

Annual Review

for the period

1 July 2017 to 30 June 2018



Wallerawang Quarry

Project Approval DA 344-11-2001

Prepared by:



R.W. CORKERY & CO. PTY. LIMITED

September 2018

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Annual Review

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1 July 2017 to 30 June 2018

Wallerawang Quarry

Project Approval DA 344-11-2001

Prepared for:

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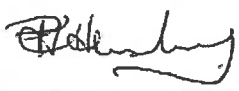
Ref No. 949/16

September 2018



R.W. CORKERY & CO. PTY. LIMITED

TITLE BLOCK

Name of operation	Wallerawang Quarry
Name of operator	Walker Quarries Pty Ltd
Development consent / project approval #	DA 344-11-2001
Name of holder of development consent / project approval	Walker Quarries Pty Ltd
Mining Lease #	ML1633
Name of holder of mining lease	Walker Quarries Pty Ltd
Water licence #	N/A
Name of holder of water licence	N/A
MOP/RMP start date	15 May 2018
MOP/RMP end date	15 December 2019
Annual Review start date	1 July 2017
Annual Review end date	30 June 2018
<p>I, Paul Hensley, certify that this audit report is a true and accurate record of the compliance status of the Wallerawang Quarry for the period 1 July 2017 to 30 June 2018 and that I am authorised to make this statement of behalf of Walker Quarries Pty Ltd.</p> <p><i>Note.</i></p> <p>a) The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</p> <p>b) The Crimes Act 1900 contains other offences relating to false and misleading information: Section 192G (Intention to defraud by false or misleading statement – maximum penalty 5 years imprisonment); Section 307A, 307B and 307C (false or misleading application/information/documents – maximum penalty 2 years imprisonment or \$22,000, or both).</p>	
Name of authorised reporting officer	Paul Hensley
Title of authorised reporting officer	Managing Director
Signature of authorised reporting officer	
Date	20 September 2018

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LIST OF ACRONYMS

ACHAR	Aboriginal Cultural Heritage Assessment Report
ACHCRs	Aboriginal Cultural Heritage Consultation Requirements
AQMP	Air Quality Management Plan
BC Act	NSW Biodiversity Conservation Act 1995
BMP	Bushfire Management Plan
CCC	Community Consultative Committee
DRG	Division of Resources and Geoscience
EIS	Environmental Impact Statement
EP&A Act	Environmental Planning & Assessment Act 1979
EPBC Act	Commonwealth Environment Protection and Biodiversity Conservation Act 1999
EPL	Environment Protection Licence
FC NSW	Forestry Corporation of NSW
IEA	Independent Environmental Audit
INP	Industrial Noise Policy
MAC	Muller Acoustic Consulting Pty Ltd
ML	Mining Lease
NMP	Noise Management Plan
OzArk	OzArk Environmental and Heritage Management Pty Ltd
PIN	Penalty Infringement Notice
POEO	Protection of the Environment Operations Act 1997
RWC	RW Corkery & Co. Pty Limited
SB	Sediment Basin
SLR	SLR Consulting Pty Ltd
SoEE	Statement of Environmental Effects
SWMP	Soil and Water Management Plan
TSP	Total suspended particulates
WSEA	Western Stockpile Extension Area



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1. STATEMENT OF COMPLIANCE

The Statement of Compliance comprising **Tables 1** and **2** below, follows an Independent Environmental Audit (IEA) commenced on 12 April 2018 and completed 4 July 2018. Section 10 provides an overview of the results and status of action.

Noting the IEA was completed for the period 29 October 2015 to 13 April 2018, **Tables 1** and **2** reflect the non-compliances that occurred as a result of activities during the reporting period only. The period of 13 April to 30 June 2018 was the subject of a separate analysis of data and management completed by RW Corkery & Co. Pty Limited (RWC) and Walker Quarries Pty Ltd.

Table 1
Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	Yes / No
DA 344-11-2001	No
ML 1633	Yes
EPL 13172	No

Table 2
Non-compliances

Page 1 of 2

Condition	Condition Description (summary)	Compliance Status	Comment	Section Where Addressed
DA 344-11-2001				
2(8)	Construction of, alterations or additions to buildings and structures	Non-Compliant Low Risk	Two transportable structures were erected on the property without Council approval. The Company understood the structures were approved by DA 344-11-2001.	4.3.1
5(2)	Consultation with relevant public authorities during preparation of required documents	Non-Compliant Administrative	Several management plans do not describe how matters raised by the consulted agencies have been addressed. The matters raised by the consulted agencies were all addressed in the management plans.	6.3.3, 6.12 and 7.2.3
5(3)	Management plans	Non-Compliant Administrative	Detailed baseline data is not provided in several management plans. The management plans implied the baseline data be derivation of criteria.	6.3.3, 6.5.3 and 7.2.3
5(12)	Annual Review	Non-Compliant Administrative	The 2016/2017 Annual Review was provided to DPE on 30/10/2017 instead of 31/8/2017 as required.	10
5(13)	Independent Environmental Audit (IEA)	Non-Compliant Low Risk	The Company submitted an IEA on 4/7/2017 instead of 28/2/2017 as required.	10
EPL 13172				
M1.2	Record-keeping	Non-Compliant Low Risk	Some monitoring data is missing, including deposited dust data prior to 6/2014, noise monitoring data prior to 7/2016, water monitoring data prior to 7/2014, and blast monitoring data prior to 9/2014. This monitoring data was shredded by the previous operator of the Quarry. All monitoring data from the reporting period is available.	10



Table 2 (Cont'd)
Non-compliances

Page 2 of 2

Condition	Condition Description (summary)	Compliance Status	Comment	Section Where Addressed
EPL 13172 (Cont'd)				
M1.3	Samples record-keeping	Non-Compliant Administrative	Blast, dust and water monitoring results provided on the Company's website did not include some required information including time collected and person who collected the sample.	10
R1.6	Annual Return record-keeping	Non-Compliant Low Risk	Copies of the 2013/2014 and 2014/2015 Annual Returns were not present at the Quarry, as many records were destroyed by a former contractor.	10
Note: Refer to Table 2A for Compliance Status Key				

Table 2A
Compliance Status Key

Risk level	Colour code	Description
High	Non-compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence.
Medium	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> potential for serious environmental consequences, but is unlikely to occur; or potential for moderate environmental consequence but is likely to occur.
Low	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> potential for moderate environmental consequences but is unlikely to occur; or potential for low environmental consequences but is likely to occur.
Administrative non-compliance	Non-compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions).

2. INTRODUCTION

2.1 SCOPE AND FORMAT

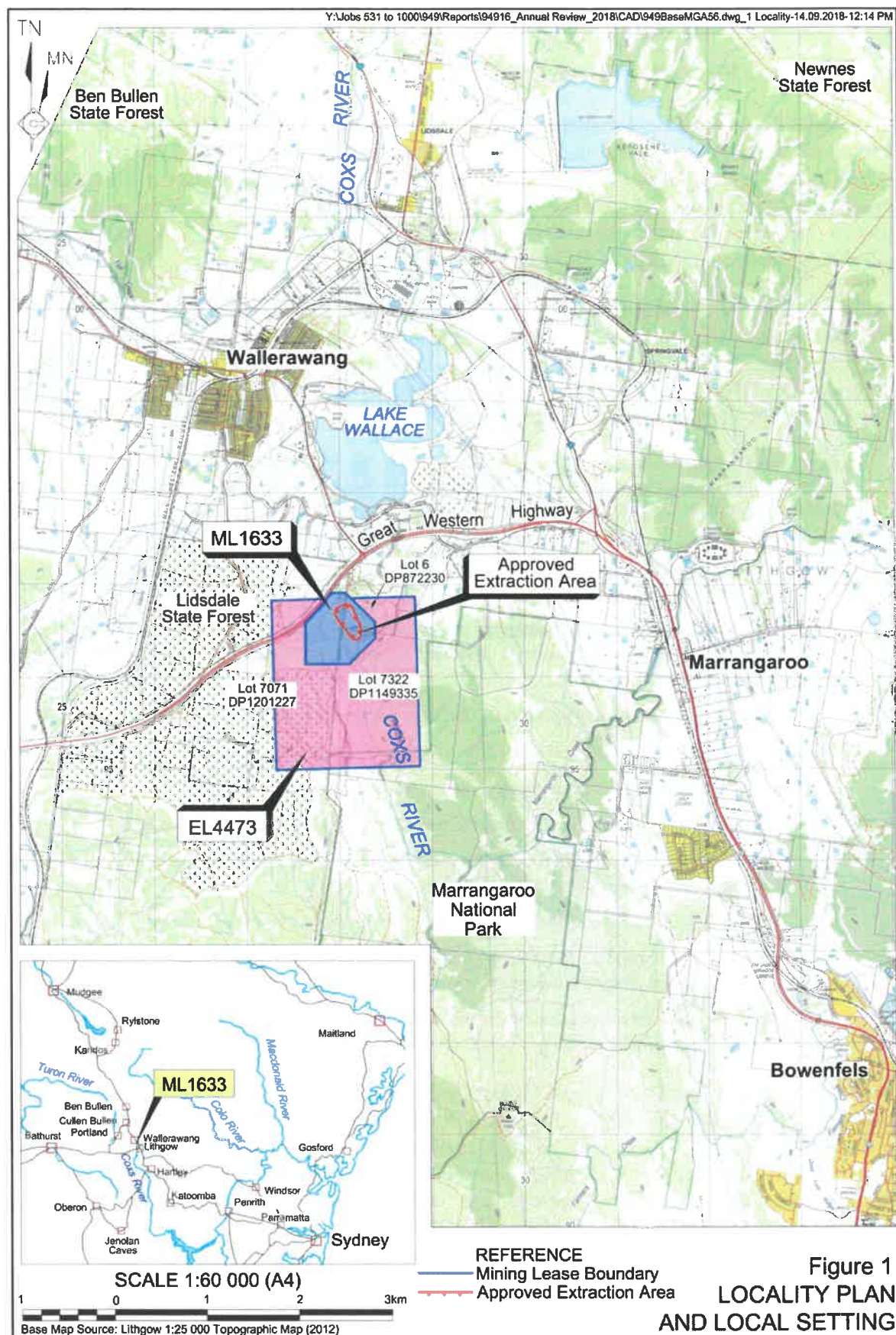
This Annual Review has been prepared for the Wallerawang Quarry (the Quarry) in accordance with the requirements of *Condition 5(12)* of Development Consent DA 344-11-2001 (DA 344-11-2001). The Quarry is operated by Walker Quarries Pty Ltd (the Company), a wholly owned subsidiary company of Sitegoal Pty Ltd, and is located approximately 8km northwest of Lithgow (**Figure 1**). This report documents the works undertaken and environmental performance from 1 July 2017 to 30 June 2018 (the reporting period).

DA 344-11-2001 was granted by the Minister for Infrastructure and Planning on 19 October 2004, and was modified on 25 August 2017 to regularize several constructed components of the Quarry and formalise the approval of production of a more extensive range of quarry products. A copy of DA 344-11-2001 is reproduced as **Appendix 1**. *Condition 5(12)* of Development Consent DA 344-11-2001 is reproduced below.

"By the end of September each year, or other timing as may be agreed by the Secretary, the Applicant must submit a review to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must:

- a) describe the development (including any progressive rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;*
- b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against the:*
 - relevant statutory requirements, limits or performance measures/criteria;*
 - requirements of any plan or program required under this consent;*
 - monitoring results of previous years; and*
 - relevant predictions in the documents listed in condition 2(a) of Schedule 2;*
- c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance;*
- d) identify any trends in the monitoring data over the life of the development;*
- e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and*
- f) describe what measures will be implemented over the current [financial/calendar] year to improve the environmental performance of the development."*

The information presented within this Annual Review has been prepared based on information compiled by R.W. Corkery & Co. Pty Limited (RWC) and provided by the Company and generally follows the format and content requirements identified in the *Annual Review Guideline* dated October 2015. It should also be noted that although this *Annual Review* has been prepared based upon the approval and licencing requirements applicable following modification of DA 344-11-2001 on 25 August 2017.



2.2 THE COMPANY

Sitegoal Pty Ltd was formed in 1994 to identify and develop mineral resources in New South Wales. The Company Directors maintain a hands-on management style and are either Lithgow or Sydney based.

Walker Quarries Pty Ltd was created to carry out mining, processing, transport and other ancillary activities at the Wallerawang Quarry and remains a wholly owned subsidiary of Sitegoal Pty Ltd. Walker Quarries Pty Ltd is committed to operating the Quarry in a manner that complies with relevant environmental legislation and is environmentally responsible.

2.3 OVERVIEW OF OPERATIONS

2.3.1 Approved Activities

The approved activities at the Quarry comprise the following (Figure 2).

- Development and use of an extraction area to extract quartzite using conventional drill and blast, load and haul methods.
- Construction and use of stockpile areas for storage of extracted and processed material.
- Use of mobile processing plant to process extracted material by crushing, screening and washing, to produce a range of aggregates, pebbles and sand. Crushing to produce coarse aggregates is currently undertaken within the void space created by the extraction area. Washing and screening to produce finer aggregates and sand is undertaken on Main Stockpile Area 1 to the immediate west of the Extraction Area
- Construction and use of an access road and haul roads, and an intersection with the Great Western Highway.
- Transportation of up to 500 000t per year of quarry products via the Great Western Highway using predominantly truck and dog and B-Double trucks.

2.3.2 Hours of Operation

The approved hours of operation are as follows.

Activity	Hours
Quarrying operations	<ul style="list-style-type: none">• 7am to 6pm Monday to Friday• 8am to 1pm Saturday
Loading and dispatch of trucks	Any time, provided activities comply with specified noise criteria
Blasting	<ul style="list-style-type: none">• 9am to 5pm Monday to Friday• 9am to 1pm Saturday
Maintenance	Any time, provided activities are inaudible at privately-owned residences

Source: DA 344-11-2001 Notice of Modification – 25 August 2017



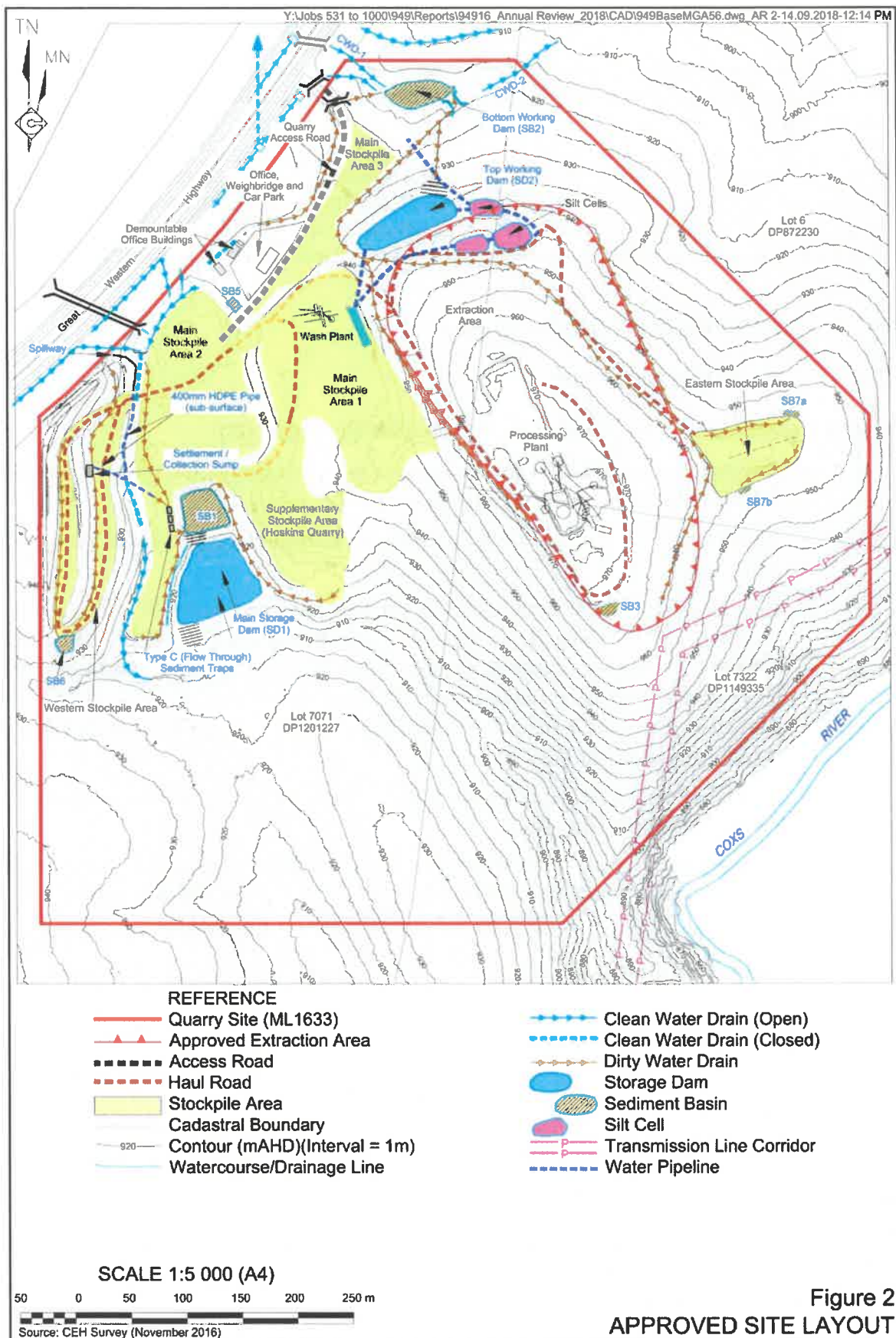


Figure 2
APPROVED SITE LAYOUT

All activities during the reporting Period were undertaken within the approved hours of operation.

2.3.3 Employment

The Quarry currently employs five management staff and nine equipment operators. Employment is expected to remain the same during the next reporting period.

2.4 KEY PERSONNEL CONTACT DETAILS

The key personnel contact names, position and phone numbers are as follows.

Name	Position	24 Hour Contact
Paul Hensley	Managing Director / Compliance Manager	0418 680 022
Trevor Hoffman	Operations Manager	0417 663 222
Ray Sharwood	Quarry Manager	0429 272 148

2.5 MANAGEMENT OF DOCUMENT PREPARATION

This document has been prepared by Mr Andrew Bridle (B.A. (Outdoor Ed.), M. Env.Mgmt), Graduate Environmental Consultant. The document was reviewed by Mr Alex Irwin (B.Sc. (Hons)), Senior Environmental Consultant, both with R.W. Corkery & Co Pty. Limited (RWC).

Mr Paul Hensley (M.E., B.E.) Director / Compliance Manager, Walker Quarries Pty Ltd, provided technical input and information on Quarry operations and environmental performance during the reporting period.



3. APPROVALS

Table 3 presents the approvals and licences held in relation to the Quarry.

Table 3
Wallerawang Quarry – Approvals, Leases and Licences

Consent/Lease/Licence	Issue Date	Expiry Date	Details / Comments
Development Approval DA 344-11-2001	19/10/2004 Modified 25/8/2017	15/7/2019	Issued by the Minister for Infrastructure and Planning
Development Approval DA019/18	28/2/2018	28/2/2023	Issued by Lithgow City Council for demountable office buildings
Environment Protection Licence EPL 13172	21/10/2012 Last varied 23/1/2018	-	Issued by the Environment Protection Authority
Mining Lease 1633	15/7/2009	15/7/2040	Issued by the Minister for Mineral Resources

The Company is planning to seek a modification to DA 344-11-2001 to extend the period of consent beyond July 2019. The Company is currently preparing the application, with submission planned for the fourth quarter of 2018.

