior to work commencing within the extension area.

21	Aboriginal Cultural Heritage	Should any Aboriginal objects (artefacts) be exposed during ground surface disturbance, all works involving ground surface disturbance will be suspended. A representative of the Nungaroo Local Aboriginal Land Council and an archaeologist will conduct an assessment of the significance of the Aboriginal object(s) and identify appropriate mitigation and management measures.	Daracon Quarries	Ongoing for the duration of the project.
22	Community Consultation	The proponent will continue to engage the community in consultation, with the aim of providing the community with up-to-date information in relation to the project and quarry operations in general, and allowing the community to provide feedback and raise any issues or concerns. On-going consultation will include distribution of an annual community newsletter and individual face-to-face meetings with adjoining landowners and other stakeholders when required.	Daracon Quarries	Ongoing for the duration of the project.
23	Annual Reporting	<p>The proponent will prepare and submit to the Director-General an Annual Environmental Management Report (AEMR). The AEMR will:</p> <ul style="list-style-type: none"> include a summary of the environmental monitoring results for the project for the past year; include an analysis of the monitoring results against relevant limits/criteria and monitoring results from previous years; and identify and discuss any non-compliances during the past year and detail any actions taken to ensure compliance. 	Daracon Quarries	Report to be submitted annually

Appendix 2 Noise monitoring report



21 December 2017

Ref: 161308/7547

Daracon Quarries Pty Ltd
PO Box 299
WALLSEND NSW 2287

RE: DECEMBER 2017 ATTENDED NOISE MONITORING RESULTS – ARDGLEN QUARRY

This letter report presents the results of attended noise monitoring conducted for the Ardglenn Quarry (AQ) on Thursday 14th December 2017. The monitoring was carried out specifically to measure noise emissions during train loading at the quarry. Noise monitoring was carried out in accordance with the conditions of the AQ Noise Monitoring Plan (NMP) as detailed below.

NOISE CRITERIA

*The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in **Table 1** at any residence on privately-owned land, or more than 25% of any privately owned land.*

Table 1 Noise Impact Assessment Criteria				
Land	Day Leq (15 min)	Evening Leq (15 min)	Night	
			Leq (15 min)	L1 (1 min)
1 Burraston	35	35	35	45
3 Rose	35	35	35	45
4 C M Thompson	44	35	35	45
5 M Taylor	45	35	35	45
6 S Thompson	45	35	35	45
9 Bates	37	35	35	45
10 Avery	38	35	35	45
11 Shipman	37	35	35	45
12 Hall	36	35	35	45
13 McGhie	35	35	35	45
14 Purtell	36	35	35	45
15 J Taylor	43	35	35	45
16 Bojba	40	35	35	45
All other privately owned land	35	35	35	45

However, if the Proponent has a written negotiated noise agreement with any landowner of the land listed in Table 1, and a copy of this agreement has been forwarded to the Department and the DECCW, then the Proponent may exceed the noise limits in Table 1 in accordance with the negotiated agreement. The Proponent may also exceed the L1 (1 min) and Leq (15 min) noise impact criteria during out of hours rail loading activities provided they are conducted in accordance with Section 3, Condition 41 of the Project Approval (which is reproduced below).

41. The Proponent may only load a maximum of 2 trains outside the rail loading and distribution hours listed in Table 1 (of the Project Approval, being Monday to Sunday 7:00am to 10:00pm) in any 12 month period, unless agreed in writing by the Director General.

Notes:

- For information on the numbering and identification of properties used in this approval see Figure 2 on Page 14 of this Noise Monitoring Program).
- To determine compliance with the LAeq (15 minute) noise limits, noise from the project is to be measured at the most affected point on or within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the development is impractical, the DECCW may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.
- To determine compliance with the L1 (1 minute) noise limits, noise from the project is to be measured 1m from the dwelling facade. Where it can be demonstrated that direct measurement of noise from the development is impractical, the DECCW may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy).
- The noise emission limits identified in the above table apply under meteorological conditions of:
 - wind speeds of up to 3 m/s at 10 metres above ground level; or
 - Temperature inversion conditions of up to 3°C/100m, and wind speeds of up to 2 m/s at 10 metres above ground level.

NOISE MONITORING LOCATIONS

Noise measurement locations for the attended noise survey are listed below and shown in the accompanying figure:

Location 4: C M Thompson
Location 13: McGhie
Location 14: Purtell
Location 16: Bojba



ATTENDED NOISE MEASUREMENTS

Noise emission levels were measured with Brüel & Kjær Type 2260 Precision Sound Analysers. These instruments have Type 1 characteristics as defined in AS1259-1982 "Sound Level Meters". Calibration of the instruments was confirmed with a Brüel & Kjær Type 4231 Sound Level Calibrator prior to and at the completion of measurements.

Meteorological data used in this report was obtained from a hand held weather station with measurements made at approximately 2m above ground level. The weather throughout the survey was hot with relatively clear skies at 2 octas cloud cover. The wind speed was variable throughout at 1 to 2.5 m/s from the north north west.

Throughout the monitoring period the quarry was not operating.

RESULTS OF ATTENDED MONITORING

The measured noise levels, over 1 second intervals, were analysed using Brüel & Kjær “Evaluator” software. The software enables the contributions of the quarry and other significant noise sources to the overall to be quantified.

Noise levels were recorded for each of the Leq (15 min), Lmax, L1, L10, L90 and Lmin percentiles. As shown in Table 1, the noise criterion for AQ during the day is based on an Leq noise level. The results shown in **Table 2**, below, represent the total 15 minute Leq noise level for all noise sources and the relative contributions of each. Levels for the other percentiles are not shown as they have no compliance criteria for comparison but are available on request. The exception is the L1 (1 min) noise level (which is the standard measure of sleep disturbance) which is applicable to noise emissions at night (i.e. between 10 pm and 7 am).

Table 2 Ardglen Quarry Noise Monitoring Results – 14 December 2017 (Day)				
Location	Time	dB(A), Leq	Wind speed/ direction	Identified Noise Sources
4. Thompson	11:40 am	48	1 m/s NNW	Traffic (47), birds (36), train (33), AQ inaudible
13. McGhie	12:45 pm	36	2 m/s NNW	Insects (34), traffic (32), birds (25), AQ inaudible
14. Purtell	12:00 pm	38	2.5 m/s NNW	Traffic (37), birds & insects (30), AQ inaudible
16. Bojba	11:15 am	40	1 m/s NNW	Traffic (40), birds (31), AQ inaudible

As the quarry was not working at the time of the monitoring there were no noise emissions and there is no requirement for any further analysis of the data.

UNATTENDED NOISE MEASUREMENTS

The NMP requires that unattended noise logging be undertaken over a period of seven days, part of which coincides with the quarterly attended noise monitoring. To measure the acoustic environment Rion NL-42 sound level meters, set up as environmental noise loggers, were located on the quarry fence line in the vicinity of R14 and to the west of the fence at R16 from 14th to 20th December, 2017. **Table 3** shows a summary of the relevant measured data from the loggers which is also shown graphically in **Appendix I**.

TABLE 3 MEASURED LOGGER NOISE LEVELS dB(A) 14 th to 20 th December, 2017						
Logger Location	Day (7am to 6pm)		Evening (6pm to 10 pm)		Night (10pm to 7am)	
	Leq	L90	Leq	L90	Leq	L90
R14	53	43	53	44	52	34
R16	52	41	46	37	50	31

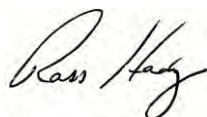
The unattended noise loggers measure the total noise level in the environment but the data cannot discriminate between various noise sources. As such, the data is presented here with no further analysis.

