



Newman Quarrying  
Slys Quarry, Tullymorgan-Jackybulbin Road, Mororo  
Annual Review

November 2017



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# Abbreviations

Abbreviations	Terms
AQMP	Air Quality Management Plan
BMP	Blast Management Plan
BRMP	Biodiversity and Rehabilitation Management Plan
CoA	Conditions of Approval
CVC	Clarence Valley Council
EIS	Environmental Impact Statement
EMS	Environmental Management Strategy
EPL	Environmental Protection Licence
HMP	Heritage Management Plan
LGA	Local Government Area
Newman Quarrying	Newman Quarrying Pty Ltd
NMP	Noise Management Plan
SEPP	State Environmental Planning Policy
SWMP	Soil and Water Management Plan
TMP	Traffic Management Plan
TSS	Total suspended solids
WMP	Waste Management Plan



# 1. Introduction

Newman Quarrying Pty Ltd (Newman Quarrying) operate a sandstone quarry known as Sly's Quarry at Tullymorgan-Jackybulbin Road, Mororo, NSW. Sly's Quarry is located at Lot 2 DP1055044, approximately 2.6 km west of the Pacific Highway, in the Clarence Valley Local Government Area (LGA). The location of the site is presented in Figure 1-1. The primary purpose of the quarry is to supply quarry materials required for current and proposed Pacific Highway works, and for supply to local councils and contractors.

Newman Quarrying have been operating since the early 1990's, however the site has reportedly been used as a quarry since the 1950's. In 1995, Maclean Shire Council (now Clarence Valley Council) granted development consent (No. 1995/128) to the operation according to *State Environmental Planning Policy (SEPP) No. 37 – Continued Mines and Extractive Industries*. A further consent (1997/011) was granted by Maclean Shire Council in 1997.

Sly's Quarry, when initially operated by Newman Quarrying, consisted of Sites A, B and C. Site A is an area of approximately 22 hectares which contains the sandstone quarry, Site B is a sand extraction operation approximately 5 hectares in area south of Tullymorgan-Jackybulbin Road and Site C is a sand extraction area approximately 44 hectares in area, on the western section of Lot 2 on the northern side of Tullymorgan-Jackybulbin Road.

Newman Quarrying obtained development consent separately to import and deposit fill at Site C in the areas where sand has been extracted previously. The Development Consent 2004/439 was issued by Clarence Valley Council (CVC) on 8 September 2004. The fill was clean material mainly sourced from Pacific Highway construction sites where it is surplus to requirements or unsuitable for other uses.

On 5 May 2016, development consent and CoA (SSD 6624) were granted for the expansion of the quarry, with details as follows:

- Expand Site A by 11.1 hectares
- Close and rehabilitate Sites B and C
- Increase the extraction rate up to 500,000 tonnes per annum

Current quarry details are provided in Table 1-1.

Table 1-1 Key quarry information

Feature	Details
Approved extraction rate	500,000 tonnes/annum
Estimated available resource	7,000,000 tonnes
Estimated operating period	15-40 years (demand driven). Approved until 31 May 2041.
Extraction depth	44 m AHD
Site area	374 hectares
Quarry area	18 hectares

## 1.1 Approvals and licences

Table 1-2 summarises the key approvals currently held by Newmans Quarrying which are relevant to the operations at Sly's Quarry.

Table 1-2 Key approvals, consents and licences

Description	Date granted/ commencement date	Expiry/duration
<b>Project Approvals</b>		
Development Consent (SSD 6624)	5 May 2016	31 May 2041
<b>Environmental Protection Licences</b>		
EPL 11649	12 June 2002	In perpetuity (Anniversary 1 January) until surrendered

## 1.1 Quarry contacts

Table 1-3 provides contact details for key personnel who are responsible for the environmental management of Sly's Quarry.

Table 1-3 Sly's Quarry Contacts

<b>Quarry Owner/Manager:</b>	Mark Newman
Company:	Newman Quarrying Pty Ltd
Address:	Tullymorgan-Jackybulbin Road, Mororo
Phone:	0427 822 667
Email:	newmanquarrying@gmail.com

## 1.2 Purpose and scope of this report

The Annual Review has been prepared to satisfy the conditions of Development Consent (SSD 6624), in particular Condition 10 of Schedule 5. Requirements of the Development Consent are shown in Table 1-4. As approved by NSW Department of Planning and Environment (DPE) in a letter dated 31 October 2016 (Appendix A), the Annual Review covers the period from the date of consent until 30 June 2017 (herein referred to as the reporting period).

This Annual Review provides a summary of actual operational and environmental management activities undertaken at Sly's Quarry during the reporting period. The Annual Review also addresses any complaints made during the reporting period.

The Annual Review has been prepared generally in accordance with the *Annual Review Guideline* (2015) where practicable.

