



ANNUAL ENVIRONMENTAL MANAGEMENT REPORT (AEMR)

2019



Reporting period - 1st January to 31st December 2019

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1. INTRODUCTION

1.1 Scope

This report has been prepared by Daracon Quarries in accordance with the Project Approvals section 7.1 "Annual Report Requirements of Buttai Quarry Management Plan" to record the activities and environmental monitoring undertaken within and surrounding Buttai Quarry during the period 1st January 2019 to 31st December 2019.

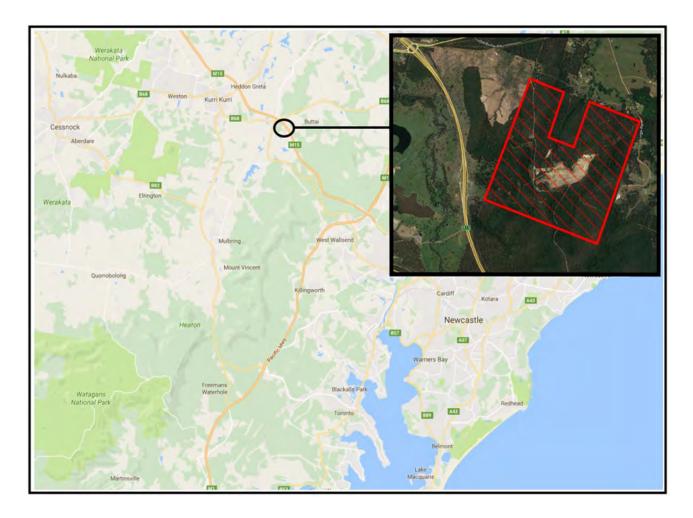


Figure 1: Quarry Location

This document provides an overview of activities and environmental monitoring that occurred within the reporting period and also activities and environmental monitoring planned for 2020. This Annual Environmental Management Report (AEMR) contains the following:

- A description of activities that were carried out in 2019;
- A review of the environmental monitoring results that were obtained during 2019;
- Results of the Environmental Inspections (Rubicon formerly TREES and internal) completed during 2019;
- A description of potential measures that may be implemented throughout 2020 to improve the environmental performance of the Quarry;

1.2 Standards and Performance Measures

The owner and operator of Buttai Quarry, Daracon Quarries (Trading as Buttai Gravel Pty Ltd) is required to operate the Quarry site in accordance with conditions of consent and licences listed in **Table 1.**



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Table 1: Buttai Quarry - Consents and Licences

Approval/Licence	Issue Date			
Project Approval 10286	1997			
Modification of Approval	2008			
Modification of Approval	2008			
Modification of Approval	2010			
Modification of Approval	2015			
Environment Protection Licence No.12829				

Relevant conditions with Project Approval 10286 (1997) and associated modifications which nominate specific environmental criteria are as follows providing complete records of all measurements.

- Project Approval 10286 (1997) Schedule 7 Condition 1 & 2: Operating Hours, Blasting
- Project Approval 10286 (1997) Schedule 17: Noise
- Project Approval 10286 (1997) Schedule 29: Air Quality
- Project Approval 10286 (1997) Schedule 35: Water Quality
- Project Approval 10286 (1997) Schedule 39: Blasting
- Project Approval 10286 (1997) Schedule 43: Rehabilitation
- Project Approval 10286 (1997) Schedule 65: Waste and Effluent

In addition to the specific environmental criteria, the following conditions within Project Approval 10286 specifically request further information be included in each AEMR.

Section 6.12.2 of Buttai Quarry Management Plan: Product Transport

1.3 Site Management And Responsibilities

Mr Paul Walker continues to undertake the role of Quarry Manager. Mr Daniel Smith has been nominated by Paul to oversee the management of Buttai Quarry with Mr Geoff Reeves continuing as the Quarry Supervisor. Site safety, environmental and quality processes are managed by Mr Luke Robinson (Systems Manager). Other companies involved with quarry related documentation and monitoring include:

- VGT Environmental Compliance Solutions;
- Spectrum Acoustics;
- Rubicon Enviro Pty Ltd (external environmental consultant) Formerly TREES;

1.4 Document Preparation

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

 Buttai Quarry Environmental Monitoring Folders (this document was prepared by Mr Luke Robinson and Mr Daniel Smith).

2. OPERATIONS DURING THE REPORTING PERIOD

2.1 Introduction

During 2019, the Quarry was in an operational phase. **Table 2** lists the activities that occurred at Buttai Quarry during 2019.

Table 2: Summary of operations during the reporting period

January 2019	Production and sale of various road base and construction materials;		
February 2019	Production and sale of various road base and construction materials; Noise Monitoring;		
March 2019	Production and sale of various road base and construction materials;		
April 2019	Production and sale of various road base and construction materials; April 2019 Buttai Quarry CCC meeting; Daracon site environmental audit and report;		
May 2019	Production and sale of various road base and construction materials; Noise Monitoring;		



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June 2019	Production and sale of various road base and construction materials;
July 2019	Production and sale of various road base and construction materials; Rubicon environmental inspection and report;
August 2019	Production and sale of various road base and construction materials; Noise Monitoring; Local resident enquiry / complaint received regarding cracking to concrete pool:
September 2019	Production and sale of various road base and construction materials; Daracon site environmental audit and report;
October 2019	Production and sale of various road base and construction materials;
November 2019	Production and sale of various road base and construction materials; Noise Monitoring; Buttai Quarry CCC meeting and site visit;
December 2019	Production and sale of various road base and construction materials; Daracon site environmental audit and report;

2.2 Extraction And Clearing Operations

During 2019 there was a total of 188,478 tonnes of material sold to internal and external clients for construction purposes.

The quarry footprint and extent of clearing remains unchanged from 2018.

Table 3 presents the monthly sales from Buttai Quarry during 2019 reporting period.

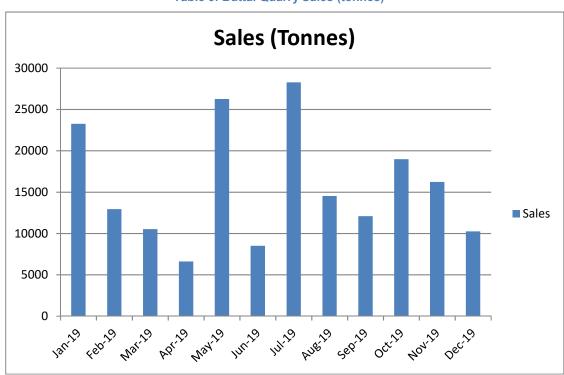


Table 3: Buttai Quarry Sales (tonnes)



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2.3 Processing Operations

Processing of material occurs in two stages at Buttai Quarry;

Stage 1 - Drilling and Blasting

Drilling and blasting are two critical aspects of the quarrying process. Daracon has engaged a subcontractor who is specifically trained in this area to complete these tasks appropriately. The subcontract explosive experts drill holes into the rock, place explosives and stemming material inside, install and operate the blast monitors and then detonate the shot to provide the smallest release of energy necessary to achieve the desired result.

Stage 2 – Material Processing and Stockpiling

The material generated from the drill and blast process is then processed through a crushing plant. The specialised quarry equipment used to crush the materials will depend on the size of the rock being crushed and the final product required (size, shape and various other properties). The crushed material is then separated by the use of screens and stored in product stockpiles, such as road base, fill or specific client materials.

2.4 Overburden and Soil Management

Overburden material is stockpiled at the top section of the quarry and may be sold for various purposes within the civil construction industry as required. Soil and water is managed as per Daracon environmental management plans and procedures. Please refer to Section 2.7 Water Management.

2.5 Waste Management

The following non-production wastes were produced at the Quarry during the reporting period:

- General Waste The site contains an onsite waste bin which is serviced regularly by Cleanaway;
- Scrap Steel The site contains a scrap steel bin which is sent to a licensed recycling facility;
- Recyclables The site recycles and / reuses materials where practical;
- Waste Oil, Oil Filters and Grease All grease and filters are removed from site by service fitters and taken to licensed collection points;
- Batteries Batteries are removed by field service fitters who take batteries to licensed collection point;

2.6 Site Infrastructure And Services

No changes were made to the site office and lunch room facilities during the reporting period. An additional security camera was also added to site near the front gate later in the year.

2.7 Water Management

The site water is managed by utilising the various Daracon site procedures. The quarry currently has 5 dams to manage water runoff off during rain events. The water collected in these dams is then re-used for dust control (via a site watercart) or for production purposes.

2.8 Bushfire Management

Lantana removal and weed eradication from the quarry site occurred intermittently on a campaign basis during the reporting period. In consultation with the local Rural Fire Service (RFS), a controlled hazard reduction burn was originally planned for 2019 however, unfavourable weather conditions meant that it could not occur. It is currently planned to occur sometime during 2020.

Additionally, a substantial amount of fire trail maintenance occurred during the reporting period along boundary lines (utilising a dozer) whilst an additional gate was also installed at the top of the quarry site to assist with RFS access to the surrounding bushland. An image showing the new gate and access way is shown in Appendix 5. The quarry supervisor continues to liaise with the local RFS representatives regarding potential bushfire mitigation and general access matters for the quarry and surrounding areas.

2.9 Hazardous Materials Management

Hazardous materials within the Quarry site are appropriately managed with diesel fuel, oil and greases stored in above ground storage containers with appropriate bunding. Machines are filled up daily via a fuel cart which minimises the quantity of fuel stored on site.



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

2.10 Product Transportation

During this reporting period the Quarry was operational and materials were exported exclusively by road transport.

Table 4: Buttai Quarry Truck movements per day

2.11 Rehabilitation

Daracon continued to inspect and maintain the rehabilitation work completed on benches 2 and 3 as well as the additional areas surrounding the site. Despite the exceptionally dry conditions experienced during the majority of 2019 including significant restrictions to water in the latter stages of the year, the rehabilitation work is progressing as well as can be expected as shown in the various inspections, reports and images attached.

A rehabilitation report was prepared by Umwelt which is included in Appendix 4 of this document. Additionally, the following information is provided as an update against the approved "Rehabilitation Plan":

- Rehabilitation is ongoing to the exposed benches along the quarry face of Lots 75 and 76. This is being regularly inspected and maintained appropriately;
- Blasting of the various quarry finished faces are being shaped in accordance with the "Rehabilitation Plan";
- The majority of the quarry floor located within in Lots 75 and 76 are still used for operational purposes and have not been rehabilitated as yet;
- Rehabilitation of the eastern section of lot 76 is ongoing and progressing satisfactorily;
- Rehabilitation of the western section of lot 76 is ongoing and progressing satisfactorily;
- The various rehabilitation areas will be inspected and reported regularly;
- Ongoing maintenance will occur as required to selectively replace vegetation that may not have survived the drought;



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3. COMMUNITY RELATIONS

3.1 Surrounding Communities

Table 5 indicates the residences surrounding the quarry.

Table 5: Adjacent residences

Adjacent Residences

45 Old Buttai Road, Buttai NSW 2323
191 Lings Road, Buttai, NSW 2323
212 Lings Road, Buttai, NSW 2323
160 Lings Road, Buttai, NSW 2323
268 Lings Road, Buttai, NSW 2323
269 Lings Road, Buttai, NSW 2323
Buttai Creek, Buttai, NSW 2323
281 Lings Road, Buttai, NSW 2323
251 Browns Road, Black Hill, NSW 2323
255 Browns Road, Black Hill, NSW 2323
25 Old Buttai Road, Buttai, NSW 2323

3.2 Community Consultative Committee Meetings

The Community Consultative Committee (CCC) held its bi-annual meetings on the 18th April 2019 and the 14th November 2019 (which also included a quarry site visit). The meeting minutes are attached in Appendix 2.

3.3 Environmental Complaints

There was one enquiry / complaint received during the 2019 annual reporting period. The enquiry / complaint was received from a local resident regarding the presence of cracking in their pool and the potential that blasting activities associated with the quarry operations may have contributed to this. In order to resolve this matter, Daracon representatives met with the local resident at the premises and formally offered to engage a structural engineer to inspect and report on the pool damage whilst also considering the potential influence of blasting. Following many attempts to further engage with the complainant, no further instruction or correspondence has been received regarding this matter.

3.4 Community Involvement

The proposed Buttai Resource Recovery Facility (Recycling) was discussed at length during 2019 and is currently ongoing with Umwelt continuing to work on the response to the various submissions received during the exhibition period. Additionally, during the site visit in November 2019, the community members inspected the progress of the recent additional planting along bench 3 as well as discussing the ongoing logistics associated with transport and truck movements from the site.

4. ENVIRONMENTAL MONITORING

4.1 Water Quality

4.1.1 Introduction

Buttai Quarry operates under an approved Site Water Management Plan. The purpose of this plan is to ensure that Buttai Quarry does not pollute any waters, in accordance with Environmental Protection Licence No. 12829.

4.1.2 Conclusion

During the reporting period, no water was discharged from site.

4.2 Noise and Blasting

4.2.1 Introduction

Buttai Quarry operates under approved Noise Monitoring and Blast Monitoring programs. These programs outline the measures which mitigate the environmental effects of noise and blasting on our nearest neighbours. It proposes noise monitoring programs to assess



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and report the levels of likely impact so as to comply with the Project Approval. It also provides a mechanism whereby any noise or blasting complaints can be managed effectively.

4.2.2 Blast Criteria

Table 6 shows the blasting criteria to be met.

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%

4.2.3 Blast Monitoring Locations

The Blast Monitoring program requires monitoring to take place at specified locations as shown in **Figure 2**.



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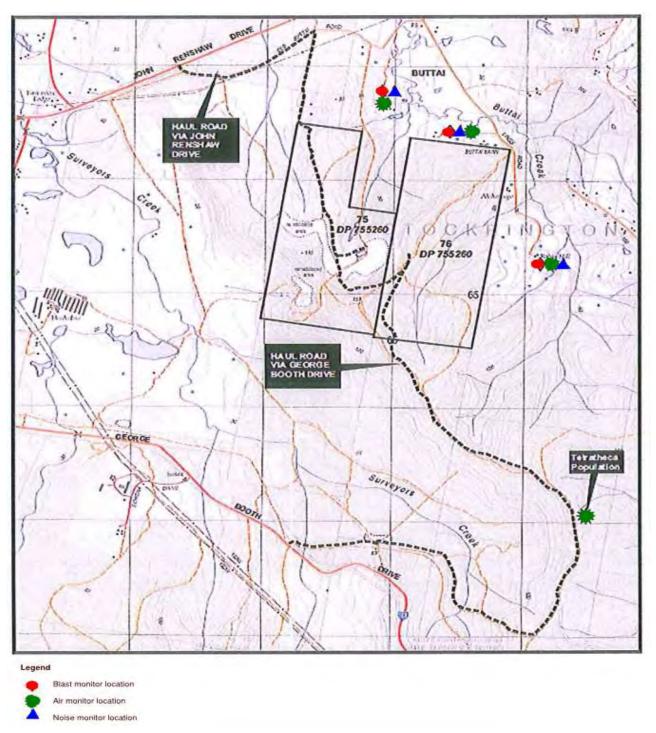


Figure 2: Blast Monitoring Locations

4.2.4 Blasting Monitoring Results

During the reporting period there were a total of 7 blasts undertaken at Buttai Quarry. The monitoring results are shown below in Table 7.

