



Slys Quarry, Tullmorgan- Jackbulbin Road, Mororo

Annual Review

Newman Quarrying Pty Ltd

23 November 2021

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Document status

Status Code	Revision	Author	Reviewer		Approved for issue		
			Name	Signature	Name	Signature	Date
S4	0	B Luffman	S Lawer		S Lawer		30/09/21
S4	1	B Luffman	S Lawer		S Lawer		23/11/21

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Annual review title block

Feature	Details
Name of operation	Slys Quarry
Name of operator	Newman Quarrying Pty Ltd
Development consent/project approval #	SSD 6624
Name of holder of development consent/project approval	Newman Quarrying Pty Ltd
Mining lease #	NA
Name of holder of mining lease	NA
Water licence #	NA
Name of holder of water licence	NA
MOP/RMP start date	NA
MOP/RMP end date	NA
Annual Review start date	01 July 2020
Annual Review end date	30 June 2021
<p>I, Mark Newman, certify that this annual review is a true and accurate record of the compliance status of Slys Quarry for the period 01 July 2020 to 30 June 2021 and that I am authorised to make this statement on behalf of Newman Quarrying Pty Ltd.</p> <p><i>Note.</i></p> <p>a) <i>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.</i></p> <p>b) <i>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); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
Name of authorised reporting officer	Mark Newman
Title of authorised reporting officer	Director
Signature of authorised reporting officer	
Date: 30 September 2021	

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1. Statement of compliance

The expansion of Slys Quarry was approved by Project Approval SSD 6624 and has an Environmental Protection Licence (EPL 11649). In regard to the compliance of the operations with the Project Approval (SSD 6624) and EPL, a statement of compliance, as at the end of the reporting period, is provided in Table 1.1. Table 1.3 provides more detail in regards to the non-compliances, including the compliance status, in accordance with Table 1.2.

Table 1.1 Statement of compliance

Were all conditions of the relevant approvals complied with	
SSD 6624	No
EPL 11649	Yes

Table 1.2 Compliance status

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: potential for serious environmental consequences, but is unlikely to occur; or potential for moderate environmental consequences, but is likely to occur
Low	Non-compliant	Non-compliance with: 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)

Table 1.3 Non-compliances

Relevant approval	Condition	Condition description	Compliance status	Comment	Where addressed in Annual Review
SSD 6624	Schedule 3, Condition 36	The Applicant must: (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	Non-compliant - low	Council recently inspected the on-site wastewater system and didn't raise any concerns. Regardless, the Land Application Area has since been sprayed and will continue to be mown monthly.	Section 8

2. Overview

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 DP 1055044, 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 2.1. 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. On 5 May 2016, development consent (SSD 6624) was granted for the expansion of the quarry and involved the following:

- Expand main quarry pit (Site A) by 11.1 hectares to 18 hectares
- Close and rehabilitate other quarry pits (Sites B and C)
- Extraction depth 44 m AHD
- Increase the extraction rate up to 500,000 tonnes per annum
- Estimated resource 7,000,000 tonnes
- Estimated operating period 15-40 years with approval to 31 May 2041

2.1 Quarry contacts

Table 2.1 provides contact details for key personnel who are responsible for the environmental management of Sly's Quarry.

Table 2.1 Sly's Quarry Contacts

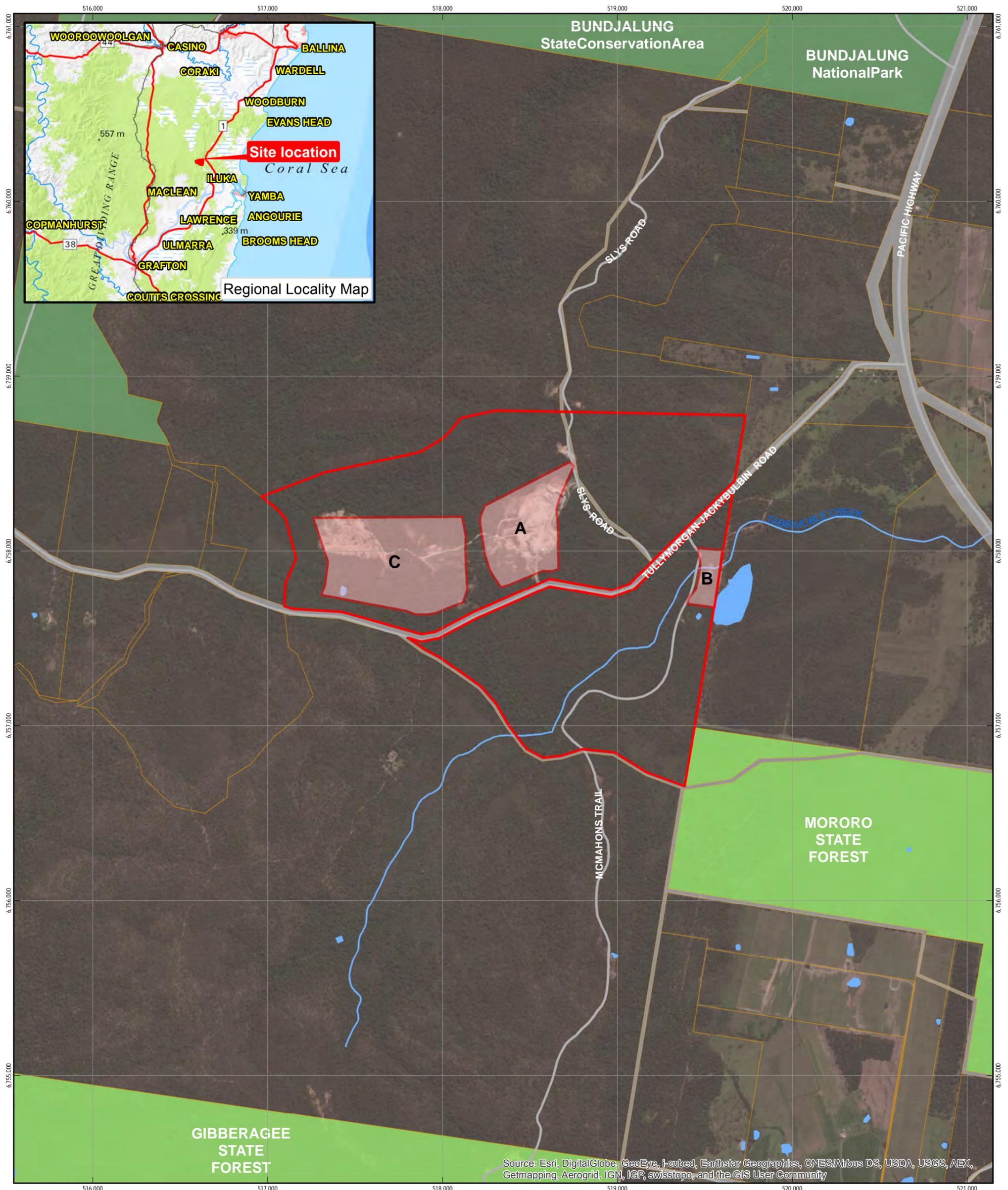
Quarry Owner/Manager:	Mark Newman
Company:	Newman Quarrying Pty Ltd
Address:	Tullymorgan-Jackybulbin Road, Mororo
Phone:	0427 822 667
Email:	newmanquarrying@gmail.com

2.2 Purpose and scope of this report

This Annual Review has been prepared to satisfy the Conditions of Development Consent (SSD 6624), in particular Condition 10 of Schedule 5. The Annual Review covers the period from 1 July 2020 until 30 June 2021 (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.

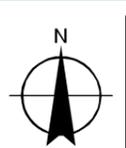
The Annual Review has been prepared generally in accordance with the *Annual Review Guideline* (2015) where practicable.



LEGEND

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

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



Newman Quarrying
Sly's Quarry Environmental Impact Statement

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

Site location

Figure 2-1

2.3 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. Specifically, this Report does not take into account the effects, implications and consequences of or responses to COVID-19, which is a highly dynamic situation and rapidly changing. These effects, implications, consequences of and responses to COVID-19 may have a material effect on the opinions, conclusions, recommendations, assumptions, qualifications and limitations in this Report, and the entire Report must be re-examined and revisited in light of COVID-19. Where this Report is relied on or used without obtaining this further advice from GHD, to the maximum extent permitted by law, GHD disclaims all liability and responsibility to any person in connection with, arising from or in respect of this Report whether such liability arises in contract, tort (including negligence) or under statute.

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.

3. Approvals and licences

Table 3.1 summarises the key approvals currently held by Newman Quarrying which are relevant to the operations at Sly's Quarry.

Table 3.1 Key approvals, consents and licences

Description	Date granted/ commencement date	Expiry/duration
Project Approvals		
Development Consent (SSD 6624)	5 May 2016. Modified 19 October 2017	31 May 2041
Environmental Protection Licences		
EPL 11649	12 June 2002. Licence varied 14 September 2020	In perpetuity (Anniversary 1 January) until surrendered

The requirements of the Development Consent, relevant to the Annual Review, are shown in Table 3.2.