Table 1-4 Annual Review Requirements

Licence, Approval or Guideline	Section Reference	Requirement	Reference in this report
Development consent and CoA SSD 6624	Schedule 5, Condition 10	Annual Review By the end of September each year, or other timing as may be agreed by the Secretary, the Applicant must review the environmental performance of the development to the satisfaction of the Secretary. This review must:	Entire Report
		a) describe the development (including any 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;	Section 2
		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: <ul style="list-style-type: none"> <li>relevant statutory requirements, limits or performance measures / criteria;</li> </ul>	Section 3 and 4



Licence, Approval or Guideline	Section Reference	Requirement	Reference in this report										
		<ul style="list-style-type: none"> <li>requirements of any plan or program required under this consent;</li> <li>monitoring results of previous years; and</li> <li>relevant predictions in the Environmental Impact Statement (EIS);</li> </ul>											
		c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance;	Section 5										
		d) identify any trends in the monitoring data over the life of the development;	Section 3										
		e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	Section 5										
		f) describe what measures will be implemented over the current financial year to improve the environmental performance of the development.	Section 3										
	Schedule 3, Condition 1	<p>The Applicant must comply with the operating hours set out in Table 1.</p> <p><i>Table 1: Operating Hours</i></p> <table border="1"> <thead> <tr> <th>Activity</th> <th>Permissible Hours</th> </tr> </thead> <tbody> <tr> <td>Employee arrival</td> <td> <ul style="list-style-type: none"> <li>From 6:30 am Monday to Saturday inclusive</li> <li>From 7:30 am Sundays or public holidays if engaged in maintenance, site security or other similar activities</li> </ul> </td> </tr> <tr> <td>Quarrying operations including loading and dispatch of laden trucks</td> <td> <ul style="list-style-type: none"> <li>7 am to 6 pm Monday to Friday</li> <li>7 am to 1 pm Saturday</li> <li>7 am to 4 pm Saturday if fulfilling a contract for the supply of quarry products to the Pacific Highway update project (SSD 4963)*</li> <li>At no time on Sundays or public holidays</li> </ul> </td> </tr> <tr> <td>Blasting</td> <td> <ul style="list-style-type: none"> <li>9 am to 3 pm Monday to Friday (except public holidays)</li> </ul> </td> </tr> <tr> <td>Maintenance</td> <td> <ul style="list-style-type: none"> <li>May be conducted at any time, provided that these activities are not audible at any privately-owned residence</li> </ul> </td> </tr> </tbody> </table> <p>*Note: Evidence of contracts that cover those periods during which extended Saturday afternoon operating hours are undertaken must be reported in the Annual Review required by condition 9 of Schedule 5.</p>	Activity	Permissible Hours	Employee arrival	<ul style="list-style-type: none"> <li>From 6:30 am Monday to Saturday inclusive</li> <li>From 7:30 am Sundays or public holidays if engaged in maintenance, site security or other similar activities</li> </ul>	Quarrying operations including loading and dispatch of laden trucks	<ul style="list-style-type: none"> <li>7 am to 6 pm Monday to Friday</li> <li>7 am to 1 pm Saturday</li> <li>7 am to 4 pm Saturday if fulfilling a contract for the supply of quarry products to the Pacific Highway update project (SSD 4963)*</li> <li>At no time on Sundays or public holidays</li> </ul>	Blasting	<ul style="list-style-type: none"> <li>9 am to 3 pm Monday to Friday (except public holidays)</li> </ul>	Maintenance	<ul style="list-style-type: none"> <li>May be conducted at any time, provided that these activities are not audible at any privately-owned residence</li> </ul>	Not applicable – the quarry has not operated on Saturday afternoons during the reporting period
Activity	Permissible Hours												
Employee arrival	<ul style="list-style-type: none"> <li>From 6:30 am Monday to Saturday inclusive</li> <li>From 7:30 am Sundays or public holidays if engaged in maintenance, site security or other similar activities</li> </ul>												
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Blasting	<ul style="list-style-type: none"> <li>9 am to 3 pm Monday to Friday (except public holidays)</li> </ul>												
Maintenance	<ul style="list-style-type: none"> <li>May be conducted at any time, provided that these activities are not audible at any privately-owned residence</li> </ul>												
	Schedule 3, Condition 36	<p>The Applicant must:</p> <p>a) manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Council;</p> <p>b) minimise the waste generated by the development;</p> <p>c) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and</p> <p>d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.</p>	Section 3.7										

### 1.3 Limitations

This report: has been prepared by GHD for Newman Quarrying Pty Ltd and may only be used and relied on by Newman Quarrying Pty Ltd for the purpose agreed between GHD and the Newman Quarrying Pty Ltd.

GHD otherwise disclaims responsibility to any person other than Newman Quarrying Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no

responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report. GHD disclaims liability arising from any of the assumptions being incorrect.