4.2.5 Analysis of Blast Results

The blast results in **table 7** indicate that all blast monitoring results are below the specified criteria as described in section 4.2.2.



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Table 7: Blast Monitoring Results

			Norma Brookes		Ling	Lings Rd		Buttai Barn	
Date	Time	Blast	PPV mm/s	O/pressure	PPV	PPV O/pressure		O/pressure	
		No.		dBL	mm/s	dBL	mm/s	dBL	
14/01/2019	13.15	P_081	0.51	111.7	0.71	108	0.67	101.4	
16/05/2019	12.51	P_082	0.5	107.8	0.66	105.3	No trigger	No trigger	
13/06/2019	12.38	P_083	No trigger	No trigger	No trigger	No trigger	No trigger	No trigger	
10/07/2019	12.48	P_084	0.69	105.7	1.03	109.6	No trigger	No trigger	
21/08/2019	12.37	P_085	0.54	102.3	0.83	109.8	0.67	95.75	
3/10/2019	12:03	P_086	0.58	111	1.02	108.6	0.69	104.9	
5/12/2019	13:17	P_087	No trigger	No trigger	No trigger	No trigger	No trigger	No trigger	

4.2.6 Noise Criteria

To meet the relevant noise criteria applicable to quarry operations as detailed in conditions of consent (under neutral conditions when measures within a radius of 30 metres);

- LA 10 (15 minute) of 38 dBA (Daytime)
- LA 10 (15 minute) of 32 dBA (Night time)
- Laeq (1 hour) 50 dBA noise of traffic associated with the guarry operations

The Noise Monitoring Program calls for quarterly attended noise monitoring to take place at specified noise monitoring locations as shown in **Figure 3**.

4.2.7 Noise Monitoring Locations

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

Location 1: Brooks, 45 Old Buttai Road

Location 2: Maddison (Buttai Barn), 160 Lings Road

Location 3: Bishop, 281 Lings Road



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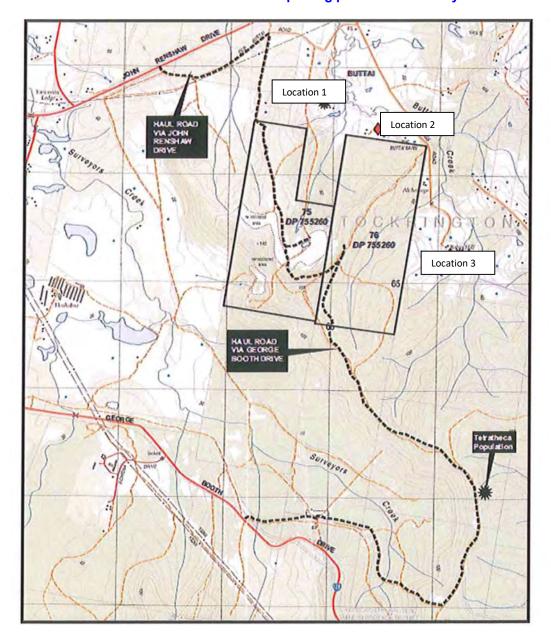


Figure 3: Noise Monitoring Locations

4.2.8 Noise Monitoring Results

During the reporting period there were a total of 4 noise monitoring assessments undertaken at Buttai Quarry. The results are shown below in **table 8**.

4.2.9 Analysis of Noise Results

The noise results in **table 8** indicate that all noise monitoring results are below the specified criteria as described in section 4.2.6.



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Table 8: Buttai Quarry Noise Monitoring

Buttai Quarry (BQ) Noise Monitoring

	Location	Time	dB(A))	Wind Speed and Direction	Identified Noise Sources
	1	12:20 pm	48	2.5 m/s S	Traffic (48), birds (39), BQ inaudible (<20)
25-Feb- 19	2	12:42 pm	44	2.5 m/s SE	Birds (44), traffic (28), BQ inaudible (<20)
	3	1:05 pm	37	2.5 m/s SE	Birds (37), traffic (28), BQ inaudible (<20)
	1	2:55 pm	41	2 m/s NE	Birds & insects (40), traffic (35), BQ inaudible (<20)
06- May-19	2	3:18 pm	50	2 m/s NE	Birds & insects (50), traffic (32), BQ inaudible (<20)
	3	3:40 pm	41	2.5 m/s NE	Birds (40), BQ (28) , plane (26)
	1	10:30 am	38	1 m/s S	Birds (35), traffic (35), BQ inaudible (<20)
26- Aug-19	2	10:25 am	38	1 m/s S	Birds (38), traffic (28), BQ inaudible (<20)
	3	10:45 am	42	1 m/s S	Birds (42), BQ inaudible (<20)
	1	10:30 am	40	1.5 m/s NW	Birds & insects (38), traffic (36), BQ (25)
04-Nov- 19	2	10:51 am	39	1.5 m/s NE	Birds & insects (36), traffic (36), BQ inaudible (<20)
19	3	11:15 am	40	2.0 m/s NE	Birds & insects (40), traffic (28), BQ inaudible (<20)

4.3 Air Quality

4.3.1 Introduction

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

4.3.2 Air Quality Monitoring Locations and Frequency

The current air quality monitoring network consists of five dust deposition gauges, (see **Figure 4**.).

The location of the air quality monitoring equipment (primarily to the North-East and East of the Quarry) was chosen due to the location of the adjacent private residences.



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Figure 4: Air Quality Monitoring

4.3.3 Air Quality Criteria

The air quality criteria for the quarry is provided in the below table.

Table 9: Air Quality Criteria

Parameter	Frequency	Locations	Limit/Guideline	Sampling Method
Deposited dust	Monthly.	DG-1 located at Tetratheca DG-2 located at Norma DG-3 located at Buttai Barn DG-4 located at Bishop DG-5 located at Buttai Barn #2	Deposition Rate* Maximum total deposited dust level: 4 g/m².month. (Annual Average)	AM-19 AS3580.10.1 – 2003
Visible air pollution	Weekly. In response to any visible emissions complaint.	Weekly site inspection. At the location of any reported emission.	Daracon 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	No required sampling methodology. Actions required if visual impact is suspected or confirmed is located in the quarry management plan.



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4.3.4 Air Quality Monitoring Results

The following information presents the results and a breakdown of the deposited dust monitoring program.

Table 10: Depositional Dust Gauge Results

		D1 - Tetratheca	D2 - Norma	D3 - Buttai Barn	D4 - Bishop	D5 - Buttai Barn #2
20/12/18	Insoluble Solids	1	2.2	2.5	1.2	1.1
to	Ash*	0.8	1.9	1.8	0.6	0.7
17/1/19	Combustible Matter**	0.2	0.3	0.7	0.6	0.4
17/1/19	Insoluble Solids	0.8	1.6	1.5	0.4	0.6
to	Ash*	0.3	1	1.2	0.4	0.4
14/2/19	Combustible Matter**	0.5	0.6	0.3	0	0.2
14/2/19	Insoluble Solids	1.6	2.3	8.1	1.6	4.9
to	Ash*	1.3	1.8	6.7	1.2	3.6
14/3/19	Combustible Matter**	0.3	0.5	1.4	0.4	1.3
14/3/19	Insoluble Solids	0.4	1.1	23.8	2.9	6.3
to	Ash*	0.2	0.7	18.5	0.6	4.1
11/4/19	Combustible Matter**	0.2	0.4	5.3	2.3	2.2
11/04/19	Insoluble Solids	0.5	1.3	6.4	3.6	1.3
to	Ash*	0.4	1.1	3.3	2.2	0.8
09/05/19	Combustible Matter**	0.1	0.2	3.1	1.4	0.5
09/05/19	Insoluble Solids	0.7	1.8	2.2	1.1	3
to	Ash*	0.4	1.3	1.5	0.8	1
06/06/19	Combustible Matter**	0.3	0.5	0.7	0.3	2
06/06/19	Insoluble Solids	0.3	1.3	4.8	0.6	0.4
to	Ash*	0.1	1	3.5	0.2	0.2
04/07/19	Combustible Matter**	0.2	0.3	1.3	0.4	0.2
04/07/19	Insoluble Solids	0.5	1	2.1	0.5	1.1
to	Ash*	0.4	0.7	1.5	0.4	0.6
02/08/19	Combustible Matter**	0.1	0.3	0.6	0.1	0.5
02/08/19	Insoluble Solids	0.8	1.5	1.2	0.8	0.4
to	Ash*	0.5	1	0.6	0.5	0.3
30/08/19	Combustible Matter**	0.3	0.5	0.6	0.3	0.1
30/08/19	Insoluble Solids	0.6	1.5	1.9	1.5	5.8
to	Ash*	0.3	8.0	1.4	0.7	4.2
27/09/19	Combustible Matter**	0.3	0.7	0.5	0.8	1.6
27/09/19	Insoluble Solids	0.7	3.3	3.4	0.9	3.2
to	Ash*	0.4	0.4	2.1	0.5	2.7
25/10/19	Combustible Matter**	0.3	0.9	1.3	0.4	0.5
25/10/19	Insoluble Solids	1.2	1.3	6.4	1.8	0.6
to	Ash*	0.7	1	3.9	0.9	0.5
22/11/19	Combustible Matter**	0.5	0.3	2.5	0.9	0.1
22/11/19	Insoluble Solids	3	2.9	4.7	3	2.1
to	Ash*	2	0.3	2.4	2.4	1.5
20/12/19	Combustible Matter**	1	0.6	2.3	0.6	0.6

Definition

Insoluble solids - this is the matter that does not dissolve in water and is the total of Ash and Combustible matter in the gauge.

Ash* - this is the matter that remains after the sample has been combusted in the laboratory.



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Combustible Matter** - This is the matter that has been combusted in the laboratory. It is the difference between the total insoluble solids and ash content.

Table 11: Summary of Depositional Dust Gauge Results

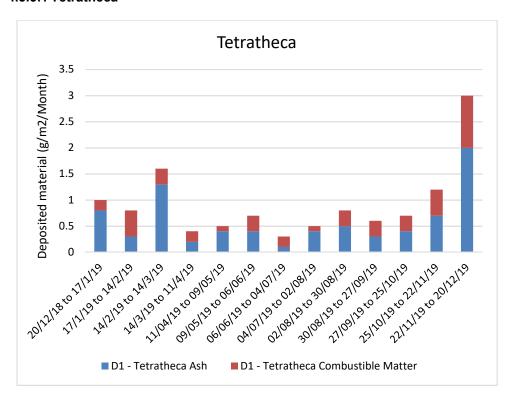
	D1 - Tetratheca	D2 - Norma	D3 - Buttai Barn	D4 - Bishop	D5 - Buttai Barn #2
20/12/18 to 17/1/19	1.0	2.2	2.5	1.2	1.1
17/1/19 to 14/2/19	0.8	1.6	1.5	0.4	0.6
14/2/19 to 14/3/19	1.6	2.3	8.1	1.6	4.9
14/3/19 to 11/4/19	0.4	1.1	23.8	2.8	6.3
11/04/19 to 09/05/19	0.5	1.3	6.4	3.6	1.3
09/05/19 to 06/06/19	0.7	1.8	2.2	1.1	3
06/06/19 to 04/07/19	0.3	1.3	4.8	0.6	0.4
04/07/19 to 02/08/19	0.5	1	2.1	0.5	1.1
02/08/19 to 30/08/19	0.8	1.5	1.2	0.8	0.4
30/08/19 to 27/09/19	0.6	1.5	1.9	1.5	5.8
27/09/19 to 25/10/19	0.7	3.3	3.4	0.9	3.2
25/10/19 to 22/11/19	1.2	1.3	6.4	1.8	0.6
22/11/19 to 20/12/19	3	2.9	4.7	3	2.1
Average	0.9	1.8	5.3	1.5	2.4



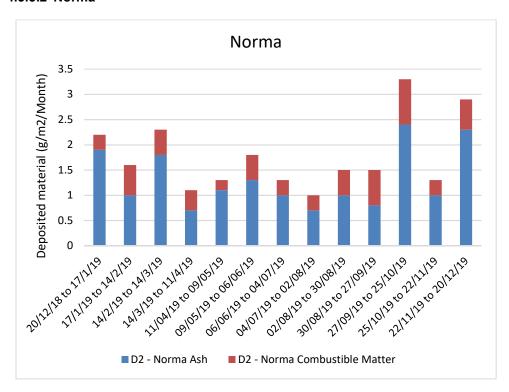
Reporting period - 1st January to 31st December 2019

4.3.5 Depositional Dust Gauge Graphs

4.3.5.1 Tetratheca



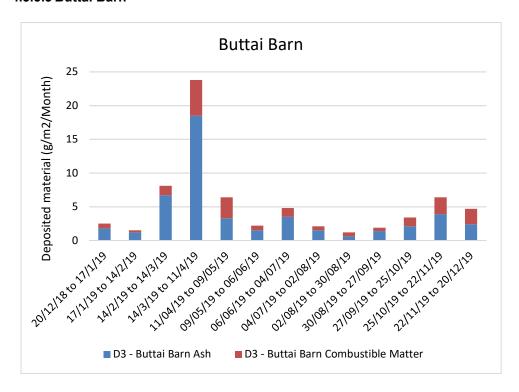
4.3.5.2 Norma



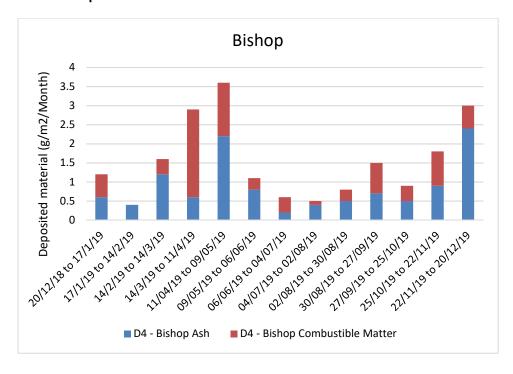


Reporting period - 1st January to 31st December 2019

4.3.5.3 Buttai Barn



4.3.5.4 Bishop

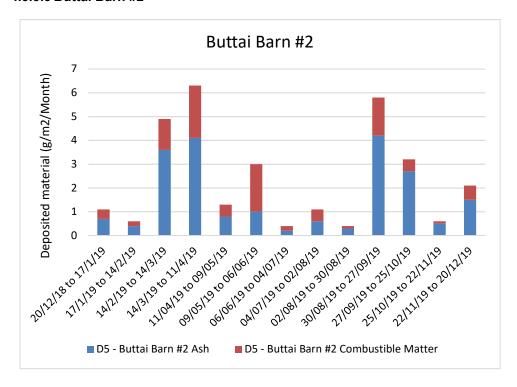




Povision No: 01

Reporting period - 1st January to 31st December 2019

4.3.5.5 Buttai Barn #2



4.3.6 Air Quality Discussion

As shown in the tables and graphs above, all of the Dust Deposition Gauge (DDG) monitoring results except for Buttai Barn were well below the 4g/m²/month (based on the annual average) threshold.