We trust this report fulfils your requirements at this time, however, should you require additional information or assistance please contact the undersigned on 4954 2276.

Yours faithfully,

SPECTRUM ACOUSTICS PTY LIMITED

Author:



Ross Hodge

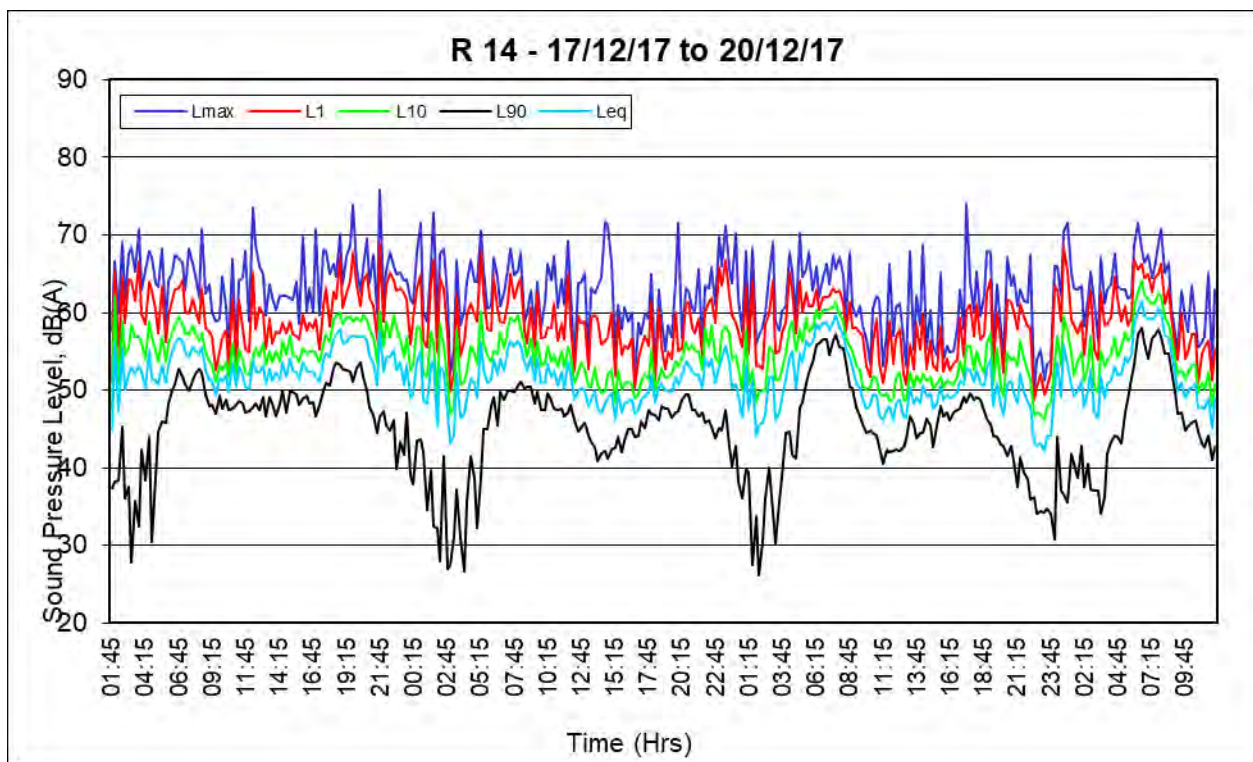
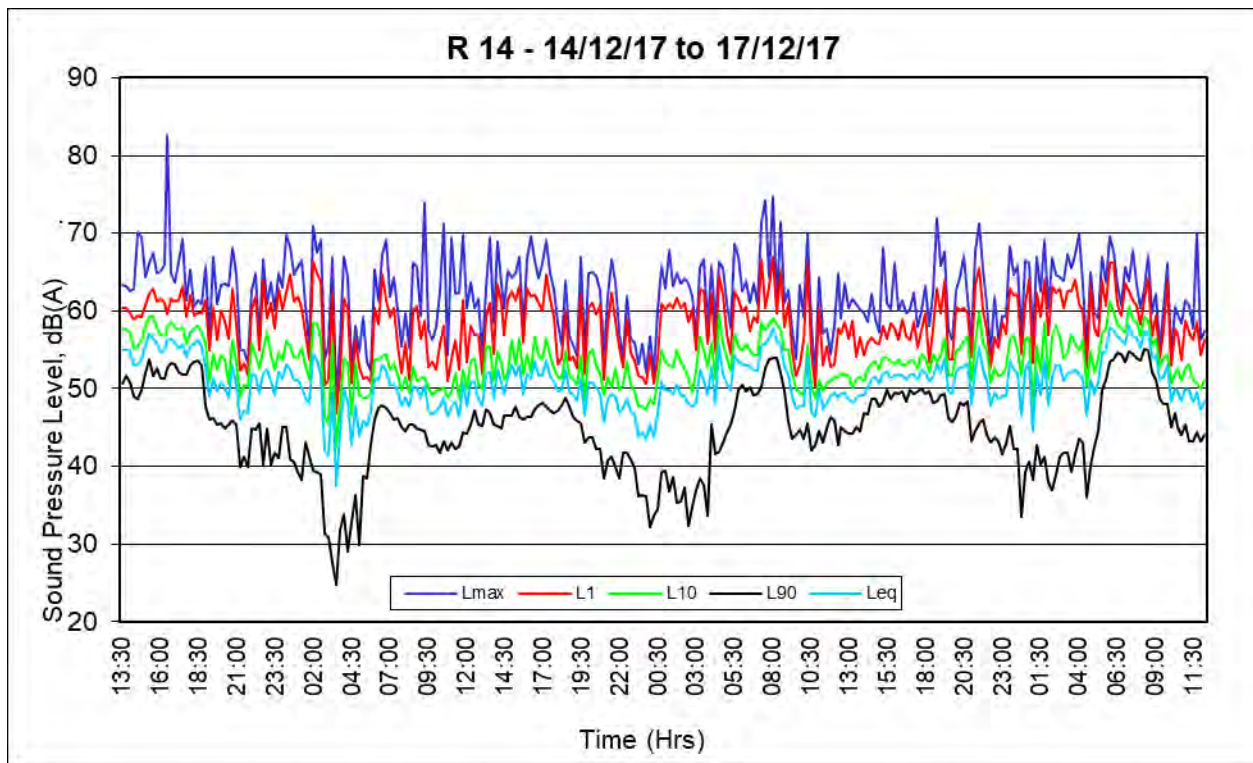
Acoustical Consultant