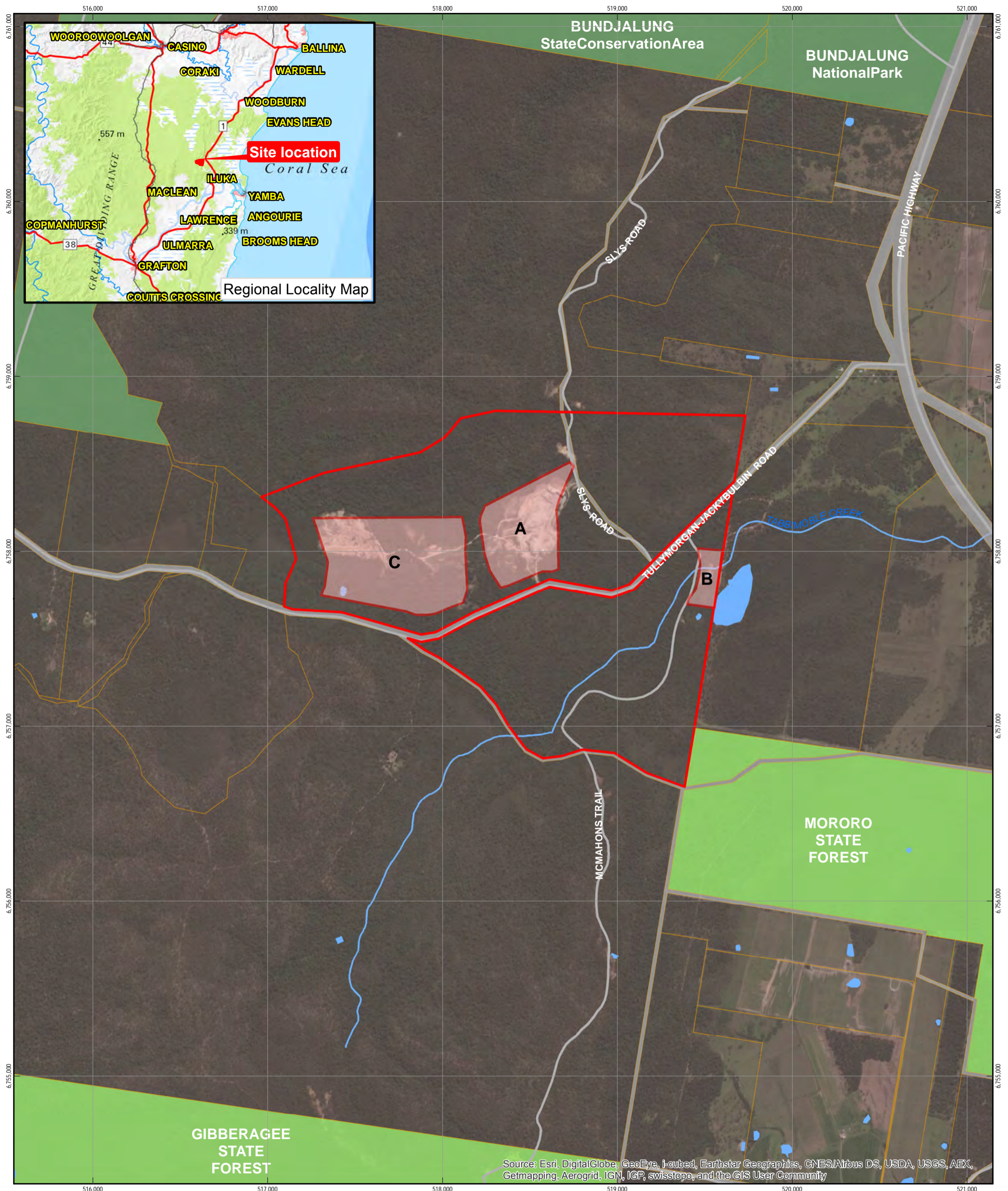
GHD has prepared this report on the basis of information provided by Newman Quarrying Pty Ltd and others who provided information to GHD (including Government authorities)], which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

The opinions, conclusions and any recommendations in this report are based on information obtained from, and testing undertaken at or in connection with, specific sample points. Site conditions at other parts of the site may be different from the site conditions found at the specific sample points.

Investigations undertaken in respect of this report are constrained by the particular site conditions, such as the location of buildings, services and vegetation. As a result, not all relevant site features and conditions may have been identified in this report.









Site conditions (including the presence of hazardous substances and/or site contamination) may change after the date of this Report. GHD does not accept responsibility arising from, or in connection with, any change to the site conditions. GHD is also not responsible for updating this report if the site conditions change.

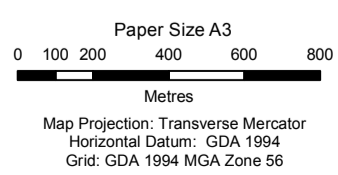




Source: Esri, DigitalGlobe, GeoEye, I-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**LEGEND**

	Current Quarry Areas		Road		Waterbody
	Lot 2 DP 1055044		Lot		Natural Parks
			Waterways		State Forest



Newman Quarrying  
Sly's Quarry Environmental Impact Statement

Job Number | 22-17528  
Revision | A  
Date | 11 Dec 2014

Site location

Figure 1-1



## 2. Quarry operations

### 2.1 Past 12 months

During the reporting period, the quarry has continued to extract material from the north of Stage 1. Extraction has involved a process of blasting, crushing, screening and stockpiling as described in the *Environmental Impact Statement* (GHD, 2015) submitted with the development application.

In the reporting period, there have been 18 blasts, as shown in Table 2-1. Table 2-1 also shows the volume and tonnes extracted from the quarry during each blast. Table 2-2 summaries the material extracted and sold within the two calendar years within the reporting period. This shows the material extracted and sold within both calendar years was within the approved limit of 500,000 tonnes.

The extraction, within the reporting period, has not required any clearing.

Table 2-1 Blast and production summary

Date	Time	Volume (m3)	Tonnes
6/05/2016	3 pm	11,903.20	28,151
2/06/2016	11.29 am	7,471.70	17,671
5/07/2016	12.02 pm	11,029.20	26,084
21/07/2016	2.34 pm	12,411.36	29,353
8/08/2016	1.45 pm	8,435.70	19,950
22/08/2016	2.27 pm	22,700.60	53,687
13/09/2016	12.20 pm	10,402.30	24,601
23/09/2016	1.40 pm	19,303.62	45,653
4/11/2016	2 pm	12,850.65	30,392
17/11/2016	1.30 pm	12,354.73	29,219
5/12/2016	1.35 pm	10,042.50	23,751
<b>Total 2016</b>			<b>328,512</b>
17/01/2017	2.15 pm	11,234.90	26,571
10/02/2017	1.25 pm	11,774.10	27,846
21/02/2017	2.46 pm	12,859.70	30,413
21/04/2017	1.30 pm	13,207.70	31,236
9/05/2017	1.45 pm	23,741.64	56,149
28/06/2017	2.20 pm	10,424.05	24,653
28/06/2017	2.22 pm	10,416.07	24,634
<b>Total 2017</b>			<b>221,502</b>

Table 2-2 Material extracted and sold

Period	Extracted (tonnes)	Sold (tonnes)
05/05/2016 to 31/12/2016	328,512	259,636
01/01/2017 to 30/06/2017	221,502	273,740

Other activities during the reporting period include:

- Preparation and approval of the environmental management plans.
- Establishing monitoring programs required by the management plans.
- Rehabilitation of Area C, as per the approved Rehabilitation Plan.
- Establish website with information required by Condition 13, Schedule 5.