Table 3.2 Annual Review Requirements

Licence, Approval or Guideline	Section Reference	Requirement	Reference in this report										
Development consent and CoA SSD 6624	Schedule 2, Condition 16	The Applicant must: (a) provide annual quarry production data to DRG using the standard form for that purpose; and (b) include a copy of this data in the Annual Review (see condition 9 of Schedule 5).	Appendix A										
	Schedule 2, Condition 19	The Applicant must pay to Council an annual financial contribution toward the maintenance of Tullymorgan-Jackybulbin Road. The contribution must be determined in accordance with the Maclean Shire Council S.94 Contribution Plan for Maintenance of Quarry Roads, November 1994, or any subsequent relevant contributions plan adopted by Council. The annual contribution must be paid to Council prior to 31 July each year and reported in the Annual Review required in condition 9 of Schedule 5.	Appendix B										
	Schedule 3, Condition 1	<p>The Applicant must comply with the operating hours set out in Table 1.</p> <table border="1"> <caption>Table 1: Operating Hours</caption> <thead> <tr> <th>Activity</th> <th>Permissible Hours</th> </tr> </thead> <tbody> <tr> <td>Employee arrival</td> <td> <ul style="list-style-type: none"> From 6:30 am Monday to Saturday inclusive From 7:30 am Sundays or public holidays if engaged in maintenance, site security or other similar activities </td> </tr> <tr> <td>Quarrying operations including loading and dispatch of laden trucks</td> <td> <ul style="list-style-type: none"> 7 am to 6 pm Monday to Friday 7 am to 1 pm Saturday 7 am to 4 pm Saturday if fulfilling a contract for the supply of quarry products to the Pacific Highway update project (SSD 4963)* At no time on Sundays or public holidays </td> </tr> <tr> <td>Blasting</td> <td> <ul style="list-style-type: none"> 9 am to 3 pm Monday to Friday (except public holidays) </td> </tr> <tr> <td>Maintenance</td> <td> <ul style="list-style-type: none"> May be conducted at any time, provided that these activities are not audible at any privately-owned residence </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"> From 6:30 am Monday to Saturday inclusive From 7:30 am Sundays or public holidays if engaged in maintenance, site security or other similar activities 	Quarrying operations including loading and dispatch of laden trucks	<ul style="list-style-type: none"> 7 am to 6 pm Monday to Friday 7 am to 1 pm Saturday 7 am to 4 pm Saturday if fulfilling a contract for the supply of quarry products to the Pacific Highway update project (SSD 4963)* At no time on Sundays or public holidays 	Blasting	<ul style="list-style-type: none"> 9 am to 3 pm Monday to Friday (except public holidays) 	Maintenance	<ul style="list-style-type: none"> May be conducted at any time, provided that these activities are not audible at any privately-owned residence 	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"> From 6:30 am Monday to Saturday inclusive From 7:30 am Sundays or public holidays if engaged in maintenance, site security or other similar activities 												
Quarrying operations including loading and dispatch of laden trucks	<ul style="list-style-type: none"> 7 am to 6 pm Monday to Friday 7 am to 1 pm Saturday 7 am to 4 pm Saturday if fulfilling a contract for the supply of quarry products to the Pacific Highway update project (SSD 4963)* At no time on Sundays or public holidays 												
Blasting	<ul style="list-style-type: none"> 9 am to 3 pm Monday to Friday (except public holidays) 												
Maintenance	<ul style="list-style-type: none"> May be conducted at any time, provided that these activities are not audible at any privately-owned residence 												
	Schedule 3, Condition 36	The Applicant must: 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; b) minimise the waste generated by the development; c) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.	Section 6.7										

Licence, Approval or Guideline	Section Reference	Requirement	Reference in this report
	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 4
		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 Environmental Impact Statement (EIS);	Section 5 and 7
		c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance;	Section 8
		d) identify any trends in the monitoring data over the life of the development;	Section 5
		e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	Section 8
		f) describe what measures will be implemented over the current financial year to improve the environmental performance of the development.	Section 5

4. Operation summary

During the reporting period, the quarry has continued to extract material from the north of Stage 1, as shown on Figure 4.1. 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.

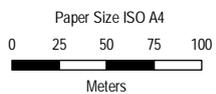
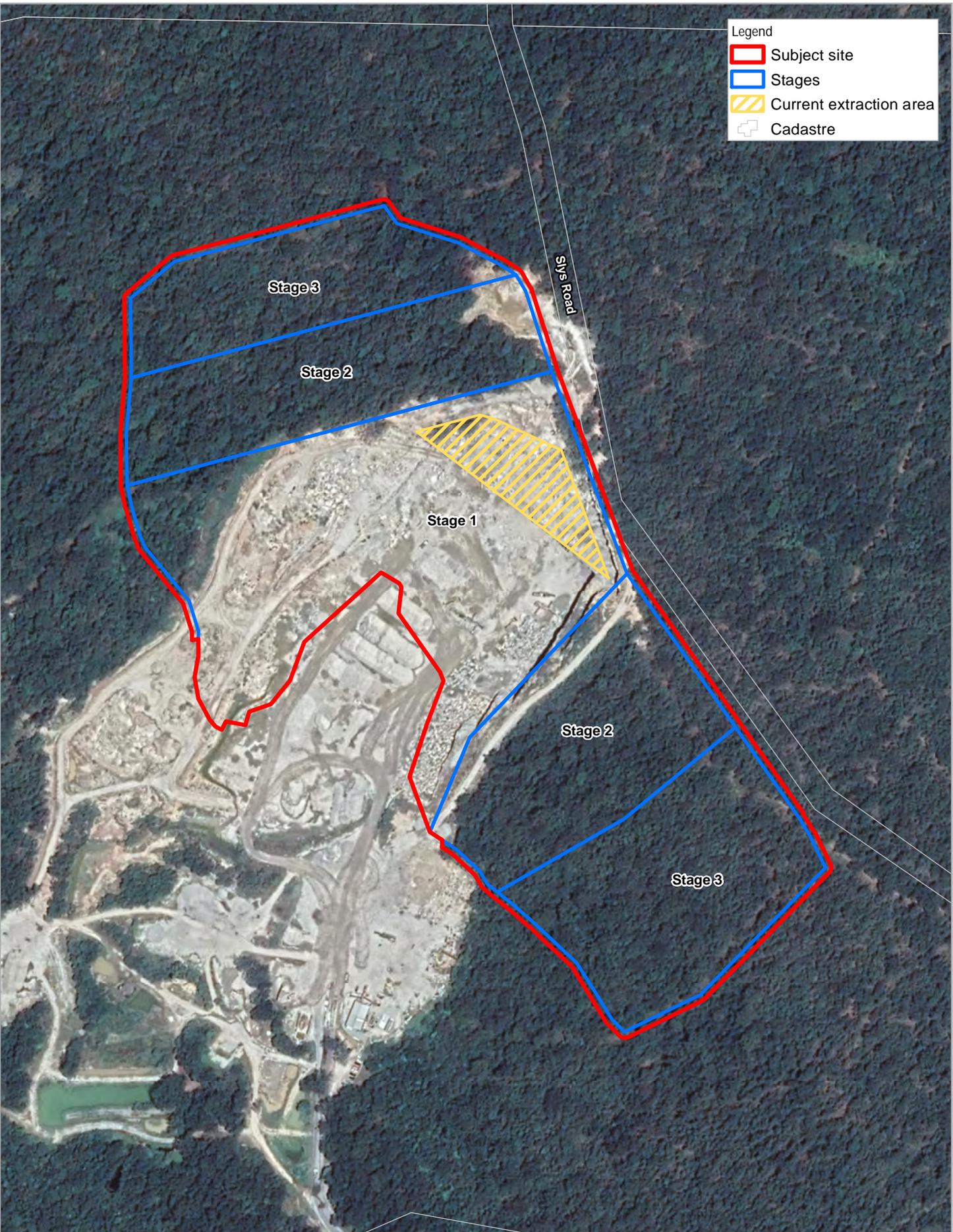
In the reporting period, 183,442 tonnes of material was extracted, as shown in Table 4.1. The table also shows the volume of material sold from Slys Quarry during the reporting period was 142,121 tonnes. This shows the material extracted and transported during the reporting period was within the approved limit of 500,000 tonnes.

Table 4.1 *Blast and production summary*

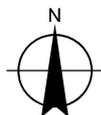
Reporting period	Extracted		Sold/transported (tonnes)
	Volume (m ³)	Tonnes	
2019/20	61,866	154,664	214,568
2020/21	73,377	183,441	142,121
2021/22 (forecast)	120,000	300,000	300,000

Other activities during the reporting period include:

- Conducted Independent Environmental Audit.
- Cleared the remaining area of Stage 1.
- Monitoring rehabilitation of Area C.
- Ongoing environmental monitoring.



Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1994
 Grid: GDA 1994 MGA Zone 56



Newman Quarrying
 Sly's Quarry
 Annual Review

Project No. 22-17528
 Revision No. 0
 Date 04 Dec 2019

Current extraction area

FIGURE 4-1

5. Actions from previous Annual Review

The actions identified during the previous Annual Review for implementation during the current Annual Review reporting period are presented in Table 5.1, along with the current status.

Table 5.1 Status of actions from previous Annual Review

Action required from previous Annual Review	Requested by	Action taken by the Operator	Reference
Monitoring and mitigation measures identified in the CoA, EPL and management plans will continue to be implemented.	A commitment from the previous Annual Review	The monitoring and mitigation measures identified in the CoA, EPL and management plans have continued to be implemented.	Section 6

6. Environmental performance

6.1 Noise

6.1.1 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 7:00 am and 6:00 pm where possible.
- Closing all engine covers while equipment is operating.
- Avoiding dropping materials from height and avoiding metal to metal contact on material.

6.1.2 Environmental performance

As reported in the 2018/19 Annual Review, Newman Quarrying ceased noise monitoring following approval from DPIE. Although no noise monitoring was carried out during the reporting period, there was less extraction than previous years and no complaints, so it is expected the noise impacts were less than previous years when monitoring indicated the operations complied with the noise criteria.

6.1.3 Improvements and initiatives

Mitigation measures and monitoring identified in the CoA, EPL and NMP will continue to be implemented.

6.2 Blasting

6.2.1 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.

6.2.2 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 blast criteria are outlined in EPL 11649 and CoA SSD 6624. A summary of the blast criteria is provided in Table 6.1.

Table 6.1 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 4 blasts were undertaken during the reporting period and all were below the trigger threshold. A summary of the blast monitoring is provided in Table 6.2.

Table 6.2 Summary of blast monitoring

Date	Time	Vibration (mm/s)	Pressure (dBL)	Complies
Blast criteria		5	115	
Trigger value		0.4	106	
23/07/2020	12.53pm	Not triggered	Not triggered	Yes
20/01/2021	2.11pm	Not triggered	Not triggered	Yes
05/03/2021	12.47pm	Not triggered	Not triggered	Yes
28/05/2021	12.32pm	Not triggered	Not triggered	Yes

Based on the predicted results in the EIS, presented in Figure 6.1, the actual results are less. This is similar to previous year's results when most did not trigger and the others were less than the criteria.

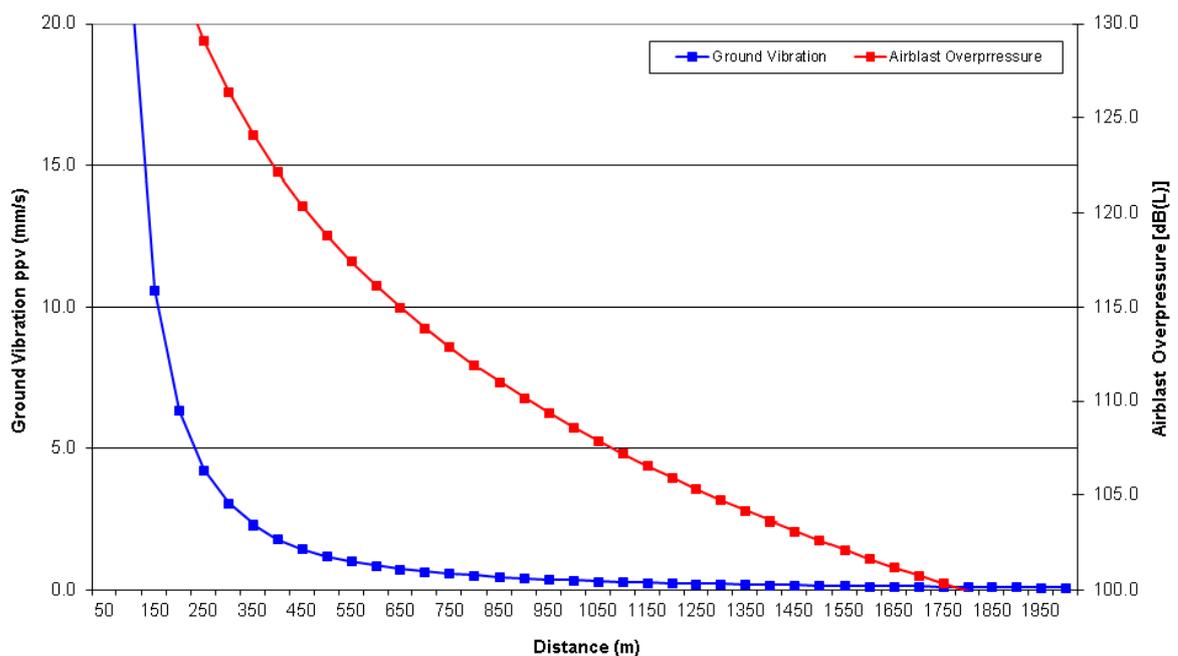


Figure 6.1 EIS estimated ground vibration and airblast overpressure levels from blasting

6.2.3 Improvements and initiatives

Given that no exceedances of the blast criteria were recorded in the reporting period, no improvements are considered necessary. Monitoring and mitigation measures identified in the CoA, EPL and BMP will continue to be implemented.

6.3 Air quality

6.3.1 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.

6.3.2 Environmental performance

Dust monitoring ceased in August 2018 following approval from DPIE given there was no exceedances during previous years. Air quality monitoring will recommence, in accordance with the AQMP, if the site receives a dust complaint or makes an operational change that is likely to increase dust emissions from the site.

6.3.3 Improvements and initiatives

Monitoring and mitigation measures identified in the CoA, EPL and AQMP will continue to be implemented.

6.4 Soil and water quality

6.4.1 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 include:

- 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
- Groundwater level monitoring

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

6.4.2 Environmental performance

Basin monitoring

Monitoring was undertaken for total suspended solids (TSS), pH and oil and grease at the outlet of the main basin (MP1) prior to discharging. This location is the EPL monitoring point. The criteria outlined in the SWMP and EPL is presented in Table 6.3.

Table 6.3 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 6.4. Full water quality records are provided in Appendix D. This shows the water quality complied with the EPL criteria prior to discharging, as predicted in the EIS. The results are reasonably consistent with previous years, with the results less than 50 mg/L and between a pH of 7.09 and 8.15.

Table 6.4 Summary of basin monitoring results

Date	Rain		Discharging	TSS (mg/L)	pH	Oil	Treated?	Discharged
	24hrs	5 Days						
Criteria				50	6.5-8.5	Nil		
26/08/21	0	0	No	4	7.8	Nil	No	Yes
01/02/21	8	11	No	9	7.88	Nil	No	Yes
15/03/21	27	44	No	16	7.22	Nil	No	Yes
06/04/21	32	41	No	29	7.09	Nil	No	Yes
28/06/21	0	10	No	27	8.15	Nil	No	Yes

Surface water

Surface water sampling was collected at WQ1 and WQ2 following greater than 10 mm of rain in a 24 hour period until the end of 2020, when DPIE agreed to reducing the monitoring frequency to once per quarter (see Appendix C). A total of 12 sampling events occurred during the reporting period. A summary of the results are presented in Table 6.5 with full water quality records provided in Appendix D. This shows the water quality at the two monitoring locations were relatively consistent. The water quality is also relatively good, which is as predicted in the EIS.

Table 6.5 Baseline surface water monitoring results summary

Site	TSS (mg/L)		pH		Oil (visible)	
	WQ1	WQ2	WQ1	WQ2	WQ1	WQ2
Median	9.2	12.7	6.3	6.2	None	None
Maximum	29	32	6.8	6.5	None	None
Minimum	2	3	5.9	5.8	None	None

Groundwater

Quarterly groundwater monitoring was undertaken at the three groundwater wells.

A summary of the results are presented in Table 6.6, with full water quality records provided in Appendix D. This shows the results vary a little between sites and sampling events. Generally pH is highest at GW1 and about 1 pH unit lower at GW3, while GW2 is somewhere in-between. The conductivity of GW1 and GW3 vary a little between sampling events, while the conductivity at GW2 is relatively stable. Regardless, the conductivity for all sites and sampling events would be considered freshwater and within the natural variability of the area.

Table 6.6 Quarterly groundwater monitoring results

Date	Rain		GW1		GW2		GW3	
	24 hrs	5 days	pH	Cond	pH	Cond	pH	Cond
15/10/2020	0	0	5.8	465	6	302	5	188
01/12/2020	0	0	5.9	288	5.7	287	4.8	340
01/02/2021	8	11	5.7	176	5.4	262	4.9	216
28/06/2021	0	10	6.28	418	5.39	232	5.22	116

Due to the relatively consistent results and lack of impact from the quarry, Newman Quarrying requested surface water and groundwater monitoring cease. This request was approved by DPIE in letters dated 02/12/2021 and 04/02/2021 with the clarification that groundwater levels are dipped annually and baseline monitoring continues quarterly. Copies of the letters are attached in Appendix C.