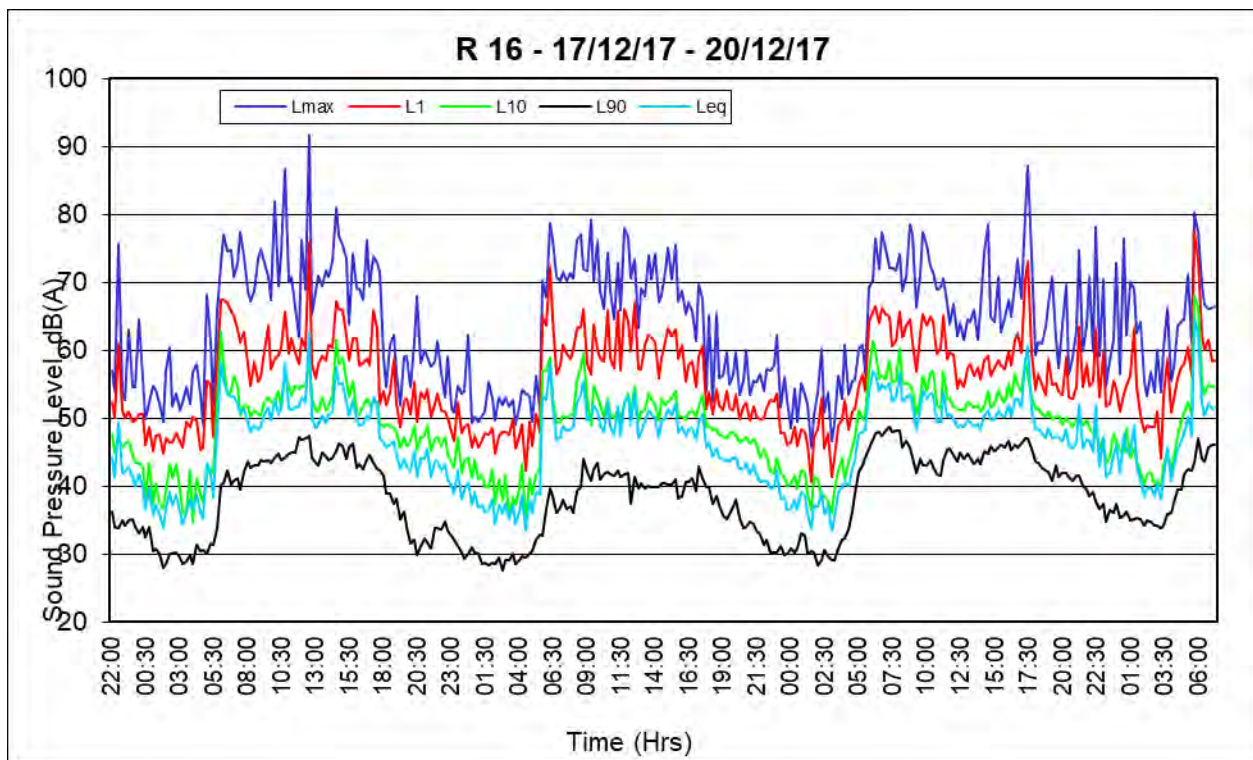
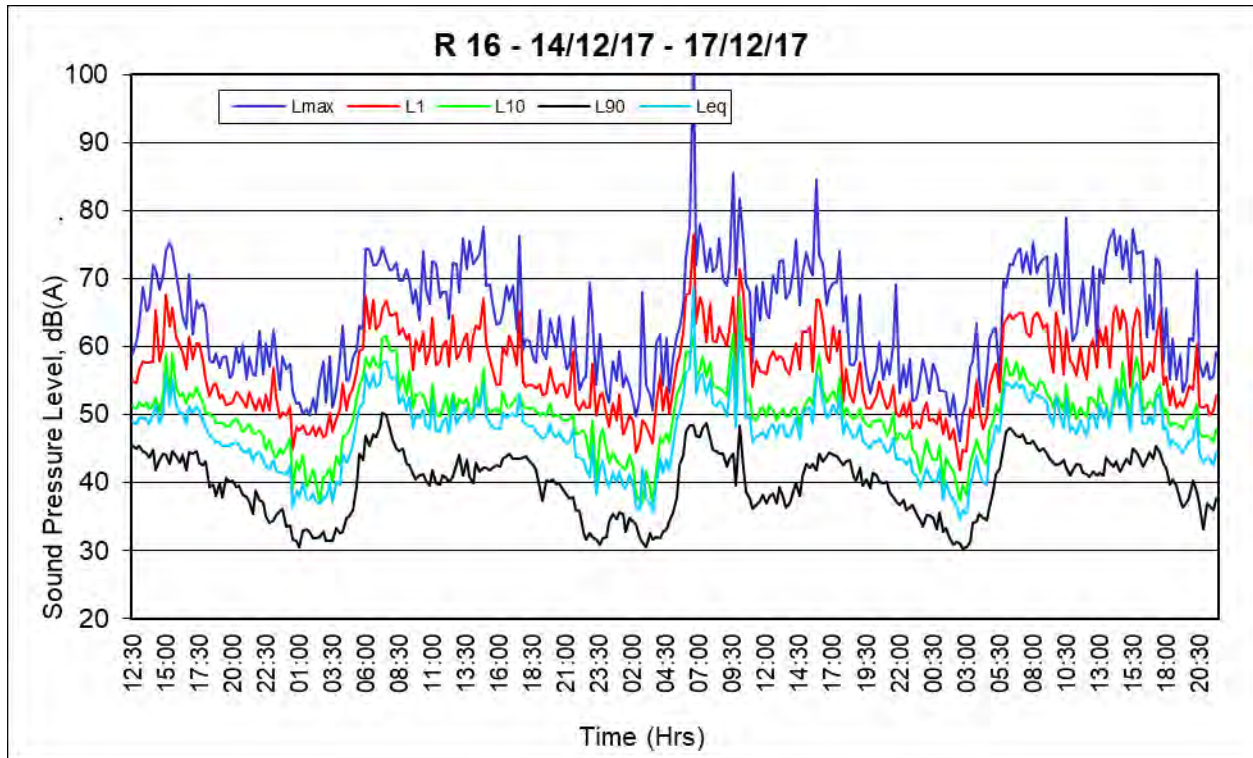
Review:



Neil Pennington

Acoustical Consultant





Appendix 3 2017 Community Consultative Committee Meeting Minutes

Ardglen Quarry Community Consultative Committee Meeting Notes

Murrurundi Library, 11am Monday 11th December 2017

Attendees:

Shay Riley-Lewis (Independent Chairperson)

Dell Ross (Community Representative)

Bill Avery (Community Representative)

Megan Taylor (Community Representative)

Jon Shillito (Liverpool Plains Shire Council)

Luke Robinson (Daracon)

1. Welcome and introductions

2. Apologies

Apologies were received from Heidi Watters (Department of Planning) and community representative Christine Thomson.

3. Pecuniary Interests

The Chair reiterated the pecuniary interests raised at previous meetings remain.

The Chair also acknowledged contract planning work with Liverpool Plains Shire Council.

4. Confirmation of previous minutes of meeting held 23 August 2016

Minutes were confirmed.

5. Issues raised from previous minutes

Nil.

6. Planned activities

Daracon presented an overview of the background and current status of the site's operations (refer presentation provided in [Attachments](#)). There has been limited progress on the site due to Daracon resourcing needs at other quarries.

Air monitoring results have reported levels consistently below criteria.

The transformer yard has been removed as required by DP&E. Fixed plant will be removed as part of the site redevelopment.

It was noted that Daracon has tendered for the Scone Bypass project. If successful, it may or may not affect the Ardglan Quarry.

7. Questions

Christine Thomson provided the Chair with the following questions to raise in her absence:

- CT was not advised about the ARTC work being undertaken by Daracon contractors

LR advised the rail team is not related to the quarry. Although LR noted he advised the team the contact details of the local residents.

MT advised the ARTC communications team attempted to contact CT by post and phone without success.

- Lot 11 is overgrown with grass and needs maintenance. Daracon staff are likely using CT's property to access the dust monitor rather than traverse the overgrown site. CT requested Lot 11 be mowed and maintained to enable direct access by staff via the road instead.