The Company is also seeking a separate modification to extend the extraction area and increase the area available for stockpiling to the southwest and south of the Western Stockpile Area. The Company is currently preparing the application, with submission planned for the first half of 2019.

In addition to the approvals and licences listed in **Table 3**, the Company has negotiated a Compensation Agreement with Forestry Corporation of NSW (FC NSW) which allows the Company to operate within an area of Lidsdale State Forest on Lot 7322 DP1149335 and Lot 7071 DP1201227. Discussions with FC NSW have commenced to discuss the incorporation of additional areas of Lidsdale State Forest for the proposed modification to Quarry operations, with initial indications being that FC NSW will not object, subject to the continuation and enforcement of the existing Compensation Agreement and demonstration that the proposed modification would not impact on their softwood plantation harvesting operations.

Table 4 presents the documentation used by Quarry management to guide day-to-day operations at the Quarry.

All management plans are regularly reviewed in accordance with Condition 5(3) of DA 344-11-2001. As noted in **Table 4**, the management plans are being reviewed concurrently with this *Annual Review* in accordance with an *Independent Environmental Audit Action Plan*.

Table 4
Quarry Documentation

Document Title	Date Finalised/Approved
Supporting Documentation for DA 344-11-2001	
<i>Environmental Impact Statement</i>	19/10/2004
<i>Environmental Assessment Modification 1</i>	25/8/2017
Supporting Documentation for ML 1633	
<i>Mining Operations Plan (incorporating a Rehabilitation Management Plan)</i>	8/5/2018
Environmental Management Plans	
<i>Environmental Management Strategy</i>	30/1/2018
<i>Rehabilitation Management Plan</i>	8/5/2018
<i>Noise Management Plan¹</i>	21/12/2017
<i>Blast Management Plan¹</i>	21/12/2017
<i>Air Quality Management Plan¹</i>	21/12/2017
<i>Biodiversity Management Plan</i>	18/9/2018
<i>Soil and Water Management Plan¹</i>	3/9/2018
<i>Environmental Monitoring Program¹</i>	27/9/2016
<i>Bushfire Management Plan¹</i>	21/12/2017
<i>Landscape Planting Plan</i>	22/3/2017
Note 1: These plans are currently being reviewed following the July 2018 IEA and revisions made (as required) by 4 October 2018.	

4. OPERATIONS SUMMARY

4.1 INTRODUCTION

Figure 3 presents an overview of the Quarry layout at the end of the current reporting period. The only changes to the layout expected during the next reporting period will be an increased in the disturbance footprint of the Extraction Area (in accordance with the mining and rehabilitation plans presented in the MOP (see **Figure 4**). In addition, **Plates 1 to 12** present views of various components of the Quarry.

4.2 MINING OPERATIONS

Table 5 presents the material movements during the reporting period and the anticipated movements during the next reporting period.

Table 5
Production Summary – tonnes

Material	Approved limit (specify source)	Previous reporting period (actual)	This reporting period (actual)	Next reporting period (forecast)
Soil	N/A	0	0	0
Overburden	N/A	0	202	0
Product (sold and transported off site)	500 000	85 000	73 326	240 000

Source: Walker Quarries Pty Ltd

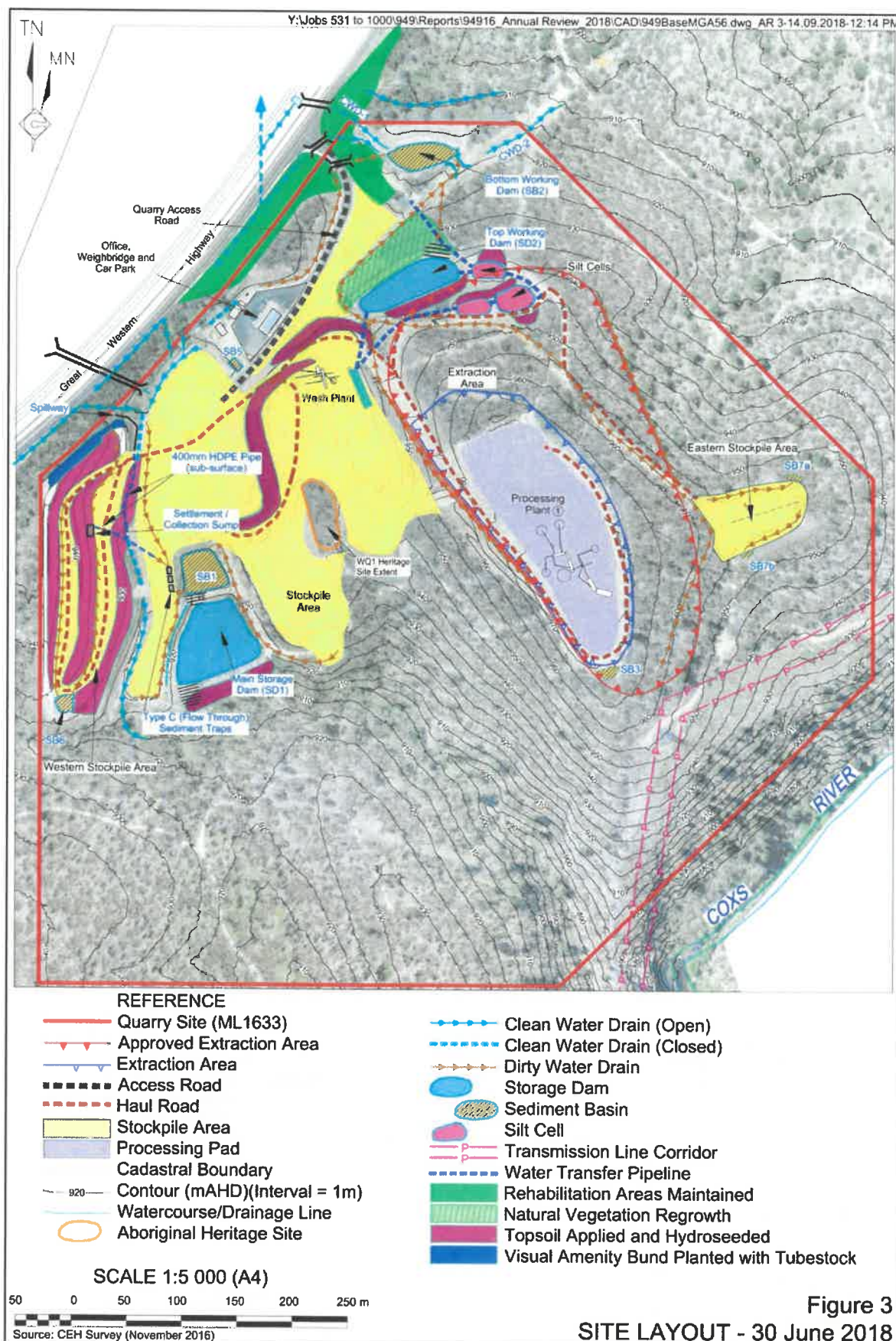
Overburden stripped in preparation for blasting and mining activities was used in the construction of the visual amenity bund to the north of the Western Stockpile Area. A copy of Form S1 submitted to the Division of Resources & Geoscience during the reporting period is included as **Appendix 2**.

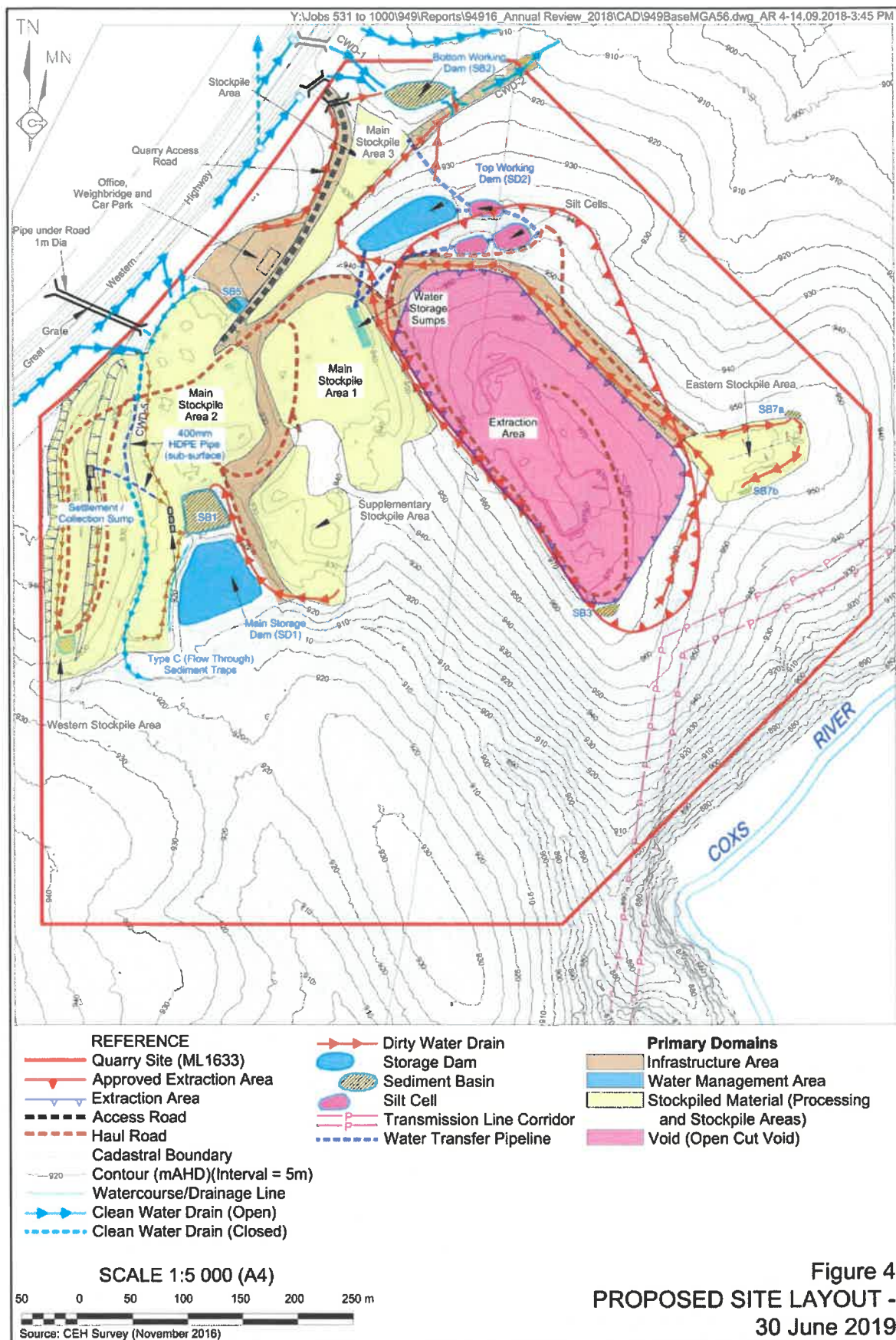
A total of 4 blasts were initiated during the reporting period. **Table 6** presents the date and volume of each blast. All blasts were production blasts and occurred within the approved extraction area.

Table 6
Blasting Operations during the Reporting Period

Blast Date	Volume of Blast (bcm)
23/10/2017	33 837
21/2/2018	21 078
27/4/2018	16 426
9/5/2018	21 074

Source: Walker Quarries Pty Ltd







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Plate 1: View of Hydroseeded
batters of the Western Stockpile
Area and Amenity Bund
(Ref: IMG_3565)

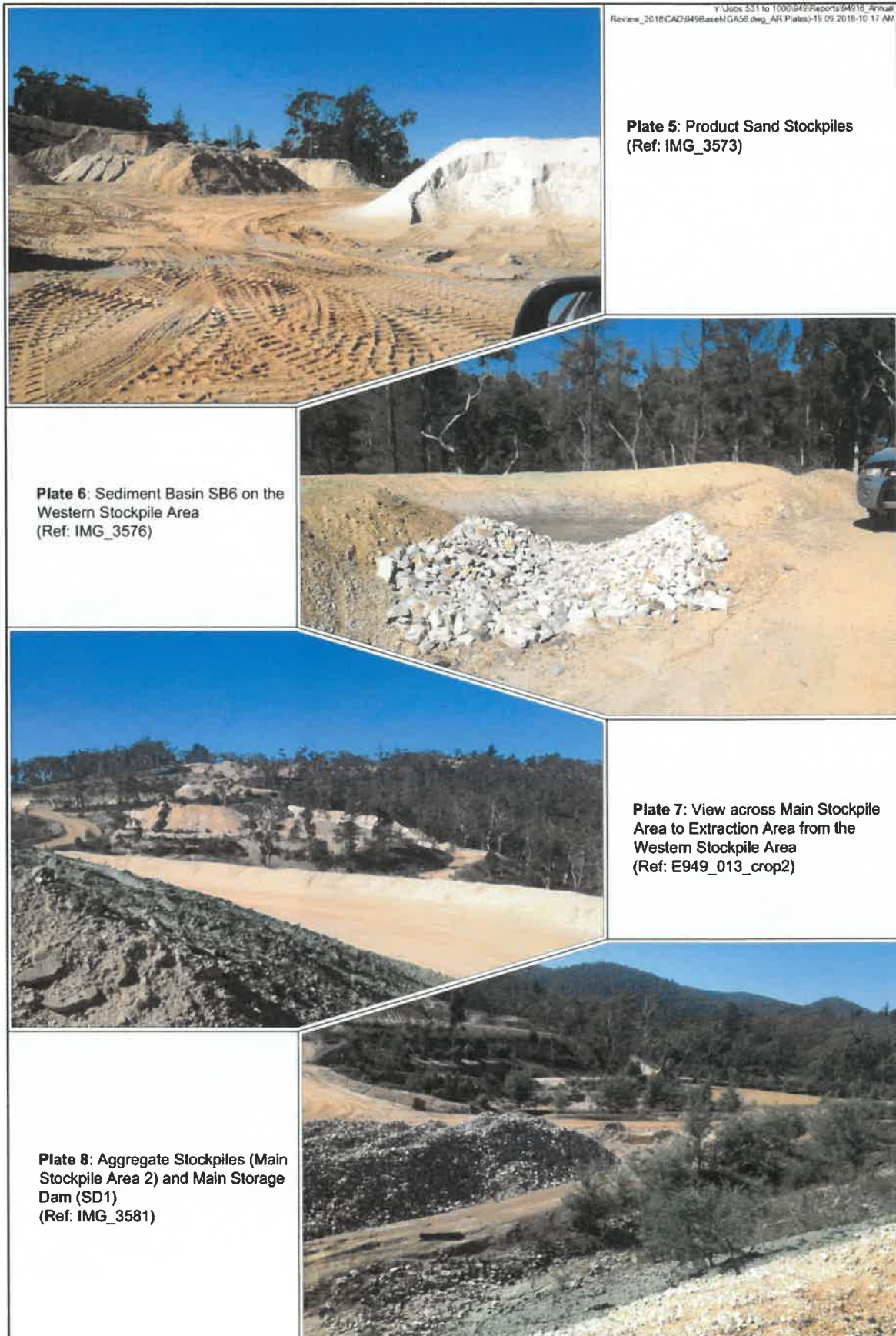
Plate 2: In-pit Mobile Crushing Train
(Ref: IMG_3567)



Plate 3: Extraction Area
(southeastern perimeter)
(Ref: IMG_3569)

Plate 4: Hydroseeded batter above
Silt Cells
(Ref: IMG_3572)







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Plate 9: Tube stock and hydroseed batter of the Amenity Bund and Erosion Controls (Ref: IMG_3583)

Plate 10: View of Hydroseeded batters of the Western Stockpile Area (from the Extraction Area) (Ref: E949G_001)

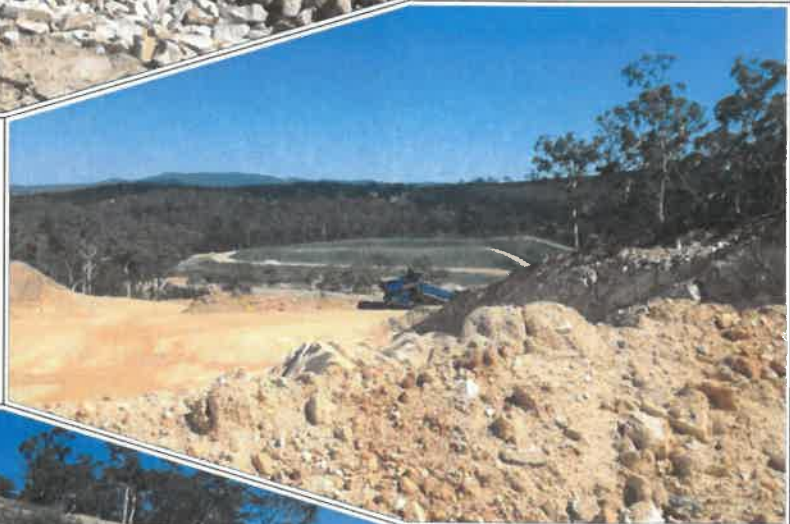


Plate 11: Wash Plant Settling Ponds (Ref: E949G_004)

Plate 12: Top Working Dam (SD2) (Ref: E949G_008)



The Company and blast contractors implement a continuous improvement protocol for blasting through implementation of the following procedures (which are nominated in the Blast Management Plan).

- Blast energies are minimised as far as possible.
- Electronic detonators are not used at the Quarry at any time.
- Quality control practices are implemented on the ground to ensure blasts are kept within design tolerances.
- Adequate burden is maintained on all faces to prevent blowouts and blast anomalies.
- Blasts are designed to ensure fly-rock, dust and fumes, and the impact/damage to people, property, livestock and infrastructure, are limited as much as reasonably practicable.
- Each blast is monitored to confirm compliance with air blast overpressure and ground vibration criteria.
- Following each blast, the area surrounding the blast location is inspected and fly-rock distribution to the front, rear and both sides of the blast site observed.
- Blast contractors, in conjunction with the Quarry Manager, review blast monitoring records to enable continuous improvement and quality control, resulting in continual development of optimum blast parameters.

The results of blast monitoring are provided in Section 6.4.2 (Table 13).

4.3 OTHER OPERATIONS

4.3.1 Construction Operations

During the reporting period, two demountable office buildings were constructed, as shown on Figure 3. During an inspection on 14 December 2017, Lithgow City Council identified that these buildings had been erected without Council approval. The IEA conducted between April and July 2018 found this to represent a non-compliance (low risk) against *Condition 2(8)* of DA 344-11-2001 (relating to construction of, alterations or additions to buildings and structures). Company management had understood that the structures were approved by DA 344-11-2001, however, on advice from Lithgow City Council to the contrary, Development Consent DA 019/18 was obtained for the buildings on 28 February 2018. The Company will obtain Construction and Occupation Certificates for the buildings by 5 October 2018.

The visual amenity bund north of the Western Stockpile Area (see Plates 1 and 9) was completed in accordance with the commitments made in the Environmental Assessment accompanying the application to modify DA 344-11-2001 and to the satisfaction of the DPE.

4.3.2 Processing Operations

The Quarry features two processing plants:

- a crushing and screening plant to produce a range of coarse and fine aggregate sizes; and
- a sand washing plant and associated series of silt settlement basins for the production of fine aggregates and sand.

A Silt Arrestor was installed on the sand washing plant between February and March 2018. This improves the recovery of water and produced a drier product. The Company estimates that water use decreased by approximately 10% as a result of installing the Silt Arrestor.

4.3.3 Stockpiling Operations

The Quarry features several hardstand stockpile areas identified on **Figure 2**, which were used as follows during the reporting period.