As shown in Table 10, we received a number of elevated DDG results at "Buttai Barn". It is therefore worth noting again that following various high results received at "Buttai Barn" during 2015, a second dust gauge at Buttai Barn ("Buttai Barn #2") was installed in August 2015. We've continued to monitor both "Buttai Barn" and "Buttai Barn #2" continuously since that time.

For the elevated DDG results obtained at "Buttai Barn", we've compared them to the results obtained at "Buttai Barn #2" and note that there are a number of instances where both "Buttai Barn" and "Buttai Barn #2" coincided with elevated DDG results. We therefore undertook a more detailed investigation into the likely cause of the elevated DDG results and discovered the following information:

- Substantial evidence of ground disturbance activities occurring adjacent to Buttai Barn #2 DDG (non-quarry related);
- It appears that the land owner had undertaken some additional vegetation removal / earthworks for reasons only known to them;
- Ongoing drought conditions have inevitably contributed to elevated regional DDG results;
- For the period January 2019 to December 2019, the quarry was abnormally quiet from a production and sales perspective;

Once again, we'll continue to report all DDG results (including the elevated results obtained at "Buttai Barn" etc), with additional investigations completed for ongoing or unexpected outcomes.



Pavision No. 01

Reporting period - 1st January to 31st December 2019

5. COMPLIANCE ASSESSMENT

5.1 Environmental Protection Licence

Daracon hold Environmental protection Licence 12829 for a 'land based' extractive industry. The licence has an anniversary date of 29th June. The annual return covering the reporting period identified no non-compliances with the conditions of the licence.

5.2 Environmental Inspections

Daracon continued to utilise the previous TREES soils conservation representative (Andrew Littlewood) who now operates under the banner of Rubicon Enviro Pty Ltd to undertake an inspection of the quarry annually. Daracon also undertakes regular internal environmental audits of the site. The various reports are attached in Appendix 1 of this document.

All minor deficiencies identified as part of the various inspections were promptly rectified or are ongoing.

5.3 Department of Industry – Resource Regulator

Daracon had two inspections by the Resource Regulator during the reporting period with no significant issues identified.

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 2020 reporting period. **Table 12** provides a summary of the proposed quarry activities.

Table 12: Proposed Activities for 2020

Table 12. Proposed Activities for 2020		
January - December 2020	Ongoing review of various Management Plans	
	Noise Monitoring	
	Blast Monitoring	
	Regular site Inspections	
	Continuation of Dust Monitoring	
	 Continuation of quarrying operations 	
	 Recycling facility proposal process ongoing 	
	Ongoing CCC involvement	

6.2 Extraction Operations

Extraction will continue to take place during the subsequent reporting period.

6.3 Processing

At this stage, it is envisaged that the Quarry processing operations will remain the same for the 2020 period.

6.4 Overburden And Silt Management

Current controls for overburden and soil management to remain in place and monitored.

6.5 Waste Management

Current controls for waste management to remain in place and monitored.

6.6 Site Infrastructure And Services

No changes are proposed to be made to the existing site infrastructure and services.



Reporting period - 1st January to 31st December 2019

6.7 Water Management

It is expected that no changes will be made and the current water management practices will remain in place and continued to be monitored.

6.8 Bushfire Management

Bush fire management practices will remain in place and continually monitored.

6.9 Hazardous Materials Management

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

6.10 Product Transportation

It is expected that no changes will be made to product transportation.

6.11 Rehabilitation

The quarry will continue to rehabilitate the finished benches and maintain the bench planting as outlined in the rehabilitation report. Further lantana removal and weed eradication will take place during 2020.

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



Reporting period - 1st January to 31st December 2019

8. APPENDICES

Appendix 1 Environmental Inspection Reports

MONTHLY SITE CONDITION CHECKLIST

Date of Inspection: Fricky 25-1-19	1	
Inspected by: Geoff Reeves	Yes/No	Comments/Action
SEDIMENT CONTROLS		
Sediment fences installed and maintained	√Yes ☐ No	
Site checked for erosion	Yes No	
Stockpiles located and maintained correctly	Yes No	
Tree clearance restricted to required area	☑Yes ☐ No	
WATER QUALITY AND QUANTITY		
Drainage and sediment controls in place and in good order (including water storages, pumps and pipes)	▼Yes□ No	
Fuel or oil spills reported and cleaned up.	☐ Yes ☐ No	No spills
Fuels / chemicals stored in bunded areas	Yes ☐ No	<u> </u>
AIR QUALITY		
Continuous dust deposition monitoring (collected for analysis every 28 days) undertaken	Yes No	,
On site dust suppression undertaken as required	✓ Yes ☐ No	
All loads covered entering and leaving site	☑ Yes ☐ No	
Vegetation burnt on site	☐ Yes 🗹 No	
NOISE		
Operating only during hours of operation	Yes 🗌 No	
Have there been any noise complaints received from nearby residences	☐ Yes 🗹 No	
Noise monitoring of new plant and equipment (initially and then every 12 months)	Yes No No No No No No No No No N	
Ambient noise monitoring at nearby residences (frequency: 12 monthly)	☑ Yes ☐ No	
BLAST MANAGEMENT		
Blast Notification Checklist completed for each blast undertaken during the month	Yes 🗌 No	
Blast Record Form completed for each blast undertaken during the month	Yes No	

FLORA AND FAUNA		
Any disturbance outside area of operations	☐ Yes 🗹 No	
Road seal and drainage adjacent to Tetraffiecea juncea population in good order	Yes No	
All buffer areas and buffer boundary markings intact	✓ Yes 🗌 No	
Weed control undertaken (also document presence of weeds on site and effectiveness of control works)	☑ Yes ☐ No	
REHABILITATION	•	
Rehabilitated areas in good condition	Yes 🗌 No	no roun very dry.
WEEDS		
Identify location of weed species sighted during inspection (distribution and occurrence) and effectiveness of weed control undertaken during the month.	☑Yes ☐ No	Weed shraying Top Eastern high wall.
HERITAGE		
Stop work if sites located, consulted with DECC-NPWS?	🗍 Yes 🗌 No	None found
Evidence of inspection for mine portals prior to rehabilitation in Lot 75.	☐ Yes ☐ No	
BUSHFIRE		
Hazard reduction measures have been undertaken	Yes 🗌 No	
WASTE MANAGEMENT		
Any rubbish visible or buried on site	Yes V IVo	
Waste removed by licensed contractors	✓ Yes ☐ No	Clean away.
Fuels / waste oils stored in bunded area	Yes No	
ROADS AND TRANSPORT		
Haul roads and associated drainage in good condition	▼Yes ☐ No	
Truck movements not exceeding 60 loads per day (120 truck movements) combined	Yes No	
COMPLAINTS AND INCIDENTS		
Complaints register maintained	☐Yes ☐ No	No complaints
Incident register maintained	Yes No	No complaints

MONTHLY SITE CONDITION CHECKLIST

Date of Inspection: 01-03-2019 Inspected by: Geoff Reeves			
Inspected by: Geoff Reeves			
	Yes/No	Comments/Action	
SEDIMENT CONTROLS			
Sediment fences installed and maintained	Yes No		
Site checked for erosion	V ee □ No		
Stockpiles located and maintained correctly	✓ Yes ☐ No		
Tree clearance restricted to required area	Yes 🗌 No		
WATER QUALITY AND QUANTITY			
Drainage and sediment controls in place and in good order (including water storages, pumps and pipes)	¥Yes □ No		
Fuel or oil spills reported and cleaned up.	☐ Yes ☐ No	No spills	
Fuels / chemicals stored in bunded areas	☑ Yes ☐ No		
AIR QUALITY			
Continuous dust deposition monitoring (collected for analysis every 28 days) undertaken	☑ Yes 🗌 No		
On site dust suppression undertaken as required	☑Yes ☐ No		
All loads covered entering and leaving site	Yes 🗌 No		
Vegetation burnt on site	☐ Yes 🗹 No		
NOISE			
Operating only during hours of operation	✓ Yes 🗌 No		
Have there been any noise complaints received from nearby residences	☐ Yes 🗹 No		
Noise monitoring of new plant and equipment (initially and then every 12 months)	Yes 🗌 No		
Ambient noise monitoring at nearby residences (frequency: 12 monthly)	☑ Yes ☐ No	7-2-19	
BLAST MANAGEMENT			
Blast Notification Checklist completed for each blast undertaken during the month	☑ Yes ☐ No		
Blast Record Form completed for each blast undertaken during the month	☑ Yes □ No		

FLORA AND FAUNA	<u> </u>	
Any disturbance outside area of operations		
	Yes No	
Road seal and drainage adjacent to Tetrainecea juncea population in good order	Yes No	
All buffer areas and buffer boundary markings intact	Yes No	
Weed control undertaken (also document presence of weeds on site and effectiveness of control works)	☑Yes□ No	Dom 2 may
REHABILITATION		
Rehabilitated areas in good condition	Yes No	
WEEDS	······································	
Identify location of weed species sighted during inspection (distribution and occurrence) and effectiveness of weed control undertaken during the month.	∐Yes □ No	Thustle LANTANA
HERITAGE		
Stop work if sites located, consulted with DECC-NPWS?	☐ Yes ☐ No	NoneFound
Evidence of inspection for mine portals prior to rehabilitation in Lot 75.	Yes No	
BUSHFIRE		1
Hazard reduction measures have been undertaken	Yes No	
WASTE MANAGEMENT	· · · · · · · · · · · · · · · · · · ·	
Any rubbish visible or buried on site	☐ Yes 🗹 No	
Waste removed by licensed contractors	Yes No	
Fuels / waste oils stored in bunded area	[√Yes ☐ No	
ROADS AND TRANSPORT		
Haul roads and associated drainage in good condition	▼Yes ☐ No	
Truck movements not exceeding 60 loads per day (120 truck movements) combined	ĭ Yes ☐ No	
COMPLAINTS AND INCIDENTS		
Complaints register maintained	☑ Yes ☐ No	No complaints
Incident register maintained		No Tociclosti

MONTHLY SITE CONDITION CHECKLIST

Date of Inspection: 19-03-19		
Inspected by: Geoff Reeves		
	Yes/No	Comments/Action
SEDIMENT CONTROLS		
Sediment fences installed and maintained	☑Yes ☐ No	Repairs done
Site checked for erosion	☑ Yes □ No	
Stockpiles located and maintained correctly	Yes No	
Tree clearance restricted to required area	Yes No	No clearing
WATER QUALITY AND QUANTITY		
Drainage and sediment controls in place and in good order (including water storages, pumps and pipes)	☑ Yes □ No	
Fuel or oil spills reported and cleaned up.	Yes No	No spills
Fuels / chemicals stored in bunded areas	√Yes No	
AIR QUALITY		
Continuous dust deposition monitoring (collected for analysis every 28 days) undertaken	☑Yes ☐ No	
On site dust suppression undertaken as required	Yes No	
All loads covered entering and leaving site	Yes 🗌 No	
Vegetation burnt on site	☐ Yes 🗹 No	No burning
NOISE]
Operating only during hours of operation	✓ Yes ☐ No	
Have there been any noise complaints received from nearby residences	Yes No	
Noise monitoring of new plant and equipment (initially and then every 12 months)	Yes No	
Ambient noise monitoring at nearby residences (frequency: 12 monthly)	☑ Yes ☐ No	
BLAST MANAGEMENT		
Blast Notification Checklist completed for each blast undertaken during the month	Yes No	No blasting
Blast Record Form completed for each blast undertaken during the month	Yes No	No blasting

FLORA AND FAUNA		
Any disturbance outside area of operations		
	Yes 🗹 No	
Road seal and drainage adjacent to Tetrallieces junces population in good order	Yes ∐ No	
All buffer areas and buffer boundary markings intact	V Yes [No	
Weed control undertaken (also document presence of weeds on site and effectiveness of control works)	✓ Yes 🗌 No	
REHABILITATION		
Rehabilitated areas in good condition	Yes No	
WEEDS		
Identify location of weed species sighted during inspection (distribution and occurrence) and effectiveness of weed control undertaken during the month.	I IVITESIINA	
HERITAGE		
Stop work if sites located, consulted with DECC-NPWS?	Yes No	130-5
Evidence of inspection for mine portals prior to rehabilitation in Lot 75.	☐ Yes ☐ No	Nonefound
BUSHPIRE		
Hazard reduction measures have been undertaken	Yes No	
WASTE MANAGEMENT		
Any rubbish visible or buried on site	Yes 1No	
Waste removed by licensed contractors	Yes No	Classic
Fuels / waste oils stored in bunded area	Yes No	Cleanauray.
ROADS AND TRANSPORT		
Haul roads and associated drainage in good condition	Yes 🗌 No	
Truck movements not exceeding 60 loads per day (120 truck movements) combined	Yes No	
COMPLAINTS AND INCIDENTS		
Complaints register maintained	Yes No	No complete to
Incident register maintained	Yes No	No complaints

MONTHLY SITE CONDITION CHECKLIST

Date of Inspection: Mon 29-4-19			
Inspected by: Geoff Resides		Commante / A -lin-	
SEDIMENT CONTROLS	Yes/No	Comments / Action	
		00/2000 0/200	
Sediment fences installed and maintained	Yes No	Rehain done.	
Site checked for erosion	☑Yes ☐ No		
Stockpiles located and maintained correctly	Yes No		
Tree clearance restricted to required area	Ves ☐ No		
WATER QUALITY AND QUANTITY			
Drainage and sediment controls in place and in good order (including water storages, pumps and pipes)	☑ Yes ☐ No		
Fuel or oil spills reported and cleaned up.	Yes No	No spills	
Fuels / chemicals stored in bunded areas	Yes 🗌 No		
AIR QUALITY			
Continuous dust deposition monitoring (collected for analysis every 28 days) undertaken	✓ Yes 🗌 No	VGT	
On site dust suppression undertaken as required	Yes No		
All loads covered entering and leaving site	✓ Yes 🗌 lVo		
Vegetation burnt on site	Yes No	No burning	
NOISE		7	
Operating only during hours of operation	Yes 🗌 No		
Have there been any noise complaints received from nearby residences	☐ Yes ☑ No		
Noise monitoring of new plant and equipment (initially and then every 12 months)	Yes No		
Ambient noise monitoring at nearby residences (frequency: 12 monthly)	Yes No		
BLAST MANAGEMENT			
Blast Notification Checklist completed for each blast undertaken during the month	☐ Yes ☐ Ño	No Hastina	
Blast Record Form completed for each blast undertaken during the month	Yes No	No blasting No blasting	
	40	DARAGUN	