LR advised he will investigate mowing Lot 11 to maintain the grass and confirm staff are not to access the dust monitor via CT's property.

- CT queried dust monitoring results, noting obvious dust on the outside of her house and inside on furniture etc. CT noted the quarry should be planted and stabilized.

LR advised dust monitoring results have remained below Environmental Protection Licence (EPL) criteria. LR noted coal train dust generation may be a large contributor to local dust.

BA noted the prevailing SW winds avoid disturbing quarry soils. MT/BA/DR all noted no dust concerns at their properties.

8. Date of next meeting

The community representatives agreed that it is preferred to not meet again until there is new information to discuss. The Chair will contact Daracon in February 2018 to check the status of the modification application and works program. If there is no progress or changes to report, then community representatives will be advised and the next meeting postponed.

Next meeting 10:30am Tuesday 4th April 2017 at Murrurundi Library.

Meeting Closed at 11:55am.

Attachments:

Daracon presentation



Ardglen Quarry

Community Consultative Committee

11 December 2017

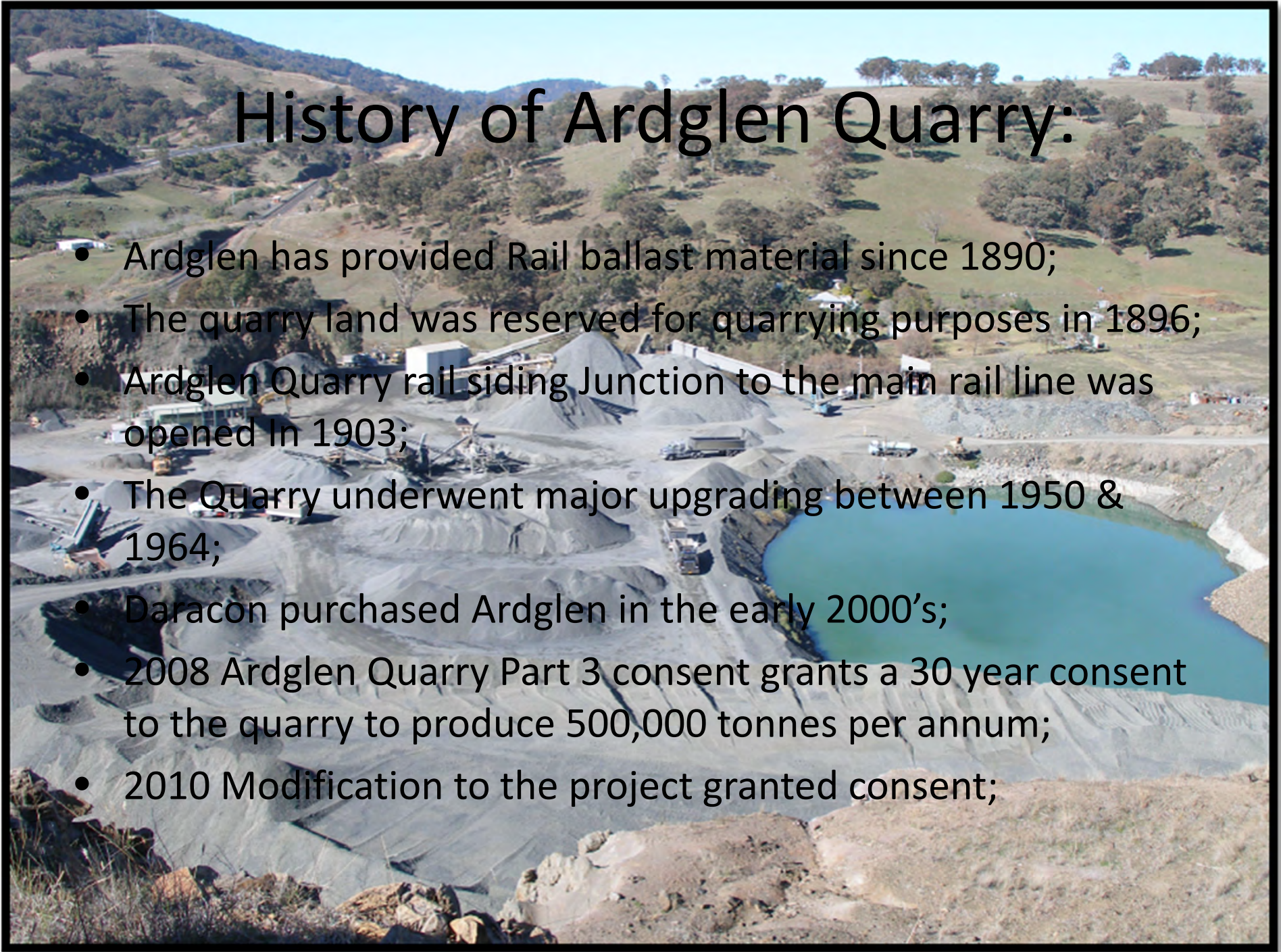


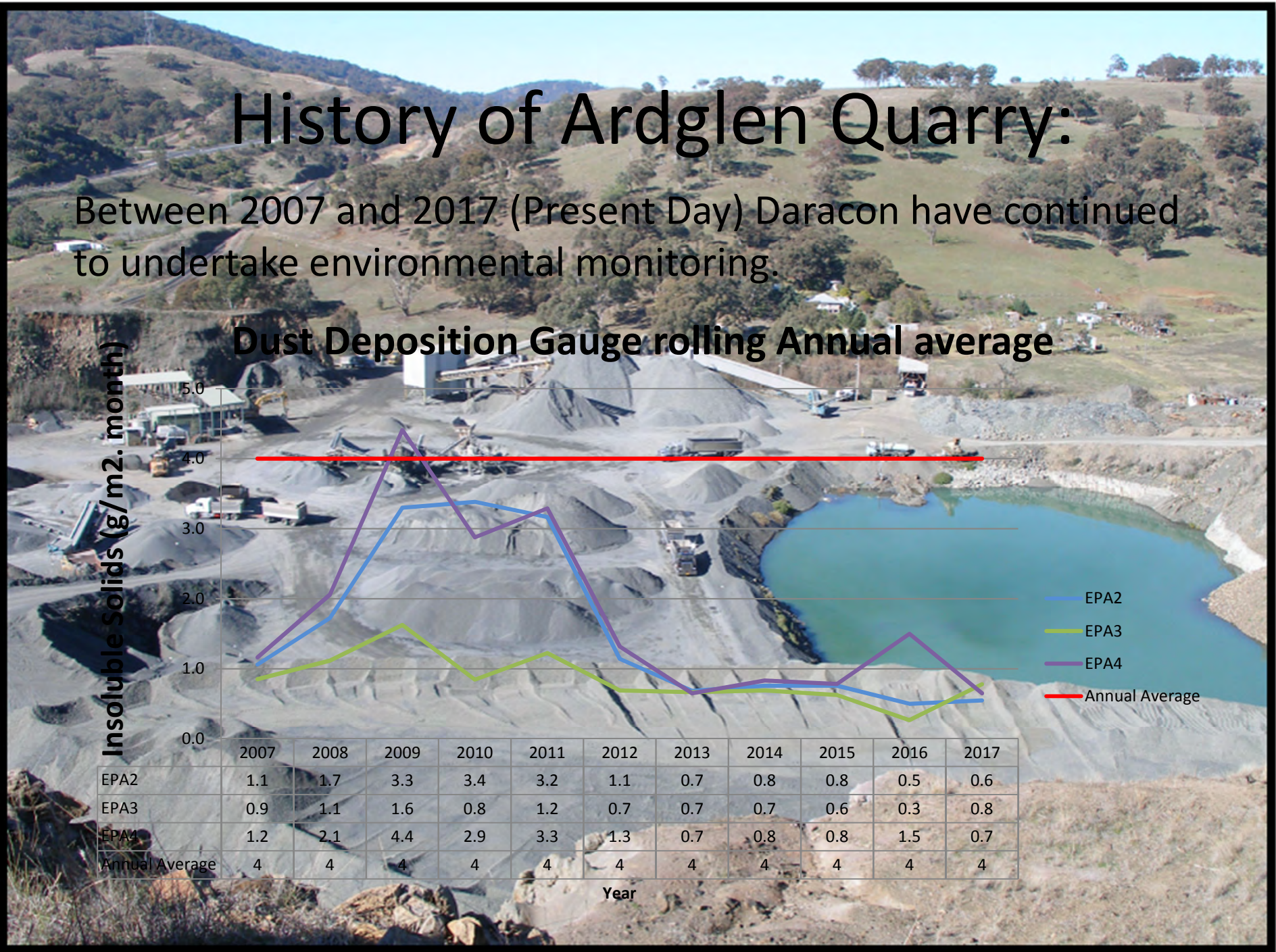
Map of Area



History of Ardglen Quarry:

- Ardglen has provided Rail ballast material since 1890;
- The quarry land was reserved for quarrying purposes in 1896;
- Ardglen Quarry rail siding Junction to the main rail line was opened In 1903;
- The Quarry underwent major upgrading between 1950 & 1964;
- Daracon purchased Ardglen in the early 2000's;
- 2008 Ardglen Quarry Part 3 consent grants a 30 year consent to the quarry to produce 500,000 tonnes per annum;
- 2010 Modification to the project granted consent;

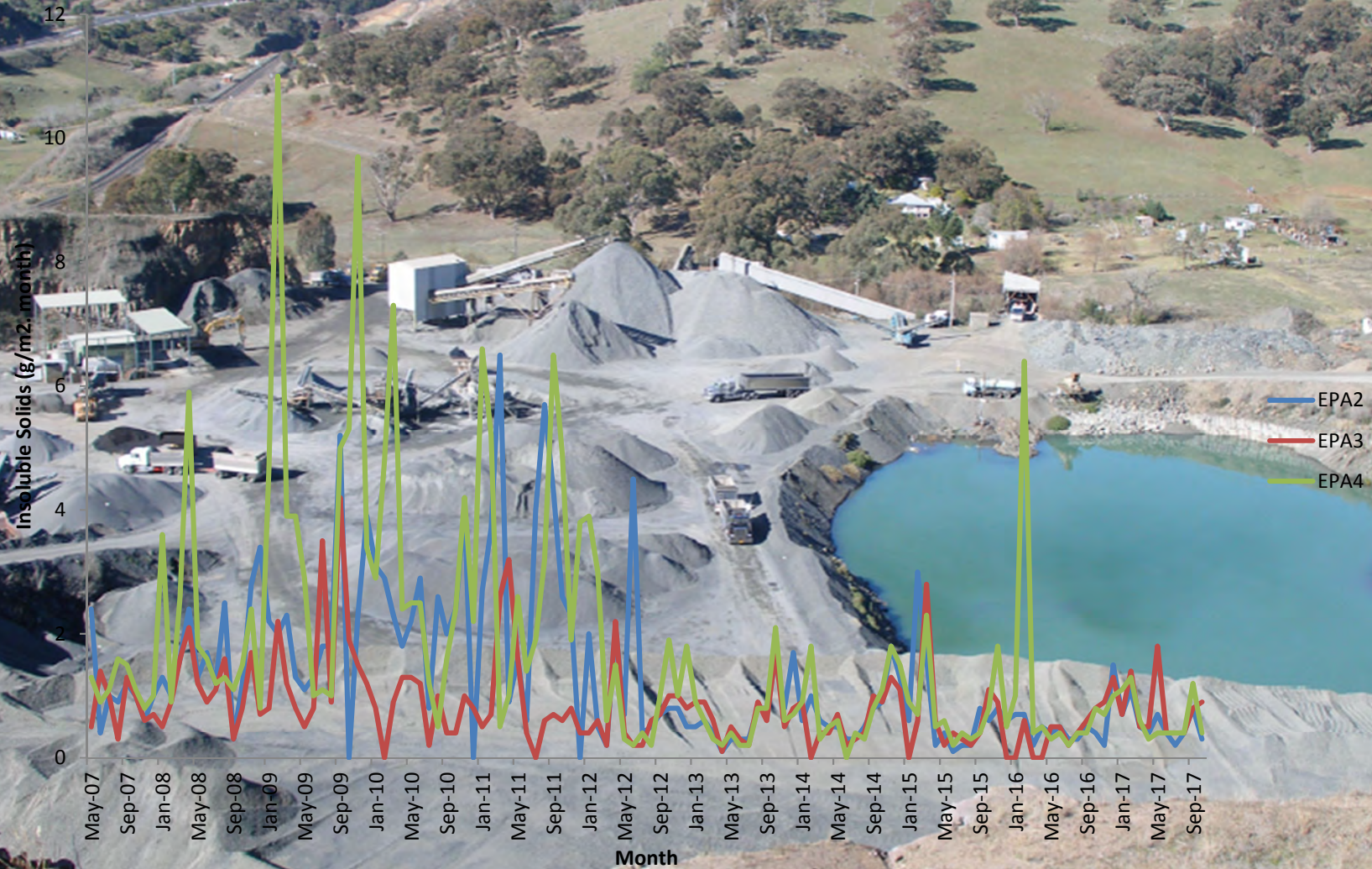


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Dust Deposition Gauge results