6.4.3 Improvements and initiatives

Newman Quarrying will continue to implement the appropriate mitigation measures and monitoring required by the EPL and SWMP.

6.5 Biodiversity and rehabilitation

6.5.1 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

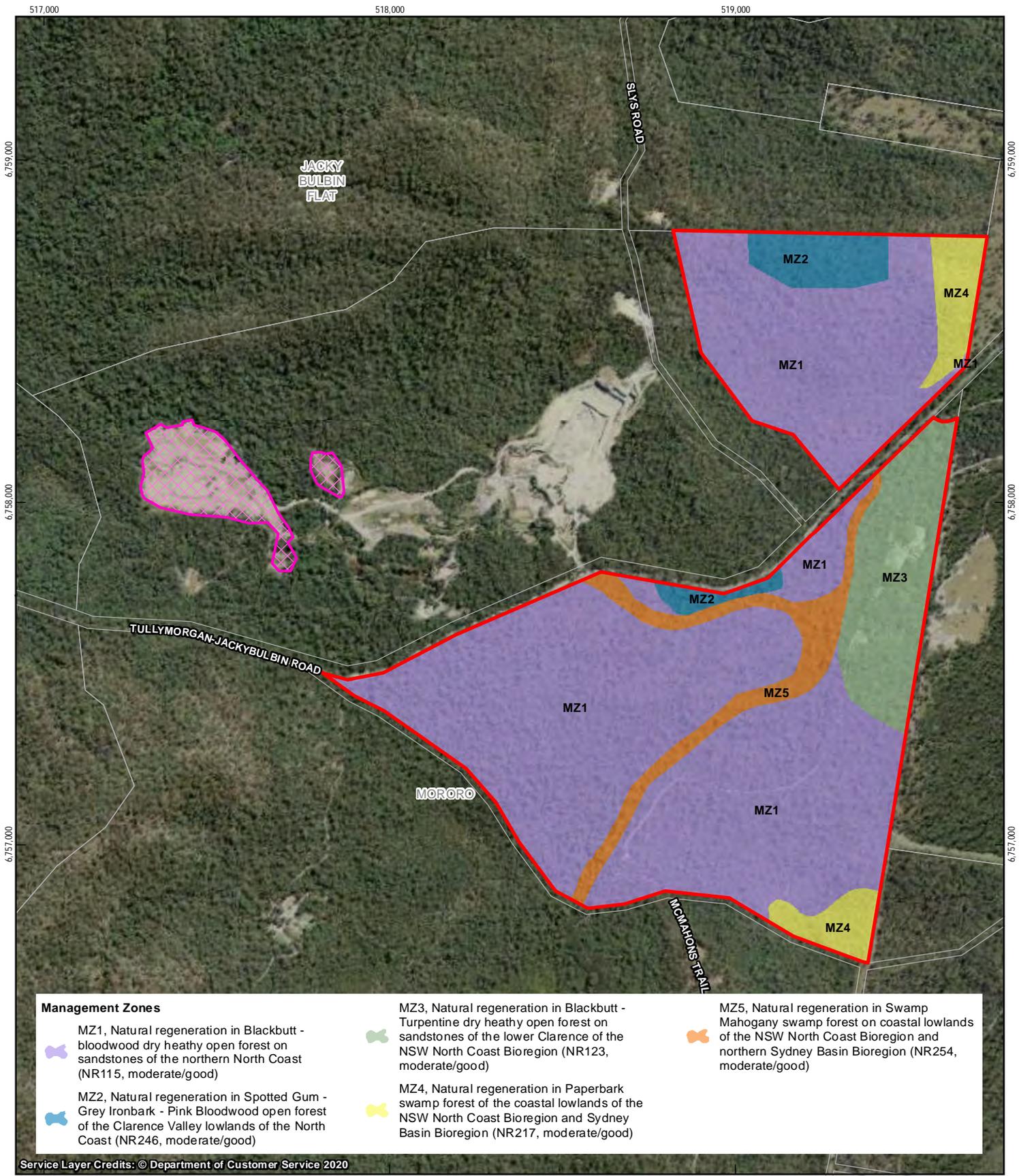
6.5.2 Environmental performance

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 in accordance with the Rehabilitation Plan
- Clearly marked the limits of clearing
- Nest box monitoring in accordance with the Nest Box Management Plan
- Cleared the remainder of Stage 1
- Maintained the Stewardship site in accordance with the Agreement. Figure 6.2 shows the extent of the Stewardship site.

Due to the minimal clearing, the actual impacts are considered to be less than those predicted. Detailed monitoring of the revegetation of Area C has not been completed previously but from opportunistic observations and Figure 6.3, the natural revegetation appears to have progressed with plants growing and additional species observed. Some areas are slow to revegetate and may require assistance if natural revegetation continues to fail in the next few years.

The bushfires in November 2019 burnt most of the property but largely avoided Area C.



Management Zones

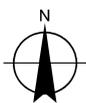
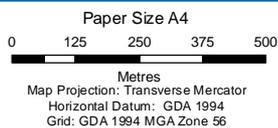
- MZ1, Natural regeneration in Blackbutt - bloodwood dry heathy open forest on sandstones of the northern North Coast (NR115, moderate/good)
- MZ2, Natural regeneration in Spotted Gum - Grey Ironbark - Pink Bloodwood open forest of the Clarence Valley lowlands of the North Coast (NR246, moderate/good)

- MZ3, Natural regeneration in Blackbutt - Turpentine dry heathy open forest on sandstones of the lower Clarence of the NSW North Coast Bioregion (NR123, moderate/good)
- MZ4, Natural regeneration in Paperbark swamp forest of the coastal lowlands of the NSW North Coast Bioregion and Sydney Basin Bioregion (NR217, moderate/good)
- MZ5, Natural regeneration in Swamp Mahogany swamp forest on coastal lowlands of the NSW North Coast Bioregion and northern Sydney Basin Bioregion (NR254, moderate/good)

Service Layer Credits: © Department of Customer Service 2020

LEGEND

- Cadastral
- Tabbimble Creek biobank site
- Revegetation Areas
- Stage 1



Markyl Pty Ltd
 Tabbimble Creek
 Biobanking Assessment

Job Number | 22-17528
 Revision | 1
 Date | 23 Dec 2020

Biobank and revegetation areas **Figure 6-2**

© 2020. Whilst every care has been taken to prepare this map, GHD and LPI make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

Data source: LPI: DCDB / DTDB, Aerial Imagery, 2012.. Created by: fmackay, tmorton

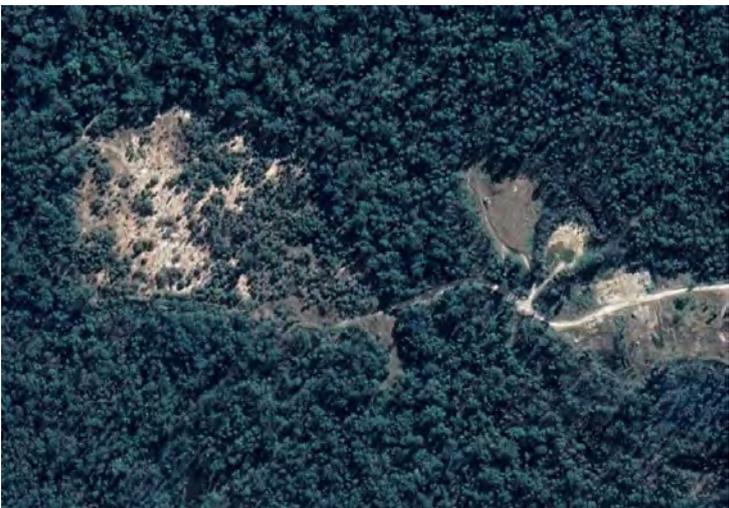


Figure 6.3 Aerial photograph of Area C rehabilitation between 5/10/2013 (top), 25/10/2018 (middle) and August 2020 (bottom)

Newman Quarrying have been progressing the removal of the 317 Common Planigale credits from Condition 27, Schedule 3, and are currently in the process of engaging an expert to assess if the site contains Common Planigale habitat.

6.5.3 Improvements and initiatives

Newman Quarrying will continue to implement the BRMP and Stewardship Agreement requirements to minimise impacts on biodiversity.

6.6 Heritage

6.6.1 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.

6.6.2 Environmental performance

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

6.6.3 Improvements and initiatives

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

6.7 Waste

6.7.1 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.

6.7.2 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.

A summary of the type and quantity of wastes generated by the quarry during the 2020/21 reporting period are presented in Table 6.7. The volumes of waste were not predicted in the EIS, however the type of wastes and disposal option is generally as predicted.