FLORA AND FAUNA		
Any disturbance outside area of operations		
	Yes No	
Road seal and drainage adjacent to Tetraffiecea junces population in good order	Y Yes No	
All buffer areas and buffer boundary markings intact	Y Yes No	
Weed control undertaken (also document presence of weeds on site and effectiveness of control works)	Yes No	
REHABILITATION		
Rehabilitated areas in good condition	✓ Yes ☐ No	
WEEDS		
Identify location of weed species sighted during inspection (distribution and occurrence) and effectiveness of weed control undertaken during the month.		
HERITAGE		
Stop work if sites located, consulted with DECC-NPWS?	☐ Yes ☐ No	None found
Evidence of inspection for mine portals prior to rehabilitation in Lot 75.	☐ Yes ☐ No	TOCINE TOWNED
BUSHFIRE		
Hazard reduction measures have been undertaken	✓ Yes 🗆 No	
WASTE MANAGEMENT		, ,
Any rubbish visible or buried on site	Yes V No	And the second s
Waste removed by licensed contractors	Yes No	Cleanaway.
Fuels / waste oils stored in bunded area	Yes No	CHESTITUTES :
ROADS AND TRANSPORT		
Haul roads and associated drainage in good condition	Yes ☐ No	
Truck movements not exceeding 60 loads per day (120 truck movements) combined	☑Yes ☐ No	
COMPLAINTS AND INCIDENTS	 	
Complaints register maintained	Yes No	
Incident register maintained	Yes No	

MONTHLY SITE CONDITION CHECKLIST

E OF FIRM		•
Date of Inspection: Free 31-5-19	·	
Inspected by: Geoff Reeves	Yes/No	Comments/Action
CYTHY TIME CONTROL C		
SEDIMENT CONTROLS Sediment fences installed and maintained	Yes No	
Site checked for erosion	✓ Yes ☐ No	
Stockpiles located and maintained correctly	✓Yes 🗌 No	
Tree clearance restricted to required area	Yes No	No cloaring dos
WATER QUALITY AND QUANTITY		<u> </u>
Drainage and sediment controls in place and in good order (including water storages, pumps and pipes)	Yes 🗌 No	
Fuel or oil spills reported and cleaned up.	☐ Yes ☐ No	Nospills
Fuels / chemicals stored in bunded areas	Yes No	
AIR QUALITY		
Continuous dust deposition monitoring (collected for analysis every 28 days) undertaken	Ves ☐ No	
On site dust suppression undertaken as required	☑ Yes ☐ No	
All loads covered entering and leaving site	☑ Yes ☐ 1Vo	
Vegetation burnt on site	☐ Yes 🔀 No	
NOISE		
Operating only during hours of operation		
Have there been any noise complaints received from nearby residences	∐ Yes 🖾 No	
Noise monitoring of new plant and equipment (initially and then every 12 months)	✓ Yes 🗌 No	
Ambient noise monitoring at nearby residences (frequency: 12 monthly)	Yes No	
BLAST MANAGEMENT		
Blast Notification Checklist completed for each blast undertaken during the month	✓ Yes ☐ No	
Blast Record Form completed for each blast undertaken during the month	✓ Yes ☐ No	

FLORA AND FAUNA		
Any disturbance outside area of operations	☐ Yes 🛛 No	
Road seal and drainage adjacent to Tetrathecea junces population in good order	Yes No	
All buffer areas and buffer boundary markings intact	☑ Yes ☐ No	
Weed control undertaken (also document presence of weeds on site and effectiveness of control works)	☑ Yes ☐ No	
REHABILITATION		
Rehabilitated areas in good condition	✓ Yes ☐ No	
WEEDS		
Identify location of weed species sighted during inspection (distribution and occurrence) and effectiveness of weed control undertaken during the month.	Yes 🗌 No	
HERITAGE		
Stop work if sites located, consulted with DECC - NPWS?	Yes No	Nonstaund.
Evidence of inspection for mine portals prior to rehabilitation in Lot 75.	☐ Yes ☐ No	
BUSHFIRE		1
Hazard reduction measures have been undertaken	☐ Yes 🔀 No	RES Hove declared
WASTE MANAGEMENT		
Any rubbish visible or buried on site	Yes 🛛 No	
Waste removed by licensed contractors	Yes No	Cleanaway.
Fuels / waste oils stored in bunded area	Yes No	-
ROADS AND TRANSPORT		
Haul roads and associated drainage in good condition	☑ Yes ☐ IVo	
Truck movements not exceeding 60 loads per day (120 truck movements) combined	Yes No	
COMPLAINTS AND INCIDENTS		
Complaints register maintained	☐ Yes ☐ No	No complaints
Incident register maintained	✓ Yes □ No	

MONTHLY SITE CONDITION CHECKLIST

Date of Inspection: Fx 28-06-19		
Inspected by: Geoff Reeves		
	Yes/No	Comments/Action
SEDIMENT CONTROLS		
Sediment fences installed and maintained	✓ Yes 🗌 No	
Site checked for erosion	☑ Yes ☐ No	
Stockpiles located and maintained correctly	Ves □ No	
Tree clearance restricted to required area	y Yes □ No	No clearing done.
WATER QUALITY AND QUANTITY		
Drainage and sediment controls in place and in good order (including water storages, pumps and pipes)	✓ Yes □ No	
Fuel or oil spills reported and cleaned up.	🗌 Yes 📗 No	No spills
Fuels / chemicals stored in bunded areas	✓ Yes 🗌 No	
AIR QUALITY		
Continuous dust deposition monitoring (collected for analysis every 28 days) undertaken	Yes No	
On site dust suppression undertaken as required	Yes No	
All loads covered entering and leaving site	Yes 🗌 No	
Vegetation burnt on site	Yes No	No burning
NOISE		<u> </u>
Operating only during hours of operation	☑Yes ☐ No	
Have there been any noise complaints received from nearby residences	☐ Yes ☑ No	
Noise monitoring of new plant and equipment (initially and then every 12 months)	i Wilvaci i NG	
Ambient noise monitoring at nearby residences (frequency: 12 monthly)	☑ Yes ☐ No	
BLAST MANAGEMENT		
Blast Notification Checklist completed for each blast undertaken during the month	☑Yes ☐ No	
Blast Record Form completed for each blast undertaken during the month	☑ Yes ☐ No	

FLORA AND FAUNA		
Any disturbance outside area of operations		
	Yes No	
Road seal and drainage adjacent to Tetrathecea juncea population in good order	Z Yes No	
All buffer areas and buffer boundary markings intact	Yes No	
Weed control undertaken (also document presence of weeds on site and effectiveness of control works)	Yes No	
REHABILITATION		
Rehabilitated areas in good condition	✓ Yes ☐ No	4,000
WEEDS		
Identify location of weed species sighted during inspection (distribution and occurrence) and effectiveness of weed control undertaken during the month.		
HERITAGE		
Stop work if sites located, consulted with DECC - NPWS?	☐ Yes ☐ No	workfound.
Evidence of inspection for mine portals prior to rehabilitation in Lot 75.	☐ Yes ☐ No	Least Madilla :
BUSHFIRE		
Hazard reduction measures have been undertaken	☐ Yes ☑ No	
WASTE MANAGEMENT		
Any rubbish visible or buried on site	Yes No	
Waste removed by licensed contractors	✓ Yes ☐ No	Classaciani
Fuels / waste ails stored in bunded area	Yes No	Cleanaway
ROADS AND TRANSPORT		
Haul roads and associated drainage in good condition	[Yes [No	
Truck movements not exceeding 60 loads per day (120 truck movements) combined	✓ Yes 🗌 No	
COMPLAINTS AND INCIDENTS		
Complaints register maintained	Yes No	
Incident register maintained	Yes No	No Incidents.
		1

BUTTAI QUARRY

MONTHLY SITE CONDITION CHECKLIST

This checklist is to be completed monthly by the Operations Manager, Daracon Quarry. Completed checklists are to be retained and included in the Annual Report to Council.

Date of Inspection: Fricay 27-7-	19	
Inspected by: Geoff Reeves		
	Yes/No	Comments / Action
SEDIMENT CONTROLS		
Sediment fences installed and maintained	✓ Yes ☐ No	
Site checked for erosion	☑ Yes □ No	
Stockpiles located and maintained correctly	✓ Yes 🗌 No	
Tree clearance restricted to required area	V Yes ☐ No	
WATER QUALITY AND QUANTITY		
Drainage and sediment controls in place and in good order (including water storages, pumps and pipes)	✓ Yes ☐ No	
Fuel or oil spills reported and cleaned up.	☐ Yes ☐ No	Nospills
Fuels / chemicals stored in bunded areas	Yes No	
AIR QUALITY		
Continuous dust deposition monitoring (collected for analysis every 28 days) undértaken	☑ Yes ☐ No	
On site dust suppression undertaken as required	✓ Yes ☐ No	
All loads covered entering and leaving site	☑ Yes ☐ No	
Vegetation burnt on site	☐ Yes ☑ No	
NOISE		
Operating only during hours of operation	☑ Yes ☐ No	
Have there been any noise complaints received from nearby residences	☐ Yes 🗹 No	
Noise monitoring of new plant and equipment (initially and then every 12 months)	Yes 🗌 No	
Ambient noise monitoring at nearby residences (frequency: 12 monthly)	Yes 🗌 No	
BLAST MANAGEMENT		
Blast Notification Checklist completed for each blast undertaken during the month	Yes No	
Blast Record Form completed for each blast undertaken during the month	☑ Yes ☐ No	

FLORA AND FAUNA	T	
Any disturbance outside area of operations		
	Yes No	
Road seal and drainage adjacent to Tetrathecea		
juncea population in good order	Yes No	
All buffer areas and buffer boundary		
markings intact	Yes No	
Weed control undertaken (also document		
presence of weeds on site and effectiveness of	☑ Yes ☐ No	
control works)	[
REHABILITATION		
Rehabilitated areas in good condition		
good condition	☑ Yes ☐ No	ł
WEEDS		
Identify location of weed species sighted		
during inspection (distribution and	☑ Yes ☐ No	
occurrence) and effectiveness of weed control		
undertaken during the month.		ļ
HERITAGE		
Stop work if sites located, consulted with		
DECC - NPWS?	🗌 Yes 🗌 No	A . C .
Evidence of inspection for mine portals prior		Nonefound.
to rehabilitation in Lot 75.	🗌 Yes 📗 No	
BUSHFIRE		
Hazard reduction measures have been		
undertaken	Yes 🗌 No	
WASTE MANAGEMENT		*
Any rubbish visible or buried on site		
and amount apprise of purise of purise of sife	Yes No	
Waste removed by licensed contractors		
The state of the s	🗹 Yes 🗌 No	
Fuels / waste oils stored in bunded area		
	Yes 🗌 No	
ROADS AND TRANSPORT		
Haul roads and associated drainage in good		
condition	🗸 Yes 🗌 No	
Truck movements not exceeding 60 loads per		
day (120 truck movements) combined	🗹 Yes 🗌 No	
COMPLAINTS AND INCIDENTS		
Complaints register maintained		
C	🗹 Yes 🗌 No	103-6-1
Incident register maintained		No Incidents
	Yes 🗌 No	No Tourdant
		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -

Buttai quarry Monthly site condition checklist

(Extract from Buttai quarry management plan February 2011)

This checklist is to be campleted monthly by the aperatians manager, Daracon quarry.

Completed checklists are to be retained and included in the annual report to council

Date of inspection: 30-08-19	lr	rspect	ed by: Geoff Reeves
SEDIMENT CONTROLS	Yes	No	Comments/ Action
Sediment fences installed and maintained	/		
Site checked for erosion	~		
Stockpiles located and maintained correctly	/		
Tree clearance restricted to required area			
WATER QUALITY AND QUANTITY	YES	NO	
Drainage and sediment controls in place and in good order. (Including water storages, pumps and pipes.)	~		
Fuel or oil spills reported and cleaned up			Nospills
Fuels\ Chemicals stored in bunded areas	/		•
AIR QUALITY	YES	NO	
Continuous dust deposition monitoring Under taken. (Collected for anaylsis every 28 days.)	/		
On site dust suppression undertaken as required	/		
All loads covered entering and leaving site.	/		
Vegitation burnt on site		/	
NOISE	YES	NO	
Operating only during hours of operation	/		
Have there been any noise complaints received nearby residents?		/	
Noise monitoring of new plant and equipment. (Initially and then every 12 months)	/		
Ambient noise monitoring at nearby residents. (Frequency: 12 monthly)	\/		
BLAST MANAGEMENT	YES	NO	
Blast notification checklist completwed for each blast undertaken during the month.	1		
Blast record form completed for each blast undertaken for the month	/		

FLORA AND FAUNA	Yes	No	Comments/ Action
Any disturbance outside area of operations?		7	
Road seal and drainage adjacent to Tetratheca juncea population in good order	V		
All buffer areas and buffer boundary markings intact	1		
Weed control undertaken. (Also document presence of weeds on site and effectiveness of control works	•/		Deed spraying tehabrown 2- out pramilly
REHABILITATION	YES	NO	. 7
Rehabilitation areas in good condition	√		
Weeds	YES	NO	
Identify location of weed species sighted during inspection and effectiveness of weed control undertaken during the month	/		
HERITAGE	YES	NO	
Stop work if sites located, consult with DECC- NPWS			Nonefound
BUSHFIRE	YES	NO	,
Hazard reduction measures have been undertaken.		/	
WASTE MANAGEMENT	YES	NO	
Any rubbish visable or burried on site.		/	
Waste removed by licenced contractor	\		cleanaway
Fuels\ waste oils stored in bunded area			
ROADS AND TRANSPORT	YES	NO	
Haul roads and associated drainage in good condition	/		
Truck movements not exceeding 60 loads per day. (120 truck movements) combined.	./		
COMPLAINTS AND INCIDENTS	YES	NO	
Complaints register maintained	/	<u> </u>	No complaints
Incident register maintained	/		No Incidents
Oth	ier coi	mmen	ts

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Buttai quarry

Monthly site condition checklist

(Extract from Buttai quarry management plan February 2011)

This checklist is to be completed monthly by the operations manager, Daracon quarry.