- Commenced upgrade of quarry intersection.
- Paid Council Levy.
- Progressing BioBanking Agreement.

## 2.2 Next 12 months

In the next 12 months, activities at the quarry are anticipated to include:

- Finish extraction from Stage 1, including clearing.
- Start extraction from Stage 2 (south).
- Total extraction 480,000 tonnes.
- Install nest boxes.
- Finalise BioBanking Agreement and establish BioBank site.
- Increase the sediment basin volume.
- Monitoring rehabilitation of Areas C.
- Ongoing environmental monitoring.

## 3. Environmental monitoring

### 3.1 Noise

#### 3.1.1 Environmental management

Operational noise is managed by Newman Quarrying in accordance with the approved Noise Management Plan (NMP). The NMP covers all operational activities with the potential to generate noise at Sly's Quarry. It details specific noise management and mitigation measures, outlines monitoring and reporting requirements and provides clear definition of the roles and responsibilities for noise management. The objectives of the NMP are:

- Ensure full compliance with the relevant legislative requirements and CoA.
- No exceedance of the operational noise limits.
- No justified complaints from adjacent residents in relation to noise generation.
- No out of hours work.

Newman Quarrying proactively implements a range of noise mitigation measures for operational activities at Sly's Quarry. During the reporting period these included, but were not limited to the following:

- Ensuring machines were operated at low speed and were switched off when not being used.
- Progressive replacement of components of the existing fleet found to be generating excessive noise.
- Maintaining plant and equipment to manufacturer's standards.
- Scheduling noisy activities between 7 am and 6 pm where possible.
- Closing all engine covers while equipment is operating.
- Avoiding dropping materials from height and avoiding metal to metal contact on material.

Newman Quarrying engaged acoustic specialists to undertake attended noise monitoring quarterly, in accordance with the NMP, CoA and EPL.

#### 3.1.2 Environmental performance

Quarterly attended noise monitoring surveys were carried out in October 2016, February 2017 and May 2017. Attended noise measurements were taken using a Bruel & Kjaer Type 1 sound level meter (serial number 2456407). This instrument is capable of measuring continuous sound pressure levels and able to record  $L_{Amin}$ ,  $L_{A90}$ ,  $L_{A10}$ ,  $L_{A1}$ ,  $L_{Amax}$  and  $L_{Aeq}$  noise descriptors.

The noise monitoring locations are shown in Table 3-1.

Table 3-1 Noise monitoring locations

Receiver ID	Approximate distance and direction from quarry	Elevation above sea level <sup>1</sup>	Reason for selecting location
October 2016			
Hill	1.9 km WNW	105 m	Concerned resident
R3	1.4 km SW	40 m	EPL requirement
R3 Extra	1.1 km SW	40 m	Additional location to assist with determining quarry contribution at R3
February 2017			
R3	1.4 km SW	40 m	EPL requirement
Roadside	1.6 km E	25 m	CoA road traffic noise requirement
May 2017			
R3	1.4 km SW	40 m	EPL requirement
Roadside	0.8 km E	46 m	CoA road traffic noise requirement

Note: <sup>1</sup> The quarry site is approximately 40 metres above sea level

Project specific noise criteria are outlined in EPL 11649 and CoA SSD 6624. The operational noise limits of Sly's Quarry are 35 dB(A)  $L_{Aeq}$  (15 minutes) for day, evening and night.

A summary of the attended noise monitoring results is provided in Table 3-2.

Table 3-2 Summary of attended noise monitoring results

Monitoring Location	Sly's Quarry $L_{Aeq(Period)}$ dB(A)	Noise criteria dB(A)	Complies? Y/N
October 2016			
Hill	<33	35	Yes
R3	<30	35	Yes
R3 Extra	<30	35	Yes
February 2017			
R3	<35	35	Yes
May 2017			
R3	<30	35	Yes

The CoA in SSD 6624 also includes a requirement for noise management and monitoring along Jackybulbin Road, to determine site traffic noise received at receivers R1 and R2. One hour  $L_{Aeq}$  values were calculated for the site only pass-by events. This  $L_{Aeq}$  value was then corrected for a separation distance of 30 metres (approximate distance of closest receiver, R2, to the centre of Jackybulbin Road). The predicted  $L_{Aeq, 1 \text{ hour}}$  values take into account a 2.5 dB façade reflection based on guidance provided in the NSW Road Noise Policy (NSW DECCW, 2011). The road traffic noise monitoring results are presented in Table 3-3.