- Main Stockpile Areas 1, 2 and 3, which was operated as the principal stockpile areas for quarry products.
- Supplementary Stockpile Area, which was used for the stockpiling of crushing and screening reject material prior to sale or use of this material in rehabilitation works.
- Western Stockpile Area, which was used for the stockpiling of smaller volume and specialty products.
- Eastern Stockpile Area, which was used for the drying of silts removed from the sand washing plant silt cells prior to use in rehabilitation.

4.3.4 Product Transportation

Product transported off site during the reporting period was approximately 73 326 tonnes of material, well below the approved annual transportation volume of 500 000 tonnes. There were a total of 3 107 truck movements during the reporting period.

4.4 NEXT REPORTING PERIOD

The Company anticipates that blasting will continue during the next reporting period, and estimates that subject to market demand, approximately five blasts will be undertaken. The Company anticipates that production will increase significantly in the next reporting period, to approximately 240 000t (see **Table 5**).

Processing activities using the mobile plant are proposed to continue during the next reporting period, with the amount of material to be processed dependant on the demand for the Quarry's products. A Kleemann Impact Crusher (MR-130-ZEV02) was commissioned in August 2018 to produce predominantly concrete aggregate.



Product transported during the next reporting period will be consistent with production and is anticipated to rise to 240 000t. This remains well below the production limit of DA 344-11-2001.

An application to extend the period of ML 1633 to July 2040 has been lodged and the Company expects to receive this extension during the next reporting period.

The Company is planning to seek two modifications to DA 344-11-2001.

- The first (being the 2nd modification [MOD 2] to DA 344-11-2001) under Section 4.55(1A) of the *Environmental Planning & Assessment Act 1979* (EP&A Act) to extend the period of consent beyond July 2019.
- The second (and 3rd cumulative modification [MOD 3]) and more significant modification will be made under Section 4.55(2) of the EP&A Act. This modification will include an increase in the resource to be extracted, an extension the extraction area and an increase to the area available for stockpiling to the west of the Western Stockpile Area.

Initially the modifications were to be made as part of a single application. However, due to delays in the preparation of a Statement of Environmental Effects (SoEE), it has been determined that confirmation of an extension to the period of approved quarrying operations (beyond July 2019) is critical and requires immediate application, assessment and determination. Application for MOD 2 is likely to be submitted in the 4th quarter of 2018 and the application for MOD 3 in the 1st or 2nd quarter of 2019.

5. ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

Correspondence from the Department of Planning and Environment regarding the *Annual Review 2017* was provided on 13 and 30 November 2017. **Table 7** describes the feedback the Department provided and the Company's response.

Table 7
Actions from the Previous Annual Review

Action Required from Previous Annual Review	Action Taken	Where Discussed in Annual Review
Include a plan that shows the offset areas.	A Biodiversity Offset Strategy was prepared and submitted on 12 July 2018. The BOS provides for the retirement of biodiversity credits through payment to the Biodiversity Conservation Fund by 31 December 2018.	Section 6.6
Include a plan that shows the areas under rehabilitation	Areas under rehabilitation are shown in Figure 3 in Section 4.	Section 4
It is suggested that the Annual Review is split into separate sections prior to uploading on to the website to reduce the size of the document to a more suitable size for download.	Noted.	N/A
It is also suggested that pages 413 – 1890 are omitted from the Annual Review, as this is over 1400 pages of weather data that is not useful in this format and is not necessary to be included.	Noted.	Meteorological data is provided and discussed in Section 6.2
It is also noted that the Department does not require the inclusion of management plans in the Annual Review. These documents will be available on the website for reference if required.	Noted.	Management plans are available on the Company's website.

It is noted that the format of the Annual Review has been updated since the preparation of the 2017 Annual Environmental Management Report (RME, 2017) and is in accordance with the DPE's *Annual Review Guideline* dated October 2015. As noted in the *Preliminary Section* of these guidelines, by following these guidelines, operators will meet:

- the Annual Review requirements nominated in the project approval;
- the Environmental Management Report requirements of the Division of Resources & Energy (now Resources Regulator) under the conditions of a mining lease; and
- the routine reporting expectations of DPI Water (now Natural Resources Assessment Regulator).

6. ENVIRONMENTAL PERFORMANCE

6.1 INTRODUCTION

Environmental monitoring is undertaken to determine the degree of impact the Quarry is having on the environment. Assessment of these results can establish if environmental management systems are being successfully applied in the short term and if the management systems need to be amended.

Appropriate environmental monitoring, apart from satisfying necessary statutory requirements, demonstrates to the local community and relevant authorities the Company's commitment to the protection of the environment.

The following sub-sections present the results of the various monitoring programs undertaken throughout the reporting period. Where appropriate, results of the previous years' monitoring are also presented for comparative purposes.

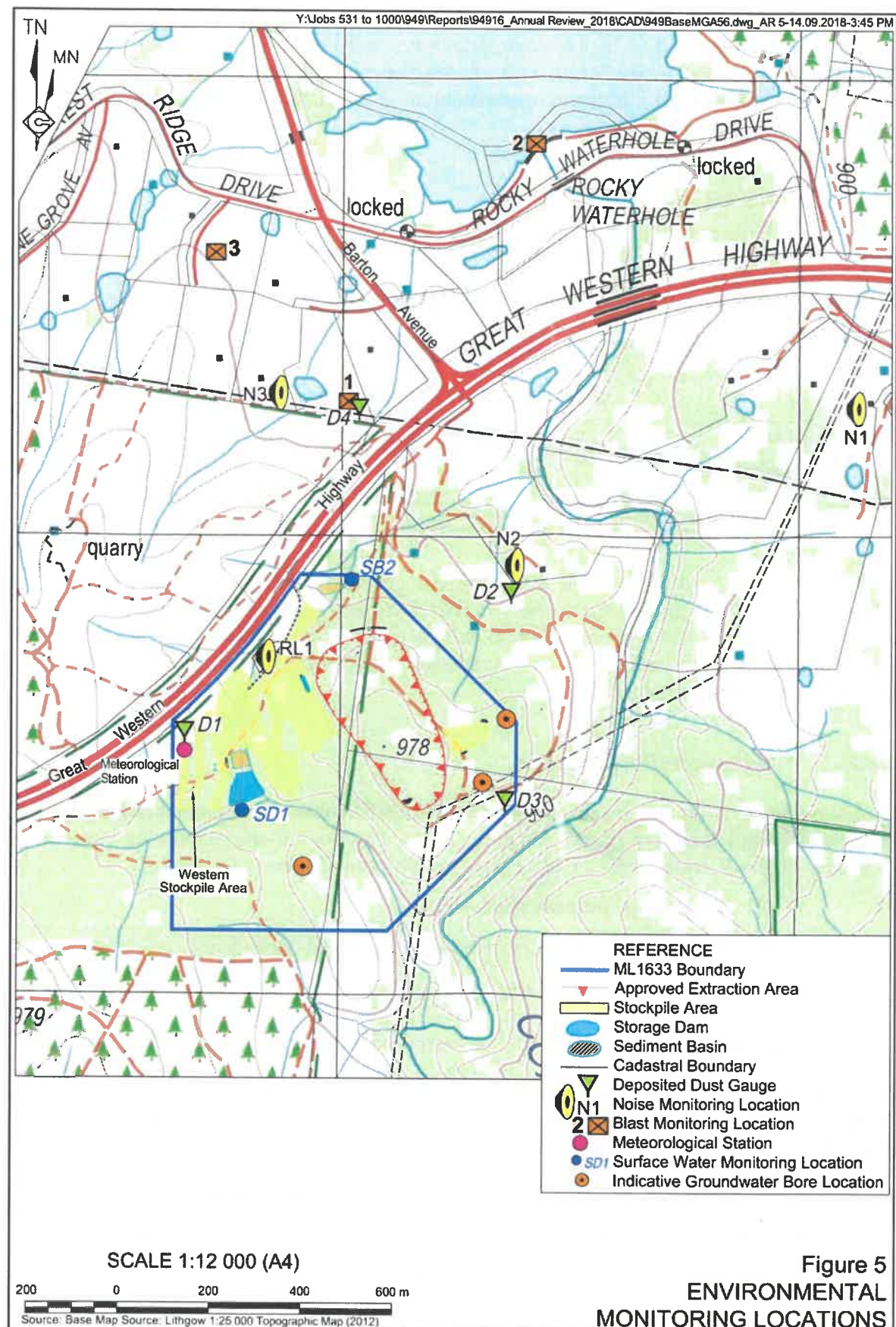
Figure 5 provides the monitoring locations referred to in this section.

6.2 METEOROLOGICAL MONITORING

Table 8 presents the meteorological monitoring results recorded by the Company's automated meteorological monitoring station (also displayed in Figure 5). In addition, long term-average climate data from the Bureau of Meteorology-operated Lithgow (Cooerwull) Weather Station (Station No 063226) is provided for comparison.

Table 8
Meteorological Monitoring Results

Year		July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	Ann
Average Temperature (°C)														
2016/17 ²	Maximum	11.7	11.8	13.9	17.6	23.3	26.6	28.7	28.7	21.5	17.2	14.6	11.4	18.9
	Minimum	2.3	1.2	4.5	5.4	8.5	12.6	14.9	14.1	13.0	6.1	2.8	1.3	7.2
2017/18	Maximum	11.7	12.4	19.8	20.8	20.2	26.4	28.0	26.0	23.8	21.8	15.4	10.5	19.7
	Minimum	-0.4	0.4	2.1	7.6	8.5	13.0	12.8	11.6	10.9	10.9	2.1	1.6	6.8
Rainfall (mm)														
2016/17 ²	Total	47.6	60.6	123.6	57.6	48.6	83.8	38.6	18.6	148	23.4	26.6	26.6	703.6
	No. of Rain Days	7	12	19	11	9	11	11	10	20	13	15	19	157.0
	Max Daily Rainfall	34.6	19.8	34	9.6	30.4	48.6	22	3.4	53.2	10.4	17.4	9.6	53.2
2017/18	Total	14.2	36	5.4	77.2	22	77.4	43	90.6	26.2	9.8	15.8	32.8	450.4
	No. of Rain Days	11	9	5	11	12	12	5	8	11	9	8	18	119.0
	Max Daily Rainfall	6.8	12.4	2.6	49.4	8.6	28.8	37.2	55	13.8	2.8	10.2	14.4	55.0
Note 2: Monitoring commenced at 4:00pm on 13 July 2016														
Source: Walker Quarries Pty Ltd														



A meteorological monitoring station has been operating at the Quarry, in its current location, since July 2016. Previously a meteorological station was located to the east of the Quarry Site on the boundary of Lot 6 DP872230. This meteorological station was damaged beyond repair by a lightning strike in 2015. Meteorological monitoring was not undertaken during the 2015/16 reporting period as a result.

6.3 NOISE

6.3.1 Performance Criteria and Predicted Impacts

Table 9 identifies the relevant noise-related performance criteria for residences surrounding the Quarry Site identified by *Condition 3(3)* of DA 344-11-2001.

Table 9
Noise-related Performance Criteria

Receiver	Day dB(A) ¹	Evening dB(A) ¹	Night dB(A) ¹
Any residence on privately owned land	43	43	39
Note 1: Units = LAeq 15 minutes			

Modelling of predicted noise levels for potential receptors in the vicinity of the Quarry was undertaken for the original *Environmental Impact Statement* (EIS) (Pacrim, 2001). The results of the modelling reported by Pacrim (2001) indicated that all noise criteria would be complied with under calm conditions, however, exceedances could occur during adverse atmospheric conditions at some receptor locations.

6.3.2 Measured Performance

Section 6.3 of the *Noise Management Plan* (NMP) identifies that attended noise monitoring will be undertaken at least every six months at the following three off-site monitoring locations as shown on **Figure 5**, which represent the closest residential receivers to the Quarry.

- N1: "Gemalong" property residence.
- N2: "Cockatoo Pines" property boundary adjacent to residence.
- N3: Cypress Place, Wallerawang.

In addition, a fourth monitoring point, RL1, is located adjacent to the Quarry office.

Attended noise monitoring programs were undertaken on 19 and 20 September 2017 and 4 April 2018 by Muller Acoustic Consulting Pty Ltd (MAC). The resulting reports (MAC, 2017 and MAC, 2018) are presented as **Appendix 3**.

All noise monitoring was undertaken under the following operational conditions.

- extraction of quartzite using standard drill, blast, load and haul techniques;
- processing of extracted quartzite and stockpiling; and
- transportation of quarry products.

Noise monitoring was undertaken at monitoring locations N1, N2, N3 and RL1 (see **Figure 5**) during each monitoring campaign. The noise monitoring results are summarised in **Tables 10 and 11**.

6.3.3 Discussion and Analysis

Noise levels at locations N1, N2 and N3 complied with the assessment criteria in all instances during the reporting period. Indeed, the attended monitoring program found that the Quarry was inaudible at these locations over background noise levels. This is consistent with the results of earlier noise monitoring conducted in July 2016 and January 2017, which also found the Quarry to be inaudible over background noise levels, except for one instance in July 2016 at N3 where a reversing alarm was audible. In this instance, the quarry contribution was still estimated to be less than 33dB(A), well below the assessment criteria of 43dB(A). As such, there are no identifiable trends in noise levels, except the continued compliance of the operation.

Monitoring during the reporting periods was undertaken on the 19 and 20 September 2017, and 4 April 2018. Noise monitoring was originally planned for March 2018, however, was delayed due to a period of reduced operational activity and high winds during March 2018. This delay resulted in monitoring being undertaken outside the 6 months nominated in the approved NMP and recorded as a non-compliance (low risk) with *Condition 3(4)* of DA 344-11-2001 by the IEA. The NMP is being reviewed to ensure factors such as operational activity and wind conditions are considered in the scheduling of noise monitoring.

The IEA also reported a non-compliance (low risk) against *Condition 5(2)* of DA 344-11-2001 as the NMP does not describe how matters raised by EPA have been addressed and resolved. The Company maintains that approval of the NMP illustrates the matters raised by the relevant agencies have been resolved to the satisfaction of the Secretary of DPE.

The IEA also reported that detailed baseline data is not provided in the NMP as required by *Condition 5(3)* of DA 344-11-2001. The Company believes that the establishment of noise criteria in accordance with the Industrial Noise Policy (INP) identifies the background (baseline) noise data.

Table 10
Noise Monitoring Results – 19-20 September 2017

Location	Date and Time (hrs)	Attended Noise Monitoring Results (dB(A))					Criteria dB(A)	Met conditions ¹		Comments
		Total measured			Site Contribution L _{eq}	Wind Speed (m/s)		Wind Direction		
		L _{max}	L _{eq}	L ₉₀						
N1	19/9, 12:41	67	52	47	Quarry Inaudible	43	3.2	SW	Wind Noise 45-50; Traffic 47-56; Airbrakes 55-67; Birds 53-56.	
	20/9, 8:58	59	49	41		43	1.1	W	Traffic 42-59, Birds 46-56, Horse Noise 50-56, Airbrakes 48-58.	
N2	19/9, 11:52	64	50	42	Quarry Inaudible	43	2.8	S	Traffic Noise 44-48, Birds 39-51, Aircraft 60-63, Airbrakes 53-64.	
	20/9, 9:23	60	45	38		43	0.5	W	Traffic 40-49, Airbrakes 46-60, Birds 35-41.	
N3	19/9, 13:52	59	45	40	Quarry Inaudible	43	3.5	SW	Wind 45-55, Traffic Noise 43-47, Airbrake 52-53, Birds 50-59.	
	20/9, 8:38	62	49	40		43	0.5	NW	Traffic 42-62, Birds 36-51, Airbrakes 51.	
RL1	19/9, 13:16	76	65	62	65	N/A	3.2	SW	Sand Plant 64-67; Truck 56-58; Reverse Alarm 63; Wind Turbulence 64-65.	
	20/9, 9:44	79	65	62	65	N/A	1.0	W	Sand Plant 63-67, Loader 64-66, Trucks on Highway 50-56; Truck onsite 66-73, Reverse Alarm 63-64.	

Note 1: Meteorological data was recorded with a hand-held anemometer.

N/A: Not Applicable.

Source: Muller Acoustic Consulting (2017) – Tables 3-6

Note 1: Meteorological data was recorded with a hand-held anemometer.

N/A: Not Applicable.

Source: Muller Acoustic Consulting (2017) – Tables 3-6

Table 11
Noise Monitoring Results – 4 April 2018

Location	Time (hrs)	Attended Noise Monitoring Results (dB(A))				Criteria dB(A)	Met conditions ¹		Comments
		Total measured			Site Contribution		Wind Speed (m/s)	Wind Direction	
		L _{max}	L _{eq}	L ₉₀					
N1	9:12	62	48	40	Quarry Inaudible	43	0.5	E	Traffic 46-62, Domestic Noise 36-38, Birds 42-54.
	11:22	66	50	42			1.2	E	Traffic 49-66, Birds 46-53, Aircraft 48-54.
N2	8:26	65	47	42	Quarry Inaudible	43	0.9	SE	Traffic Noise 44-54, Birds 41-65, Wind in trees 43-45.
	10:38	66	43	37			0.6	E	Traffic 42-48, Birds 43-66, Aircraft 39-53.
N3	8:51	55	46	39	Quarry Inaudible	43	1.0	NE	Insects 34-36, Traffic 46-55, Aircraft 44-50, Birds 36-45.
	11:01	62	46	35			1.4	E	Traffic 42-62, Birds 40-50, Insects 35-37
RL1	8:06	71	57	54	57	N/A	2.0	SE	Onsite Truck 59-61, Generator 56-58, HIAB 60-62, Highway Trucks 59-60.
	10:16	79	57	52	57	N/A	0.5	E	Generator 53-54, Screening Plant 50-56, Water Cart 61-79, Highway Trucks 60-71
Note 1: Meteorological data was recorded with a hand-held anemometer.									
N/A Not Applicable.									
Source: Muller Acoustic Consulting (2018) – Tables 3-6									

Note 1: Meteorological data was recorded with a hand-held anemometer.

N/A Not Applicable.

Source: Muller Acoustic Consulting (2018) – Tables 3-6

6.4 BLASTING

6.4.1 Public Notices, Performance Criteria and Predicted Performance

Condition 3(9) of DA 344-11-2001 requires the Company during blasting operations to:

- implement best practice management to:
 - protect the safety of people and livestock;
 - protect public or private infrastructure and property from damage; and
 - minimise the dust and fume emissions;
- operate a suitable system to enable the local community to get up-to-date information on the proposed blasting schedule on site; and
- carry out regular monitoring to determine whether the development is complying with the relevant conditions of this consent.

A blast notification board, detailing the date and time of the next blast is maintained at the Quarry entrance on the Great Western Highway and updated at least 24 hours before each blast. In addition, the Company provides specific notification of individual blasts to any landowner, within 2km of the Quarry who has registered an interest in being notified about the blasting schedule at the Quarry.

Table 12 presents the airblast overpressure and ground vibration performance criteria identified in *Conditions 3(6)* of DA 344-11-2001.

Table 12
Blasting-related Performance Criteria

Receiver	Airblast Overpressure (dB Linear Peak)	Ground Vibration (mm/s)	Allowable Exceedance
Any residence on privately-owned land	120	10	0%
	115	5	5% of the total number of blasts over a period of 12 months
All public infrastructure	-	50	0%

The *Blast Management Plan* identifies that blast monitoring will be undertaken at three locations, B1, B2 and B3, for each blast event, as shown in **Figure 5**.

In addition to the above criteria, *Condition 3(1)* of DA 344-11-2001 permits blasting between 9:00am and 5:00pm, Monday to Friday, and between 9:00am and 1:00pm on Saturdays. No blasting is permitted on Sundays or Public Holidays.