Completed checklists are to be retained and included in the annual report to council

Date of inspection: 27-09-19			cted by: Geoff Reeves
SEDIMENT CONTROLS	Yes		Comments/ Action
Sediment fences installed and maintained	1		
Site checked for erosion	/		
Stockpiles located and maintained correctly	1		
Tree clearance restricted to required area	√		
WATER QUALITY AND QUANTITY	YES	NO	
Drainage and sediment controls in place and in good order. (Including water storages, pumps and pipes.)	/		
Fuel or oil spills reported and cleaned up			No spills
Fuels\ Chemicals stored in bunded areas	V		
AIR QUALITY	YES	NO	
Continuous dust deposition monitoring Under taken. (Collected for anaylsis every 28 days.)	✓		
On site dust suppression undertaken as required	/		
All loads covered entering and leaving site.	/		
Vegitation burnt on site		/	
NOISE	YES	NO	
Operating only during hours of operation	/		
Have there been any noise complaints received nearby residents?		\checkmark	
Noise monitoring of new plant and equipment. (Initially and then every 12 months)	/		
Ambient noise monitoring at nearby residents. (Frequency: 12 monthly)	/	,	
	YES	NO	
Blast notification checklist completwed for each	_/		
blast undertaken during the month.	·		

FLORA AND FAUNA	Yes	1	Comments/ Action
Any disturbance outside area of operations?		~	
Road seal and drainage adjacent to Tetratheca juncea population in good order	\ \/		
All buffer areas and buffer boundary markings intac	t /		
Weed control undertaken. (Also document presence of weeds on site and effectiveness of control works	/		Sprayed for Lantona &
REHABILITATION	YES	NO	
Rehabilitation areas in good condition	1	,	
Weeds	YES	NO	
dentify location of weed species sighted during inspectior and effectiveness of weed control undertaken during the month	1		
HERITAGE	YES	NO	
Stop work if sites located, consult with DECC- NPWS			Nonofound
BUSHFIRE	YES	NO	
Hazard reduction measures have been undertaken.	1		Fire trails closured.
WASTE MANAGEMENT	YES	NO	a - 1, and endaged.
Any rubbish visable or burried on site.		√	
Waste removed by licenced contractor	1		
Fuels\ waste oils stored in bunded area	/		
ROADS AND TRANSPORT	YES	NO	
Haul roads and associated drainage in good condition	V		
Truck movements not exceeding 60 loads per day. (120 truck movements) combined.	✓		
COMPLAINTS AND INCIDENTS	YES	NO	
Complaints register maintained	√		Blasting effect complaint
Incident register maintained	1		No Incidents.
Oth	er con	ment	5
Fire secision started early	ري اص	atro	burns out on hold.
Began clearing fire trails	٠,		

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Buttai quarry Monthly site condition checklist

(Extract from Buttai quarry management plan February 2011)

This checklist is to be completed monthly by the operations manager, Daracan quarry.

Completed checklists are to be retained and included in the annual report to council

Date of inspection: 28-10-19		Inspec	ted by: Geoff Reeves
SEDIMENT CONTROLS	Yes	No	Comments/ Action
Sediment fences installed and maintained	/		Some repairs needed
Site checked for erosion			
Stockpiles located and maintained correctly	/		
Tree clearance restricted to required area	1		
WATER QUALITY AND QUANTITY	YES	NO	
Drainage and sediment controls in place and in good order. (Including water storages, pumps and pipes.)	1		
Fuel or oil spills reported and cleaned up			No spills
Fuels\ Chemicals stored in bunded areas	/		
AIR QUALITY	YES	NO	
Continuous dust deposition monitoring Under taken. (Collected for anaylsis every 28 days.)	/		VGT
On site dust suppression undertaken as required	/		
All loads covered entering and leaving site.	/		
Vegitation burnt on site		/	
NOISE	YES	NO	
Operating only during hours of operation	/		
Have there been any noise complaints received nearby residents?		/	
Noise monitoring of new plant and equipment. (Initially and then every 12 months)			
Ambient noise monitoring at nearby residents. (Frequency: 12 monthly)	\checkmark		
BLAST MANAGEMENT	YES	NO	
Blast notification checklist completwed for each blast undertaken during the month.			
Blast record form completed for each blast undertaken for the month	1		

FLORA AND FAUNA	Yes	No	Comments/ Action
Any disturbance outside area of operations?	103	1	Comments/ Action
Road seal and drainage adjacent to Tetratheca	Τ,		
juncea population in good order	V		
All buffer areas and buffer boundary markings intact	/		
Weed control undertaken. (Also document presence of weeds on site and effectiveness of control works	/		
REHABILITATION	YES	NO	
Rehabilitation areas in good condition	1		Trees require more water due to dry cond
Weeds	YES	NO	
Identify location of weed species sighted during inspection and effectiveness of weed control undertaken during the month	/		Documented in herbicide
HERITAGE	YES	NO	
Stop work if sites located, consult with DECC- NPWS			Nonefound
BUSHFIRE	YES	NO	***************************************
Hazard reduction measures have been undertaken.	1		Fire trails cleared
WASTE MANAGEMENT	YES	NO	
Any rubbish visable or burried on site.		/	
Waste removed by licenced contractor	/		Cleanaway
Fuels\ waste oils stored in bunded area	/)
ROADS AND TRANSPORT	YES	NO	
Haul roads and associated drainage in good condition	/		
Truck movements not exceeding 60 loads per day. (120 truck movements) combined.	/		
COMPLAINTS AND INCIDENTS	YES	NO	
Complaints register maintained	/		
Incident register maintained			No incidents
Oth	er con	nment	
Fire trails cleared.			

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Buttai quarry Monthly site condition checklist

(Extract from Buttai quarry management plan February 2011)

This checklist is to be completed monthly by the operations manager, Daracon quarry.

Completed checklists are to be retained and included in the annual report to council

Date of inspection: 29-11-19	İr	rspec	cted by: Geoff Reeves
SEDIMENT CONTROLS	Yes	No	Comments/ Action
Sediment fences installed and maintained			
Site checked for erosion	\checkmark		
Stockpiles located and maintained correctly	✓		
Tree clearance restricted to required area	√		
WATER QUALITY AND QUANTITY	YES	NO	
Drainage and sediment controls in place and in good order. (Including water storages, pumps and pipes.)	~		
Fuel or oil spills reported and cleaned up			Nospills
Fuels\ Chemicals stored in bunded areas	1		
AIR QUALITY	YES	NO	
Continuous dust deposition monitoring Under taken (Collected for anaylsis every 28 days.)	/		VGT
On site dust suppression undertaken as required	/	-	
All loads covered entering and leaving site.	/		
Vegitation burnt on site		/	
NOISE	YES	NO	
Operating only during hours of operation	/		
Have there been any noise complaints received nearby residents?		/	
Noise monitoring of new plant and equipment. (Initially and then every 12 months)	/		
Ambient noise monitoring at nearby residents. (Frequency: 12 monthly)	/		
BLAST MANAGEMENT	YES	NO	0
Blast notification checklist completwed for each blast undertaken during the month.	V		
Blast record form completed for each blast undertaken for the month	/		

Comments/ Action Yes Νo FLORA AND FAUNA Any disturbance outside area of operations? Road seal and drainage adjacent to Tetratheca juncea population in good order All buffer areas and buffer boundary markings intact Weed control undertaken. (Also document presence of weeds on site and effectiveness of control works YES NO REHABILITATION Rehabilitation areas in good condition YES NO Weeds Identify location of weed species sighted during inspection and effectiveness of weed control undertaken during the month NO YES HERITAGE Stop work if sites located, consult with DECC- NPWS YES NO **BUSHFIRE** Hazard reduction measures have been undertaken. YES NO WASTE MANAGEMENT Any rubbish visable or burried on site. Waste removed by licenced contractor Cloananan Fuels\ waste oils stored in bunded area YES NO **ROADS AND TRANSPORT** Haul roads and associated drainage in good condition Truck movements not exceeding 60 loads per day. (120 truck movements) combined. COMPLAINTS AND INCIDENTS YES NO Complaints register maintained Incident register maintained Other comments

Buttai quarry

Monthly site condition checklist (Extract from Buttai quarry management plan February 2011)

This checklist is to be completed monthly by the operations manager, Daracon quarry.

Completed checklists are to be retained and included in the annual report to council

Date of inspection: 20-12-19	····		ted by: Geoff Reeves
SEDIMENT CONTROLS	Yes	Comments/ Action	
Sediment fences installed and maintained	~		
Site checked for erosion	/		
Stockpiles located and maintained correctly	/		
Tree clearance restricted to required area	1		
WATER QUALITY AND QUANTITY	YES	NO	
Drainage and sediment controls in place and in good order. (Including water storages, pumps and pipes.)	/		
Fuel or oil spills reported and cleaned up	•		Nospills
Fuels\ Chemicals stored in bunded areas	/		•
AIR QUALITY	YES	NO	
Continuous dust deposition monitoring Under taken. (Collected for anaylsis every 28 days.)	/		
On site dust suppression undertaken as required	$\sqrt{}$		
All loads covered entering and leaving site.	/		
Vegitation burnt on site		1	
NOISE	YES	NO	
Operating only during hours of operation	V		
Have there been any noise complaints received nearby residents?		1	
Noise monitoring of new plant and equipment. (Initially and then every 12 months)	/		
Ambient noise monitoring at nearby residents. (Frequency: 12 monthly)	1		
BLAST MANAGEMENT	YES	NO	
Blast notification checklist completwed for each blast undertaken during the month.	✓		
Blast record form completed for each blast undertaken for the month	/		

FLORA AND FAUNA	Yes	No	Comments/ Action
Any disturbance outside area of operations?		✓	
Road seal and drainage adjacent to Tetratheca juncea population in good order	/		
All buffer areas and buffer boundary markings intact	/		
Weed control undertaken. (Also document presence of weeds on site and effectiveness of control works	/		
REHABILITATION	YES	NO	
Rehabilitation areas in good condition	/		
Weeds	YES	NO	
Identify location of weed species sighted during inspection and effectiveness of weed control undertaken during the month	/		
HERITAGE	YES	NO	
Stop work if sites located, consult with DECC- NPWS			NA
BUSHFIRE	YES	NO	-
Hazard reduction measures have been undertaken.		1	
WASTE MANAGEMENT	YES	NO	
Any rubbish visable or burried on site.		V	
Waste removed by licenced contractor	√	1	Cleanaway
Fuels\ waste oils stored in bunded area	✓		
ROADS AND TRANSPORT	YES	NO	
Haul roads and associated drainage in good condition	/		
Truck movements not exceeding 60 loads per day. (120 truck movements) combined.	√		
COMPLAINTS AND INCIDENTS	YES	NO	
Complaints register maintained			No complaints
Incident register maintained	√		No complaints
Ot	her co	mmer	nts



ENVIRONMENTAL INSPECTION REPORT

WOF	RKPLACE: Butt	ai Quarry	DATE OF INSPECTION: 11/04/19	WEAT	HER CON	DITIONS	:			OVER	ALL STATUS
LOC	ATION: Buttai		ATTENDEES: Luke Robinson	*	Ö	٩	6	3	100		☐ High
WOF	RKS UNDERTAI	KEN BY:									□Medium
Dara	con ☑ Subc	ontractor 🗆			$\overline{\mathbf{A}}$						☑ Low
Subo	contractor nam	e:		Rain (r	nm): More	e than 10	0mm in th	ne month	prior		
				Other:							
No.	Location (Area / description)		Issue / Comment	Recom	nmended	priority	,	Action		Clo	se out date
1	Buttai Quarry - general overall area			N/A			Nil – At inspecti was no dust ge site – P observa	on, ther evidenc neration ositive	e e of	N/A	



2 Sediment controls along the western boundary of Lot 75 (near main access gate)





Nil - At the time of inspection, all sediment fences were intact and operating effectively – Positive observation.

N/A



3	Bench #3 rehab' work	N/A	Bench #3 rehabilitation planting is progressing reasonably well with some additional planting occurring in April 2019 including a number of mature shrubs. These were planted to the previously identified "bare" areas with the Landscapers and quarry Supervisor to	N/A
			monitor and water as required - Ongoing	



4	Lower Dam (Basin #4)	N/A	Nil – No issues identified at Basin #4. All water management processes are being implemented as required – Positive observation.	N/A
5	Sediment control fences along the main access road	N/A	Nil - The sediment control fences are in good condition and operating effectively – Positive observation.	N/A



Stockpile The sediment fence Low Cheeves on the below the stockpile on the eastern side eastern of the quarry pit "Lot side of the quarry pit "Lot 76" 76" area requires maintenance. area



7	Bund on the upper western edge of the quarry pit "Lot 76" area	N/A	Nil – The revegetation work previously completed in this area is progressing well – Positive observation.	N/A
8	Various Quarry access roads and laydown areas	N/A	Nil - At the time of inspection, the various Quarry access roads and laydown areas had recently been regraded and desilted as required - Positive observation.	N/A



9	Back ramp	N/A	Nil – The sedimentation controls installed at strategic locations along the back ramp have recently been desilted and were operating effectively at the time of inspection – Positive observation.	N/A
10	Adjacent to the main quarry entrance	N/A	Nil – Rock lined drainage channel and sediment controls adjacent to the main access gate are all effective and well maintained - Positive observation.	N/A



11 Panoramic images of the quarry









12 Summary

One minor issue was identified during the inspection:

• The sediment fence below the stockpile on the eastern side of the quarry pit "Lot 76" area requires maintenance.

Please advise when this has been completed and signed off by the quarry supervisor.

Regardless of this minor matter, overall it appears that Buttai Quarry is being well managed from an environmental perspective.





Key

Recommended Priority for Completion of Actions

Immediate To be addressed straight away

High Within 24hrs*

Medium Within 3 working days*
Low Within 5 working days*

N/A No work required

^{*}To be completed sooner if adverse weather conditions are predicated



CLIENT	Daracon Group	REPORT DATE	02 nd August 2019	REPORT NO.	3	REPORT TO:	Luke Robinsor	n, Jason Gorton – Daracon Group	
PROJECT	Buttai Quarry	INSPECTION DATE	26 th July 2019	ATTENDEES:	ATTENDEES: Luke Robinson, Daniel Smith – Daracon Group, Andrew Littlewood – Rubicon Enviro				
WEATHER	Showers, Cool, Light winds	The quarry areas were inspectant and weed suppression issues	_			ge or erosion a	and sediment control. Minor maintenance		
ISSUE NO.	LOCATION	ISS	UE/MATTER	RECOM	1MENE	DATION/COMME	NT	PHOTOGRAPH	
1.	Lower sediment basin and water cart loading area		andpipe and lower control . The controls in the area d and maintained.		Continue to monitor, desilt and repair controls as required.				
2.	Controls downslope from the north-western highwall.				h som ippor ightin	in generally go ne sections req t posts or re- g at the tow. C replace control	uiring re-		
3.	Revegetation on and above Bench 1 of the southern highwall.	l ·	onal dieback of cia species was noted on ed from the quarry floor.	See Point 4					



ISSUE NO.	LOCATION	ISSUE/MATTER	RECOMMENDATION/COMMENT	PHOTOGRAPH
4.	Revegetation on and above Bench 1 of the southern highwall.	As noted above, significant generational dieback of predominantly <i>Acacia</i> species was noted on Bench 1 which has reduced the vegetative canopy. The generational dieback of is common to many short-lived <i>Acacia</i> species.	A closer inspection of the upper benches revealed that there are an abundant number of naturally-sown seedlings and saplings of various <i>Acacia</i> species, together with a variety of other native species.	
5.	Weed control on the rehabilitation areas on upper benches of the southern highwall.	A few minor weed outbreaks were noted along the revegetated benches, including Scotch Thistle, Castor Oil plant and a few isolated Pampas Grass specimens.	As discussed, we recommend this area is scheduled for treatment during the next round of targeted, periodic weed suppression.	
6.	Weed control on the rehabilitation areas on upper benches of the southern highwall.	As above.	As above.	