Table 3-3 Calculated 1 hour road traffic noise, dB(A)

Monitoring period	Measured $L_{Aeq, 1 \text{ hour}}$ (roadside), dB(A)	Predicted $L_{Aeq, 1 \text{ hour}}$ at R2 facade, dB(A)	RNP $L_{Aeq, 1 \text{ hour}}$ criteria, dB(A)	Complies? Yes/No
February 2017				
6:47 – 7:47	51	45	55	Yes
7:10 – 8:10	49	43	55	Yes
8:03 – 9:03	53	47	55	Yes
8:22 – 9:22	57	51	55	Yes
May 2017				
07:45 – 08:41	57	54	55	Yes

The noise monitoring indicates the actual noise impacts are consistent with the predicted impact.

### 3.1.3 Improvements and initiatives

Given that no exceedances of the noise criteria were recorded in the reporting period, no improvements are considered necessary. The NMP and CoA will continue to be implemented at Sly's Quarry over the next reporting period.

## 3.2 Blasting

### 3.2.1 Environmental management

Blast operations at Sly's Quarry are managed in accordance with the Blast Management Plan (BMP), which covers blasting activities associated with the quarry and appropriate mitigation measures. The objectives of blast management at Sly's Quarry are:

- Ensure full compliance with the relevant legislative requirements and CoA.
- No exceedance of the blasting criteria.
- No justified complaints from adjacent residents in relation to blasting and vibrations.

In order to meet these objectives Newman Quarrying proactively implements a range of mitigation measures for blasting activities at Sly's Quarry. During the reporting period these included:

- Only undertaking blasting operations between 09:00 and 15:00 Monday to Friday.
- Providing all sensitive receivers at least 24 hours notice when blasting operations were undertaken.

Newman Quarrying completed blast monitoring in accordance with the CoA and BMP.

### 3.2.2 Environmental performance

Blast monitoring was undertaken for all blasts at Sly's Quarry during the reporting period. Monitoring was undertaken from Receiver 3, as outlined in the EPL. Receiver 3 is located approximately 1.5 km south of the quarry boundary.

Project specific noise criteria are outlined in EPL 11649 and CoA SSD 6624. A summary of the blast criteria is provided in Table 3-4.

Table 3-4 Sly's Quarry blast criteria

Receiver	Airblast overpressure (dB(Lin 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

A total of 18 blasts were undertaken during the reporting period. On four occasions the blast monitor was triggered but did not exceed the blast criteria. A summary of the blast monitoring is provided in Table 3-5.



Table 3-5 Summary of blast monitoring

Blast name	Date	Time	Vibration (mm/s)	Pressure (dBL)	Complies
Trigger value			0.4	106	
NEW06	6/05/2016	3 pm	not triggered	not triggered	Yes
NEW07	2/06/2016	11.29 am	0.56	103.0	Yes
NEW08	5/07/2017	12.02 pm	0.40	101.0	Yes
NEW09	21/07/2016	2.34 pm	0.20	105.5	Yes
NEW10	8/08/2016	1.45 pm	not triggered	not triggered	Yes
NEW11	22/08/2016	2.27 pm	0.22	106.0	Yes
NEW12	13/09/2016	12.20 pm	not triggered	not triggered	Yes
NEW13	23/09/2016	1.40 pm	not triggered	not triggered	Yes
NEW14	4/11/2016	2 pm	not triggered	not triggered	Yes
NEW15	17/11/2016	1.30 pm	not triggered	not triggered	Yes
NEW16	5/12/2016	1.35 pm	not triggered	not triggered	Yes
NEW17	17/01/2017	2.15 pm	not triggered	not triggered	Yes
NEW18	10/02/2017	1.25 pm	not triggered	not triggered	Yes
NEW19	21/02/2017	2.46 pm	not triggered	not triggered	Yes
NEW20	21/04/2017	1.30 pm	not triggered	not triggered	Yes
NEW21	9/05/2017	1.45 pm	not triggered	not triggered	Yes
NEW22	28/06/2017	2.20 pm	not triggered	not triggered	Yes
NEW23	28/06/2017	2.22 pm	not triggered	not triggered	Yes

The blast monitoring indicates the actual impacts are consistent with the predicted impact.

### 3.2.3 Improvements and initiatives

Given that no exceedances of the blast criteria were recorded in the reporting period, no improvements are considered necessary. There was one complaint recorded from an adjacent landowner regarding lack of blast notification. This was managed at the time and Newman Quarrying now notify neighbours of blasts one week prior via text message. Monitoring and mitigation measures identified in the CoA, EPL and BMP will continue to be implemented.

## 3.3 Air quality

### 3.3.1 Environmental management

Air quality at Sly's Quarry is managed in accordance with the Air Quality Management Plan (AQMP), CoA and EPL. The objectives of the AQMP are:

- Minimise and manage potential air quality/dust impacts from the development in accordance with relevant legislative requirements and CoA.
- Control dust and exhaust emissions of plant and equipment from quarrying activities.
- Achieve particulate matter and dust concentrations that meet the approved air quality criteria.
- No visible offsite dust emissions as a result of site operations.
- No justifiable complaints related to air quality attributable to site operation.

### 3.3.2 Environmental performance

No air quality monitoring was undertaken at Sly's Quarry during the reporting period. This was because the AQMP was not approved until May 2017 and specific air quality monitoring

requirements were not confirmed. No complaints regarding dust emissions or air quality were recorded during the reporting period.

Anecdotally and the lack of complaints indicate the air quality was consistent with the predictions but it is not possible to confirm due to the lack of monitoring.