Table 6.7 Waste records

Waste	Amount	Management option
General rubbish	21 m ³	Landfill
Cardboard	12 m ³	Recycled
Oil	2,300 L	Recycled
Hydrocarbon bin	0.8t	Landfill

6.7.3 Improvements and initiatives

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

6.8 Traffic

6.8.1 Environmental management

Traffic 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.

6.8.2 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.
- No more than 150 laden trucks dispatched from the quarry on any day.

Newman Quarrying present a truck movement summary on their website, which is summarised in Table 6.8. A total of 6,181 trucks transported material from the quarry in the reporting period. Truck movements were compliant with the CoA and TMP.

Table 6.8 Truck movement summary

Day	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
1	66	0	26	20	0	15	0	22	55	44	0	21
2	66	0	23	8	13	9	0	36	69	0	0	31
3	68	13	18	0	10	10	0	21	59	0	10	15
4	4	32	12	0	23	10	0	38	38	0	23	38
5	0	72	4	0	9	0	0	9	9	0	7	0
6	71	44	0	36	9	0	0	0	0	7	6	0
7	68	19	35	18	0	11	0	0	0	4	14	17
8	37	0	12	19	0	21	0	30	42	0	0	71

Day	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
9	7	0	9	11	3	22	0	45	22	17	0	84
10	26	6	12	0	40	30	0	61	21	0	18	55
11	0	19	6	0	23	7	7	67	32	0	22	71
12	0	10	0	10	11	0	14	42	20	46	33	0
13	14	29	0	12	27	0	6	0	0	24	24	0
14	68	8	13	4	0	0	7	0	0	36	49	0
15	36	0	3	14	0	0	14	70	4	77	10	102
16	24	0	21	7	17	0	0	51	3	48	0	77
17	42	27	11	0	13	3	0	4	3	0	35	49
18	0	9	4	0	29	3	22	4	12	0	21	42
19	0	14	0	17	13	0	24	4	3	25	63	0
20	20	30	0	32	12	0	34	0	0	31	46	0
21	24	11	22	10	0	0	28	0	0	59	29	66
22	21	0	22	20	0	0	10	13	0	74	0	62
23	13	0	17	8	22	0	0	45	0	77	0	19
24	5	22	27	0	19	0	0	12	0	0	39	36
25	0	27	14	0	11	0	21	11	7	0	17	32
26	0	45	0	9	18	0	0	25	10	69	19	0
27	10	42	0	15	10	0	5	0	0	100	11	0
28	7	50	14	10	0	0	29	0	0	51	53	23
29	7	0	18	6	0	0	14		21	38	0	36
30	8	0	12	4	5	0	0		48	15	0	29
31	26	43	0	0	0	0	0		42		16	

The traffic impacts were generally consistent with those predicted, however truck numbers have decreased by over 2,000 compared to the previous reporting period.

6.8.3 Improvements and initiatives

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

7. Community

In accordance with the CoA, an Environmental Management Strategy (EMS) was prepared, which included details of 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 publicly available on their website.

During the reporting period, no complaints were received.

8. Independent audit

Tim Fitzroy & Associates completed an independent environmental audit (IEA) in April 2021. In summary the IEA stated:

Sly's Quarry was being developed generally in accordance with the project description and predictions outlined in the Environmental Impact Assessment for the Sly's Quarry Expansions, March 2015. The operation of the Sly's Quarry at the date of this audit, generally demonstrates compliance with the Development Consent conditions, and the Environment Protection Licence conditions.

Table 8.1 IEA compliance summary

Summary	Status
Environmental Management Strategy	Compliant
Management Plans	Compliant
Noise Management	Compliant ongoing
Blast Management	Compliant ongoing
Air Quality	Compliant ongoing
Soil and Water Management	Non-compliant low risk
Traffic and transport	Non-compliant low risk
Waste Management	Non-compliant low risk
Heritage Management	Compliant
Biodiversity and Rehabilitation	Compliant or Not Triggered
Bushfire Management	Compliant

Only the waste management non-compliance was in relation to a condition of consent – Schedule 3, Condition 36. This related to the on site sewage management system, which was reported to be operated satisfactorily however the Land Application\ Area (LAA) was overgrown and therefore difficult to inspect. It was recommended that the LAA be mown and kept in a well maintained manner to allow future assessment. The area has since been mown. The non-compliance was considered more a recommendation in relation to improving the maintenance of the LAA. The Council had recently inspected the system and did not raise any concerns.

DPIE have reviewed the IEA and in a letter dated 13/08/2021 acknowledged the EAR report generally satisfied the reporting requirements of the approval and no enforcement action is required. A copy of the letter is provided in Appendix C.

9. Incidents and non-compliance

9.1 Incidents

No incidents occurred during the reporting period.

9.2 Non compliance

As identified in Section 1, there was only one non-compliance identified during the IEA in relation to SSD 6624. The IEA also identified some low risk non-compliances relating to controls in the Soil and Water Management Plan, Traffic Management Plan, Waste Management Plan and Biodiversity and Rehabilitation Management Plan. All these non-compliances were addressed in the Response to Audit Recommendations, which has been reviewed and accepted by DPIE, as indicated by the letter dated 13/08/2021 in Appendix C.

9.3 Regulatory agency actions

There has been no regulatory agency action during the reporting period.

10. Activities to be completed in the next reporting period

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

- Continued extraction from Stage 1 and commence clearing and extraction in Stage 2B, as shown in Figure 4.1.
- Total expected extraction of 300,000 tonnes.
- Detailed review of EMS and management plans within 3 months of submission of the Annual Report, as per Condition 4, Schedule 5.
- Installing new nest boxes and continuing nest box monitoring.
- Modify the consent to update the biobank credit requirements.
- The requirements of the management plans, EPL and CoA will continue to be implemented.
- Rehabilitation will continue.
- Implement Stewardship management as per the agreement.

11. 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 1 July 2020 to 30 June 2021.

The primary quarry operations undertaken during the reporting period included:

- Clearing the remaining area of Stage 1.
- Extraction from Stage 1.
- Total extraction of 183,442 tonnes.
- Area C rehabilitation has been ongoing.
- Independent Environmental Audit.

Activities proposed for the next reporting period include:

- Continue extraction from Stage 1 and commence clearing and extraction in Stage 2B, as shown in Figure 4.1.
- Total expected extraction of 300,000 tonnes.
- Detailed review of EMS and management plans within 3 months of submission of the Annual Report, as per Condition 4, Schedule 5.
- Installing new nest boxes and continuing nest box monitoring.
- Modify the consent to update the biobank credit requirements.
- The requirements of the management plans, EPL and CoA will continue to be implemented.
- Rehabilitation will continue.
- Implement Stewardship management as per the agreement.

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 as predicted, consistent with previous reporting periods and compliant. The IEA identified a non-compliance with the CoA and some of the management plans but these have been addressed and DPIE have indicated they are satisfied with the response.

No complaints were received during the reporting period.

Environmental management will continue to comply with the CoA of SSD 6624, EPL 11649 and the relevant management plans.

12. 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

Production data

Extractive Materials Return 2019-2020



Regional
NSW

Form S1 – Period Ending 30 June 2020

Sales During 2019-2020
Production information may be published in aggregated form for statistical reporting. However, production data for individual operations is kept strictly confidential.

Product	Description	Quantity Tonnes
Virgin Materials		
Crushed Coarse Aggregates		
Over 75mm	Over 75mm	9,188.02
Over 30mm to 75mm	30-75mm	7,674.20
5mm to 30mm	5-30mm	1,583.64
Under 5mm		
Natural Sand		
Manufactured Sand	Washed Sand	4,524.52
Prepared Road Base & Sub Base		84,187.81
Other Unprocessed Materials		
Recycled Materials		
Crushed Coarse Aggregates		
Over 75mm		
Over 30mm to 75mm		
5mm to 30mm		
Under 5mm		
Natural Sand		
Manufactured Sand		
Prepared Road Base & Sub Base		
Other Unprocessed Materials		
River Gravel		
Over 30mm		
5mm to 30mm		
Under 5mm		
Construction Sand	Excluding Industrial Fill Sand	32,027.24
Industrial Sand		
Foundry, Moulding		
Glass		
Other (Specify)		
Dimension Stone		
Building, Ornamental, Monumental		
Quarried in Blocks	Sorted rock	2,864.16
Quarried in Slabs	FLAT ROCK GREY	71.52
Decorative Aggregate		
Including Terrazzo		
Loam	Soil for Topdressing, Garden soil, Horticultural purposes)	
TOTAL SITE PRODUCTION		142,121.15
Gross Value (\$) of all Sales		\$1,705,453.32
Type of Material		SANDSTONE
Number of Full-Time Equivalent (FTE) Employees	Employees	7
	Contractors	1

Please Note: A return for clay-based products can be obtained by contacting the inquiry number.