ISSUE NO.	LOCATION	ISSUE/MATTER	RECOMMENDATION/COMMENT	PHOTOGRAPH
7.	North east control bund	As noted during previous inspections, subsequent to the northward expansion of the quarry main workings, the control bund on the eastern area of clearing was being progressively formed and stabilised	One this inspection we noted the southern section has well-established natives and low weed occurrence. No actions required.	
8.	North east control bund	The northern section of the bund has established ground cover, and native species are emerging in some areas.	As discussed, continue with periodic weed treatment. Some minor spoil stockpiles remain in the area, and following their removal, the areas should be progressively reformed, trimmed and stabilised by revegetation.	
9.	Revegetation on the control bund near the north-western highwall.	As noted on the previous inspection, additional tube stock were planted on the control bund near the north-western highwall. The area was recommended for targeted, periodic weed suppression.	The native plantings in this area are wellestablished with a good canopy cover and surface cover. No actions required.	



ISSUE NO.	LOCATION	ISSUE/MATTER	RECOMMENDATION/COMMENT	PHOTOGRAPH
10.	Revegetation on the control bund near the north-western highwall.	The control bund has recently been extended south along the north-western highwall. The extended bund ensures all runoff is directed to the quarry floor. The area has been topsoiled and recently seeded.	No actions required.	
11.	Control bund near the north-western highwall.	We noted several outbreaks of Inkweed around the southern extent of the newly formed control bund.	As discussed, we recommend this area is scheduled for treatment during the next round of targeted, periodic weed suppression.	
12.	Control bund near the north-western highwall.	One section of the drainage line along the toe of the control bund has an existing 'pinch point' in the drain invert.	We recommend that the placement of a rock check dam (cobble or ballast size), incorporating a central spill weir, in this location, will assist with coarse sediment capture, and is also in an accessible area for maintenance.	



ISSUE NO.	LOCATION	ISSUE/MATTER	RECOMMENDATION/COMMENT	PHOTOGRAPH
13.	Sediment traps on the back ramp.	A series of sediment traps control run-off from the back ramp and generally the controls are well maintained.	As discussed, the traps should continue to be monitored and be desilted and reinstated as required.	
14.	Sediment traps on the main access road.	A series of sediment traps control run-off from the main access road and generally the controls are well maintained.	As discussed, the traps should continue to be monitored and be desilted and reinstated as required.	
15.	Drainage structures on the western boundary at Main Gate.	The rock lined drainage system, sediment sumps and rock diffuser were inspected. The structures remain in good condition and are functioning correctly.	No actions required.	



ISSUE NO.	LOCATION	ISSUE/MATTER	RECOMMENDATION/COMMENT	PHOTOGRAPH
16.	Western boundary	As noted on previous inspections, a series of	The stands of sediment fence were	
	downslope from sealed	sediment fence controls have been	inspected and continue to be in good	
	access road.	established along the western boundary and	condition and are well maintained. No	
		mid-slope below the sealed access road.	issues of erosion or scouring due to	
			increased road run-off was noted.	

Signed: A Conf

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

All items addressed

where required.

Orgoing weed con

works continued



ENVIRONMENTAL INSPECTION REPORT

WOF	WORKPLACE: Buttai Quarry DATE OF INSPECTION: 16/09/19		WEAT	WEATHER CONDITIONS:					OVERALL STATUS		
LOC	ATION: Buttai		ATTENDEES: Luke Robinson Daniel Smith	*	4	٩	660	3	1		☐ High
WOF	RKS UNDERTAI	KEN BY:									□Medium
Dara	ıcon ☑ Subco	ontractor 🗆			$\overline{\mathbf{A}}$						☑ Low
Subo	contractor name	e:		Rain (mm): Nil						
				Other:	:						
No.	Location (Area / description)		Issue / Comment	Recon	nmended	priority		Action		Clo	se out date
1	Buttai Quarry - general access roads and areas			N/A			Nil – At inspect was no dust ge site. Th was als effective observa	ion, the evidend neration e water so opera ely – Po	re ce of n on cart ating	N/A	



2 Sediment controls along the western boundary of Lot 75 (near main access gate)





N/A

Nil - At the time of inspection, all sediment control structures at this location were operating effectively – Positive

observation.

N/A



N/A

3 Bench #3 rehab' work





Nil - Bench #3
rehabilitation
planting is
progressing
reasonably well with
additional mature
shrubs planted in
April 2019. The
quarry Supervisor
continues to monitor

and water as

observation.

required – Positive



4	Bench #2		N/A	Nil – Bench #2	N/A
4	Denon #2		IN/ <i>F</i> 1	rehabilitation	IN/A
				planting is	
				progressing	
				reasonably well.	
				Some of the older	
				shrubs are expiring	
				however there is	
				substantial evidence of regrowth	
		不是是 有他们的人的 是是这种的		appearing despite	
				the current drought	
		《 		conditions – Positive	
				observations.	



5	Back ramp	Low	The majority of the sedimentation controls installed at strategic locations along the back ramp were operating effectively at the time of inspection. There were however one or two that required desilting as shown.	4-10-19 SR

Low



Revision Number: 01 Date Reviewed: 10 August 2015

The lower western edge of the quarry pit "Lot 76" area





The majority of the sedimentation controls installed below the western edge of "Lot 76" were operating effectively at the time of inspection. There was however one small section that required additional maintenance as

shown.

Completed. H-10-19



7	Lower Dam (Basin #4)	N/A	Nil – No issues were identified at Basin #4. All water management processes are being implemented as required – Positive observation.	N/A
8	Sediment control fences along the main access road	N/A	Nil - The sediment control fences at this location are in good condition and operating effectively – Positive observation.	N/A



9 Fire access roads on the eastern side of the quarry pit "Lot 76" area





N/A

Nil – The quarry supervisor arranged for additional maintenance work to be undertaken on the fire access roads surrounding the site. This also includes the impending installation of a new access gate at the top of the back ramp (location shown in the bottom image) which will also improve firefighting access to various parts of the site whilst also maintaining site security - Ongoing.

N/A



10	Bund on the upper western edge of the quarry pit "Lot 76" area		N/A	Nil – The revegetation work previously completed in this area is progressing well – Positive observation.	N/A
11	Quarry access road and signage	DARACON Welcome to BUTTAI QUARRY Please do not proceed past this point unit you have read and understood the following Outery scores rule. ALL PERSONNEL, DELIVERIES AND VISITORS MUST: A Hime a Lift on channel to the Guarry access road as shown on the neighbor score. Contract the Loader operation or Supervisor on LHF channel 12 upon armity. Report to the Quarry office to sign invout – No expectation: Comply with the after PFF requirements of high visibility long long colothing, protective foothwar, hard hat and glasses. IF YOU ARE UNABLE TO COMPLY WITH THESE RULES, DO NOT PROCEED INTO THE QUARRY! PLANE ALSO FEEL FREE TO CONTACT SITE SUPERVISOR GROPP, FABS RIS 482 4.0AGRIG CHERATOR GLARRY, UNITED THE UNITED THE WITHOUT NOTICE RAT ANY TIME WITHOUT NOTICE HEAVY VEHICLES USE THIS ROAD FREQUENTLY.	N/A	Nil – The bitumen sealed sections of the access road are well maintained reducing the risk of erosion and dust generation. Appropriate signage is also present and visible - Positive observations.	N/A



12	Rehab' work on the upper western side of the quarry pit "Lot 76" area	N/A	Nil – Following the completion of the reshaping work on the upper western side of the quarry pit "Lot 76" area, the rehabilitation work completed as part of this task is progressing well as shown – Positive observation.	N/A
13	Quarry stockpile area	N/A	Nil - At the time of inspection, there was no evidence of dust generation on site – Positive observation.	N/A



14 Panoramic images of the quarry







15	Summary	Two minor issues were identified during the inspection:	
		 The majority of the sedimentation controls installed at strategic locations along the back ramp were operating effectively at the time of inspection. There were however one or two that required desilting as shown; The majority of the sedimentation controls installed below the western edge of "Lot 76" were operating effectively at the time of inspection. There was however one small section that required additional maintenance as shown; 	
		Please advise when this has been completed and signed off by the quarry supervisor.	
		Regardless of this minor matter, overall it appears that Buttai Quarry is being well managed from an environmental perspective.	

Key

Recommended Priority for Completion of Actions

Immediate To be addressed straight away

High Within 24hrs*

Medium Within 3 working days*
Low Within 5 working days*

N/A No work required

^{*}To be completed sooner if adverse weather conditions are predicated



ENVIRONMENTAL INSPECTION REPORT

WORKPLACE: Buttai Quarry		ai Quarry	DATE OF INSPECTION: 12/12/19	WEATH	HER CON	DITIONS	i			OVER	ALL STATUS		
LOCATION: Buttai			ATTENDEES: Dan Smith	*	₫	٩	6	3			☐ High		
WORKS UNDERTAKEN BY:		KEN BY:									□Medium		
Dara	con ⊠ Subc	ontractor 🗆									☑ Low		
Subc	ontractor nam	e:		Rain (n	in (mm): Negligible her: commended priority Action								
				Other:						☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐			
No.	Location (Area / description)		Issue / Comment	Recom	mended	priority		Action		Clo	se out date		
1	Buttai Quarry			N/A			inspecti was no dust ge site, wa on unse haulage Positive	on, ther evidence neration ter carte ealed e paths -	e e of on used	N/A			



2	Access off Old Buttai Road and gate	N/A	Nil – The bitumen sealed sections of the access road are well maintained reducing the risk of erosion and dust generation. Appropriate signage is also present and visible - Positive observations.	N/A
3	Sediment controls along the western boundary of Lot 75 (near main access gate)	N/A	Nil - At the time of inspection, all sediment fences were intact and operating effectively – Positive observation.	N/A



4	Chemical storage in site container		N/A	Nil – The various fuel containers and oil drums are stored in a bunded and ventilated area – Positive observation.	N/A
5	Summary	Site is kept neat and tidy with all areas being well maintained with general site maintinance undertaken on a regular basis. All dam levels were well below spillways due to lack of rain and recent and continued hot weather.			

Issued by: D.Smith Issued to: G.Reeves Copy to: Actions Checked:

Key

Recommended Priority for Completion of Actions

Immediate To be addressed straight away

High Within 24hrs*



Medium Within 3 working days*
Low Within 5 working days*

N/A No work required

^{*}To be completed sooner if adverse weather conditions are predicated



Reporting period - 1st January to 31st December 2019

Appendix 2 2019 Community Consultative Committee Meeting Minutes



BUTTAI QUARRY COMMUNITY CONSULTATIVE COMMITTEE

MEETING NOTES

9:30am Thursday 18th April 2019 Kurri Kurri Community Centre 251 Lang Street, Kurri Kurri

Attendees:

Shay Riley-Lewis Independent Chairperson (PEP Consulting)

Richard Forbes Cessnock City Council

Janet Murray Community Representative
Terry Lewin Community Representative
Colin East Community Representative

Trish McDonald Umwelt
Daniel Smith Daracon
Luke Robinson Daracon
John Cannon Daracon
Trish McDonald Umwelt

1. Apologies

Apologies received from Janine McCarthy (Cessnock City Council).

2. Confirmation of Previous Minutes held on 15th November 2018

All attendees agreed the minutes were an accurate record and were approved.

3. Issues Arising from Previous Minutes:

a) RF to email consent to SRL by COB 16.11.18

ACTION: RF to email to SRL

b) SRL to provide LR dropbox access to edit

COMPLETE

c) RF to produce property ownership map noting private, Council and Crown ownership. "Undetermined" areas are Crown Land proposed for divestment.

ACTION: RF to email to SRL

d) LR to amend for January 2019 Annual Report:

a. Change list to just have addresses and not names.

COMPLETE

b. Drone photo to be annotated as a base map for time lapse imagery of quarry activities.

COMPLETE

e) LR to confirm the formula/method used to calculate the average truck numbers in the Annual Report.

Truck numbers averaged over the month with some months including half day on Saturdays. This leads to fractions in the averaging by apportioning Saturday hours to part of a day

CE: Conditions of consent (CoC) is a daily maximum yet the Annual Report reports monthly averages.

DS: Site procedures inspected at the last CCC site inspection monitor truck numbers throughout the day and ensure daily truck numbers are below the approved maximum.

ACTION: Site inspection to include inspection of tracking procedure.

f) RF to continue to invite Ward councilors

COMPLETE. ONGOING

g) SRL to invite Clr Darrin Gray directly to future meetings.

COMPLETE. ONGOING

h) LR to investigate the options for clearing vegetation along the powerline.

LR discussed the required tree clearing with Essential Energy who advised it is on the program of works. Daracon are not able to undertake the clearing.

i) Extra-ordinary meeting to be held to discuss the recycling facility proposal prior to its lodgment. Meeting to include a site inspection.

COMPLETE (this meeting).

 j) LR to discuss with Greg Lamb (Bloomfield Colliery) weed control options on Old Buttai Road Daracon had discussions with Bloomfield where it was confirmed that Daracon may maintain the road, however Bloomfield are responsible for the property. Bloomfield are committed to undertake weed control.

k) Report any illegal tree removal to Local Land Services and Office of Environment and Heritage (OEH).

ONGOING

4. Planned Activities (Daracon presentation)

Dust

Buttai 1 continues to report anomalous results that do not correlate with other samples and are not represent the quarry operations.

TL: Buttai Barn levels consistently high but why are the levels of combustible not high?

DS: Unknown why levels are high. Buttai 2 continues to report more regular results.

Rehabilitation

CE: Page 11 of the Annual Report notes there has been no planting at Bench 2 since July 2014 – not even replacement of dead plants. The community's aim is get the while area screened. Concerned there's insufficient density of planting to adequately screen this area.

LR: Efforts have been focused on Bench 3 rehabilitation since this is the most visible.

ACTION: LR to investigate revegetation of Bench 2 and undertake any replanting if required.

CE: Agree Bench 3 should be the focus. Are there any plans to vegetated Bench 4?