### 3.3.3 Improvements and initiatives

The AQMP was approved in May 2017, so Newman Quarrying are now aware of all their monitoring requirements and have installed the relevant air quality monitoring equipment. In the next reporting period all air quality monitoring will be undertaken in accordance with the AQMP.

## 3.4 Soil and water quality

### 3.4.1 Environmental management

Soil and water quality at Sly's Quarry are managed in accordance with the Soil and Water Management Plan (SWMP), which outlines appropriate mitigation measures for soil, surface water and groundwater management. The objectives of soil and water management at Sly's Quarry are:

- Ensure full compliance with the relevant legislative requirements and CoA.
- Meet EPL water discharge parameters for all planned discharges.
- Ensure training on soil and water management is provided to all relevant personnel through site inductions.

In order to meet these objectives Newman Quarrying implements a range of mitigation measures and monitoring requirements as outlined in the SWMP, which included:

- Daily weather monitoring.
- Daily rainfall monitoring.
- Weekly monitoring of erosion and sediment controls, and following rain.
- Baseline monitoring following rain.
- Basin monitoring when discharging.
- Basin capacity monitoring following rain.
- Spill kit checks monthly and following use.
- Quarterly groundwater monitoring.

Newman Quarrying completed water quality monitoring in accordance with the EPL.

### 3.4.2 Environmental performance

Not all of the monitoring outlined in the SWMP was undertaken in the reporting period. This was mainly due to the SWMP not being approved until May 2017, which was towards the end of the reporting period.

#### ***Basin monitoring***

Monitoring was undertaken for total suspended solids (TSS), pH and oil and grease at the outlet of the main basin when discharging. This location is the EPL monitoring point. The criteria outlined in the SWMP and EPL is presented in Table 3-6.

Table 3-6 Basin monitoring criteria

Pollutant	Concentration/Limit
Oil and grease	Nil visible
pH	6.5-8.5
Total suspended solids (TSS)	50 mg/L

Results of the basin monitoring are summarised in Table 3-7.

Table 3-7 Summary of basin monitoring results

Date	Rain		TSS	pH	Oil	Meets criteria?	Discharged?
	24 hrs	5 days					
6/06/2016	216	218	18	6.5	No	Yes	Yes
22/06/2016	0	52	26	7.4	No	Yes	Yes
14/11/2016	8	41	21	7.8	No	Yes	Yes
29/11/2016	2	43	28	7.6	No	Yes	Yes
28/01/2017	6	64	34	7.2	No	Yes	Yes
3/03/2017	7	67	16	8.1	No	Yes	Yes
23/05/2017	0	0	14	7.8	No	Yes	Yes
21/06/2017	7	27	13	8.0	No	Yes	Yes

The water quality monitoring indicates the water quality from the sediment basin is consistent with the predicted impact. It is not possible to confirm if the baseline and groundwater water quality and groundwater level are consistent with the predicted impact.

#### 3.4.3 Improvements and initiatives

The SWMP was approved in May 2017, so Newman Quarrying are now aware of all their monitoring requirements and have installed the required monitoring wells. In the next reporting period all monitoring will be undertaken in accordance with the SWMP.

### 3.5 Biodiversity

#### 3.5.1 Environmental management

Biodiversity and rehabilitation at Sly's Quarry is managed in accordance with the Biodiversity and Rehabilitation Management Plan (BRMP) and CoA. The targets outlined in the BRMP include:

- Ensure full compliance with the relevant legislative requirements and CoA.
- No fauna fatalities.
- No unapproved disturbance of vegetation.
- No new occurrences of weeds or pathogens on-site.

#### 3.5.2 Environmental performance

Newman Quarrying has implemented the mitigation measures outlined in the BRMP, including:

- Restricting vehicle movements to daylight hours.
- Implementing speed limits at the site.
- Revegetating Area C.
- Marked the limits of clearing.
- Progressed the BioBanking Agreement.

No clearing was undertaken during the reporting period and no reports of fauna fatalities were recorded.

Due to the lack of clearing to date, the actual impacts are considered to be less than those predicted.

### 3.5.3 Improvements and initiatives

Clearing is proposed to occur over the next reporting period. Newman Quarrying will follow the BRMP and implement the appropriate mitigation measures to minimise impacts of clearing to flora and fauna at the site.

The BioBanking Agreement is also expected to be completed and implemented, which will require the establishment of a BioBank site south of Tullymorgan-Jackybulbin Road.

## 3.6 Heritage

### 3.6.1 Environmental management

Management of both historical and Aboriginal cultural heritage at Sly's Quarry is in accordance with the Heritage Management Plan (HMP) and CoA. The targets outlined in the HMP are to:

- Ensure full compliance with the relevant legislative requirements and CoA.
- No damage to heritage items.
- All site staff and contractors trained on unexpected finds protocol.

### 3.6.2 Environmental performance

During the reporting period, Newman Quarrying has followed the protocols outlined in the HMP. As predicted, no unexpected finds of historical or Aboriginal heritage items have been recorded during the reporting period.

### 3.6.3 Improvements and initiatives

The HMP and CoA will continue to be implemented at Sly's Quarry over the next reporting period.

## 3.7 Waste

### 3.7.1 Environmental management

Waste at Sly's Quarry is managed in accordance with the Waste Management Plan (WMP), CoA and EPL. The objectives of the WMP are to:

- Ensure full compliance with the relevant legislative requirements and CoA.
- Waste generation minimised through the hierarchy of waste management priorities.
- Separable waste bins provided.