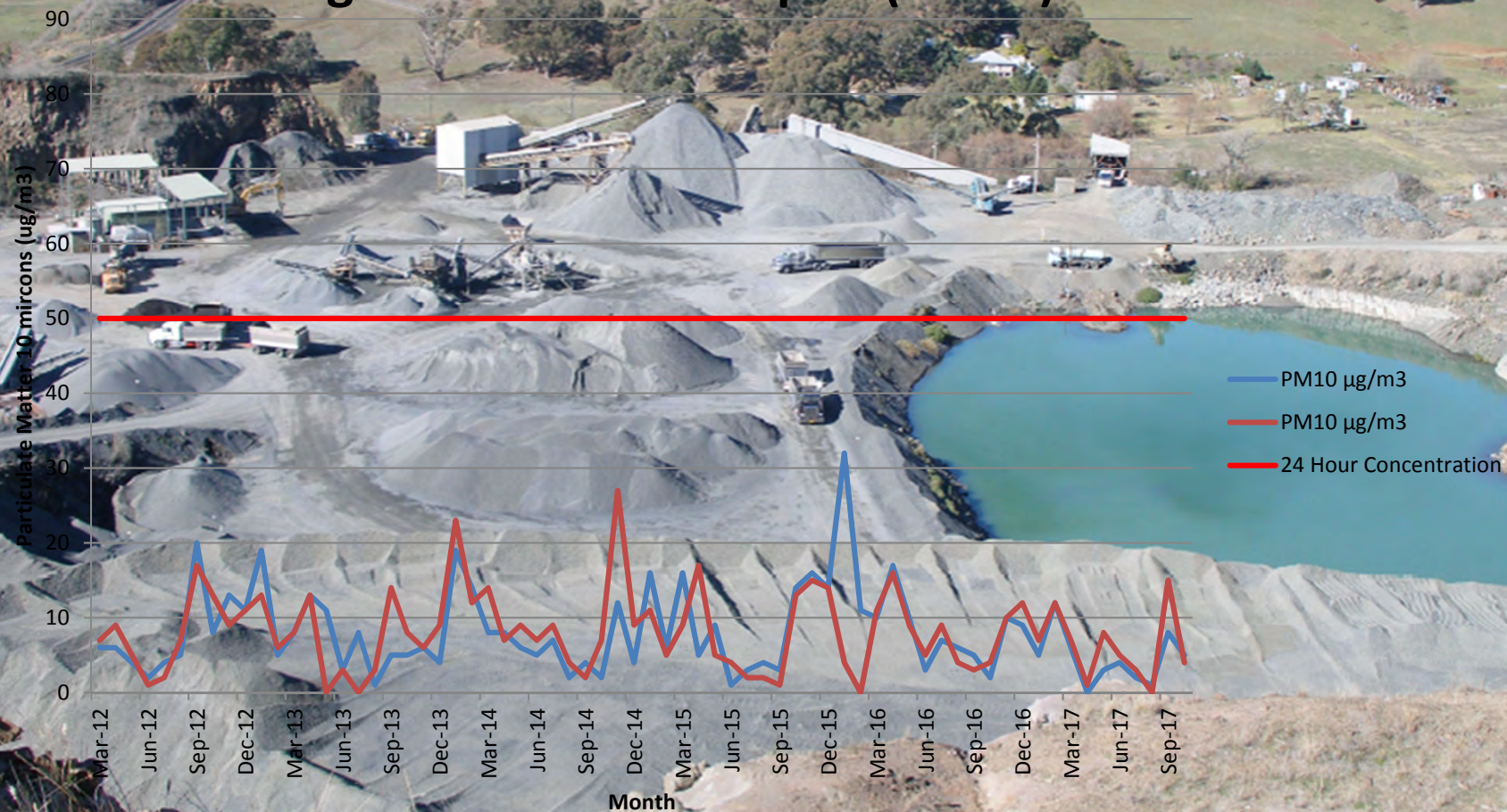
The graph displays the monthly dust deposition results for three gauges: EPA2 (blue line), EPA3 (red line), and EPA4 (green line). The y-axis represents Insoluble Solids in $\text{g/m}^2/\text{month}$, ranging from 0 to 12. The x-axis represents the month, from May-07 to Sep-17. EPA4 consistently shows the highest deposition rates, with several peaks exceeding 6 $\text{g/m}^2/\text{month}$. EPA2 and EPA3 show lower rates, generally below 4 $\text{g/m}^2/\text{month}$.

Month	EPA2 ($\text{g/m}^2/\text{month}$)	EPA3 ($\text{g/m}^2/\text{month}$)	EPA4 ($\text{g/m}^2/\text{month}$)
May-07	2.5	1.5	1.5
Sep-07	1.5	1.0	1.5
Jan-08	1.5	1.0	1.5
May-08	2.5	1.5	2.5
Sep-08	1.5	1.0	1.5
Jan-09	3.5	2.0	11.5
May-09	1.5	1.0	1.5
Sep-09	5.5	3.5	9.5
Jan-10	3.0	1.5	7.5
May-10	2.5	1.5	2.5
Sep-10	2.5	1.0	2.5
Jan-11	6.5	1.5	6.5
May-11	5.5	3.0	2.5
Sep-11	5.5	1.0	6.5
Jan-12	2.0	1.0	4.0
May-12	4.5	2.0	1.0
Sep-12	1.0	1.5	2.0
Jan-13	1.0	1.0	1.0
May-13	1.0	1.0	1.0
Sep-13	2.0	1.5	2.0
Jan-14	1.5	1.0	1.5
May-14	1.0	1.0	1.0
Sep-14	1.5	1.5	1.5
Jan-15	3.0	2.5	2.5
May-15	1.0	1.0	1.0
Sep-15	1.0	1.0	1.0
Jan-16	1.0	1.0	6.5
May-16	1.0	1.0	1.0
Sep-16	1.0	1.0	1.0
Jan-17	1.5	1.5	1.5
May-17	1.0	1.5	1.0
Sep-17	1.0	1.5	1.5



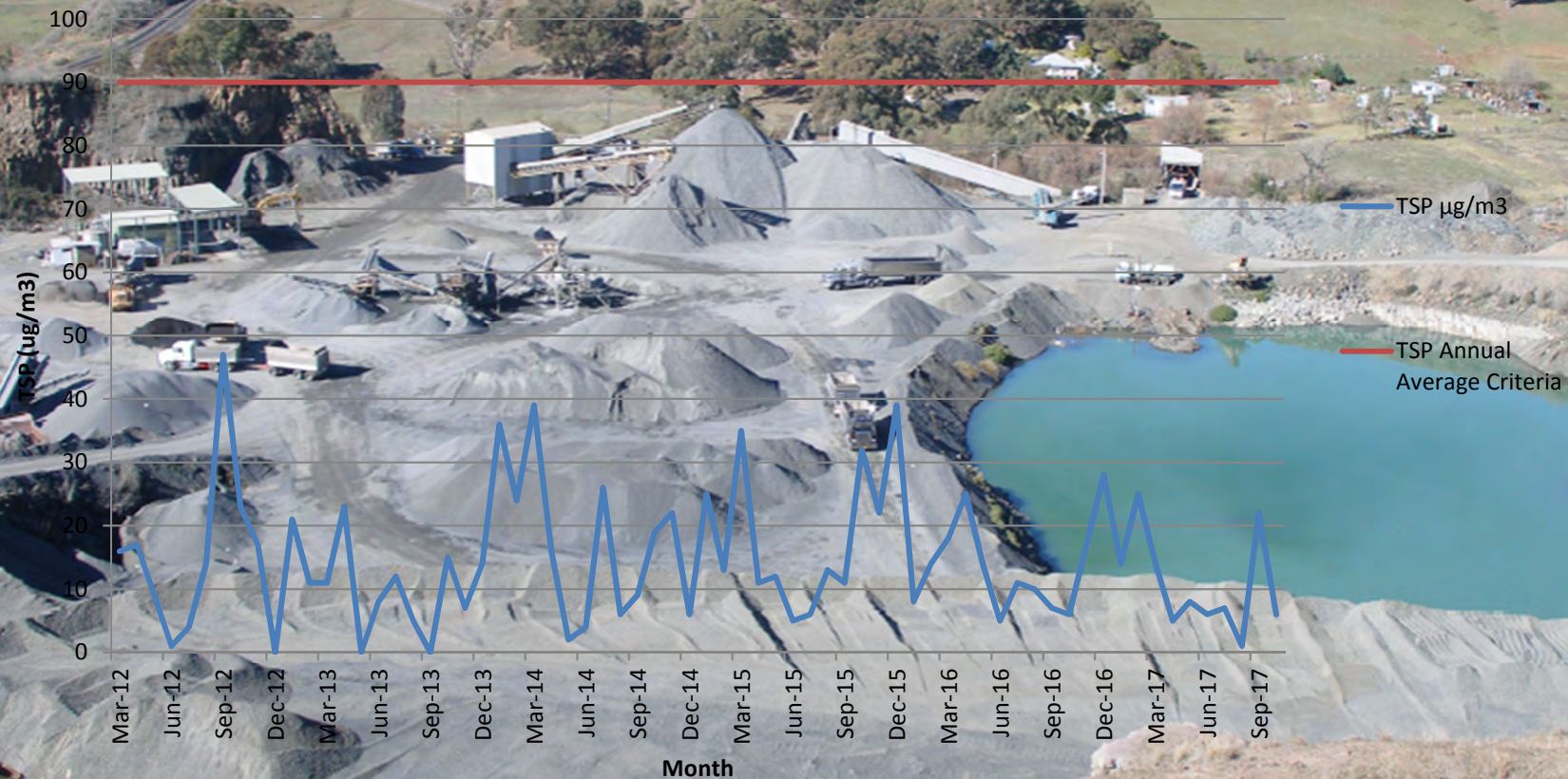
HVAS (PM10) Monitoring

High Volume Air Sampler (PM10) results



HVAS (TSP) Monitoring

Total Suspended Particulate (TSP) results



What's proposed for Ardglen:

- Daracon intends to re-commission Ardglen Quarry with upgraded contemporary quarrying practices.
- Very little progress has been made since our previous meeting in late 2016;
- Daracon is still preparing a s75W modification to the Quarry to address the following issues:
 - Utilisation of modern equipment to process materials;
 - Re design of the quarry plan to better manage Noise from its operations;
 - Introduce contemporary environmental management practices;
 - Utilise efficient transport systems and noise management for Transport;
 - Development of suitable stormwater management;



Reconnecting with our Neighbours:

- Daracon understands it has a responsibility to their neighbours;
- Daracon would like to have a clear & transparent relationship with their neighbours;
- Daracon is committed to a process of community engagement;



What is not proposed:

- Increased quota of material to be processed;
- Increased hours of operation;
- Further increase to the approved quarry size;

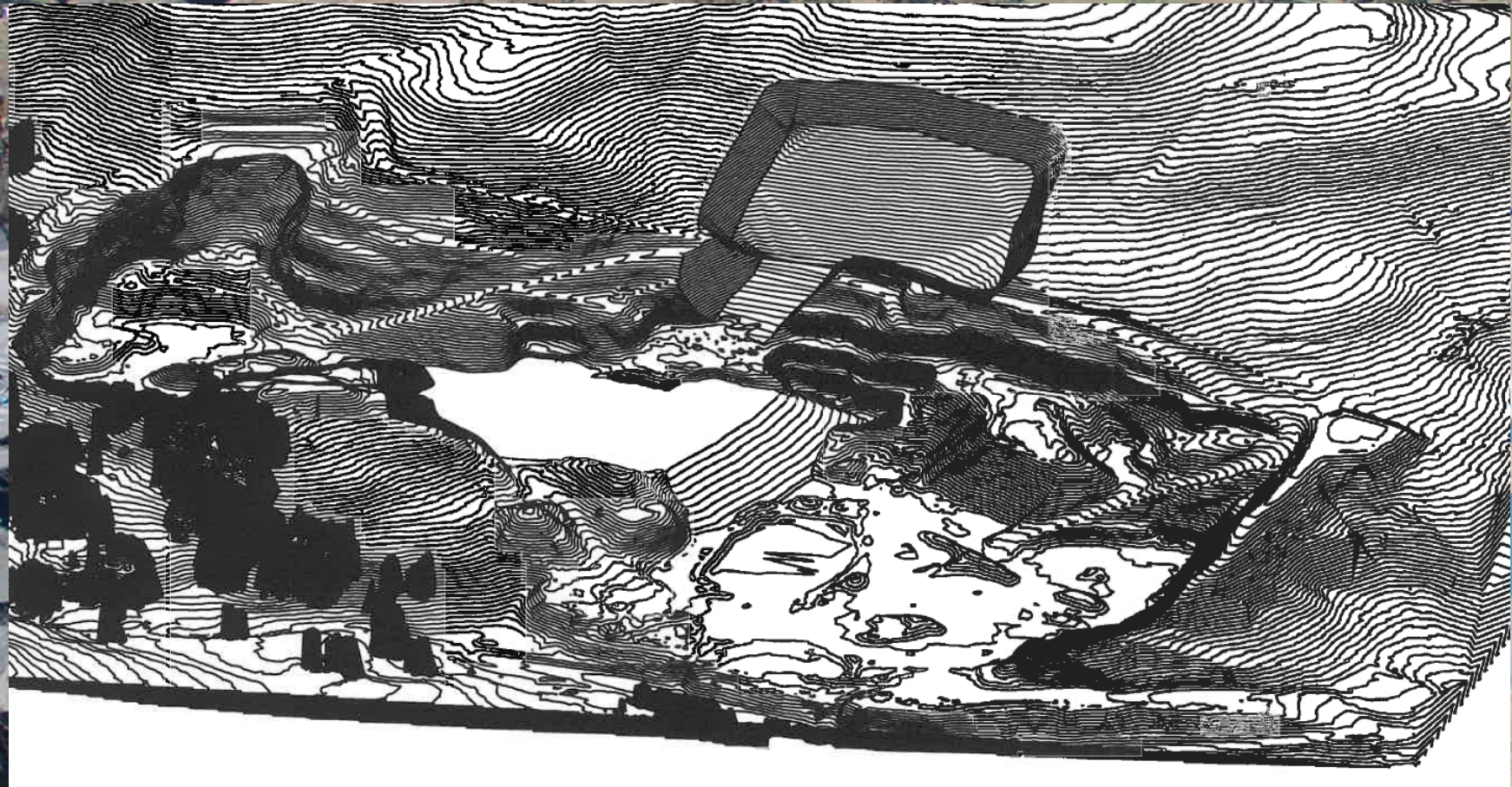


Quarry Plans

- Development of the quarry is a 3 stage process which includes:
 - Staged removal of overburden;
 - Development of processing pad next to quarry sump;
 - Cut through existing quarry face into extension area;



Stage 1 - 3



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Where to from here.

- Continued community engagement;
- Submission of 75W to Department of Planning;
- Continuation of existing environmental monitoring;
- Primary contact person is Luke Robinson on 0417 481 785;






Appendix 4 2017 Community Complaints Register





No complaints received during 2017

Appendix 5 Rubicon (formerly TREES) Erosion & Sediment Control Inspection Report





Inspection Report – Daracon Group

CLIENT	Daracon Group	REPORT DATE	24 June 2017	REPORT NO.	1	REPORT TO:	Luke Robinson, Bob Murphy – Daracon Group
PROJECT	Ardglen Quarry	INSPECTION DATE	16 June 2017	ATTENDEES:	Luke Robinson – Daracon Group, Andrew Littlewood – Rubicon Enviro		
WEATHER	Cool, Overcast, Light winds	COMMENT	The quarry remains dormant with no extractive activities or processing occurring. The quarry areas were inspected with no significant issues with drainage or erosion and sediment control. Some minor weed control is required in isolated areas. Disturbance from activities by third parties that have encroached over the site’s boundaries are detailed below.				
ISSUE NO.	LOCATION	ISSUE/MATTER	RECOMMENDATION/COMMENT		PHOTOGRAPH		
1.	Warra Street rail siding area.	It was evident that rail maintenance activities had been undertaken by third parties accessing through the quarry’s rail siding access road. Boundary fencing had been removed and a quantity of weed infested soil had been deposited on site.	We recommend the soil is removed from site and disposed or re-used in a suitable manner.				
2.	Lower detention basin.	The inspection occurred following ongoing recent rainfall events. The detention basin invert and surrounds are vegetated and weed is satisfactorily controlled.	Continue to undertake periodic weed suppression and monitor drainage controls and flow lines to the basin.				
3.	Former Sub-Station area.	As noted previously, the redundant sub-station and associated structures have been demolished. Ground cover vegetation has established over the areas that were graded and seeded, however, some weed outbreaks have established such as Scotch Thistle and Verbena ‘Purpletop’.	As discussed, to undertake periodic weed suppression targeting revegetating and boundary areas.				