Extractive Materials Return 2019-2020



Regional
NSW

Form S1 – Period Ending 30 June 2020

Quote RIMS ID in all correspondence

Quarry Id: _____	Rims ID: 400567	Inquiries please telephone: (02) 4063 6713 Completed or Nil Returns Email – mineral.royalty@planning.nsw.gov.au Postal Address (see below)
Operators Name: NEWMAN QUARRYING PTY Address: PO BOX 292 Yamba 2464 Email: newmanquarrying@gmail.com		
Quarry Name: Sly's Quarry Quarry Address: Seelysullen rd, Mororo 2469		Please amend name, postal address and location of mine or quarry if incorrect or incomplete.

The return should be completed and forwarded to **Senior Advisory Officer, RESOURCE ECONOMICS, RESOURCE PLANNING & PROJECTS, DEPARTMENT OF REGIONAL NSW, PO BOX 344 HUNTER REGION MAIL CENTRE NSW 2310** on or before **31 October 2020**. If completion of the return is unavoidably delayed, an application for extension of time should be requested before the due date. If no work was done during the year, a NIL return must be forwarded.

The return should relate to the **above quarrying establishment** and should cover the operations of quarrying and treatment (such as crushing, screening, washing etc.) carried out at or near the quarry. A return is required even if the operations are solely of a developmental nature and whether the area being worked is held under a mining title or otherwise.

Director, Resource Planning & Projects

Please complete all the following information to assist in identifying the location of the Quarry

Typical Geology SANDSTONE

Nearest Town to Quarry MACLEAN

Local Council Name CLARENDON VALLEY COUNCIL

Deposited Plan and Lot Number/s of Quarry Lot 2 DP1055044

Email Address of Operator newmanquarrying@gmail.com

Name of Owner or Licensee Mark Newman

Postal Address of Licensee PO BOX 292, Yamba 2464

Licence/Lease Number/s (if any)
From Mining, Exploration & Geoscience (NSW Mineral Resources) N/A
From Crown Lands or other NSW Department 550624

If any output was obtained from land NOT held under licence from the above Departments, state the Name/s and Address/es of the Owners of the land N/A.

To the best of my knowledge, information entered in this return is correct and no blank spaces left where figures should have been inserted.

- SIGNATURE of PROPRIETOR or MANAGER [Signature] DATE 19/8/21
- CONTACT PERSON for this return MARK NEWMAN
- NAME (Block letters) MARK NEWMAN Telephone 0427822667

Appendix B

Council contributions

NEWMAN QUARRYING PTY.LTD

ACN 067 605 323 / ABN 32 067 605 323

PO BOX 292, Yamba 2464

PH 0427822667

newmanquarrying@gmail.com

1.7.21

To Whom it may concern,

Please see attached our cheque to pay our annual s94 contribution. This amount has been calculated using the formula in your s94 plan the following way.

L = 2km of council road from our gate to Pacific Hwy

T = 142,121.11 sold /5t per axle (as s94 plan states) = 28,424.22 esa's used 20/21

M = \$4,218.93 as per s94 plan maclean quarry rd maintenance minor rd

Q = 24000 anticipated esa's used 21/22

Formula (l x m) / t x Q

$2 \times \$4218.93 = \$8,437.86 / 28,424.22 \times 24,000 = \$7,124.51$

Please feel free to contact me if you need any further information.

Regards

Mark Newman
Director

clarence
VALLEY COUNCIL

ABN: 85864095684

Locked Bag 23
Grafton NSW 2460

Tax Invoice
Official Receipt

14/07/2021 **Receipt No:** 860564

To: Newman Quarrying Pty Ltd
PO BOX 292
YAMBA NSW 2464

Applic	Reference	Amount
GL Receipt		
GL S94QuryRdsJacky		\$7,124.51
1 - Newman Quarry - Annual S94 Contribution		
Qty 1, CredCardSurcharge		\$38.86
1		
GL19997480		\$3.89
Transaction Total:		\$7,167.26
Includes GST of:		\$3.89

Amounts Tendered

Cash	\$0.00
Cheque	\$0.00
Db/Cr Card	\$7,167.26
Money Order	\$0.00
Agency	\$0.00
Total	\$7,167.26
Rounding	\$0.00
Change	\$0.00
Nett	\$7,167.26

You are a valued customer of Clarence Valley Council. We thank you for your payment.

Please Note: The print quality of this receipt will diminish over time.

A surcharge of 0.6% applies to payments by Credit Card

Printed 14/07/2021 11:56:15AM

Appendix C

DPIE Correspondence



Mr Mark Newman
Newman Quarrying Pty Ltd
Jackybulbin Road,
Mororo NSW 2469

02/12/2020

**Newman Quarrying Pty Ltd – Sly's Quarry (SSD 6624)
Annual Environmental Management Report 2019 - 2020**

Dear Mr Newman

Reference is made to the Annual Environmental Management Report (AEMR) for the period 1 July 2019 to 30 June 2020, submitted to the Department of Planning, Industry and Environment (the Department) on 17 September 2020 as required under Schedule 5, Condition 10, of SSD 6624 (the Consent, as modified).

The Department has reviewed the AEMR and in accordance with Schedule 2, Condition 4 of the Consent, the Secretary requests that the AEMR is amended to include the following:

- Provide further detail on the areas of the property impacted by the November 2019 bushfires including: impacts and regrowth of rehabilitation and biobank areas; reinstallation of the eight (8) nest boxes destroyed by fire; and reinstallation of damaged groundwater wells; and
- Update maps to reflect the recently updated Biodiversity and Rehabilitation Management Plan (BRMP) and Biobank agreement areas.

Please provide the amended AEMR to the Department, via the Major Projects Planning portal at:
<https://www.planningportal.nsw.gov.au/major-projects/services/lodge-post-approval-documents-0> by close of business **13 January 2021**.

Regarding the GHD letter 7 February 2020 requesting the cessation of baseline and groundwater monitoring in accordance with the *Soil and Water Management Plan (GHD, 2017)* (the Plan), the Department has reviewed the proposal and does not support the cessation of monitoring. Rather, the Department approves a reduction in the monitoring frequency to be undertaken annually, where adequate water is available for sampling. Further, the Department supports the dipping of wells to replace the use of data loggers.

However, if the site receives a complaint or makes an operational change that is likely to impact surface water or groundwater quality at the site, the Department expects that baseline and groundwater quality monitoring will recommence at the frequency required under the approved Plan.

Finally, please ensure the project website is kept up to date with updated plans and the latest water quality monitoring results in accordance with Condition 13, Schedule 5 of the Consent.

Should you need to discuss the above, please contact Angie Hollister, on telephone (02) 6670 8654 or email compliance@planning.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Shelley McPhee'. The signature is fluid and cursive, with the first letter 'S' being particularly large and stylized.

Shelley McPhee
Compliance Team Leader
Compliance

As nominee of the Planning Secretary



Mr Mark Newman
Newman Quarrying Pty Ltd
Jackybulbin Road,
Mororo NSW 2469

04/02/2021

Dear Mr Newman

**Newman Quarrying Pty Ltd – Sly's Quarry (SSD 6624)
Annual Environmental Management Report 2019 - 2020**

Reference is made to the revised Annual Environmental Management Report (AEMR) for the period 1 July 2019 to 30 June 2020, submitted to the Department of Planning, Industry and Environment (the Department) on 24 December 2020 as required under Schedule 5, Condition 10, of SSD 6624 (the Consent, as modified).

Thank you for providing further detail on bushfire impacts to the property and updating mapping to reflect the current Biodiversity and Rehabilitation Management Plan (BRMP) and Biobank agreement areas. The Department has reviewed the revised AEMR and considers the report generally satisfied the requirements of the Consent. Please note that acceptance of the AEMR is not endorsement of the compliance status of the project.

The Department understands the sites Environmental Management Strategy (EMS) and Management Plans have been reviewed, updated and submitted to the Department in accordance with Condition 4, Schedule 5, following the AEMR 2019. Please be advised that the Department is currently reviewing the updated Plans and hopes to provide you with advice on their approval or otherwise as soon as possible.

Regarding your request for the cessation of baseline and groundwater monitoring, the Department approves a reduction only in groundwater monitoring frequency to be undertaken annually, where adequate water is available for sampling. Regarding baseline monitoring, the Department supports your proposal to reduce to sampling after 10mm of rain at least once every quarter.

However, in the event the site receives a complaint or makes an operational change that is likely to impact surface water or groundwater quality, the Department expects that baseline and groundwater quality monitoring will recommence at the frequency required under the currently approved Plan.

If you wish to discuss the matter further, please contact Angie Hollister, Senior Compliance Officer on (02) 6670 8654.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Shelley McPhee'. The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Shelley McPhee
Compliance Team Leader
Compliance

As nominee of the Planning Secretary



Mr. Mark Newman
2 Wentworth Street
PALMERS ISLAND NSW 2463

13/08/2021

Dear Mr Newman

**Sly's Quarry Expansion (SSD-6624)
Independent Environmental Audit**

Reference is made to the Independent Environmental Audit (IEA) report and Response to Audit Recommendations (RAR) for the Sly's Quarry Expansion, prepared as required by Schedule 5, Condition 11 of SSD-6624 (the **approval**) and submitted to the Department of Planning, Industry and Environment (the **Department**) on 30 June 2021.