The WMP encouraged using the waste management hierarchy of avoid, reuse/recycle and then dispose to mitigate the impacts of waste from a number of sources, including excavated material, green waste, general construction waste, contaminated soil, liquid waste, wastewater, biological waste and domestic waste.

### 3.7.2 Environmental performance

The following mitigation measures were implemented by Newman Quarrying during the reporting period to manage waste on-site:

- Re-using excess materials.
- Recycling metal, waste oil and old batteries.
- Appropriate storage of chemicals and fuels in bunded areas with 110% capacity.
- Diverting clean water from the site.
- Routine weekly inspection to ensure the site is clean and tidy.

The type and quantity of wastes generated by the quarry are generally as predicted.

### 3.7.3 Improvements and initiatives

Newman Quarrying will continue to implement the waste mitigation measures and conditions outlined in the WMP, CoA and EPL. In future Newman Quarrying will maintain a table to record the volumes of waste being disposed at landfill and recycled.

## 3.8 Traffic

### 3.8.1 Environmental management

Traffic and transport at Sly's Quarry is managed in accordance with the Traffic Management Plan (TMP), CoA and EPL. The objectives of the TMP are:

- Ensure full compliance with the relevant legislative requirements and CoA.
- No justified complaints related to site traffic.
- No road damage from quarry vehicle movements beyond normal wear and tear.

### 3.8.2 Environmental performance

In order to meet these objectives Newman Quarrying implemented the following mitigation measures during the reporting period:

- Implementation of a code of conduct.
- Upgrading the access and Tullymorgan-Jackybulbin Road intersection.
- Installation of a rumble grid at the weighbridge.
- No more than 125 laden trucks dispatched from the quarry on any day.

Newman Quarrying present a truck movement summary on their website, which is summarised in Table 3-8. Truck movements were compliant with the CoA and TMP.

Table 3-8 Truck movement summary

	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
1st	0	53	22	124	108	0	125	24	0	21	8	0	114
2nd	3	38	3	124	104	0	75	11	0	80	12	0	113
3rd	105	39	0	16	63	0	32	34	0	5	68	97	94
4th	24	0	12	0	0	49	97	0	114	44	38	106	93
5th	47	0	5	10	106	82	11	22	116	0	0	61	
6th	61	31	45	3	111	124	0	35	101	84	103	35	
7th	0	28	25	0	116	58	106	62	0	79	117	112	
8th	0	39	25	68	50	38	125	107	0	9	107	39	
9th	23	29	0	59	17	0	68	14	123	74	123	0	
10th	54	12	0	14	54	101	61	8	115	110	124	73	
11th	67	0	12	113	0	79	109	0	51	53	113	111	
12th	40	0	29	100	17	92	41	88	12	0	0	98	

	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
13th	31	0	23	68	61	93	0	104	108	37	40	50	
14th	9	6	124	0	67	108	125	111	72	58	4	0	
15th	0	23	21	93	17	52	122	109	0	33	3	0	
16th	45	30	2	112	11	0	71	71	105	28	8	0	
17th	35	27	0	110	34	99	103	0	87	24	15	0	
18th	47	2	20	125	0	115	83	0	124	3	0	87	
19th	100	0	13	107	6	125	11	0	121	0	0	83	
20th	100	17	119	36	70	32	0	0	106	8	3	118	
21st	28	10	14	0	28	124	4	0	12	21	7	94	
22nd	0	5	101	76	53	78	12	0	0	17	92	77	
23rd	53	20	96	86	49	0	25	0	89	74	112	0	
24th	72	33	0	9	0	125	40	0	73	53	113	99	
25th	79	17	122	88	0	111	48	0	104	70	88	0	
26th	89	0	116	85	84	118	0	0	0	0	0	26	
27th	40	32	115	47	121	87	0	0	44	10	110	111	
28th	20	57	106	0	110	106	14	0	0	0	119	95	
29th	0	24	124	82	68	3	44	0	0	0	120	65	
30th	53	17	111	97	12	0	20	0	33	0	0	0	
31st	33		0	107		84		0	20				

Complaints received regarding quarry related transport and traffic are outlined in Section 4. These complaints were addressed immediately and are not considered to be non-compliant with the TMP, CoA or EPL.

The traffic impacts were generally consistent with those predicted.

### 3.8.3 Improvements and initiatives

Newman Quarrying will continue to implement the traffic mitigation measures and conditions outlined in the TMP, CoA and EPL.

## 4. Complaints

In accordance with the CoA, an Environmental Management Strategy (EMS) was prepared, which included details on a complaints handling process for the quarry. In accordance with the EMS, a complaints telephone line was established, with the number advertised on the Sly's Quarry entrance and on the Newman Quarrying website. The EMS requires all complaints to include:

- The date and time of the complaint.
- The method by which the complaint was made.
- Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect.
- The nature of the complaint.
- The action taken in relation to the complaint, including any follow-up contact with the complainant.
- If no action was taken, the reason why no action was taken.

Newman Quarrying records all complaints regarding quarry operations, in accordance with the EMS. The complaints are publically available on their website. The EPL Annual Return also reported that four complaints had been received. Table 4-1 summarises the complaints recorded at Sly's Quarry during the reporting period.