- LR: No plans for Bench 4 yet, only Benches 2 and 3. Below those is not visible from Lings Road.
- DS: Bench 4 is currently not accessible. Revegetation will commence when access is available.

TL: Annual Report photos from fixed locations are showing good growth at Benches 2 and 3.

LR: Bench 3 had 20 new mature trees planted earlier in 2019.

CE: Bench height needs to be no higher than 10m. Original consent was a maximum of 8m.

ACTION: DS to survey and confirm height of benches.

ACTION: DS to confirm CoC height of benches.

ACTION: Aim to reduce bench height to 10m.

LR: Quarry quiet at the moment with lots of concrete recycling companies competing in the space.

CE: Where is the concrete coming from?

JC: Lots of demolition, light rail, road construction generating concrete. Recyclers have maximum storage areas so sell on material cheaper than raw material to enable continued turnover.

5. Annual Report

TL: Review dates of rehabilitation reports is confusing.

LR: The dates relate to Daracon document control of templates and unfortunately can't be removed.

6. Recycling Proposal

Domestic demolition sources

JM: Concerned the proposal includes domestic demolition rather than just commercial (eg. roof tiles).

JC: It's not the intention to accept domestic material but large commercial contractors may have a mixed load including roof tiles.

CE: It may not be the intention but how can domestic waste be controlled once approved?

TMc: The facility will not be open to the public and will not accept domestic waste. Truck movements will be limited to 120 per day.

CE: Will recycled road base be blended with quarry gravel?

LR: Specifications of the recycled concrete are yet to be confirmed and may include some quarry gravel.

Tracking and licencing

Material taken from Buttai quarry to the recycling facility would need to be tracked and would come out of the total approved extraction amount.

Quarry cannot accept material from the recycling facility but quarry can add to recycled products.

TMc: The proposal is designated development and will require a separate environment protection licence (EPL). The proposal will not modify the existing quarry consent.

TL: The quarry consent will need to be modified since the approved rehabilitation of the proposed facility area will be affected.

TMc: Acceptance of material will be restricted to specified materials.

RF: Added protection provided by the need for waste licensing of waste providers. Domestic scale demolition companies do not usually have those licences.

CE: Every truck load will have tracking certificate?

DS: External certificate is required by independent geotechnical consultancy verifying the type, class, source, amount and destination of all waste material.

All loads will undergo visual inspection at the weighbridge and upon tipping.

TL: Waste tracking not just for Daracon trucks? Can a truck have a certificate and then add bad material?

DS: The system is NSW wide monitored by the EPA to prevent unlawful waste materials.

JM: What happens to rejected material?

LR: Kept in designated areas and reloaded to truck to remove. All rejected loads must be reported the EPA so they can be tracked.

Sources

JM: Just Daracon projects received at the facility?

JC: Not necessarily. But will not accept all material, only want quality material.

That's another reason why we prefer Daracon project sources instead of public to avoid the risk of rejecting loads and rejected loads being dumped.

CE: There is a financial incentive to provider to hide contamination. EPA advise that contaminated soil is the hardest to control. Sampling is often not conclusive. Need robust monitoring to prevent contamination.

JC: There is also an incentive for Daracon with greater risk to the facility in allowing contamination to be introduced into the recycled material.

RF: *Protection of Environment Operations Act 1997* provides criminal level of punishment for pollution.

Fly ash and coal rejects

JM: Why are coal washery rejects and ash being received?

JC: Fly ash are byproducts from construction demolition. Fly ash is too expensive to just move to the quarry site and on-sell. Coal washery rejects direct from power stations would be a low portion of material received and used as a blender only and not for bulk sale.

JM: Not want to see bulk storage of fly ash to prevent environmental leaching impacts. How can the consent control preventing storage? The community support resource recovery but it needs to be controlled.

CE: Coal ash contains serious heavy metals that could contaminate the local environmental with runoff.

TMc: Waste controls require separation and visual inspection.

LR: Stormwater management would capture any contaminated runoff.

CE: Self regulation is a risk. Sampling cannot be relied upon as accurate representation of materials.

RF: Council do not want a landfill and the community rage associated with a proposed landfill.

ACTION: TMcD to investigate and suggest controls for fly ash management (eg. hard stand, bunding, maximum quantities).

<u>Noise</u>

JM: Why are activities restricted between 6am – 7am?

TMcD: Noise modelling indicated activities are not likely to comply with night time noise criteria at these times.

- 3.5m noise barrier proposed.
- No exceedance of day or night noise criteria is expected with implementation of mitigation measures.

TL: The quarry will still have to achieve noise criteria of the consent. It is good that the quarry consent Is not changing. The cumulative noise of the recycling facility and the quarry will need to remain below quarry consent since the community will be unable to differentiate the source.

Historical monitoring will identify any changes caused by the recycling facility.

<u>Air</u>

Quarry not required to monitor PM10, only dust deposition.

JM: prevailing wind is west/north-west. Only part of the time.

TMcD: All wind scenarios were modelled.

ACTION: TMcD to provide JM with wind modelling.

JM: Is there equivalent plant operating elsewhere we can inspect? Noise and dust are the concern.

- LR: The facility will use the same plant and equipment that is currently at the quarry.
- JC: Concrete crushers are used at Concrush at Teralba and Kooragang Island facilities but its unlikely those operations would allow visitors. There are currently two crushers at the quarry that have been used concurrently on occasion. It is unlikely both the quarry and the facility will run crushers concurrently.

Traffic

TL: Access will still not be provided off George Booth Drive?

DS: Correct – access off George Booth Dr is not possible.

JM: Proposed 120 trucks for the facility are in addition to existing quarry trucks?

TMc: Yes - 120 trucks are in addition to the approved quarry trucks. The proposal includes sealing the unsealed sections of Old Buttai Road and the access road.

Traffic modelling included existing quarry trucks.

Daracon have banned all right turns of Old Buttai Rd onto John Renshaw Dr for all quarry and recycling facility trucks.

RF: Corridor planning for upgrading John Renshaw Dr is currently underway by Roads and Maritime Services over the next 18 months. This plan will detail how new development traffic in the area is to be managed.

Biodiversity

No offset required for the proposed clearing of less than 1ha.

CE: Comment that biodiversity impacts are well presented.

Water

JC: Alternate reuse of concrete washout water onsite is being investigated in preference to washout storage facility.

TL: Does the location of the facility affect the quarry runoff pathways?

LR: The facility footprint is easily identified and quarry runoff diverted around the facility.

Facility name

TL: So the recycling facility is not value adding to the quarry, but rather the quarry is value adding to the facility. The community expect the quarry to close at the end of its approved life and do not want this recycling facility to extend the life of the quarry.

Why is the facility called "Buttai Resource Recovery Facility" – it sounds like a public facility. We do not want to attract public to the facility.

LR: The facility does not want to attract the public. There will be no signs on public roads.

ACTION: Add a commitment to the EIS to not advertise or erect signage on public roads.

JM: Buttai does not want to be associated with industrial activities.

ACTION: Daracon to consider renaming the facility to remove reference to Buttai - "Daracon Resource Recovery Facility"

Other

ACTION: LR upload presentation to dropbox.

ACTION: If any questions please send through to SRL.

EIS expected to be lodged in May 2019. There will be a 28 day public exhibition.

ACTION: LR to advice CCC when EIS is being lodged.

TMcD: The recycling proposal is a good project within an existing industrial environment.

JM: Buttai is a rural environment, not industrial.

RF: Is the Capital Investment Value (CIV) is less than \$30M, including the entry road?

TMcD: Yes.

TL: Could some aspects of the project be separated out to keep under the \$30M threshold?

JC: There are strict rules around that, but it would become financially unviable and Daracon will not proceed with the project if it exceeds \$30M.

TL: Community will feel better if it is known that the quarry and recycling facility will be managed together by Daracon. Interconnection with quarry operations provides greater control.

CE commended TMcD presentation.

RL commended Daracons involvement with the CCC.

TL: What are the implications for the workforce.

LR: There will be one additional staff member to operate the weighbridge. The recycling facility will operate on a campaign basis scheduled around quarry operations since its not cost effective to float additional crusher in for each facility.

A maximum quantity of 100,000 tonne/yr of material will be received at the recycling facility. The crusher can process up to 2,000 tonne/day, therefore at peak operation the facility could only operate 50 days/year.

CE: Council approval process if complex and difficult for the public to get involved.

RF: Legislative amendments have been made to allow for greater community involvement.

ACTION: LR to upload Secretary's Environmental Assessment Requirement s (SEARs).

7. Next Meeting

9-11am Thursday 7th November 2019 Kurri Kurri Community Centre Lang Street, Kurri Kurri

Followed by site inspection.

Close: 12pm



BUTTAI QUARRY COMMUNITY CONSULTATIVE COMMITTEE

MEETING NOTES

9:00am Thursday 14th November 2019 Kurri Kurri Community Centre 251 Lang Street, Kurri Kurri

Attendees:

Shay Riley-Lewis Independent Chairperson (PEP Consulting)

Richard Forbes Cessnock City Council

Janet Murray Community Representative Terry Lewin Community Representative

Daniel Smith Daracon
John Cannon Daracon

Clr Darrin Grey Cessnock City Council

1. Apologies

Apologies received from Colin East (community representative) and Luke Robinson (Daracon).

2. Confirmation of Previous Minutes held on 18th April 2019

All attendees agreed the minutes were an accurate record and were approved.

3. Issues Arising from Previous Minutes:

1. Richard Forbes to email consent to SRL

LEC August 1997 decision provided to SRL on 13/11/19 and sent with the Agenda to CCC. The current conditions of consent are a combination of the Mediation Agreement signed in March 2008, and associated Section 96 and other changes, that lead to the establishment of an agreed combined set of Conditions of Consent for operations on Lots 75 and 76.

The Quarry Management Plan 2008 includes modifications and LEC Mediation Agreement (Attachment 1).

RF: The six amendments to the original consent were issued as separate modification notices and did not create a redraft of the entire consent. The QMP extract is the best record of consents.

Resource Recovery Facility will be a separate DA but must be consistent with the quarry consent since they apply to the same land.

ACTION: DS to upload consent, LEC decision, modifications and Mediation agreement to the CCC drop box.

ACTION: RF to discuss the consent status with Rod Sandall and Kerry Porter of Cessnock City Council.

- 2. Richard Forbes to email ownership map to SRL
- JM: Neighbour paid \$12,000 to purchase crown land. Concern if 'Ridge Road' is Crown Land and is potentially to be lost as public land fire trail.
- TL: Need to confirm which land was donated by Coal and Allied formed part of the State Conservation Area, so to know who are the registered owners of each portion to enable notifications for fire management, feral animals etc.

ACTION: SRL to contact Anna Cronin of Crown Lands to request a map of Crown Land and status of divestment.

3. As part of the next CCC site inspection Daracon will include an inspection of the tracking procedure.

The tracking procedures includes the following:

- Sales forecast/collection dates
- Order placed
- Monitored daily
- Actual loads recorded by loading scales
- TL: The quarry and recovery facility will need to have separate weighing and tracking facilities.
 - DS: Yes. The quarry maximum bookings retains 5 spare load capacity for unplanned arrivals.
- JM: RRF maximum trucks won't be able to use the spare trucking capacity of the quarry?
 - SRL: Depends on how Council condition the RRF consent.
 - RF: So important to get the consent clear.
 - JC: The RRF does not propose overlapping approvals with the quarry. It would be helpful to operations but it's not proposed. Two separate 60 trucks/day caps for each facility.

4. Luke Robinson to investigate revegetation of Bench 2 and undertake any replanting if required.

DS: Benches 2 and 3 were replanted in April 2019 with 20-30 mature trees added. Water carts are being used but success rates are not good.

Revegetation report recently completed.

Bench 2 acacias mostly dies off as their 7 year life span but losses acerbated by the highly exposed area.

5. Dan Smith to survey and confirm height of benches.

All benches are between 8-10m. Benches are surveyed prior to every blast and recorded in drill plans.

6. Dan Smith to confirm maximum height of benches permitted by consent.

Post meeting note: The consent does not specify a maximum height. However, the approved Buttai Quarry Management Plan specifies a bench height of 10m.

7. Aim to reduce bench height to 10m.

JC: Agreed.

8. Umwelt to add commitment of no long term storage of fly ash and bottom ash in the EIS.

COMPLETE.

9. Umwelt to provide Janet Murray with wind modelling.

ACTION: JC to provide wind modelling results and provide all wind scenarios to CCC.

10. Umwelt to add a commitment to the EIS to not advertise or erect signage on public roads.

COMPLETE.

11. Luke Robinson upload presentation to dropbox.

COMPLETE

12. If any questions please send through to SRL.

No questions received.

13. Luke Robinson to advice CCC when EIS is being lodged.

COMPLETE.

14. Luke Robinson to upload Secretary's Environmental Assessment Requirements (SEARs) to the CCC dropbox.

COMPLETE.

4. Annual Report (Daracon presentation)

ACTION: DS to upload Daracon presentation to CCC drop box.

See attached presentation.

5. Planned Activities and Resource Recovery Facility application

Four community submission received on the Resource Recovery Facility EIS exhibition.

JC: Council required detailed survey and engineering plans.

SRL: Any changes expected to the be made to the application in response to submissions?

JC: Management of coal ash and flay ash were the main issues to be addressed.

RF: Council made a recommendation report to the Planning Panel who will make the determination.

TL: It's important that the RRF approval integrates with the quarry approval:

- how the ongoing quarry rehabilitation will be completed if quarry declines,
- South haul road needs ongoing maintenance for public use for the Richmond Vale Rail Trail.

ACTION: RF to request the CCC receive a copy of any Draft Conditions of Consent to enable comment prior to finalising.

ACTION: TL to discuss the ongoing requirements with the Richmond Vale Rail Trail Committee and advise any comments related to any RRF approval.

TL: Submissions were lodged as 'objections' by the community to ensure they were considered.

RF: Submission are considered based on the significance of issues. As a precautionary principle it is a good approach to label as objection.

SRL: Yes. However, totals for and against are summarised for Councilors so it does affect first impressions.

6. Other items

JM: Did Essential Energy clear the trees along the powerlines that are overgrown and causing a fire hazard?

DS: Luke Robinson (Daracon) requested clearing and was advised the site is not on their current program.

ACTION: DS to contact Essential Energy again and request the site be added to the maintenance schedule.

7. Site Inspection

JM: Sub-contractor trucks have been seen regularly speeding in the morning creating a lot of dust.

ACTION: JC to remind sub-contractors not to speed.

ACTION: Daracon to contact Rural Fire Service to ensure they are aware of the quarry's water truck capability and on-site location of pumps etc.