Inspection Report – Daracon Group

PROJECT:	Ardglen Quarry	INSPECTION REPORT NO.	1	INSPECTION DATE	16 June 2017
4.	Rail loading area.	The rail loading area has largely been colonised by re-establishing ground cover and pasture grasses. Run-off from the upper quarry areas are filtered by vegetation along the length of the drainage line.	Continue to monitor the drainage lines and undertake periodic weed suppression in the area as required.		
5.	Lube shed and fuel storage area.	The lube shed area remains secure and dormant with adequate bund storage and controls. Ponded water in the surrounding areas was clear and no oil sheens were present.	Continue maintain the area and visually monitor water quality in the surrounding areas.		
6.	Quarry slopes and floor.	The inspection around the quarry perimeter and workings confirmed no significant outbreaks of weed have established, and in general terms, weed infestation control is good.	As recommended previously, ensure regular weed control continues with a focus on noxious weeds on boundary areas.		
7.	Main central dam.	The main dam on the quarry floor was nearing capacity from recent ongoing rain events. The water clarity was good with very low turbidity indicating low levels of erosion in the catchment.	Continue to monitor the dam, drainage lines and contributing catchment. Some minor weed suppression is required in a few isolated areas surrounding the dam.		

Inspection Report – Daracon Group

PROJECT:	Ardglen Quarry	INSPECTION REPORT NO.	1	INSPECTION DATE	16 June 2017
8.	Doughboy Hollow Creek culvert	The area around the main drainage culvert was inspected. In the time since the previous inspection, rail maintenance works appear to have been undertaken within and around the culvert. The works areas have not been adequately stabilised.	As discussed, the party/s responsible for the works should ameliorate the disturbed areas as follows: An access ramp has been formed to the culvert which should be weed treated, reformed, topsoiled and seeded.		
9.	Doughboy Hollow Creek culvert	As above. Excavated material has been placed on the embankment directly adjacent to the watercourse.	The excavated material placed on the downslope embankment should be weed treated, reformed, topsoiled and seeded.		
10.	Doughboy Hollow Creek rail culvert	As above. The discharge channel invert downslope from the culvert has been excavated and deepened without scour protection being provided.	The invert of the drainage line should be scour protected with a suitable treatment (i.e. heavy, ungraded blast rock).		
11.	Doughboy Hollow Creek road culvert	As above. We understand the culvert area was desilted in the time since the previous inspection, however, coarse sediment is re-accumulating at the culvert inlet.	In conjunction with the measures indicated above, the culvert area should be desilted, reformed and stabilised.		

Inspection Report – Daracon Group

Report by: Andrew Littlewood – Senior Soil Conservationist & CPESC No. 5988

Signed :



Date: 24 June 2017

Appendix 6 Nesting Box Inspections - Ardglen Quarry

Nesting Box Inspection Ardglen Quarry - Ardglen

Kendall & Kendall Ecological Consultants

November 2017

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Nesting Box Inspection Ardglen Quarry - Ardglen

Prepared for: Daracon

Prepared by: Kendall & Kendall
PO Box 196
WEST KEMPSEY NSW 2440

Tel: (02) 65669280
Email: kendall@midcoast.com.au

November 2017

This short report provides details of the inspection of 27 nesting boxes installed on Lot 187 DP 751028 at the Ardglan Quarry approximately 6km northwest of Murrurundi.

The author of this report is

K. R. Kendall,

Principal Zoologist and Fauna Ecologist,

Kendall & Kendall Ecological Services Pty Ltd,

whose qualification is B.A. (Biological Sciences) Macquarie University

Mr. Murray Kendall assisted in the inspection of the nesting boxes.

A handwritten signature in dark ink, appearing to read 'Keith Kendall', is positioned above the printed name.

Keith Kendall

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1. INTRODUCTION

This short report provides details of the inspection of nesting boxes at Ardglan Quarry on 1st November 2017. The nesting boxes had been installed in April 2012 on Lot 187 DP 751028 an "offset" site identified in the Landscape Management Plan produced as part of the environmental assessment for the extension of quarry activities at the Ardglan Quarry. Ardglan Quarry is approximately 6kms northwest of Murrurundi. It is a requirement of the plan that annual springtime inspections of the nesting boxes are conducted for the life of the quarry.

2. NESTING BOXES INSPECTION

Twenty-seven 27 nest boxes (ie. 9 microbat boxes, 9 Brush-tailed Phascogale boxes and 9 Squirrel Glider boxes) were inspected.

There was no evidence that feral species (including honey-bees) had been using the nesting boxes.

A number of squirrel glider and phascogale boxes contained leaves and/or bark some with a nesting depression indicating use by vertebrate species. It is suspected that the species responsible was the sugar glider as this species has been observed during previous inspections.

The two boxes were removed for repair works in 2016 were replaced after being repaired.

3. RECOMMENDATIONS

No recommendation regarding further action is considered necessary as a result of the inspection.



Keith Kendall

27/11/2017

APPENDIX 1

Box Type	Tree Species	Comment	Easting (GDA)	Northing (GDA)
Phascogale	Box	No evidence of use observed	289197	6486313
Squirrel Glider	Box	Old leaves in box	289143	6486257
Microbat	Box	No evidence of use observed	289138	6486251
Phascogale	Box	Old leaves in box with depression	289166	6486215
Squirrel Glider	Box	Repaired Box reinstalled	289173	6486198
Microbat	Box	No evidence of use observed	289179	6486190
Phascogale	Box	Leaves	289178	6486160
Squirrel Glider	Box	Old leaves in box with depression	289156	6486117
Microbat	Box	No evidence of use observed	289156	6486117
Microbat	Box	Repaired Box reinstalled	289164	6486113
Phascogale	Box	No evidence of use observed	289163	6486074
Squirrel Glider	Box	No evidence of use observed	289033	6486164
Microbat	Box	No evidence of use observed	289030	6486110
Phascogale	Gum	No evidence of use observed	289036	6486160
Squirrel Glider	Box	Ants nest	289020	6486159

Box Type	Tree Species	Comment	Easting (GDA)	Northing (GDA)
Microbat	Box	No evidence of use observed	289020	6486159
Phascogale	Box	Old leaves in box	289053	6486221
Squirrel Glider	Box	Old leaves in box	289053	6486221
Microbat	Box	No evidence of use observed	289096	6486245
Phascogale	Gum	Old leaves in box	289070	6486263
Squirrel Glider	Box	No evidence of use observed	289055	6486254
Microbat	Box	No evidence of use observed	289046	6486284
Phascogale	Box	No evidence of use observed	289030	6486316
Squirrel Glider	Box	Leaves and bark in box	289034	6486320
Microbat	Box	No evidence of use observed	289064	6486322
Phascogale	Box	Old leaves in box	289100	6486328
Squirrel Glider	Box	Old leaves in box	289089	6486322