The Department considers that the IEA report generally satisfies the reporting requirements of the approval. Please note that acceptance of this report is not endorsement of the compliance status of the project.

As a result of the review, the Department notes the following concerns and/or improvements:

- a) Schedule 5, Condition 13 of SSD-6624 requires a complaint register to be updated monthly. After a review of the project website it appears that the complaint register has not been updated since January 2020. This is a contravention of Schedule 5, Condition 13. Please ensure the information on the project website is updated by **10 September 2021**.
- b) Section 5.6.10 of the audit report highlights a concern for the build-up of sediment in the basin that services the wash-down bay for trucks and other site vehicles. The RAR provides a solution by increasing the frequency of maintenance of the basin from six monthly to quarterly. Please provide an update on this matter in the next Annual Review.

The Department highlights that the submission of the IEA was not in accordance with the timing prescribed in Schedule 5, Condition 11. While an extension of time was requested and approved by the Department to June 2021, please be mindful that the next IEA is due by 30 June 2023 in accordance with Schedule 5, Condition 11.

Non-compliances identified in the IEA have been assessed in accordance with the Department's Compliance Policy with the Department on this occasion, determining to record the breaches with no further enforcement action. However, please note that recording the breach does not preclude the Department from taking alternative enforcement action, should it become apparent that an alternative response is more appropriate.

Please include a status update for all actions provided in the RAR in the next Annual Review, until all actions are completed.

If you wish to discuss the matter further, please call Phillip Rose on (02) 6670 8657.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Shelley McPhee'. The signature is fluid and cursive, with the first letter 'S' being particularly large and stylized.

Shelley McPhee
Compliance Team Leader
Compliance
As nominee of the Planning Secretary

Appendix D

Water quality results

DATE	WHO	WEATHER	RAIN PAST 24 HRS	RAIN PAST 5 DAYS	POINT	DISCHARGING?	TSS/TURB	PH	conduct	OIL	TREATED?	DISCHARGED?		
25.7.20	mark n	rain	25	32.5	wq1	n/a		7	5.9 n/a	no	n/a	n/a	surface water >10mm	running
25.7.20	mark n	rain	25	32.5	wq2	n/a		13	6.3 n/a	no	n/a	n/a	surface water >10mm	running
26.7.20	mark n	rain	50	82.5	wq1	n/a		7	5.9 n/a	no	n/a	n/a	surface water >10mm	running
26.7.20	mark n	rain	50	82.5	wq2	n/a		13	6.2 n/a	no	n/a	n/a	surface water >10mm	running
27.7.20	mark n	rain	18	100.5	wq1	n/a		6	6 n/a	no	n/a	n/a	surface water >10mm	running
27.7.20	mark n	rain	18	100.5	wq2	n/a		11	6.2 n/a	no	n/a	n/a	surface water >10mm	running
7.8.20	mark n	rain	15	15	wq1	n/a		3	6.2 n/a	no	n/a	n/a	surface water >10mm	running
7.8.20	mark n	rain	15	15	wq2	n/a		3	6.2 n/a	no	n/a	n/a	surface water >10mm	running
15.8.20	mark n	rain	16	16	wq1	n/a		2	6.1 n/a	no	n/a	n/a	surface water >10mm	running
15.8.20	mark n	rain	16	16	wq2	n/a		3	6.2 n/a	no	n/a	n/a	surface water >10mm	running
26.8.20	mark n	fine	0	0	pond e	no		4	7.8 n/a	no	no	yes		
15.10.20	mark n	fine	0	0	gw1	n/a	n/a		5.8	465 no	n/a	n/a	quarterly test	
15.10.20	mark n	fine	0	0	gw2	n/a	n/a		6	302 no	n/a	n/a	quarterly test	
15.10.20	mark n	fine	0	0	gw3	n/a	n/a		5	188 no	n/a	n/a	quarterly test	
19.10.20	mark n	fine	10.5	10.5	wq1	n/a		9	6.8 n/a	no	n/a	n/a	surface water >10mm	stagnant
19.10.20	mark n	fine	10.5	10.5	wq2	n/a		11	5.8 n/a	no	n/a	n/a	surface water >10mm	stagnant
26.10.20	mark n	fine	15	17	wq1	n/a		4	6.5 n/a	no	n/a	n/a	surface water >10mm	stagnant
26.10.20	mark n	fine	15	17	wq2	n/a		15	5.9 n/a	no	n/a	n/a	surface water >10mm	stagnant
28.10.20	mark n	fine	11	28	wq1	n/a		3	6.5 n/a	no	n/a	n/a	surface water >10mm	stagnant
28.10.20	mark n	fine	11	28	wq2	n/a		5	6 n/a	no	n/a	n/a	surface water >10mm	stagnant
1.11.20	mark n	fine	19	40	wq1	n/a		22	6.4 n/a	no	n/a	n/a	surface water >10mm	running
1.11.20	mark n	fine	19	40	wq2	n/a		32	6.5 n/a	no	n/a	n/a	surface water >10mm	running
1.12.20	mark n	fine	0	0	gw1	n/a	n/a		5.9	288 no	n/a	n/a	quarterly test	
1.12.20	mark n	fine	0	0	gw2	n/a	n/a		5.7	287 no	n/a	n/a	quarterly test	
1.12.20	mark n	fine	0	0	gw3	n/a	n/a		4.8	340 no	n/a	n/a	quarterly test	
8.12.20	mark n	fine	14	17	wq1	n/a		13	6.53 n/a	no	n/a	n/a	surface water >10mm	running
8.12.20	mark n	fine	14	17	wq2	n/a		12	6.18 n/a	no	n/a	n/a	surface water >10mm	running
7th December 2020 Department agreed to reduce water monitoring to ground water annually and surface water once per quarter after 10mm of rain														
1.2.21	mark n	rain	8	11	gw1	n/a	n/a		5.7	176 no	n/a	n/a	quarterly test	
1.2.21	mark n	rain	8	11	gw2	n/a	n/a		5.42	262 no	n/a	n/a	quarterly test	
1.2.21	mark n	rain	8	11	gw3	n/a	n/a		4.93	216 no	n/a	n/a	quarterly test	
1.2.21	mark n	fine	8	11	epl point 1	no		9	7.88 n/a	no	no	yes		
2.2.21	mark n	rain	30	38	wq1	n/a		5	6.2 n/a	no	n/a	n/a	surface water >10mm	running
2.2.21	mark n	rain	30	38	wq2	n/a		6	6.18 n/a	no	n/a	n/a	surface water >10mm	running
15.3.21	mark n	rain	27	44	epl point 1	no		16	7.22 n/a	no	no	yes		
6.4.21	mark n	rain	32	41	wq1	n/a		29	6.1 n/a	no	n/a	n/a	surface water >10mm	running
6.4.21	mark n	rain	32	41	wq2	n/a		28	6.26 n/a	no	n/a	n/a	surface water >10mm	running
6.4.21	mark n	rain	32	41	epl point 1	no		29	7.09 n/a	no	no	yes		
28.6.21	mark n	fine	0	10	gw1	n/a	n/a		6.28	418 no	n/a	n/a	quarterly test	
28.6.21	mark n	fine	0	10	gw2	n/a	n/a		5.39	232 no	n/a	n/a	quarterly test	
28.6.21	mark n	fine	0	10	gw3	n/a	n/a		5.22	116 no	n/a	n/a	quarterly test	
28.6.21	mark n	fine	0	10	epl point 1	no		27	8.15 n/a	no	no	yes		

Appendix E

Next Box Monitoring report

7th September 2020

Newmans Quarrying

PO Box 292

Yamba NSW 2464

Attention: Mark Newman

Re: Nest Box Monitoring – Episode 4 of Stage 1 - Lot 2 DP 1055044 Tullymorgan-Jackybulbin Road

Introduction

The proposal to expand quarrying operations at Lot 2 DP 1055044 Tullymorgan-Jackybulbin Road was approved by the Minister for Planning on the 5th May 2016 (SSD 6624). The preparation of a Nest Box Management Plan was identified as an additional requirement from the EIS (GHD 2015) and Biodiversity and Rehabilitation Management Plan (GHD 2017). This Plan identified nest boxes be installed in a number of stages, the first stage specified that prior to the clearing of vegetation, 12 nest boxes would be installed to provide habitat for any displaced hollow dependant fauna. The specific requirements of these nest boxes was summarised as follows:

- Five small nest boxes with entrances smaller than 50 mm;
- Four medium nest boxes with entrances of 50-150 mm; and
- Two larger nest boxes with entrances exceeding 150 mm.