Modelling of predicted ground vibration and overpressure was undertaken for the original EIS (Pacrim, 2001), with results indicating that the criteria for ground vibration and airblast overpressure would not be exceeded at any time during Quarry operations at the nearest receivers.

6.4.2 Measured Performance

Table 13 presents the results of blast monitoring during the reporting period.

Table 13
Blast Monitoring Results

Date		B1		B2		B3	
		Ground Vibration (mm/s)	Air Blast (dB)	Ground Vibration (mm/s)	Air Blast (dB)	Ground Vibration (mm/s)	Air Blast (dB)
Criterion	95%/yr	5	115	5	115	5	115
	100%	10	120	10	120	10	120
23/10/2017		N/T	N/T	N/T	N/T	N/T	N/T
21/2/2018		N/T	N/T	N/T	N/T	N/T	N/T
27/4/2018		N/T	N/T	N/T	N/T	N/T	N/T
9/5/2018		0.6	108.4	0.9	111.8	N/T	N/T
N/T No Trigger. Blast was not sufficient to 'trigger' the monitors, which were set to trigger at 100dB (air blast) and 0.51mm/sec (ground vibration).							
Source: Walker Quarries Pty Ltd							

6.4.3 Discussion and Analysis

The criteria of 5mm/s for ground vibration and 115dB for air blast overpressure were not exceeded during the reporting period. Blasting results therefore satisfied the criteria presented in Table 12. Indeed, three of the four blasts undertaken during the reporting period created insufficient ground vibration or air blast overpressure to trigger any of the three monitors. The fourth blast triggered two of the three monitors, which recorded ground vibration and air blast overpressure levels well below the criteria.

Over the course of the Quarry's operation, all blasts have remained below the performance criteria. This reporting period is the first in which the monitor at B1 has not been triggered. In previous reporting periods between 2014 and 2017, ground vibration levels recorded at this location have ranged between 0.7mm/s and 1.4mm/s, while air blast overpressure levels have ranged between 97.5dB and 110.6dB. At B2, ground vibration levels have ranged between 0.5mm/s and 1.3mm/s in previous reporting periods, while recordings of air blast overpressure have ranged from 95.9dB to 108.0dB. At B3, the monitor was triggered on only one occasion during previous reporting periods, in November 2014, when it registered ground vibration at 0.6mm/s and air blast overpressure at 104.5dB. Over the course of the Quarry's operation, all blasts have remained below the performance criteria. There is no identifiable trend in monitored ground vibration and air blast overpressure levels since the commencement of blasting operations at the Quarry.

6.5 AIR QUALITY

6.5.1 Performance Criteria and Predicted Impacts

Table 14 presents the air quality performance criteria presented in *Condition 3(12)* of DA 344-11-2001.



Table 14
Air Quality-related Performance Criteria

Pollutant	Averaging period	Criterion
Particulate matter < 10µm (PM ₁₀)	Annual	25µg/m ³
Particulate matter < 10µm (PM ₁₀)	24 hour	50µg/m ³
Particulate matter < 2.5µm (PM _{2.5})	Annual	8µg/m ³
Total suspended particulates (TSP)	Annual	90µg/m ³
Deposited dust	Annual Incremental Increase	2g/m ² /month
Deposited dust	Annual Average Total Deposited Dust	4g/m ² /month

Modelling of likely dust emissions resulting from the Quarry was undertaken for the original EIS (Pacrim Environmental, 2001), with results indicating that nuisance and health related dust impacts would be negligible at all production levels and under all wind conditions. The modelling predicted that increases in dust deposition rates for the surrounding area would not exceed 0.1g/m²/month above existing dust levels under a production rate scenario of 125 000tpa. The average deposited dust levels in 1999 were 0.9g/m²/month at monitoring location D1, 0.6g/m²/month at D2, 0.9g/m²/month at D3, and 1.0g/m²/month at D4.

6.5.2 Measured Performance

6.5.2.1 Particulate Matter

The second revision of the *Air Quality Management Plan* (AQMP) was approved by the Department of Planning and Environment on 21 December 2017. In accordance with this Plan, monitoring of particulate matter will be implemented should the rolling average of monthly deposited dust monitoring results reach a trigger level of 3.5g/m²/month. During the reporting period, this trigger level was not reached (see Section 6.5.2.2 below).

6.5.2.2 Deposited Dust

Locations of the deposited dust monitoring locations are shown on **Figure 5**. **Table 15** presents the results of the deposited dust monitoring program for 2017/18 and the 2016/17 average for comparison, while **Figure 6** presents these results graphically. Deposited dust monitoring data from July 2013 to June 2017 is presented in **Figure 7**.

6.5.3 Discussion and Analysis

Samples recorded in the reporting period varied between <0.1g/m²/month and 9.8g/m²/month. The deposited dust criterion was exceeded on two occasions at D2, between 5/7/2017 and 4/8/2017 when 9.0g/m²/month was recorded, and between 1/12/2017 and 3/1/2018, when 9.8g/m²/month was recorded. Given that the annual average deposited dust was 2.5g/m²/month including these two samples, that during the remainder of the reporting period recordings ranged from 0.3 to 2.0, and that recordings at D1, D3 and D4 were all below 1.0g/m²/month on both occasions, it appears likely that these two exceedances were isolated and anomalous results and do not reflect dust emissions from the Quarry. With the exception of these two recordings, samples recorded during the reporting period ranged from <0.1g/m²/month to 2.6g/m²/month, and annual averages were between 0.8g/m²/month and 0.9g/m²/month at D1, D3 and D4, indicating that the deposited dust impacts as a result of the Quarry's operations are generally well below the assessment criterion.

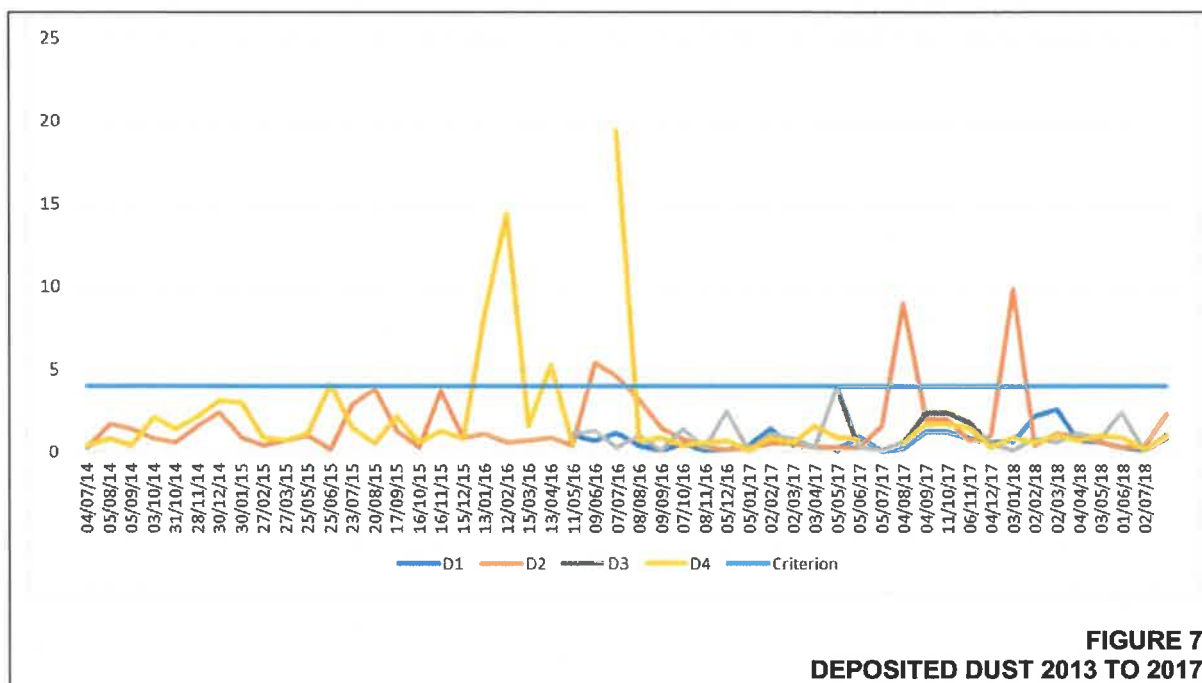
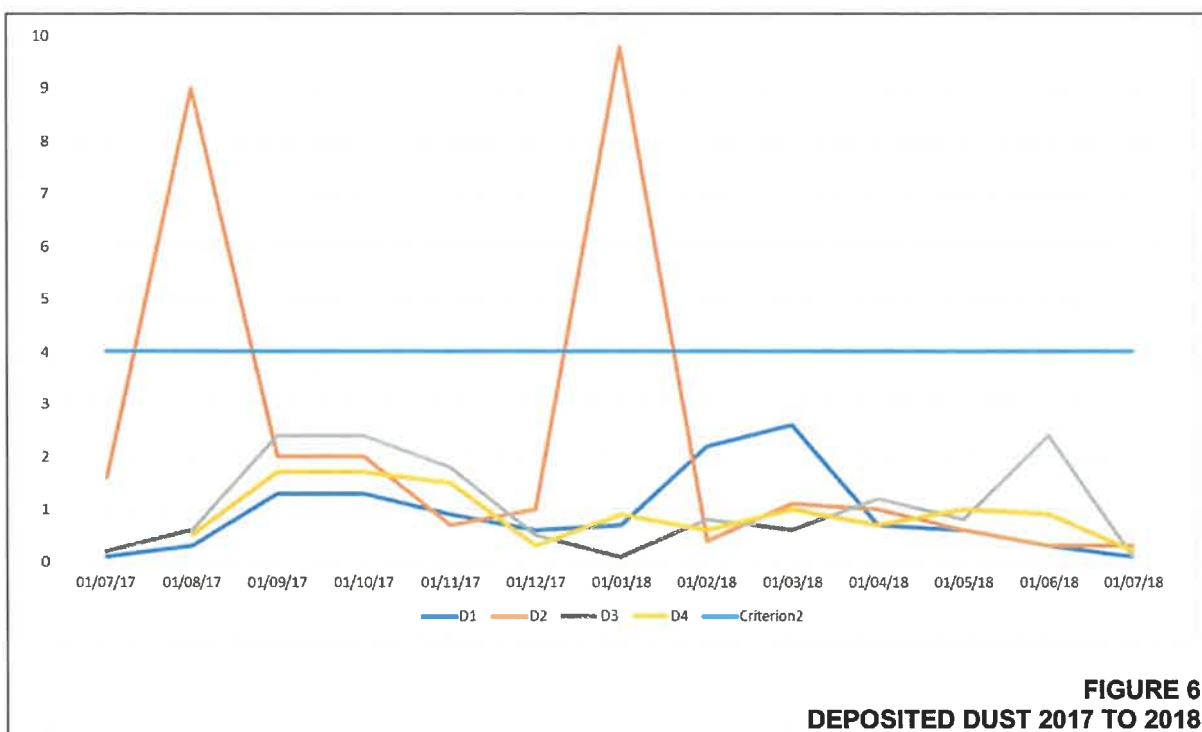
Table 15
Deposited Dust Monitoring Results¹

Start Date	End Date	Monitoring Location				Criterion ²
		D1	D2	D3	D4	
2016/17 Annual Average		0.2	0.3	0.3	1.8	4.0
5/6/2017	5/7/2017	<0.1	1.6	0.2	I/A	4.0
5/7/2017	4/8/2017	0.3	9.0	0.6	0.5	4.0
4/08/2017	4/09/2017	1.3	2.0	2.4	1.7	4.0
4/9/2017	11/10/2017	1.3	2.0	2.4	1.7	4.0
11/10/2017	6/11/2017	0.9	0.7	1.8	1.5	4.0
06/11/2017	04/12/2017	0.6	1	0.5	0.3	4.0
01/12/2017	03/01/2018	0.7	9.8	<0.1	0.9	4.0
03/01/2018	02/02/2018	2.2	0.4	0.8	0.6	4.0
02/02/2018	02/03/2018	2.6	1.1	0.6	1.0	4.0
02/03/2018	04/04/2018	0.7	1	1.2	0.7	4.0
04/04/2018	03/05/2018	0.6	0.6	0.8	1.0	4.0
03/05/2018	01/06/2018	0.3	0.3	2.4	0.9	4.0
01/06/2018	02/07/2018	<0.1	0.3	0.1	0.2	4.0
Annual Average		0.9	2.5	0.9	0.8	4.0
Note 1: Units – g/m ² /month						
Note 2: Averaged over a 12-month period						
I/A: Inaccessible						
Source: Walker Quarries Pty Ltd						

The chart of deposited dust monitoring data from July 2013 to June 2017 shows that deposited dust has predominantly remained below the criterion with the following exceptions.

- At D1 on two occasions in September 2013 and July 2016.
- At D4 on two occasions, in January and July 2016.

These exceedances do not form part of any discernible long-term trends in dust levels, but rather generally appear to occur in isolation before returning to levels below the criterion shortly afterwards. They are likely a result of localised events near the dust gauges and not indicative of dust emissions from the Quarry. For example, an investigation into the July 2016 result was completed at the time and the elevated level deemed a consequence of activities on the property near where the dust gauge was located (motorbike riding in the vicinity of the dust gauge during school holidays). The gauge was subsequently moved to avoid future contamination.



The IEA found that detailed baseline data is not provided in the AQMP as required by *Condition 5(3)* of DA 344-11-2001. The Company will review and update the AQMP to include available baseline data collected by Pacrim (2001) and noted in Section 6.5.1 above.

6.6 BIODIVERSITY

6.6.1 Consent Conditions

In accordance with *Condition 2.38* of the original development consent, and the approved *Flora and Fauna Management Plan*, the Company has undertaken monitoring of flora and fauna on the Quarry Site. The *Flora and Fauna Management Plan* also states that these areas will be monitored annually for evidence of Purple Copper Butterfly and the health and distribution of Blackthorn. When DA 344-11-2001 was modified on 25 August 2017, *Condition 2.38* was replaced by *Condition 3(26)*, which requires monitoring of biodiversity to be undertaken in accordance with a *Biodiversity Management Plan*. This condition includes a requirement that the *Biodiversity Management Plan* describe the procedures to be implemented for ensuring minimal environmental consequences for threatened species, populations and habitats, including the Purple Copper Butterfly. The *Biodiversity Management Plan* has been completed and submitted to the DPE for approval.

6.6.2 Measured Performance

A field survey was undertaken by Lesryk Environmental Pty Ltd (Lesryk) on 3 and 4 October 2017, and six 10m x 10m vegetation monitoring plots established in September 2016 were re-surveyed (see **Figure 8**). The resulting report (Lesryk, 2017a) is presented as **Appendix 4**.

Lesryk (2017a) found that the abundance of groundcover species, particularly introduced species, was noticeably less than in 2016. Lesryk (2017a) suggested that this was likely due to dry conditions in the three months leading up to the survey date, with rainfall almost half of the average for that period. None of the plots exhibited obvious signs of changes in soil condition resulting from Quarry operations. No flora species listed in the *NSW Biodiversity Conservation Act 1995* (BC Act) or *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) were detected in either 2016 or 2017.

Fauna species observed or heard during the field survey included 3 native mammals, 34 birds, 1 reptile and 1 frog. An additional 22 bird species, 2 reptile species and 4 native mammal species have been recorded during previous investigations of the Quarry Site and surrounds. Two Gang-gang Cockatoo (*Callocephalon fimbriatum*), a species listed as Vulnerable under Division 1, Part 3, Schedule 1 of the BC Act, were observed foraging within the site during the field survey, however, no evidence of nesting was obtained.

Varied Sittellas (*Daphoenositta chrysoptera*) and Scarlet Robins (*Petroica boodang*), both listed as Vulnerable under the BC Act, were detected during the 2016 survey, but were not observed or heard during the 2017 survey. Lesryk (2017a) considers that these birds incorporate the Quarry Site into their home range area, including it in their foraging movements, however no evidence of breeding on site was obtained during the 2016 and 2017 surveys.

An investigation to determine the presence of Purple Copper Butterfly was undertaken at five Blackthorn (*Bursaria spinosa subsp. lasiophylla*) monitoring sites that were identified during an initial survey for the species undertaken in 2016 (**Figure 8**). Two nearby control sites where the Purple Copper Butterfly has been previously detected were also visited.

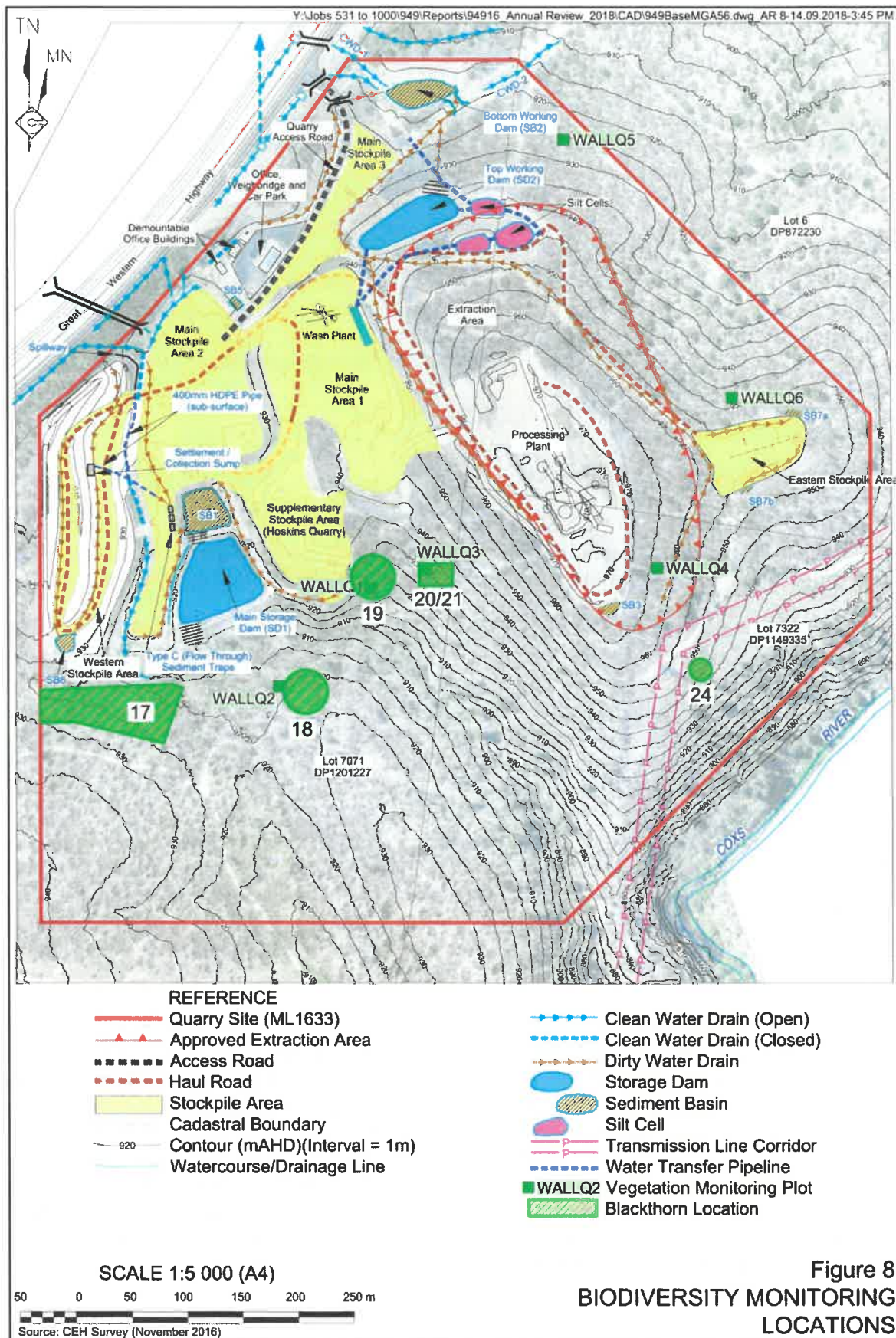


Figure 8
BIODIVERSITY MONITORING
LOCATIONS

A report of the investigation (Lesryk, 2017b) is presented as **Appendix 5**, and the results are summarised as follows.