8. Next Meeting

9-11am Thursday 2nd April 2020 Kurri Kurri Community Centre Lang Street, Kurri Kurri

Close: 12pm

Attachments:

- Combined Conditions of Consent extract from Quarry Management Plan 2008 (provided by Terry Lewin)
- 2 Daracon Presentation



Reporting period - 1st January to 31st December 2019

Appendix 3 2019 Community Complaints Register

2019 Complaint Register

19th August 2019 An enquiry was received regarding blasting that occurs at Buttai quarry and the potential for this to induce cracking in a concrete pool located at a Lings Rd residence As part of the inspection of the pool, the complainant was informed of the blast monitoring that occurs to ensure compliance with the EPL whilst also ensuring no damage to surrounding structures occurs. Daracon formally offered to engage a structural engineer to inspect and report on the pool damage whilst also considering the potential influence of blasting. Following many attempts to further engage with the complainant regarding this matter, no further instruction or correspondence was	Date received	Complaint was received regarding?	Complaint was received from?	Buttai Gravel response	Buttai Gravel action following complaint	Closed out (Y/N)
received	August	received regarding blasting that occurs at Buttai quarry and the potential for this to induce cracking in a concrete pool located at a Lings	Local resident	promptly contacted the complainant and subsequently arranged for a site inspection of the alleged damage to the	of the pool, the complainant was informed of the blast monitoring that occurs to ensure compliance with the EPL whilst also ensuring no damage to surrounding structures occurs. Daracon formally offered to engage a structural engineer to inspect and report on the pool damage whilst also considering the potential influence of blasting. Following many attempts to further engage with the complainant regarding this matter, no further instruction or correspondence was	Y



Reporting period - 1st January to 31st December 2019

Appendix 4 Vegetation Report



Our Ref: 4750/R01/RP/BH/06012020

6 January 2020

Luke Robinson
Systems Manager – Construction Materials
Daracon Group
20 Kullara Close | PO Box 401
Beresfield NSW 2322

Dear Luke

Re: Vegetation Monitoring of Buttai Quarry Rehabilitation Areas

Umwelt (Australia) Pty Limited (Umwelt) was commissioned by Daracon Group (Daracon) to undertake the 2019 annual monitoring for the rehabilitation areas at Buttai Quarry, John Renshaw Drive, Buchanan. The rehabilitation areas adjoin high-quality remnant vegetation. Four areas were subject to monitoring in this monitoring event. Two sites (Bench #2 and Bench #3) have been previously monitored and two sites (Lot 76 East and Lot 76 West) had not been monitored before. At all sites, vegetation that was still alive appeared in good health with some individuals in flower, however, the most recent planting event on Bench #3 has largely failed.

1.0 Methods

The site inspection was undertaken over one day and involved visual inspection of the plantings within the Bench #2 and Bench #3 rehabilitation areas and Lot 76 eastern rehabilitation area and Lot 76 western rehabilitation area. Data were collected in accordance with the 2018 Buttai Quarry Vegetation Report (Jones, 2018). An individual was classified as failed if there was no presence of green foliage. Data recorded for each planting included:

- common name and scientific name
- age class, height range and growth form
- health, and
- ecological value/amenity value.

Notes on groundcover establishment were also be recorded. Photographs were taken of each rehabilitation area and any ecological features of significance.

1.1 Limitations

Care was taken to distinguish between planted individuals and natural regeneration. However, where planting guards had been removed it became difficult to distinguish between the two.

Inspired People
Dedicated Team
Quality Outcomes

Newcastle

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Perth

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Canberra

2/99 Northbourne Avenue Turner ACT 2612 PO Box 6135 O'Connor ACT 2602

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Level 3 50 York Street Sydney, NSW, 2000

Brisbane

Level 13 500 Queen Street Brisbane QLD 4000

Orange

Office 1 3 Hampden Avenue Orange NSW 2800

T| 1300 793 267 E| info@umwelt.com.au www.umwelt.com.au

Umwelt (Australia) Pty Limited ABN 18 059 519 041



2.0 Results

2.1 Bench #2

The rehabilitation of Bench #2 appears to be in good health. Canopy and shrub species do not appear to be experiencing stress with three grey gums (*Eucalyptus punctata*) currently in flower. Many *Acacia* were in flower and second-generation individuals were successfully establishing. The groundcover appeared patchy and dominated by exotic grasses with areas of bare ground common. In total 230 individuals were recorded; this number has decreased since the previous year's monitoring (a total of 281 individuals) and is equal to an 80 percent survival rate.

2.2 Bench #3

The surviving individuals of Bench #3 rehabilitation appeared in good health however the most recent plantings have failed. Within the most recent plantings, three spotted gum (*Corymbia maculata*), eight grey gum (*Eucalyptus punctata*), and eight narrow-leaved ironbark (*Eucalyptus crebra*) had failed. Many *Acacia* were in flower/had produced seed; no second-generation individuals were observed. The groundcover appeared and patchy dominated by exotic grasses with areas of bare ground common. In total 147 living individuals were recorded; this number has decreased since the previous year's monitoring (a total of 208 species) and is equal to a 71 percent survival rate.

2.3 Lot 76 East

Lot 76 East has had no planting events and thus all individuals counted were considered to be natural regeneration from the adjoining remnant vegetation. The vegetation appeared in good condition with no dieback or plant failure observed. Many *Acacia* were in flower/had produced seed; no second-generation individuals were observed. The ground cover was dominated by natives, and exotic species were not observed. A total of 356 individuals were recorded within the survey area, however as this was the first year the area was surveyed a survival rate cannot be calculated.

2.4 Lot 76 West

Lot 76 West has had no planting events and thus all individuals counted were considered to be natural regeneration from the adjoining remnant vegetation. The vegetation appeared in good condition with no dieback or plant failure observed. Stem density of spotted gum (*Corymbia maculata*) and grey gum (*Eucalyptus punctata*) were very dense in this survey area. Many *Acacia* were in flower/had produced seed; no second-generation individuals were observed. The groundcover was dominated by bare ground and exotic grass species. A total of 252 individuals were recorded within the survey area, however as this was the first year the area was surveyed a survival rate cannot be calculated.

3.0 Conclusion and Future Management Recommendations

The rehabilitation occurring at Buttai Quarry appears to be largely in good health despite the area being drought affected, with these conditions intensifying, since late 2018. The total number of surviving individuals has decreased on both Bench #2 and #3 however this can largely be explained by the dry conditions, predation by herbivores, and natural senescence (in the case of the Acacia deaths). There was no apparent explanation as to the large failure rate of the most recent plantings on Bench #3, however the most likely reason is again the prolonged dry conditions experienced in the area.



Future management recommendations include:

- Continued monitoring of all rehabilitation areas.
- Increase the scope of the monitoring works to include full floristic counts. This information will help to further understand the success of natural regeneration in the rehabilitation areas.
- Performing additional planting events on Bench #3 to account for the recent Eucalypt failures.
- In order to account for the continued dry conditions, it is recommended that Daracon consider waiting until the end of summer to begin planting again.
- If plantings continue to fail, it is recommended that further investigations are completed to determine why the plantings continue to fail.

We trust this information meets with your current requirements. Please do not hesitate to contact the undersigned on 1300 793 267 should you require clarification or further information.

Yours sincerely

Belinda Howe Ecologist



Reporting period - 1st January to 31st December 2019

Appendix 5 Images of Quarry



Reporting period - 1st January to 31st December 2019

Panoramic image of Buttai Quarry – January 2019





Reporting period - 1st January to 31st December 2019

Panoramic image of Buttai Quarry - September 2019





Pavision No: 01

Reporting period - 1st January to 31st December 2019

Rehabilitation images of the quarry (Lings Rd and quarry site) – April 2019







Povision No: 01

Reporting period - 1st January to 31st December 2019

Rehabilitation images of the quarry (Lings Rd and quarry site) – January 2020







Povision No: 01

Reporting period - 1st January to 31st December 2019

Buttai Quarry Bench #3 rehabilitation – January 2019



Buttai Quarry Bench #3 rehabilitation – September 2019





Buttai Quarry stockpile area – February 2019



Buttai Quarry operation pit area – February 2019





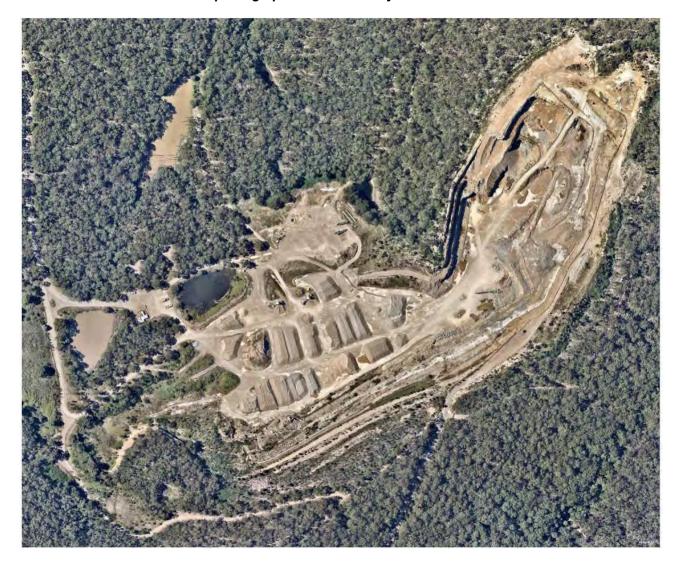
Reporting period - 1st January to 31st December 2019

Aerial photograph of Buttai Quarry – December 2019



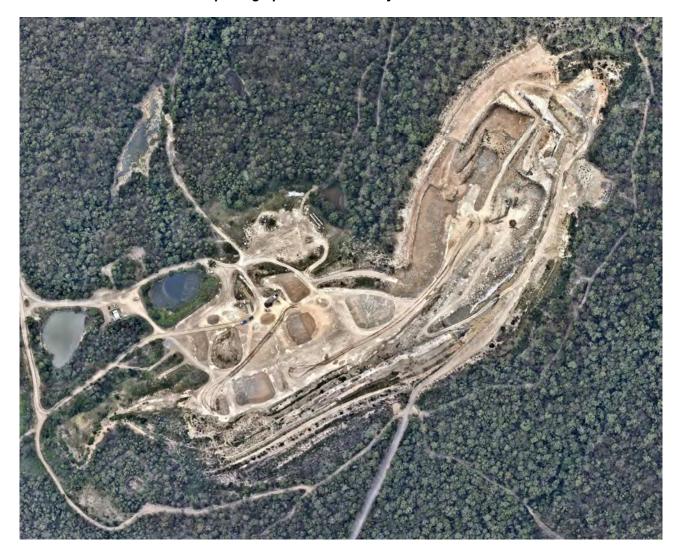


Aerial photograph of Buttai Quarry – December 2018



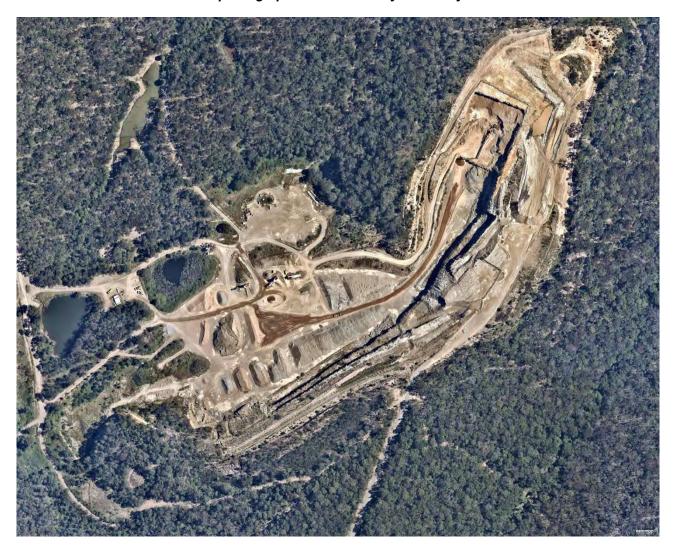


Aerial photograph of Buttai Quarry – December 2017





Aerial photograph of Buttai Quarry – January 2017





Aerial photograph of Buttai Quarry – November 2015





Reporting period - 1st January to 31st December 2019

Aerial photograph of Buttai Quarry - September 2014





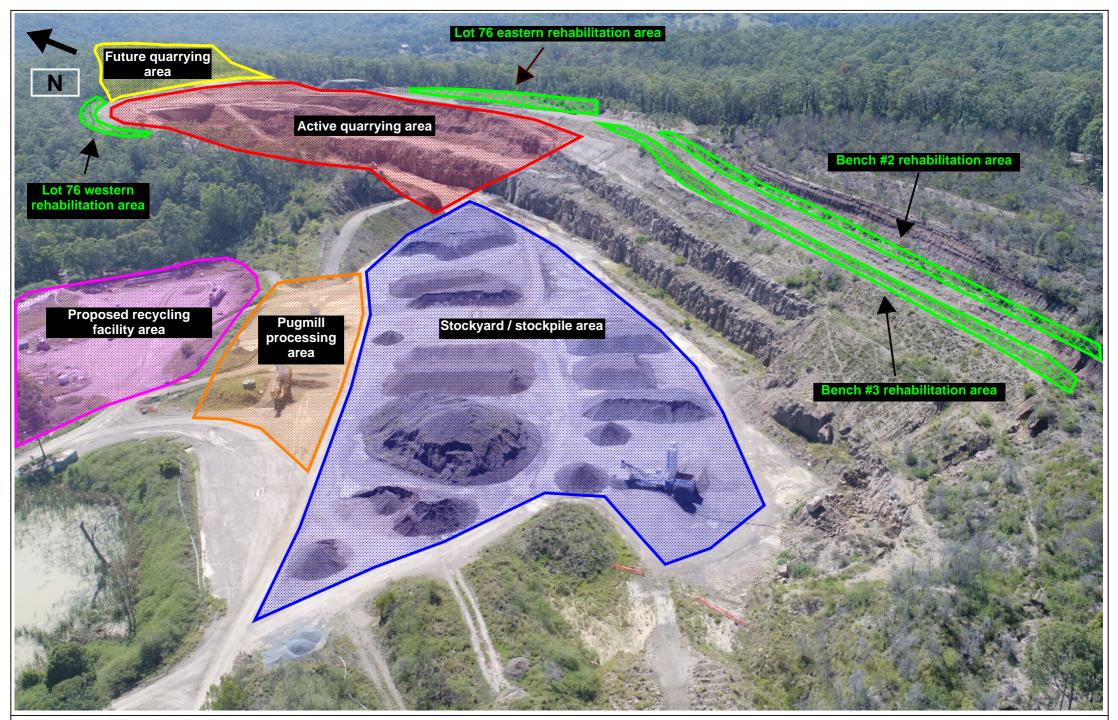
New gate installed for improved RFS access – Late 2019





Reporting period - 1st January to 31st December 2019

Appendix 6 Annotated quarry layout image



Revision: 02

Date: 30/01/2019



Buttai Quarry overview

BUTTAI QUARRY LAYOUT

Drawn By: Luke Robinson