Table 4-1 Complaints summary

Date	Complainant	Complaint	Response
26/05/2016	Truck operator	Tailgate popped open on truck spilling rocks onto the road when the truck hit a large pothole.	Spill cleaned up by quarry staff immediately, state planning was notified of incident and Clarence Valley Council was notified of pothole.
19/10/2016	State planning passing on local resident complaint	A local was not notified of a blast.	Neighbours are now being notified one week prior to blasts by text message. The complainant has since confirmed they are now notified of blasts.
19/10/2016	State planning passing on local resident complaint	Vehicles driving at high speed.	All drivers have signed code of conduct, new speed signs were installed, drivers have been tool boxed.
22/06/2017	Clarence Valley Council	Mud on road	Immediate investigation, no mud on road. Road had wet tyre marks coming out of gate due to street sweeper washing entrance. Mud is east of quarry gate from potholes on council road verge that have not been repaired for over 1 year.

Date	Complainant	Complaint	Response
30/06/2017	Contractor informed quarry	Incident on road reserve 100 m west of gate.	Regulator, mines department and workcover informed of contractor incident on council road reserve 100 m west of quarry gate.



# 5. Compliance

## 5.1 Non compliance

As identified in Section 3, non-compliances occurred with regard to surface water and groundwater management and air quality management. The incidents and non-compliances that occurred for each environmental aspect are detailed in the following sub-sections.

### 5.1.1 Surface Water

Not all surface water monitoring requirements were met in the current reporting period as the SWMP was not approved until May 2017 so the monitoring requirements were not confirmed. The requirements for monitoring discharges from the sediment basin, outlined in the EPL were met, the sampling undertaken and criteria complied with. Surface water monitoring at Sly's Quarry will be undertaken in accordance with the SWMP in the next reporting period.

### 5.1.2 Groundwater

Groundwater monitoring was not undertaken during the reporting period as the SWMP was not approved until May 2017, so the monitoring requirements were not confirmed and the monitoring wells were not installed. There were no incidents on-site to indicate that significant groundwater impacts would have occurred as a result of quarry activities. Groundwater monitoring at Sly's Quarry will be undertaken in accordance with the SWMP in the next reporting period.

### 5.1.3 Air quality

Air quality monitoring was not undertaken in accordance with the AQMP during the current reporting as the AQMP was not approved until May 2017 so the monitoring requirements were not confirmed and the monitoring equipment was not installed. Air quality monitoring will be undertaken in accordance with the AQMP and CoA in the next reporting period.

## 5.2 Independent Audit

The independent audit was not completed for Sly's Quarry in the reporting period, as required by the CoA. However, DPE was notified of this non-compliance on 18 May 2017, along with a commitment to have the independent audit undertaken immediately. The results of the independent audit will be addressed in the Annual Review for the next reporting period.

## 6. Conclusion

This Annual Review has been completed for Sly's Quarry, on behalf of Newman's Quarrying, in accordance with the CoAs (SSD 6624), to assess environmental compliance at the site from 5 May 2016 to 30 June 2017.

The primary quarry operations undertaken during the reporting period included:

- Extraction, processing and sale of material
- Complying with CoA
- No clearing

Activities proposed for the next reporting period include:

- Continuing the extraction, processing and sale of material
- Clearing
- Installing nest boxes
- Establishing the BioBank site
- Environmental monitoring

An assessment of the environmental monitoring completed at Sly's Quarry was undertaken, with compliance against CoA SSD 6624, EPL 11649 and the relevant management plans also assessed. Generally, environmental management at Sly's Quarry during the reporting period was appropriate and compliant, with the exception of the following non-compliances:

- Surface water and groundwater monitoring was not undertaken in accordance with the SWMP.
- Air quality monitoring was not undertaken in accordance with the AQMP.

The reason for these non-compliances was that the management plans were not approved until May 2017, which is towards the end of the reporting period, so the monitoring requirements were not confirmed. Full compliance with the EPL was achieved. All monitoring requirements outlined in the management plans for the site will be undertaken in the next reporting period.

## 7. References

GHD 2015. *Environmental Impact Statement*. May 2015.

GHD 2017. *Air Quality Management Plan*. May 2017.

GHD 2017. *Biodiversity and Rehabilitation Management Plan*. May 2017.

GHD 2017. *Blast Management Plan*. May 2017.

GHD 2017. *Environmental Management Strategy*. May 2017.

GHD 2017. *Heritage Management Plan*. May 2017.

GHD 2017. *Noise Management Plan*. May 2017.

GHD 2017. *Soil and Water Management Plan*. May 2017.

GHD 2017. *Traffic Management Plan*. May 2017.

GHD 2017. *Waste Management Plan*. May 2017.

NSW Government 2015, *Post-approval requirements for State Significant mining developments – Annual Review Guideline*.

# Appendices

# Appendix A – DPE Letter



# Planning & Environment

**Planning Services  
Resource Assessments**

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Mr Ben Luffman  
Senior Environmental Scientist/Planner  
GHD Pty Ltd  
PO Box 1340  
COFFS HARBOUR NSW 2450

Dear Mr Luffman,

### **Sly's Quarry (SSD 6624) – Annual Review and Management Plans**

I refer to your letter of 28 October 2016 about the Annual Review required for Sly's Quarry. The Secretary agrees that the first Annual Review should cover the period from the date of the consent until 30 June 2017 (approximately 14 months).

In your email of 28 October 2016, you requested advice about the timing for the submission of the Sly's Quarry management plans. The Secretary has agreed that all management plans and strategies that were due to be submitted by 4 November 2016 must be submitted by 18 November 2016.

If you have any enquiries on this matter please contact Colin Phillips.

Yours sincerely

Howard Reed *31. 10. 16*  
**Director, Resource Assessments**  
as the Secretary's nominee

GHD

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Rev	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	S Martin	B Luffman		S Lawer		Sep 17
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