- No Purple Copper Butterflies or their larvae were observed within any of the monitoring sites.
- No *Anonychomyrma itinerans* ants were present within any of the monitoring sites.
- Species of butterfly, ants and other insects were present within the quarry site.
- All of the monitoring sites within the quarry exhibited grazing of the Blackthorn leaves and new growth.
- Purple Copper Butterflies and *Anonychomyrma itinerans* ants were observed within the Coss River control site.
- No additional stands of Blackthorn were recorded in the two areas where foot traverses were conducted.

Similarly, no Purple Copper Butterflies or *Anonychomyrma itinerans* ants were observed during the survey undertaken in October 2016.

Lesryk (2017b) found that the predominant weed and exotic species present were Blackberry (*Rubus fruticosus*) and Monterey Pines (*Pinus radiata*), and that several Pine saplings became established within or near the monitoring sites since the 2016 survey. Whilst a number of these saplings have been treated, adult plants which are sources of seed are still present. Some introduced grasses were also present, however, their density and distribution were limited due to the low rainfall experienced in the area. Lesryk (2017b) recommended that Pine saplings be treated and mature plants removed.

No significant rehabilitation had been undertaken at the quarry site at the time of the field survey to allow monitoring of rehabilitation to commence.

6.6.3 Discussion and Analysis

The flora and fauna monitoring undertaken in accordance with the *Flora and Fauna Management Plan* has identified no evidence that the Quarry is having any detrimental effect on the biodiversity of the Quarry Site and surrounds.

6.7 HERITAGE

6.7.1 Consent Conditions

An archaeological survey of the Quarry Site undertaken in 1999 identified a single Aboriginal site containing 22 artefacts (see **Figure 2**).

Condition 3(21) of DA 344-11-2001 requires that the Company:

- not disturb the area marked “Aboriginal Heritage Site” on the Development Layout Plan; and
- protect and conserve the area subject in consultation with the Bathurst Local Aboriginal Land Council, and to the satisfaction of the Secretary.



6.7.2 Aboriginal Site Assessment

An assessment of the previously identified Aboriginal site was undertaken by OzArk Environmental and Heritage Management Pty Ltd (OzArk) on 6 March 2018, and the resulting letter report (OzArk, 2018) is presented as **Appendix 6**. Up to 16 artefacts were recorded during the site inspection, consisting of flakes of varying composition and integrity. OzArk (2018) found that no Quarry-related ground disturbance impacts have occurred within the site since initial identification due to permanent fencing, but noted ongoing erosion related impacts including general erosion and surface sediment wash.

The archaeologist who originally identified the site in 1999 considered that the site's proximity to the Coxs River and an adjoining tributary increased its potential to be an Aboriginal camp ground and thus likelihood of subsurface archaeological material, as he considered that the surface scatter may not be an accurate reflection of the real artefact density due to the aggrading condition of the landform. However, OzArk (2018) assessed that the predominantly siliceous and sandy soil at the site is highly susceptible to erosion, and therefore any subsurface archaeological material present would likely have a low conservation value.

The Company considers avoidance of the site into the future to be unfeasible should the proposed modification to extend the extraction and stockpile areas of the Quarry Site proceed. An Aboriginal Cultural Heritage Impact Assessment has been commenced and will be completed during the next reporting period. Aboriginal community consultation following the *Aboriginal Cultural Heritage Consultation Requirements* (ACHCRs) will be initiated with field survey to occur during August 2018. The results of consultation, field survey and assessment of impacts will be compiled as part of an *Aboriginal Cultural Heritage Assessment Report* (ACHAR) which will support the application to modify DA 344-11-2001 (MOD 3).

6.8 TRAFFIC AND TRANSPORT

Transportation activities during the reporting period occurred during the approved hours of operation (Section 2.3.2).

6.9 VISUAL / LANDSCAPE MANAGEMENT

Operations with the potential to adversely impact visual amenity during the reporting period include the development of the Extraction Area and stockpiling of extracted material and products.

The Company completed the construction and vegetation of a visual amenity bund located to the north of the Western Stockpile Area during the reporting period to minimise visual amenity impacts associated with its operations, as shown in **Figure 3** (see Section 8).

As the Extraction Area is developed below the current floor level of 955m AHD, the visibility of these activities will reduce as natural screens formed by the retained hill slope and vegetation take effect.

6.10 WASTE MANAGEMENT

Waste generation during the reporting period was negligible, with general waste placed within skip bins that are serviced monthly by a licenced waste contractor. Liquid wastes, principally waste hydrocarbons generated during equipment servicing, are removed by a licenced oil waste contractor when their storage container reaches capacity. As a consequence of the limitations to on-site disposal, all wastewater generated via the effluent and ablutions system is collected and disposed of off-site by a licenced contractor

6.11 EMERGENCY AND HAZARDS

Diesel delivered to the Quarry Site was delivered in bulk by a diesel supplier and stored in a self-bunded diesel tank. Refuelling of equipment was undertaken either within a secured, sealed and bunded area where any spillage or leakage can be contained, or by a mobile fuel truck away from natural or artificial drainage lines. The mobile fuel truck, as well as the plant or vehicle being refuelled, maintain hydrocarbon spill kits for use in the event of leakage or spillage. No significant hydrocarbon spills occurred during the reporting period.

Explosives used during the reporting period were transported to Site by the blasting contractor on the day of the blast.

No significant safety hazards occurred during the reporting period.

6.12 BUSHFIRE

Management of bushfire hazards is provided through the *Bushfire Management Plan* (BMP). That plan outlines procedures to be implemented in the event of a bushfire within or surrounding the Site. The IEA found that the BMP does not reference how matters raised during consultation have been addressed or resolved in the management plan. This was reported as a non-compliance (low risk) with *Condition 5(2)* of DA 344-11-2001. The Company maintains that approval of the BMP illustrates the matters raised by the relevant agencies have been resolved to the satisfaction of the Secretary of DPE. Notwithstanding this, the Company is reviewing the BMP to reference to consultation and illustration as to how any matters raised are addressed.

During the reporting period, the Company maintained fire extinguishers at the Fuel and Lube Bay, within the offices and workshops, and on all earthmoving machinery, mobile plant and light vehicles. In addition, the Company maintains a water truck with fire-fighting capability within the Quarry.

No fires occurred within the Site during the reporting period.



7. WATER MANAGEMENT

7.1 WATER USE

The Company estimates that approximately 1ML of water is used during each day of operations for sand washing and dust suppression activities. Approximately 85% of that water is reused, while approximately 15% is lost in either product moisture or evaporation. The Company estimates that 90% of water used was sourced from the water storage dams at the Quarry during the warmer months, and 95% during the cooler months. This water was supplemented by 570 000 litres of water purchased from off-site sources during the reporting period.

7.2 SURFACE WATER

7.2.1 Predicted Impacts and Performance Criteria

The *Soil and Water Management Plan* (SWMP) indicates that surface water monitoring will be undertaken monthly during discharge at two locations, SD1 and SB2 (see **Figure 5**). Section 10.7 of the SWMP identifies that, in the event that water is discharged from the licensed discharge points at the Quarry, the results of water quality monitoring will be included in this *Annual Review*.

EPL 13172 specifies the water quality criteria that apply to water discharged from the Quarry, which are presented in **Table 16**. The limits presented do not authorise the pollution of waters by any other pollutants and the Quarry must comply with Section 120 of the *Protection of the Environment Operations Act 1997* (POEO Act).

Table 16
Surface Water Monitoring Criteria

Pollutant	Unit of Measure	Criteria
TSS	mg/L	30
Sulfate	mg/L	250
Grease and Oil	mg/L	10
Electrical Conductivity	µS/cm	1 500
pH	pH	6.5-8.5

7.2.2 Measured Performance

There were no water discharges during the reporting period and therefore no monitoring of water quality was undertaken.

No exceedances of surface water criteria occurred during the reporting period.

The IEA reported that Sediment Basin (SB) 3 to the east of the Extraction Area had a small blow-out, and determined that additional sediment and erosion controls should be put in place at the Western Stockpile Extension Area to control erosion and sedimentation.

7.2.3 Discussion and Analysis

A Silt Arrestor was installed on the sand washing plant between February and March 2018, which improved the recovery of water and produced a drier product. The Company estimates that water use decreased by approximately 10% as a result of installing the Silt Arrestor.

The IEA recommended updates to the SWMP to better comply with *Condition 3(18)* of DA 344-11-2001. The Company is reviewing and revising the SWMP to address the following matters.

- Security of water supply.
- Reinstatement of a program for obtaining baseline data on surface water flows and quality in water bodies that could potentially be affected by the development.
- Monitoring and reporting on the effectiveness of the water management system.
- Monitoring and reporting on surface water quality in local watercourses.

The IEA also reported a non-compliance (low risk) against *Condition 5(2)* of DA 344-11-2001 as the SWMP does not describe how matters raised by EPA, DPI Water and WaterNSW have been addressed and resolved. The Company maintains that approval of the SWMP illustrates the matters raised by the relevant agencies have been resolved to the satisfaction of the Secretary of DPE.

The Company will implement the recommended repairs and upgrades to erosion and sediment controls nominated in the IEA.

7.3 GROUNDWATER

7.3.1 Performance Criteria

There are no prescribed groundwater monitoring criteria in DA 344-11-2001 or EPL 13172. Rather, the elevation of the local water table is to be monitored to prevent unanticipated intersection by extraction operations at the Quarry, which is considered unlikely above an elevation of 930m AHD. In the absence of prescribed criteria, a deviation of 2m from the long-term median groundwater level is considered a trigger for further action. Notwithstanding this, the Quarry must comply with Section 120 of the POEO Act.

7.3.2 Measured Performance

No groundwater was encountered within the extraction and the elevation of the extraction area remained above 950m AHD. As such, no groundwater monitoring was undertaken during the reporting period.

7.3.3 Discussion and Analysis

As expected, groundwater was not encountered within the extraction area during the reporting period. No trends in groundwater level can be assessed as no groundwater monitoring has been undertaken on or surrounding the Quarry Site.



During the next reporting period, and in accordance with the most recent revision to the SWMP (September 2018), three bores will be constructed to north, east and southwest of the extraction area for the purpose of better defining the groundwater characteristics below the Quarry and establishment of a median groundwater level. **Figure 5** provides the indicative location of these bores with the final location to be identified in the next revision of the SWMP and 2018-2019 Annual Review.

8. REHABILITATION

8.1 REHABILITATION PERFORMANCE DURING THE REPORTING PERIOD

Limited areas of the Quarry Site were available for rehabilitation during the reporting period. As a result, landscape management activities were limited to the following, as shown on **Figure 3**.

- Construction and vegetation (through seeding and planting of tubestock) of a visual amenity bund located to the north of the Western Stockpile Area was completed (see **Plate 1**).
- Three batters in the Western Stockpile Area, and one to the south of the Main Storage Dam were applied with topsoil and subsequently hydroseeded by New Era Mine Site Revegetation Pty Ltd on 9 and 10 March 2018 (see **Plate 10**).
- Batters to the north of the Silt Cells and to the south of the Top Working Dam were also applied with topsoil and subsequently hydroseeded by New Era Mine Site Revegetation Pty Ltd on 10 March 2018.
- A batter to the north of the Top Working Dam was allowed to revegetate naturally.
- Rehabilitation areas along the Great Western Highway on either side of the Quarry entrance were maintained.

Natural vegetation regrowth occurred on the walls of the three dams in the Quarry.

Table 17 provides a summary of the disturbance and rehabilitation areas.

Table 17
Rehabilitation Status

Mine Area Type	Previous Reporting Period (Actual) (ha)	This Reporting Period (Actual) (ha)	Next Reporting Period (Forecast) (ha)
A. Total mine footprint	11.7	18.6	18.6
B. Total active disturbance	10.2	16.0	16.0
C. Land being prepared for rehabilitation	0	0	0
D. Land under active rehabilitation	1.5	2.6	2.6
E. Completed rehabilitation	0	0	0

Source: Walker Quarries Pty Ltd

8.2 ACTIONS FOR THE NEXT REPORTING PERIOD

As all areas of disturbance will be required for Quarry operations, no rehabilitation activities are proposed for the next reporting period.

9. COMMUNITY

9.1 CONSULTATION AND COMMUNITY ENGAGEMENT

Two meetings of the Wallerawang Quarry Community Consultative Committee (CCC) were held during the reporting period on the following dates.

- 13 December 2017.
- 10 April 2018.

Appendix 7 presents the minutes from each of the meetings. The quarry staff present at the meetings provided information about Quarry operations, planning and compliance matters, and answered questions.

While outside the reporting period, it is noted that a letter informing residents of the intention of the Company to seek modification to DA 344-11-2001 and inviting them to register to be consulted was distributed on 18 and 19 June 2018. In total, the Company reports that there were 48 recipients of the letter by post, hand delivery or email.

9.2 COMPLAINTS

A complaint was received on 24 October 2017 where a truck exiting the Quarry turned right in foggy conditions. This was recorded in the Complaints Register on the Company website. The driver was notified that he was in breach of the Truck Driver Code of Conduct, was given a warning, and was re-inducted on his next visit to the site.

10. INDEPENDENT AUDIT

10.1 REQUIREMENT

In accordance with the requirements of *Condition 5(13)* of DA 344-11-2001, an Independent Environmental Audit (IEA) of the Quarry is to be completed within a year of the date of consent, and every 3 years thereafter.

10.2 INDEPENDENT ENVIRONMENTAL AUDIT - JULY 2018

An Independent Environmental Audit was commenced on 12 April 2018 by SLR Consulting Pty Ltd (SLR) and completed in accordance with the DPE Independent Audit Guidelines (of October 2015). The IEA comprised a site inspection, interviews with key personnel of Walker Quarries Pty Ltd, RW Corkery & Co. Pty Limited and Rangott Minerals Exploration Pty Limited, and review of documentation supplied by these companies or available on the Walker Quarries Pty Ltd website. The IEA assessed compliance against the conditions and commitments contained within the following documents.

- DA 344-11-2001, both as originally issued by the Minister for Infrastructure and Planning on 19 October 2004 and as subsequently modified (under delegation for the Minister for Planning) on 25 August 2017;
- DA 019/18 issued by Lithgow City Council for the construction of two demountable office buildings on the Quarry Site;
- management plans prepared as conditional requirements of DA 344-11-2001;
- Environment Protection Licence (EPL) 13172 issued by the NSW Environment Protection Authority; and
- Mining Lease (ML) 1633 issued for the period 15 July 2009 to 15 July 2019.

As relevant, information contained within the following documents was referenced.

- The Environmental Impact Statement (EIS) (and supporting and supplementary documents) prepared by Pacrim Environmental (November 2001) to support the initial application by Sitegoal Pty Ltd for the Wallerawang Quarry.
- The *Environmental Assessment* for Modification to Operations at the Wallerawang Quarry (DA 344-11-2001) prepared by RWC.

The IEA was submitted on 4 July 2018 (complying with the requirement to submit within 3 months of commencement). In summary, SLR assessed compliance at the Wallerawang Quarry as follows.

- The operations at Wallerawang Quarry were compliant with all relevant (triggered) conditions of DA 019/18;
- The operations at Wallerawang Quarry were compliant with the majority of conditions. Non-compliance against 19 of the 71 conditions of DA 344-11-2001 was identified, of which:
 - six were assessed to be administrative non-compliance;



- 10 assessed to be low risk; and
- three to be medium risk.
- The operations at Wallerawang Quarry were assessed to be non-compliant with 13 of the 61 conditions of EPL 13172, of which:
 - five were assessed to be administrative non-compliances;
 - seven assessed to be low risk; and
 - one to be medium risk.
- The operations at Wallerawang Quarry were assessed to be non-compliant with seven of the 27 conditions of ML 1633, of which:
 - three were assessed to be administrative non-compliance; and
 - four to be medium risk.

As illustrated by **Table 2**, the majority of the non-compliances recorded by the IEA occurred prior to the commencement of the reporting period.

It is also noted that in a number of cases, non-compliances were recorded where Walker Quarries could demonstrate compliance on most occasions, or with the majority of sub-conditions. As there is no allowance for identification of partial compliance or majority compliance, the nature of the auditing process requires that a non-compliance is recorded against these conditions.

On review of the IEA, it is noted that many of the non-compliances recorded for DA 344-11-2001, EPL 13172 and ML 1633 reflect common matters associated with several specific occurrences or incidents at the Quarry. These are discussed briefly below.

Unauthorised Clearing

In October 2016, the Division of Resources and Geoscience (DRG), which is now referred to as the Compliance Division of the Resources Regulator, queried “a new, undocumented area of disturbance” and requested that additional details were provided of this area. On review, it was identified that the quarrying contractor of the day had cleared areas of the Quarry Site beyond that nominated in the original EIS and therefore outside the consented area.

Walker Quarries was subsequently issued with a Penalty Infringement Notice (PIN) for this clearing and has since rectified this non-compliance through modification to DA 344-11-2001 (as approved on 25 August 2017). Walker Quarries notes that the contractor was removed from the Quarry and Walker Quarries now operates the Quarry itself. A Vegetation Clearance Protocol has been implemented, with this to be reviewed as a commitment of this Action Plan.

The unauthorised clearing generated or contributed to the risk rating of the following non-compliances.

- DA 344-11-2001: *Condition 2(1), Condition 3(13) and Condition 3(31).*
- ML 1633: *Condition 2, Condition 3, Condition 18 and Condition 23.*

These non-compliances relate to activities prior to the reporting period.

Deposited Dust Measurement of Dust Gauge DG4 (July 2016)

The IEA identifies an exceedance of the 12 month average dust deposition criteria at one gauge and failure to undertake Total Suspended Particulates (TSP) and particulate matter as nominated in the Air Quality Management Plan (AQMP) as a source of non-compliance (should the rolling 12 month average dust deposition level exceed $3.5\text{g/m}^2/\text{month}$).

As noted above, Walker Quarries disputes the audit finding of non-compliance. As noted in the IEA, both criteria exceedances are "*due to a potentially contaminated sample from July 2016, with a depositional dust reading of $19.5\text{g/m}^2/\text{month}$* ". Exclusion of the July 2016 result reduces the rolling average dust deposition concentration to $<3.5\text{g/m}^2/\text{month}$. As discussed with the auditor, the July 2016 result was investigated at the time and deemed a consequence of activities on the property where the dust gauge was located (motorbike riding in the vicinity of the dust gauge during school holidays). Notably, the gauge was subsequently moved to avoid future contamination.

As the 12 month average (and rolling average) dust deposition concentration should be calculated after exclusion of the July 2016 result, the non-compliances related to 12 month average dust deposition concentration and requirement to monitor airborne particulate matter are removed.

It is further noted that the reference to the 12 month rolling average dust deposition concentration as a trigger for airborne particulate matter monitoring commenced in September 2016. This considered the July 2016 as anomalous and therefore excluded from consideration.

The matter of the elevated July 2016 deposited dust measurement and subsequent effect on the rolling 12 month average generated or contributed to the risk rating of the following non-compliances.

- DA 344-11-2001: *Condition 2(1), Condition 3(12), Condition 3(13), Condition 3(14) and Condition 4(1).*
- EPL 13172: *Condition R 2.1.*
- ML 1633: *Condition 2 and Condition 18.*

Notwithstanding that these non-compliances were disputed, they relate to activities prior to the reporting period.

Water Quality Criteria Exceedance

Walker Quarries report that water was only discharged from the Quarry Site on 20 June 2016 and 23 March 2017. On both occasions, the rainfall was understood to have exceeded the 5 day 95th percentile rainfall level for Lithgow (55.6mm). Under such conditions, Walker Quarries was of the understanding that the water criteria of EPL 13172 did not apply. The IEA notes that this exemption from water quality criteria only applies following the most recent variation to EPL 13172 and was not applicable at the time of the two discharges.

Rainfall data collected from the Quarry Site rain gauge confirms rainfall of the 5 days preceding the discharge on 23 March 2017 exceeded 55.6mm. Site rainfall data for the 20 June 2016 event, however, is not available and regional rainfall data (Lidsdale BOM Station) does not support this claim.



The two isolated water discharge events generated or contributed to the risk rating of the following non-compliances.

- DA 344-11-2001: *Condition 2(1), Condition 3(17) and Condition 3(18).*
- EPL 13172: *Conditions L2.1 to L2.4, Condition O4.2, Condition M2.1, Condition R2.1 and Condition R2.2.*
- ML 1633: *Condition 2 and Condition 18.*

These non-compliances relate to activities prior to the reporting period.

Noise Monitoring

The IEA notes that the period between the (19/20) September 2017 and (4) April 2018 noise monitoring exceeded the 6 months nominated by the Noise Management Plan. It is noted that noise monitoring originally planned for March 2018 was delayed due to a period of reduced operational activity during March 2018 and periods of high winds.

This minor delay in the completion of noise monitoring has generated the following non-compliances.

- DA 344-11-2001: *Condition 3(4) and Condition 3(5).*

10.3 ACTION PLAN

Accompanying the IEA when submitted to the DPE was an IEA Action Plan which summarised the key recommendations of the IEA and identified the actions to taken against each. **Appendix 8** provides a summary of the progress against the nominated actions

The next IEA is due to be submitted by July 2021.

11. INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD

11.1 INCIDENTS

On 11 April 2018, a surface fitter and crusher attendant was found to have exceeded the Occupational Exposure Limit for respirable quartz of $0.1\text{mg}/\text{m}^3$, with a result of $0.16\text{mg}/\text{m}^3$. The worker was wearing a P2 disposable respirator. The exceedance was reported to the Resource Regulator on 4 May 2018. The delay in reporting the exceedance occurred due a delay in receiving the report from Coal Mines Technical Services.

11.2 WARNINGS, NOTICES AND ADDITIONAL ADVICE BY DPE

11.2.1 Official Caution

Sitegoal Pty Ltd was issued an Official Caution by DPE under Section 19A (3) of the *Fines Act 1996* on 13 December 2017 for breach of Condition 3.8 of Schedule 2 of the original DA 34-11-2001, as Sitegoal Pty Ltd had not undertaken an IEA by the required date of 28 February 2017. This failure to comply with a condition of consent constituted a breach of s76A(1)(b) of the *Environmental Planning and Assessment Act 1979*. The Secretary directed that an IEA be commissioned by 31 March 2018 in accordance with *Condition 5(13)* of DA 344-11-2001 (as modified on 25 August 2017). An IEA was commissioned on 8 March 2018, and submitted to the DPE on 5 July 2018.

11.2.2 Site Inspection

Representatives from DPE undertook a site inspection of the Quarry on 22 February 2018. The Company subsequently received a letter from a Senior Compliance Officer at DPE dated 26 February 2018 which noted the following issues in the Western Stockpile Extension Area (WSEA):

- potential water flows from dirty water catchments were being directed to the clean water drain;
- no stabilising media was evident on slopes to prevent erosion and stabilise topsoil, with tubestock and seeds not considered effective until established;
- non-rehabilitated slopes were adjacent to the clean water drain with no sediment controls in place; and
- existing erosion and sediment controls required maintenance.

The letter also stated that the Department had reviewed the SWMP submitted in January 2018, and that while the SWMP had not yet been approved by DPE, the works undertaken at the Quarry must comply with it, or else the SWMP must be amended to reflect these works. DPE observed that the following erosion and sediment controls had not been implemented in accordance with the SWMP:

- dirty water flows were not being captured within the WSEA; and

- dirty water flows from the southern end of the site could not practically be directed to Sediment Basin 6

The Company responded that the WSEA was still under construction at the time of the inspection and that no product had yet been stockpiled there. The response noted that topsoiling of the batters in the WSEA was only undertaken three days prior to the inspection, and that the Quarry had only been able to partially complete subsequent stabilisation works including tube stock planting within that timeframe. The Company wrote that the Quarry would complete construction of the WSEA with due regard to environmental controls and the SWMP, and that the WSEA would only be commissioned for stockpiling until all construction and stabilisation works had been finalised. The response also noted that DPE notified RWC on 31 January 2018 that the SWMP had been approved subject to some minor administrative changes which had since been completed, and that RWC understood that the SWMP did not require resubmission for approval.

11.3 NON-COMPLIANT CONDITIONS

Please refer to **Table 2** in Section 1, which summarises the Quarry's non-compliances with conditions of DA 344-11-2001, ML 1633, and EPL 13172 during the reporting period. Please also see **Appendix 8** which presents the actions the Company has committed to and completed in response to these non-compliances identified in the July 2018 IEA.

11.4 GENERAL COMPLIANCE

While the IEA of July 2018 identified a number of non-compliances against the conditions of DA 344-11-2001, EPLA 13172 and ML 1633 (see Section 10.2), it is worth noting that:

- i) The majority of these non-compliances refer to incidents, actions or operations preceding the current reporting period; and
- ii) Many of the non-compliances relate to common incidents or operations (see Section 10.2).

During the reporting period, non-compliances have been generally administrative in nature and related to the content of the Quarry's management plans.

It is considered that during the reporting period, the overall environmental performance and adherence to administrative environmental requirements has improved markedly. The management of environmental monitoring and management data has improved with all data available on the Company's website. Document control, and the implementation of the commitments contained within these documents has also significantly improved.

Continued improvements in environmental performance are expected over the course of the next reporting period.

12. ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

Key activities to be completed during the next reporting period are summarised as follows.

- Quarry operations will continue generally as completed during the reporting period and in accordance with the Quarry MOP. Should any deviations from this be required, these will only be undertaken subject to approval by the DPE and (if required) approval of an updated MOP.
- The environmental management plans of the Quarry will be reviewed and (if required) revised to address the recommendations of an IEA and the Company's objective to continually improve environmental performance.
- The environmental management and monitoring commitments of the Quarry's environmental management plans will be implemented and adhered to. Key changes to environmental monitoring and management to be implemented during the next reporting period are as follows.
 - Annual surface water monitoring in the Coxs River will be reinstated.
 - Groundwater monitoring from three bores to be constructed on the Quarry Site will be commenced.
- Rehabilitation activities will be restricted to the maintenance of areas already rehabilitated and ad hoc stabilisation and revegetation works as required.
- An application to modify DA 344-11-2001 under Section 4.155(1A) of the EP&A Act will be made to extend the limit on quarrying operations by 12 months (to 15 July 2020).
- A separate application to modify DA 344-11-2001 will be made (under Section 4.55(2) of the EP&A Act) for more significant changes to the Quarry operations including:
 - an increase in the resource to be extracted;
 - an increase in the extraction area (laterally and vertically); and
 - an increase in the stockpile areas of the Quarry Site.
- Consultation in accordance with a Community Engagement Strategy will be completed to assess any concerns the local community may have over extended Quarry operations.

13. REFERENCES

- Lesryk Environmental (2017a).** *Vegetation Monitoring – Walker Quarry, Wallerawang, NSW.* December 2017.
- Lesryk Environmental (2017b).** *Purple Copper Butterfly Monitoring Report #2 – Walker Quarry, Wallerawang, NSW.* December 2017.
- Muller Acoustic Consulting (2017).** *Noise Monitoring Assessment - Wallerawang Quarry.* September 2017.
- Muller Acoustic Consulting (2018).** *Noise Monitoring Assessment - Wallerawang Quarry.* April 2018.
- OzArk Environmental and Heritage Management (2018).** *Walker Quarries, Wallerawang NSW - Assessment and heritage advice for site WQ1.* May 2018.
- Pacrim Environmental (2001).** *Environmental Impact Statement - Proposed Wallerawang Quarry.* November 2001.

Appendix 8

Independent Environmental Audit – Action Plan Progress Tables

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Table 1
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Development Consent DA 344-11-2001

Condition		Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
Schedule 2	Condition 1 In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.	Medium	The audit of DA 344-11-2001 reports: <ul style="list-style-type: none"> exceedances in surface water and dust criteria (refer to Schedule 3, Conditions 12 and Condition 17); and unauthorised clearing (a new, undocumented area of disturbance) (refer to Schedule 3, Condition 13(e)); during the audit period. 	REC 1 <ul style="list-style-type: none"> Ensure harm to the environment (that may result from the construction, operation or rehabilitation of the development) is minimised as far as possible. 	All management plans and associated procedures and protocols will be reviewed, updated (as necessary) and implemented.	Complete. Management Plans have been reviewed, revised and resubmitted to the DPE for approval.
	Condition 8 The Applicant must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. Notes: <ul style="list-style-type: none"> Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works; and Part 8 of the EP&A Regulation sets out the requirements for the certification of the development or project. 	Low	Letter from Lithgow City Council noted that during an inspection on the 14/12/2017 the Council identified two transportable structures had been erected on the property without Council approval.	REC 2 <ul style="list-style-type: none"> Ensure that all structures are constructed in accordance with the requirements of the BCA. Ensure occupation certificates are acquired for the works. Ensure the building works comply with DA 019/18. 	Construction and Occupation Certificates will be obtained.	Partially Complete. Construction Certificate has been obtained. The Occupation Certificate remains to be obtained as construction has yet to be complete.
Schedule 3	Condition 4 The Applicant must: (a) implement best practice management to minimise the construction, operational and road transportation noise of the development; (b) minimise the noise impacts of the development during meteorological conditions when the noise criteria in this consent do not apply (see Appendix 3); (c) carry out noise monitoring (at least every 3 months or as otherwise agreed with the Secretary) to determine whether the development is complying with the relevant conditions of this consent; and (d) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent, to the satisfaction of the Secretary. Note: Required frequency of noise monitoring may be reduced if approved by the Secretary.	Low	Current NMP deemed compliant. Monitoring was not undertaken as frequently as nominated in the applicable Noise Management Plan (NMP) on two occasions. <ul style="list-style-type: none"> Warning letter from DPE dated 18/4/2016 indicated that attended monitoring was not undertaken each month in accordance with the original NMP and Condition 2.5 of the original development consent. Monitoring was undertaken on the 19/9/2017 & 20/9/2017, and 4/4/2018. The period between 20/9/2017, and 4/4/2018 exceeds 6 months. 	REC 3 <ul style="list-style-type: none"> Ensure noise monitoring is undertaken in accordance with the development consent and NMP. 	The Noise Management Plan will be reviewed in consultation with an acoustic consultant to ensure factors such as operational activity and wind conditions are considered in the scheduling of noise monitoring.	Complete. Section 7.3.5 of the Noise Management Plan (NMP) has been updated. The NMP has been resubmitted to the DPE for approval..
	Condition 5 The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Secretary. ... The Applicant must implement the Noise Management Plan as approved from time to time by the Secretary.	Low				

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Table 1 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Development Consent DA 344-11-2001

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Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status																		
Condition 12 Table 4: Air quality criteria <table><tr><th>Pollutant</th><th>Averaging Period</th><th>Criterion</th></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>Annual</td><td>a.d 25 µg/m³</td></tr><tr><td>Particulate matter < 10 µm (PM₁₀)</td><td>24 hour</td><td>b 50 µg/m³</td></tr><tr><td>Particulate matter < 2.5 µm (PM_{2.5})</td><td>Annual</td><td>a.d 8 µg/m³</td></tr><tr><td>Total suspended particulates (TSP)</td><td>Annual</td><td>a.i 50 µg/m³</td></tr><tr><td>Deposited dust</td><td>Annual</td><td>b 2 g/m²/month a.d 4 g/m²/month</td></tr></table> Notes to Table 4: a Cumulative impact (ie increase in concentrations due to the development plus background concentrations due to all other sources). b Incremental impact (ie increase in concentrations due to the development alone, with zero allowable exceedances of the criteria over the life of the development). c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter – Gravimetric Method. d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity agreed by the Secretary. e "Reasonable and feasible avoidance measures" includes, but is not limited to, the operational requirements in conditions 11, 12 and 13 to develop and implement an air quality management system that ensures operational responses to the risks of exceedance of the criteria.	Pollutant	Averaging Period	Criterion	Particulate matter < 10 µm (PM ₁₀)	Annual	a.d 25 µg/m ³	Particulate matter < 10 µm (PM ₁₀)	24 hour	b 50 µg/m ³	Particulate matter < 2.5 µm (PM _{2.5})	Annual	a.d 8 µg/m ³	Total suspended particulates (TSP)	Annual	a.i 50 µg/m ³	Deposited dust	Annual	b 2 g/m ² /month a.d 4 g/m ² /month	Low	Audit reports the rolling 12 monthly average for depositional dust (4.58) for DG4 exceeded the criteria. The audit notes this as "due to a potentially contaminated sample from July 2016, with a depositional dust reading of 19.5 g/m ² /month". The audit notes Total Suspended Particulates (TSP) and particulate matter was not measured at the site and references the AQMP (dated November 2017, and prior versions) states that "should the rolling average of monthly deposited dust monitoring results reach a trigger level of 3.5g/m ² /month the Company would implement a program of particulate matter monitoring to ensure that particulate matter levels (i.e. TSP and PM10) remain within the levels approved in DA 344-11-2001". This monitoring was not undertaken when the trigger level was exceeded, as described above. Observation: DG4 bottle was mixed up with the DG1 bottle. This mistake was discovered on 19/10/2017.	REC 4 <ul style="list-style-type: none">Ensure all possible measures are undertaken to keep levels of dust at the site down. REC 5 <ul style="list-style-type: none">Ensure dust monitoring is undertaken correctly, including ensuring that dust monitoring bottles are not mixed up.	The Air Quality Management Plan will be reviewed and updated as required. Dust bottle collection will be undertaken by Quarry personnel, not outsourced to external contractor.	Complete. Sections 6.2.2.2 and 8.3 of the Air Quality Management Plan (AQMP) have been reviewed and updated. The AQMP has been resubmitted to the DPE for approval. Dust bottle collection is now by Quarry personnel. This is reflected in the AQMP.
Pollutant	Averaging Period	Criterion																					
Particulate matter < 10 µm (PM ₁₀)	Annual	a.d 25 µg/m ³																					
Particulate matter < 10 µm (PM ₁₀)	24 hour	b 50 µg/m ³																					
Particulate matter < 2.5 µm (PM _{2.5})	Annual	a.d 8 µg/m ³																					
Total suspended particulates (TSP)	Annual	a.i 50 µg/m ³																					
Deposited dust	Annual	b 2 g/m ² /month a.d 4 g/m ² /month																					
Condition 13 The Applicant must: ... (d) monitor and report on compliance with the relevant air quality conditions in this consent; and	Medium	The audit reports that dust monitoring not undertaken in accordance with the AQMP (dated November 2017, and prior versions) as Total Suspended Particulates (TSP) and particulate matter not measured at the site.	REC 6 Ensure dust monitoring is undertaken in accordance with the AQMP (dated November 2017).	The Air Quality Management Plan will be reviewed and updated as required.	Complete. Sections 6.2.2.2 and 8.3 of the Air Quality Management Plan (AQMP) have been reviewed and updated. The AQMP has been resubmitted to the DPE for approval. Dust bottle collection is now by Quarry personnel. This is reflected in the AQMP.																		
Condition 13 The Applicant must: ... (e) minimise the area of surface disturbance and undertake progressive rehabilitation of the site, to the satisfaction of the Secretary.	Medium	During the audit period it was confirmed that "a new, undocumented area of disturbance" was cleared and developed on the Quarry Site.	REC 7 Ensure future disturbance at site is in accordance with the site's RMP/MOP, including the Vegetation Clearing Protocol.	A Biodiversity Management Plan is to be prepared to replace the FFMP and will include a review and update to the Vegetation Clearing Protocol to include an internal Ground Disturbance Permitting process.	Complete. A Biodiversity Management Plan was submitted on 14/9/2018 and approved by DPE on 18/9/2018.																		

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Table 1 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Development Consent DA 344-11-2001

Condition		Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
Schedule 3	<p>Condition 14 The Applicant must prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary.</p> <p>...</p> <p>The Applicant must implement the approved Air Quality Management Plan as approved from time to time by the Secretary.</p>	Low	<p>The audit reports that dust monitoring not undertaken in accordance with the AQMP (dated November 2017, and prior versions) as:</p> <ul style="list-style-type: none"> Total Suspended Particulates (TSP) and particulate matter not measured at the site. <p>The November 2014 version of the AQMP includes depositional dust sites D1, D2, D3 and D4 (in the next) and sites D64, D62, D61 and D63 on the plan in the AQMP. The September 2016 and November 2017 version of the AQMP includes depositional dust sites D1, D2, D3 and D4.</p> <p>Depositional dust results for sites D62 & D64 available from October 2015 to February 2016. No other dust results available for this time.</p>	Refer to REC 4 and REWC 6	<p>The Air Quality Management Plan will be reviewed and updated as required.</p> <p>Future monitoring to be undertaken in accordance with the AQMP.</p>	<p>Complete. Sections 6.2.2.2 and 8.3 of the Air Quality Management Plan (AQMP) have been reviewed and updated. The AQMP has been resubmitted to the DPE for approval.</p> <p>Dust bottle collection is now by Quarry personnel. This is reflected in the AQMP.</p>
	<p>Condition 15 For the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales guideline.</p>	Low	<p>According to the Compliance Statement in the 2015/2016 AEMR/Annual Review "Monitoring not done due to breakdown of monitor. A more suitable weather monitoring station has been installed".</p> <p>According to Warning Letter from DPE dated 18/4/2016, a meteorological station was installed but was not downloaded on an ongoing basis nor maintained.</p>	REC 8	<p>The meteorological station is currently operating.</p>	<p>Complete.</p>
	<p>Condition 17 The Applicant must comply with the discharge limits in any EPL, or with section 120 of the POEO Act.</p>	Low	<p>Exceedance in Total Suspended Solids (>30 mg/L) in water discharged from Main Storage Dam (SD-1) (monitoring point 1) on 20/6/2016 (75 mg/L).</p> <p>pH was below the EPL range of 6.5 - 8.5, with a reading of 5.72, in water discharged from Main Storage Dam (SD-1) (monitoring point 1) on 20/6/2016.</p> <p>Observation: The water quality monitoring data for the Annual Return reporting period did not provide data that showed the 20/6/2016 exceedance. This exceedance was included in the data provided in Section B2 of the Annual Return but was not included in Section C1.</p>	REC 9	<p>Ensure site based rainfall data is reviewed and recorded at the time of any discharge. Review and update the Soil and Water Management Plan to ensure this procedural requirement is included.</p> <p>Investigate the use of a flocculant within the Quarry Site water storages and, subject to compliance with EPA requirements, include any commitments and procedural requirements in an updated Soil and Water Management Plan.</p>	<p>Complete. Sections 10.6.1, 10.7 and 11.2.2 of the Soil and Water Management Plan (SWMP) have been updated. The SWMP has been resubmitted to the DPE for approval</p>
				REC 10	<p>Ensure Annual Returns are assessed by an independent reviewer prior to submission to confirm accuracy.</p>	<p>Next Annual Return due 19 December 2018.</p>

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Table 1 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Development Consent DA 344-11-2001

Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
<p>Condition 18 The Applicant must prepare a Soil and Water Management Plan for the development to the satisfaction of the Secretary. This plan must: ...</p> <p>(d) include a:</p> <ul style="list-style-type: none"> • Site Water Balance that includes: • details of: <ul style="list-style-type: none"> – sources and security of water supply; – water use and management on site; – any off-site water transfers; and – reporting procedures; and • measures to be implemented to minimise clean water use on site; • Surface Water Management Plan, that includes: • a program for obtaining detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the development; • a detailed description of the surface water management system on site including the: <ul style="list-style-type: none"> – clean water diversion system; – erosion and sediment controls; – dirty water management system; and – water storages; and • a program to monitor and report on: <ul style="list-style-type: none"> – any surface water discharges; – the effectiveness of the water management system, – the quality of water discharged from the site to the environment; – surface water flows and quality in local watercourses; • Groundwater Management Plan includes: <ul style="list-style-type: none"> – Provision that requires the Applicant to obtain appropriate water licence(s) to cover the volume of any unforeseen groundwater inflows into the quarry from the quarry face or floor (Section 3.3); and – A monitoring program to manage potential impacts, if any, on any alluvium and associated surface water source near the proposed extraction area that includes: <ul style="list-style-type: none"> o methodology for determining threshold water level criteria; o contingency measures in the event of a breach of thresholds; o a program to regularly report on monitoring. <p>The Applicant must implement the approved Soil and Water Management Plan as approved from time to time by the Secretary.</p> 	Low	<p>Security of water supply is not discussed. The SWMP does not include a specific program to monitor and report on the effectiveness of the water management system.</p> <p>The SWMP does not include a specific program to monitor and report on surface water flows and quality in local watercourses.</p> <p>Observation: As outlined in DPE's letter dated 30/1/2018 the Plans in the SWMP do not reflect that the crushing plant is located in the pit.</p> <p>As discussed for Condition 3(17)</p> <p>Monitoring of Cox's River not undertaken in 2017 or prior to 13/4/2016. All versions of the Water Management Plan (or SWMP) include a monitoring requirement (2014 version requires "regular monitoring" and the 2016, 2017 and 2018 version requires "monitoring" to be undertaken).</p> <p>Samples from the main storage dam (160mg/L) and the bottom working dam (64mg/L) on 12/9/2016 indicate that TSS exceeded 30mg/L.</p> <p>According to Section 10.7 of the SWMP (dated January 2018) results of all monitoring undertaken will be made publicly available on the Walker Quarries website (http://walkerquarries.com.au/statutory-information/). However, results from June 2016 and March 2017 were missing from the website (when exceedances in water quality data occurred).</p> <p>Warning letter from the DPE dated 18/4/2016 noted the failure to undertake surface water monitoring.</p> <p>Observation: One small sediment basin (at the top of extraction area) had a small blow-out.</p> <p>Observation: Inspection of the WSEA identified additional sediment and erosion controls should be put in place to control erosion & sedimentation, particularly where the access road and the bund meet.</p>	<p>As per REC 9 and 10 REC 11</p> <ul style="list-style-type: none"> • Include security of water supply in the SWMP. • Ensure all references included in Table 3.1. of the SWMP are correct. • Include a program for obtaining detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the development (i.e. Cox's river) in the SWMP. • Include in the SWMP a specific program to monitor and report on the effectiveness of the water management system. • Include in the SWMP a specific program to monitor and report on surface water quality in local watercourses. • Further details are required about the program for obtaining detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the development i.e. sampling locations and how often sampling will be undertaken. • Include Plans in the SWMP that reflect that the crushing plant is located in the pit. REC 12 • Ensure all surface water monitoring data is included on the Walker Quarry website. • Repair sediment control basin with the small blowout. • Install additional sediment and erosion controls (i.e. rock lined drains) in place at the WSEA to control erosion & sedimentation, particularly where the access road and the bund meet. • Ensure that a pipe be installed at the WSEA to convey dirty water to SB1. 	<p>Update the Soil and Water Management Plan to incorporate all recommendations of the IEA.</p> <p>Implement the recommended repairs and upgrades to erosion and sediment controls (of REC 12).</p> <p>The SWMP update will revise section on the publication of monitoring results to restrict to results of monitoring required by the development consent or other regulatory approvals.</p>	<p>Complete.</p> <p>Sections 5.1.1, 7.1, 9.3, 10.2.1, 10.3.1, 10.6.1, 10.7, 11.2.2 of the Soil and Water Management Plan (SWMP) have been updated. The SWMP has been resubmitted to the DPE for approval resubmitted to the DPE for approval.</p> <p>The repairs and upgrades to the erosion and sediment control structures has been completed (refer to Plates 6 and 9 of the Annual Review).</p>

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Table 1 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Development Consent DA 344-11-2001

Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
<p>Condition 31 The Applicant must prepare a Rehabilitation Management Plan for the project to the satisfaction of DRG. This plan must:</p> <ul style="list-style-type: none"> (a) be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary; (b) be prepared in consultation with the Department, DPI Water, FCNSW, OEH, DPI, and Council; (c) be submitted to DRG for approval within three months of the determination of Modification 1, unless the Secretary agrees otherwise; (d) be prepared in accordance with any relevant DRG Guideline; (e) describe how the rehabilitation of the site would achieve the objectives identified in Table 6 and be integrated with the Biodiversity Offset Strategy described in condition 27; (f) include a detailed soil and growing medium balance for the development; (g) include a detailed plan for the reinstatement and review of the proposed rehabilitated woodland areas and fauna habitat, including a protocol for periodic trials to demonstrate that the target vegetation community is being achieved; (h) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and for triggering remedial action (if necessary); (i) describe the measures to be implemented to ensure compliance with the relevant conditions of this consent, and address all aspects of rehabilitation including mine closure, final landform (including final voids), final land uses; (j) include procedures for the use of interim stabilisation and temporary vegetation strategies, where reasonable to minimise the area exposed for dust generation; (k) include a program to monitor, independently audit and report on the effectiveness of the measures in paragraph (h) above, and progress against the detailed performance and completion criteria in paragraph (g) above; and (l) build on to the maximum extent practicable and integrate with the other Management Plans required under this consent. 	Medium	<p>Current RMP/MOP deemed compliant. During the audit period it was confirmed that "a new, undocumented area of disturbance" was cleared and developed on the Quarry Site. Section 2.3 of the RMP/MOP dated 21/12/2017 (MOP Amendment B) identifies these areas of disturbance.</p>	REC 7	<p>A Biodiversity Management Plan is to be prepared to replace the FRMP and will include a review and update to the Vegetation Clearing Protocol to include an Internal Ground Disturbance Permitting process.</p>	<p>Complete. A Biodiversity Management Plan was submitted on 14/9/2018 and approved by DPE on 18/9/2018.</p>

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Table 1 (Cont'd)
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Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
<p>Condition 1 As soon as practicable, and no longer than 7 days, after obtaining monitoring results showing:</p> <p>(a) an exceedance of any criteria in Schedule 3, the Applicant must notify the affected landowners in writing of the exceedance, and provide regular monitoring results, at least every 3 months, to each affected landowner until the development is again complying with the relevant criteria; and</p> <p>(b) an exceedance of any air quality criteria in Schedule 3, the Applicant must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and current tenants of the land (including the tenants of land which is not privately owned).</p> <p>Schedule 4</p>	Admin	<p>Observation: Prior to the Mod 1 being approved and this condition coming into effect (the original consent does not include such a condition), affected landowners were not notified in writing of the exceedance, and provided regular monitoring results, at least every 3 months, to each affected landowner until the development was again complying with the relevant criteria.</p> <p>Exceedance in air quality criteria. Walker Quarries was required to send a copy of the NSW Health fact sheet entitled "Mine Dust and You" to landowners and current tenants of the land but did not. As the exceedance was likely due to an outlier result from a contaminated sample, Walker Quarries should have at least consulted with DPE to determine if they were required to send out the fact sheet.</p>	<p>REC 13</p> <ul style="list-style-type: none"> Ensure affected landowners are notified in writing of exceedances, and provided regular monitoring results, at least every 3 months, to each affected landowner until the development is again complying with the relevant criteria. Ensure Walker Quarries sends a copy of the NSW Health fact sheet entitled "Mine Dust and You" to landowners and current tenants of the land when exceedances of air quality criteria occur. 	<p>The Air Quality Management Plan will be reviewed and updated to include more prescriptive instruction and procedures to be followed on receipt of monitoring results which exceed the dust deposition criteria (including distribution of the noted NSW Health fact sheet).</p>	<p>Complete. Sections 6.2.2.2 and 8.3 of the Air Quality Management Plan (AQMP) have been reviewed and updated. The AQMP has been resubmitted to the DPE for approval.</p>
<p>Condition 2 Where consultation with any public authority is required by the conditions of this consent, the Applicant must:</p> <p>(a) consult with the relevant public authority prior to submitting the required document to the Secretary for approval;</p> <p>(b) submit evidence of this consultation as part of the relevant document;</p> <p>(c) describe how matters raised by the authority have been addressed and any matters not resolved; and</p> <p>(d) include details of any outstanding issues raised by the authority and an explanation of disagreement between any public authority and the Applicant.</p> <p>Schedule 5</p>	Admin	<p>The NMP (dated November 2017) doesn't:</p> <ul style="list-style-type: none"> describe how matters raised by EPA have been addressed and any matters not resolved; or include details of any outstanding issues raised by EPA and an explanation of disagreement between EPA and the Applicant <p>The SWMP (dated January 2018) doesn't:</p> <ul style="list-style-type: none"> describe how matters raised by EPA, DPI Water and WaterNSW have been addressed and any matters not resolved; or include details of any outstanding issues raised by EPA, DPI Water and WaterNSW and an explanation of disagreement between any public authority and the Applicant. <p>The Bushfire Management Plan (dated November 2017) doesn't:</p> <ul style="list-style-type: none"> reference how any matters raised during consultation have been addressed or resolved in the management plan; or include details of any outstanding issues raised by FCNSW and an explanation of disagreement between FCNSW and the applicant. 	<p>REC 14</p> <ul style="list-style-type: none"> Ensure NMP describes how matters raised by EPA have been addressed and any matters not resolved and includes details of any outstanding issues raised by EPA and an explanation of any disagreement between EPA and Walker Quarries. Ensure the SWMP describes how matters raised by EPA, DPI Water and WaterNSW have been addressed and any matters not resolved, and any details of any outstanding issues raised by EPA, DPI Water and WaterNSW and an explanation of any disagreement between any public authority and Walker Quarries. 	<p>All management plans will be reviewed and updated (with updated reference to consultation and illustration as to how any matters raised are addressed).</p>	<p>Complete. The Noise, Soil and Water, and Bushfire Management Plans have each been updated with reference to the matters raised by the consulted government agencies. The management plans have been resubmitted to the DPE for approval.</p>

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Condition		Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
Schedule 5	Condition 2 (Cont'd)	Admin		<ul style="list-style-type: none"> Ensure the Bushfire Management Plan references how any matters raised during consultation have been addressed or resolved in the management plan, and how any matters raised during consultation have been addressed or resolved in the management plan. Also ensure the Bushfire Management Plan includes details of any outstanding issues raised by FCNSW and an explanation of any disagreement between FCNSW and Walker Quarries. 		
	Condition 3 The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include: (a) detailed baseline data; (b) a description of: <ul style="list-style-type: none"> the relevant statutory requirements (including any relevant approval, licence or lease conditions); 	Admin	Detailed baseline data is not provided in the AQMP (dated November 2017), NMP (dated November 2017) or SWMP (dated January 2018).	<p>REC 15</p> <ul style="list-style-type: none"> Ensure all Management Plans include baseline data, including the AQMP, NMP and SWMP. 	Noise, Air Quality and Soil & Water Management Plans will be reviewed and updated to include available baseline data.	Complete. Section 4 of the NMP, Section 4 of the AQMP and Section 5.1.1 of the SWMP have been updated and resubmitted to the DPE for approval.
	Condition 5 Within 3 months of the submission of an: (a) incident report under condition 9 below; (b) Annual Review under condition 11 below; (c) audit report under condition 12 below; and (d) any modifications to this consent, the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. The applicant must notify the Department in writing of any such review being undertaken. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary.	Admin	DPE was notified of the issue of clearing at the WSEA on 18 October 2016, by Walker Quarries. The action from the notification was that Walker Quarries was to update the RMP/MOP. The RMP/MOP was not revised and submitted within the required timeframe.	<p>REC 16</p> <ul style="list-style-type: none"> Ensure all updates to relevant strategies, plans and programs required as a result of an incident report are undertaken within the 3 month timeframe. 	All management plans will be reviewed and updated following this audit (with specific issues as noted in preceding comments to be addressed).	Complete. Section 8.3 of the NMP, Section 8.3 of the AQMP, Section 8.3 of the Blast Management Plan (BMP) and Section 11.3 of the SWMP have been updated and resubmitted to the DPE for approval.

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Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Development Consent DA 344-11-2001

Condition		Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
Schedule 5	<p>Condition 12</p> <p>By the end of September each year, or other timing as may be agreed by the Secretary, the Applicant must submit a review to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must:</p> <p>(a) describe the development (including any progressive rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;</p> <p>(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against the:</p> <ul style="list-style-type: none"> • relevant statutory requirements, limits or performance measures/criteria; • requirements of any plan or program required under this consent; • monitoring results of previous years; and • relevant predictions in the documents listed in condition 2(a) of Schedule 2; 	Admin	<p>The 2016/2017 Annual Review was provided to the DPE on 30 October 2017 and not the required submission date of 31 August 2017.</p> <p>Observation: Surface water monitoring results of previous years not provided in the 2015/2016 and 2016/2017 Annual Reviews/AEMRs.</p> <p>Relevant predictions from the EIS have not been provided for surface water for the 2015/2016 and 2016/2017 Annual Reviews/AEMRs. Relates to the original consent Schedule 2, Condition 37d).</p>	<p>REC 17</p> <ul style="list-style-type: none"> • Ensure all Annual Reviews/AEMRs are submitted on time. • Ensure surface water monitoring results of previous years are included in future Annual Reviews/AEMRs. • Ensure relevant predictions from the EIS are included in the Annual Review/AEMR for surface water. 	<p>The recommendations of the audit will be incorporated into the next Annual Review</p>	<p>Complete.</p> <p>Annual Review submitted prior to 30 September 2018.</p>
	<p>Condition 13</p> <p>Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission, commence and pay the full cost of an Independent Environmental Audit of the development. This audit must:</p> <p>(a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;</p> <p>(b) include consultation with the relevant agencies and the CCC;</p> <p>(c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL or necessary water licences for the development (including any assessment, strategy, plan or program required under these approvals);</p> <p>(d) review the adequacy of strategies, plans or programs required under the abovementioned approvals;</p> <p>(e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and</p> <p>(f) be conducted and reported to the satisfaction of the Secretary.</p>	Low	<p>According to DPE letter dated 13/12/2017 Walker Quarries were required to undertake an IEA by 28 February 2017 (in accordance with Condition 3.8 of Schedule 2 of Development Consent 344-11-2001 [original consent]).</p> <p>Observation: A Warning Letter from DPE dated 18/4/2016 noted that monitoring of non-compliances from the 2015 IEA was not undertaken.</p>	<p>REC 18</p> <ul style="list-style-type: none"> • Ensure all IEAs are undertaken within the required timeframe. • Ensure a status update of non-compliances is provided in future Annual Reviews/AEMRs. 	<p>The current IEA to be submitted within 12 weeks of audit commencement (12 April 2018).</p> <p>Future Annual Reviews will include updates on status against non-compliances identified in this audit.</p>	<p>Complete.</p> <p>Complete.</p> <p>This document.</p>

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Table 1 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Development Consent DA 344-11-2001

Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
<p>Condition 14 Within 12 weeks of commencing this audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of these recommendations as required. The Applicant must implement these recommendations, to the satisfaction of the Secretary.</p>	Low	<p>The prior IEA Report and Action Plan and was submitted to DPE on March 2016. The previous audit was required to have been undertaken by 28 February 2015 (1 year after commencement of construction). Site received warning letter from DPE on 17 April 2016 requesting a revised IEA Action Plan.</p>	<p>REC 19</p> <ul style="list-style-type: none"> Ensure Action Plan is prepared and Submitted within the required time. 	<p>The current IEA to submitted within 12 weeks of audit commencement (12 April 2018).</p>	Complete.
<p>Condition 15 Within 6 months of the date of this consent, until the completion of all works, including rehabilitation and remediation the Applicant must:</p> <p>(a) make the following information publicly available on its website:¹</p> <ul style="list-style-type: none"> the documents listed in condition 2(a) of Schedule 2; current statutory approvals for the development; all approved strategies, plans and programs required under the conditions of this consent; a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; a complaints register, updated monthly; the annual reviews of the development; any independent environmental audit as described in condition 12 above, and the Applicant's response to the recommendations in any audit; and any other matter required by the Secretary; and <p>(b) keep this information up-to-date, to the satisfaction of the Secretary.</p>	Admin	<p>A comprehensive summary of the monitoring results of the development is not included on the website. The surface water monitoring data for June 2016 and March 2017 is missing.</p> <p>On the 18/6/2018 the site's website only provided the 2017 Annual Review and not the Annual Reviews for previous years.</p> <p>On the 18/6/2018 the site's website did not include the site's response to the recommendations of the March 2016 IEA Report findings.</p>	<p>REC 20</p> <ul style="list-style-type: none"> Ensure all relevant monitoring data is provided on the site's website. <p>REC 21</p> <ul style="list-style-type: none"> Ensure Annual Reviews for previous years are included on the site's website. Ensure the site's response to the recommendations of the March 2016 IEA Report findings is included on the site's website. 	<p>The recommendations of the audit will be implemented.</p>	Complete. All available data on website.

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Table 2
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Environment Protection Licence 13172

Condition		Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Completion Date
L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Low	Exceedance in Total Suspended Solids (>30mg/L) in water discharged from Main Storage Dam (SD-1) (monitoring point 1) on 9/6/2016 (150mg/L), 20/6/2016 (75mg/L) and 22/3/2017 (120mg/L).	As per REC 9 and REC 10 (refer to Table 2)	Ensure site based rainfall data is reviewed and recorded at the time of any discharge. Review and update the Soil and Water Management Plan to ensure this procedural requirement is included.	Complete. Sections 5.1.1, 7.1, 9.3, 10.2.1, 10.3.1, 10.6.1, 10.7, 11.2.2 of the Soil and Water Management Plan (SWMP) have been updated. The SWMP has been resubmitted to the DPE for approval. Annual Return to be submitted by 19 December 2018.
L2.1	For each monitoring/discharge point or utilisation area specified in the table below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.	Low	Exceedance in Total Suspended Solids (>30 mg/L) in water discharged from Top Working Dam (SD-2) (monitoring point 2) on 22/3/2017 (58mg/L). Exceedance in the range of pH (6.5 - 8.5), with a reading of 8.53, in water discharged from Main Storage Dam (SD-1) (monitoring point 1) on 22/3/2017.		Investigate the use of a flocculant within the Quarry Site water storages and, subject to compliance with EPA requirements, include any commitments and procedural requirements in an updated Soil and Water Management Plan. Ensure Annual Returns are assessed by an independent reviewer prior to submission to confirm accuracy.	Ongoing.
L2.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.	Low	pH was below the EPL range of 6.5 - 8.5, with a reading of 5.72, in water discharged from Main Storage Dam (SD-1) (monitoring point 1) on 20/6/2016. Observation: The water quality monitoring data for the Annual Return reporting period did not provide data that showed the 20/6/2016 exceedance. This exceedance was included in the data provided in Section B2 of the Annual Return but was not included in Section C1.	REC 20 • Ensure all monitoring data is included on the Walker Quarry website	Upload monitoring data to the Walker Quarries website within 14 days of the analysis being received by Walker Quarries for last sample for that period being collected (or as specific in the Soil and Water Management Plan).	
L2.4	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s. POINT L2	Low	As above (Conditions L1.1, L2.1 and L2.2). The EPA website reports that the EPA wrote to the quarry in regards to the exceedance of water concentration limits, including 20/6/2018 exceedance of pH and turbidity.	REC 22 • Ensure mitigation measures are implemented at the site to obtain compliant water quality discharge results.	Update the Soil and Water Management Plan to incorporate all recommendations of the IEA. The SWMP update will revise section on the publication of monitoring results to restrict to results of monitoring required by the development consent or other regulatory approvals. Implement the recommended repairs and upgrades to erosion and sediment controls (of REC 12).	Complete. Sections 5.1.1, 7.1, 9.3, 10.2.1, 10.3.1, 10.6.1, 10.7, 11.2.2 of the Soil and Water Management Plan (SWMP) have been updated. The SWMP has been resubmitted to the DPE for approval. The repairs and upgrades to the erosion and sediment control structures has been completed (refer to Plates 6 and 9 of the Annual Review).

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Table 2 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Environment Protection Licence 13172

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Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Completion Date
O4.2 Water discharged to comply with condition O5.1 may only be discharged to waters from those stormwater control structures (sediment dams) identified at EPA identification point 1 and 2 where the discharged water complies with the discharge limits stipulated at condition L2.4 (and taking into consideration condition L2.6).	Low	As above (Conditions L1.1, L2.1 and L2.2). Observation: The water quality monitoring data for the Annual Return reporting period did not provide data that showed the 20/6/2016 exceedance. This exceedance was included in the data provided in Section B2 of the Annual Return but was not included in Section C1.	As per REC 9 and REC 10 (refer to Table 2)	Ensure site based rainfall data is reviewed and recorded at the time of any discharge. Review and update the Soil and Water Management Plan to ensure this procedural requirement is included. Investigate the use of a flocculant within the Quarry Site water storages and, subject to compliance with EPA requirements, include any commitments and procedural requirements in an updated Soil and Water Management Plan.	Complete. Sections 5.1.1, 7.1, 9.3, 10.2.1, 10.3.1, 10.6.1, 10.7, 11.2.2 of the Soil and Water Management Plan (SWMP) have been updated. The SWMP has been resubmitted to the DPE for approval.
M1.2 All records required to be kept by this licence must be: (a) in a legible form, or in a form that can readily be reduced to a legible form; (b) kept for at least 4 years after the monitoring or event to which they relate took place; and (c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Low	Dust monitoring: data only goes back to June 2014. Data from April 2014 to May 2014 was provided during the prior audit. Noise monitoring: data for noise only goes back to July 2016. Water monitoring: data for water only goes back to July 2014. According to Annual Return for the period 21 Oct 2009 to 20 Oct 2010 water monitoring commenced May 2011 and therefore data going back to April 2014 should be available. Missing June 2016 and March 2017 from the website but available from Walker quarries once requested. <ul style="list-style-type: none">According to site communications missing data is a result of the prior quarry operator shredding data.According to the prior IEA dust, water, blast and noise monitoring data was provided to the auditor. Blast monitoring: data for blasting only goes back to September 2014. First blast undertaken on 3/9/2014.	REC 24 <ul style="list-style-type: none">Ensure all monitoring results for Walker Quarries are retained on the website for a minimum of 4 years or on-site.	Ensure Annual Returns are assessed by an independent reviewer prior to submission to confirm accuracy. All available monitoring data to be uploaded to the Walker Quarries website. Note to be included on the Walker Quarries website identifying any missing data points.	Annual Return to be submitted by 19 December 2018. Complete and ongoing.
M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence: (a) the date(s) on which the sample was taken; (b) the time(s) at which the sample was collected; (c) the point at which the sample was taken; and (d) the name of the person who collected the sample.	Admin	Blast and dust monitoring results did not include the time the sample was collected. Blast monitoring results do not clearly provide the person who collected the sample. Dust and water monitoring results between October 2015 and September 2017 refer to "ALS staff" and not the persons name.	REC 25 <ul style="list-style-type: none">Ensure blast and dust monitoring results include the time at which the sample was collected.Ensure blast, dust and water monitoring results include the name of the person who collected the sample.	All management plans will be reviewed and updated (as required).	Complete. Section 6.3.3.2 of the AQMP, Section 7.3.4 of the BMP and Section 10.5.12 of the SWMP have been updated and resubmitted to the DPE for approval.

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Table 2 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Environment Protection Licence 13172

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Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Completion Date
M2.1 For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Low	The audit refers to water discharge monitoring results of 9/6/2016, 20/6/2016 and 22/3/2017. The audit refers to a non-compliance associated with the sample taken on 9/6/2016 which was only analysed for TSS. The sample was not analysed for conductivity, oil and grease, pH and sulfate. The meteorological station of the Quarry was not operated for the entirety of the audit period as (reported in the Compliance Statement in the 2015/2016 AEMR/Annual Review "Monitoring not done due to breakdown of monitor. A more suitable weather monitoring station has been installed".	REC 26 <ul style="list-style-type: none">Ensure samples are analysed for all pollutants.	Review and update the Soil and Water Management Plan (as necessary) to ensure sampling requirements are clear and understood.	Complete. Section 10 of the Soil and Water Management Plan has been updated and resubmitted to the DPE for approval.
M4.1 For each monitoring point specified in the table below the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.	Low		REC 8 <ul style="list-style-type: none">Ensure a weather station is operated and maintained at the site at all times.	The meteorological station, which had been damaged by lightning strike, has been replaced and relocated to the northwestern corner of the Quarry Site.	Complete.
M5.2 The record must include details of the following: (a) the date and time of the complaint; (b) the method by which the complaint was made; (c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect; (d) the nature of the complaint; (e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and (f) if no action was taken by the licensee, the reasons why no action was taken.	Admin	A register of complaints is maintained on the company website. The time of the complaint isn't included in the register. The method by which the complaint was made isn't included in the register. Personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect, isn't included in the register. The action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant isn't included in the register. If no action was taken by the licensee and the reasons why no action was taken isn't included in the register.	REC 27 <ul style="list-style-type: none">The complaints register must include all details per EPL 13172 condition M5.2	The complaints register will be reviewed and updated (as required) to ensure all details required by the EPL are included.	Complete. The website is only required to identify complaints.
R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	Low	The Annual Review was due to the Department on 19/12/2016. <ul style="list-style-type: none">2015/2016 Annual Return was sent to the EPA on 22/12/2016.2016/2017 Annual Return was received by the Department on 20/12/2016.	REC 28 <ul style="list-style-type: none">Ensure all future Annual Returns are submitted within the required timeframe.	All future Annual Returns are submitted within the required timeframe.	The Annual Return is to be submitted 19 December 2018.
R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Low	Walker Quarries had not retained copies of the 2013/2014 and 2014/2015 Annual Returns at site.	REC 29 <ul style="list-style-type: none">Ensure copies of Annual Returns dating back 4 years from the date of submission are retained on site.	Recover copies of the Annual Returns.	Complete. Copies retained by Walker Quarries

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Table 2 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Environment Protection Licence 13172

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Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Completion Date
R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.	Medium	Exceedances in dust and water criteria during the audit period should have been reported to the EPA.	REC 30 • Ensure all exceedances in criteria are reported to the EPA.	Ensure site based rainfall data is reviewed and recorded at the time of any discharge. Review and update the Soil and Water Management Plan to ensure this procedural requirement is included.	Complete. Sections 5.1.1, 7.1, 9.3, 10.2.1, 10.3.1, 10.6.1, 10.7, 11.2.2 of the Soil and Water Management Plan (SWMP) have been updated. The SWMP has been resubmitted to the DPE for approval.
R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred	Medium	Exceedances in dust and water criteria during the audit period should have been reported to the EPA.		Investigate the use of a flocculant within the Quarry Site water storages and, subject to compliance with EPA requirements, include any commitments and procedural requirements in an updated Soil and Water Management Plan. Ensure Annual Returns are assessed by an independent reviewer prior to submission to confirm accuracy.	The Annual Return is to be submitted 19 December 2018.

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Table 3
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Mining Lease 1633

Condition		Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
2	The leaseholder shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or rehabilitation of the development.	Medium	<ul style="list-style-type: none"> The audit of DA 344-11-2001 reported exceedances in surface water and dust criteria (refer to Schedule 3, Conditions 12 and Condition 17); and unauthorised clearing (a new, undocumented area of disturbance) (refer to Schedule 3, Condition 13(e)); during the audit period. 	<p>REC 1</p> <ul style="list-style-type: none"> Ensure harm to the environment (that may result from the construction, operation or rehabilitation of the development) is minimised as far as possible. 	<p>All management plans will be reviewed and updated (as required) following this audit (with specific issues as noted in the Action Plan for DA 344-11-2001 [Table 2] to be addressed).</p> <p>A Biodiversity Management Plan is to be prepared to replace the FFMP and will include a review and update to the Vegetation Clearing Protocol to include an Internal Ground Disturbance Permitting process.</p>	<p>Complete.</p> <p>All management plans reviewed, revised and resubmitted to the DPE for approval.</p>
						<p>Complete.</p> <p>A Biodiversity Management Plan was submitted on 14/9/2018 and approved by DPE on 18/9/2018.</p>
3	<p>(a) Mining operations must not be carried out otherwise than in accordance with:</p> <p>A Mining Operations Plan (MOP) which has been approved by the Director-General of the Department of Primary Industries.</p> <p>(b) The MOP must:</p> <ul style="list-style-type: none"> (i) identify areas that will be disturbed by mining operations; (ii) detail the staging of specific mining operations; (iii) identify how the mine will be managed to allow mine closure; (iv) identify how mining operations will be carried out on site in order to prevent and/or minimise harm to the environment; (v) reflect the conditions of approval under: <ul style="list-style-type: none"> o the Environmental Planning and Assessment Act 1979 o the Protection of the Environment Operations Act 1997 o and any other approvals relevant to the development including the conditions of this lease; and (vi) have regard to any relevant guidelines adopted by the Director-General. <p>(c) The leaseholder may apply to the Director-Generally amend an approved MOP at any time.</p> <p>(d) It is not a breach of this condition if:</p> <ul style="list-style-type: none"> (i) the operations constituting the breach were necessary to comply with a lawful order or direction given under the Mining Act 1992, the Environmental Planning and Assessment Act 1979, Protection of the Environment Operations Act 1997 or the Occupational Health and Safety Act 2000; and (ii) the Director-General had been notified in writing of the terms of the order or direction prior to the operations constituting the breach being carried out. <p>(e) A MOP ceases to have effect 7 years after date of approval or other such period as identified by the Director-General. An approved amendment to the MOP under condition 5 does not constitute an approval for the purpose of this paragraph unless otherwise identified by the Director-General.</p>	Medium	<p>The audit notes the MOP is prepared in accordance with the DRG Guideline.</p> <p>During the audit period the Quarry was non-compliant as a result of "a new, undocumented area of disturbance" as identified in a letter from DRG dated 4 October 2016 which followed an inspection by DRG on 16 August 2016.</p> <p>DA 344-11-2001 was subsequently modified (as of 25 August 2017) to rectify the non-compliance.</p>	<p>As per REC 7 (refer to Table 2)</p>	<p>A Biodiversity Management Plan is to be prepared to replace the FFMP and will include a review and update to the Vegetation Clearing Protocol to include an Internal Ground Disturbance Permitting process.</p> <p>The MOP/Rehabilitation Management Plan is to be reviewed and updated as required.</p>	<p>Complete.</p> <p>A Biodiversity Management Plan was submitted on 14/9/2018 and approved by DPE on 18/9/2018.</p> <p>The MOP was not required to be updated.</p>

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Table 3 (Cont'd)
Walker Quarries Analysis and Action Plan for Identified Non-Compliances of Mining Lease 1633

Condition	Risk Level	IEA Comments / Evidence	Audit Recommendation	Action(s)	Status
5 The EMR must: (a) report against compliance with the MOP; (b) report on progress in respect of rehabilitation completion criteria; (c) report on the extent of compliance with regulatory requirements; and (d) have regard to any relevant guidelines adopted by the Director-General;	Admin	The 2015/2016 and 2016/2017 Annual Reviews do not report on progress against rehabilitation completion criteria.	REC 30 • Ensure future Annual Reviews/AEMR's report on progress against rehabilitation completion criteria.	Annual Reviews (now to be completed by RW Corkery & Co. Pty Limited) to report on progress against rehabilitation completion criteria.	Complete. Refer to Section 8 of the Annual Review.
11 The lease holder must provide an exploration report, within a period of twenty-eight days after each anniversary of the date this lease has effect or at such other date as the Director-General may stipulate, of each year.	Admin	The 2016/2017 Annual Exploration Report was submitted to DRG (formerly DRE) on 14/8/2017 (2 days outside the required timeframe of 28 days).	REC 31 • Ensure the Annual Exploration Report is submitted to DRG by 12 August of each year.	Annual Exploration Report is submitted to DRG by 12 August of each year.	Complete. Submitted 10 August 2018
17 (a) At least twenty eight days prior to commencement of drilling operations the lease holder must notify the relevant Department of Water and Energy Regional Hydrologist of the intention to drill exploratory drill holes together with information on the location of the proposed holes. ...	Admin	DPI Water was not provided at least twenty eight days advance notice of the proposed commencement of drilling operations. • DPI Water was advised of upcoming drilling program on 23/06/2017. • The proposed commencement of drilling was the 3/7/2017.	REC 32 • Ensure DPI Water is provided at least twenty eight days advance notice of the proposed commencement of drilling operations	Provide DoI-Lands & Water with at least twenty eight days advance notice of the proposed commencement of drilling operations.	Noted and Ongoing.
18 Operations must be carried out in a manner that does not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion, unless otherwise authorised by a relevant approval, and in accordance with an accepted Mining Operations Plan. For the purpose of this condition, water shall be taken to include any watercourse, waterbody or groundwater's. The lease holder must observe and perform any instructions given by the Director-General in this regard.	Medium	As discussed for Condition 2. The audit of DA 344-11-2001 reported • exceedances in surface water and dust criteria (refer to Schedule 3, Conditions 12 and Condition 17); and • unauthorised clearing (a new, undocumented area of disturbance) (refer to Schedule 3, Condition 13(e)); during the audit period.	REC 33 • Operations must be carried out in a manner so that they do not cause or aggravate air pollution, water pollution (including sedimentation) or soil contamination or erosion.	All management plans will be reviewed and updated (as required) following this audit (with specific issues as noted in the Action Plan for DA 344-11-2001 [Table 2] to be addressed).	Complete. All management plans reviewed, revised and resubmitted to the DPE for approval.
23 (a) The lease holder must not fell trees, strip bark or cut timber on the lease without the consent of the landholder who is entitled to the use of the timber, or if such a landholder refuses consent or attaches unreasonable conditions to the consent, without the approval of a warden. (b) The lease holder must not cut, destroy, ringbark or remove any timber or other vegetative cover on the lease area except such as directly obstructs or prevents the carrying on of operations. Any clearing not authorised under the Mining Act 1992 must comply with the provisions of the Native Vegetation Act 2003.	Medium	During the audit period the Quarry was non-compliant as a result of "a new, undocumented area of disturbance" as identified in a letter from DRG dated 4 October 2016 which followed an inspection by DRG on 16 August 2016.	As per REC 7 (refer to Table 2)	A Biodiversity Management Plan is to be prepared to replace the FFMP and will include a review and update to the Vegetation Clearing Protocol to include an Internal Ground Disturbance Permitting process.	Complete. A Biodiversity Management Plan was submitted on 14/9/2018 and approved by DPE on 18/9/2018.

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Table 4
Additional IEA and DPE Compliance Audit Recommendations

Aspect	Recommendation	Proposed Action	Status
Annual quarry production data	REC 34: • Attach a copy of S1 Forms to future AEMR/Annual Reviews.	REC 34 will be implemented	Complete. Refer to Appendix 2 of Annual Return.
Employee awareness of the conditions of DA Mod 1	REC 35: • Include up-to-date versions of the EMS and EMP in training folders.	REC 35 will be implemented	Complete. EMS and EMP updated and submitted to DPE for approval.
Noise monitoring	REC 36: • Ensure noise monitoring is undertaken over a single day.	The Noise Management Plan will be reviewed in consultation with an acoustic consultant.	Complete. Section 6.3.2 of the Noise Management Plan updated and resubmitted to DPE for approval.
Signage displayed on trucks	REC 37: • Ensure Walker Quarries uses its best endeavours to ensure that appropriate signage is displayed on all trucks used to transport product from the development so they can be easily identified by road users.	This is impractical as Walker Quarries cannot stipulate signage on the vehicles of third parties.	Not completed.
Waste management	REC 38: • The site should provide opportunities/incentives to minimise waste generated at the site, such as installing recycling bins. • In future Annual Reviews/AEMRs include details regarding how may kilograms/tonnes of waste are produced/removed from site on an annual basis.	Walker Quarries will review the practicality of the measures proposed and report on approach in the next Annual Review.	Ongoing.
Dangerous goods	REC 39: • Update the Hazardous Substance Control Plan so that it reflects the current development consent (Mod 1).	REC 39 will be implemented	Complete.
Bushfire Management Plan	REC 40: • Include a clause in the Bushfire Management Plan stating that emergency services will be assisted to the extent practicable if there is a fire in the vicinity of the site.	The bushfire management plan will be reviewed and consideration given to the inclusion of the suggested commitment (following review of safety and legal implications).	Complete. Section 4.3 of the Bushfire Management Plan updated and resubmitted to DPE for approval.
Incident reporting	REC 41: • Update the PIRMP to include the telephone number/contact details of the DPE. REC 42: • Ensure all exceedances are reported to the DPE and other agencies.	REC 41 will be implemented. REC 42 will be implemented.	Complete. Test of PIRMP completed on 1 August 2017. Noted. Incident management sections of all management plans reviewed and updated.
Sediment basin	REC 43: • Ensure storage basins identified at EPA identification points 1 and 2 are desilted on a regular basis.	REC 44 will be implemented. The Soil and Water Management Plan will be reviewed and updated (as required) to provide protocol for desilting.	Complete. Section 9.3 of the Soil and Water Management Plan Management Plan updated and resubmitted to DPE for approval.
Complaints telephone line	REC 44: • Update either the Walker Quarry website or EMS to include the correct complaints telephone line.	The website will be updated. The EMS will be reviewed and updated.	Complete. Complete. EMS updated and submitted to DPE for approval.
Blast Management Plan	REC 45: • Include appropriate reference to Australian Standard 2187.2 of 2006 in the next version of the Blast Management Plan.	The Blast Management Plan will be reviewed and updated.	Complete. Section 7.3.1 of the Blast Management Plan updated and resubmitted to DPE for approval.
Dust sample analysis	REC 46: • Obtain lab analysis on percentage of contaminated material within dust deposition results.	The Air Quality Management Plan will be reviewed and updated to include a protocol for review following monthly exceedance of dust deposition concentration.	Complete. Section 6.2.2.1 of the Air Quality Management Plan updated and resubmitted to DPE for approval.

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