A fifth medium sized nest box was installed due to anomalies between the individual and total tallies in Table 4-2 of the Slys Quarry Nest Box Management Plan (GHD 2017).

In accordance with the Nest Box Plan of Management, monitoring must be undertaken twice per year for a period of five years.

Past monitoring events have found the following:

- Year one where initial round of monitoring in October 2018 found three of the 12 (25%) nest boxes showed signs of occupation. Two of the medium sized nest boxes (numbers 6 and 8) had glider leaf nests in them whilst the large nest box designed for small owls had been recently used by a possum, presumably a Common Brushtail Possum (*Trichosurus vulpecula*). The second round of monitoring in April 2019 found six of the 12 (50%) nest boxes showed signs of occupation. This included a Gould's Long-eared Bat (*Nyctophilus gouldi*) using Nest Box 1 (two chamber bat box) along with active marsupial glider nests in Nest Box 4 (Parrot design), Nest Box 6 (parrot design) and Nest Box 8 (rear entry glider). Older signs of occupation were recorded in Nest Box 3 (small possum) with a disused glider nest and Nest Box 10 (small owl) with a possum nest.

At the end of Year 1, no feral species (i.e. European Honey Bee or Common Myna) were recorded using the nest boxes and only some minimal maintenance was required to remove ants using a medium sized parrot box (Nest Box 9) and some repositioning of Nest Box 11 so that it remained in a firm position in the recipient tree.

- Year two where the first round of monitoring on the 28th December 2019 found eight of the 12 (67%) nest boxes had been destroyed by the Myall Creek Bushfire that burnt through this area on the 20th and 21st November 2019. Of the remaining four nest boxes, two were found to contain wildlife with two Sugar Gliders (*Petaurus breviceps*) using Nest Box 4 and a Common Brushtail Possum (*Trichosurus vulpecula*) using Nest Box 11. From a maintenance perspective, no feral species (i.e. European Honey Bee or Common Myna) were recorded using the four nest boxes that remain undamaged from the fire and there was a recommendation to replace those boxes lost in the fire during the next round of monitoring.

Episode Four Monitoring Details

The site was accessed on the 3rd September 2020 for the purposes of inspecting the remaining nests boxes which had survived the fire and to install the eight replacement nest boxes. A ladder with a fall arrest (belay and harness) system was used to access each nest box so that species could be positively identified and that any maintenance activities could be performed at that time.

Monitoring Results

None of the four nest boxes showed recent signs of evidence. The Sugar Glider (*Petaurus breviceps*) leaf nest in Nest Box 4 was still evident but showed no recent sign of use (Plate 1-1). Similarly, there was no recent sign of use in Nest Box 11 which had been previously used by a Common Brushtail Possum (*Trichosurus vulpecula*).

From a maintenance perspective, no feral species (i.e. European Honey Bee or Common Myna) were recorded. Eight cyplas nest boxes from Hollow Log Homes were installed during the survey and this included positioning boxes on some new trees of the same species as well as some on those trees which previously contained boxes (Plate 1-2).



Plate 1-1. Nest box 4 and the disused glider nest.



Plate 1-2. Newly installed CYPLAS nest boxes 9 and 10 replacing those destroyed by fire.

Discussion and Conclusion

No fauna were recorded during this round of monitoring nor were there any recent signs of use (i.e. scats, new nesting material, fur). This represents a decline after Year 1 when 50% of the nest boxes showed some sign of current or past occupation. The Myall Creek fire which burnt through the site explains this change in occupancy whilst monitoring shortly after the fire (i.e. 5 weeks) revealed possum and glider were still present in the area and had survived the fire event. Meanwhile, their absence during this round of monitoring may reflect one of two things, firstly, some change in the use of den resources which is normal, or secondly, it could be related to the severity of the fire and the slow recovery of the forest that has resulted in the starvation of these animals. cursory observations of the site show fewer mid storey and habitat trees containing natural hollows.

This round of monitoring coincided with eight new CYPLAS nest boxes being installed and these have been deployed in the same general area and included some existing trees where nest boxes had been destroyed as well as some new trees. These boxes tend to be more durable and may be less prone to ember attack during future fires.

Future monitoring will prove useful in determining the extent of hollow dependent fauna that have recovered from the fire.

Should you require any additional information please contact me at your convenience.

Kind Regards,



Ben Lewis
Director
Lewis Ecological Surveys

References

GHD (2015). *Environmental Impact Statement*. Prepared for Proposed Quarry Expansion at Lot 2 DP 1055044, Tullymorgan-Jackybulbin Road, Mororo

GHD (2017). Slys Quarry Nest Box Plan of Management. Report prepared for Newman Quarrying Pty Ltd.

GHD (2017a). *Biodiversity and Rehabilitation Management Plan*. Prepared for Quarry Expansion at Lot 2 DP 1055044, Tullymorgan-Jackybulbin Road, Mororo

Lewis, B. D (2018). Nest Box Installation – Stage 1 Slys Quarry Tullymorgan. Report prepared for Newman Quarrying by Lewis Ecological Surveys.

Lewis, B. D (2018). Nest Box Monitoring – Episode 1 (October 2018). Stage 1 Slys Quarry Tullymorgan. Report prepared for Newman Quarrying by Lewis Ecological Surveys.



Lewis, B. D (2019). Nest Box Monitoring – Episode 2 (May 2019). Stage 1 Slys Quarry Tullymorgan. Report prepared for Newman Quarrying by Lewis Ecological Surveys.

Lewis, B. D (2020). Nest Box Monitoring – Episode 3 (January 2020). Stage 1 Slys Quarry Tullymorgan. Report prepared for Newman Quarrying by Lewis Ecological Surveys.

Table A1. Nest box register at Year 2 encompassing monitoring episodes 1, 2, 3 and 4.

Installation Date	Nest Box Number	Nest Box Size	Nest Box Type	Easting Northing	Tree Species	Monitoring Episode 1 (October 2018)				Monitoring Episode 2 (April 2019)				Monitoring Episode 3 (December 2019)				Monitoring Episode 4 (September 2020)			
						Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements	Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements	Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements	Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements
6/02/2018	1	Small	Microbat (2 chamber)	518703 6758648	Pink Bloodwood	Nil	Nil	Good	Nil	Gould's Long-eared Bat	Nil	Good	Nil	Nil	Nil	Functional	Survived Fire	Nil	Nil	Functional	Nil
6/02/2018	2	Medium	Barn Owl	518703 6758648	Pink Bloodwood	Nil	Nil	Good	Nil	Ants	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to "Barn Owl" Installed
6/02/2018	3	Small	Microbat (2 chamber)	518659 6758655	Needlebark Stringybark	Nil	Nil	Good	Nil	Glider nest - old	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to "Microbat Box" Installed
6/02/2018	4	Medium	Parrot	518659 6758655	Needlebark Stringybark	Nil	Nil	Good	Nil	Glider nest (active)	Nil	Good	Nil	Sugar Glider x 2	Nil	Functional	Survived Fire	Old glider nest	Nil	Functional	Cleaned some ant nest and spider web material from entrance
6/02/2018	5	Small	Microbat (2 chamber)	518707 6758662	Needlebark Stringybark	Nil	Nil	Good	Nil	Nil	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to new show new tree location and "Microbat Box" installed
6/02/2018	6	Medium	Parrot/nightjar	518707 6758662	Needlebark Stringybark	Glider nest - Sugar or Squirrel Glider	Nil	Good	Nil	Glider nest (active) - Sugar or Squirrel Glider	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to new show new tree location and "Parrot/Nightjar Box" installed
6/02/2018	7	Small	Microbat (2 chamber)	518565 6758642	Rough-barked Apple	Nil	Nil	Good	Nil	Nil	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to "Rear Entry Glider Box" installed
6/02/2018	8	Medium	Rear Entry Glider	518565 6758642	Rough-barked Apple	Glider nest - Sugar or Squirrel Glider	Nil	Good	Nil	Glider nest (active) - Sugar or Squirrel Glider	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to "Possum Box" installed
6/02/2018	9	Large	Glider (large rear entry)	518660 6758644	Rough-barked Apple	Nil	Ants – native spp	Good	Clean entrance – completed on the day	Nil	Ants – native spp	Good	Clean entrance again – completed on the day	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to new show new tree location and "Large Rear Entry Glider Box" installed
6/02/2018	10	Medium	Parrot Box	518660 6758644	Rough-barked Apple	Possum nest - Probably Common Brushtail Possum	Nil	Good	Nil	Possum nest (old) - Probably Common Brushtail Possum	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to new show new tree location and "Parrot Box" installed
6/02/2018	11	Large	Possum (large)	518588 6758616	Pink Bloodwood	Nil	Nil	Good	Readjusted in tree to firmly position – completed on the day	Nil	Nil	Good	Readjusted in tree to firmly position – completed on the day	Nil	Nil	Functional	Survived Fire	Nil	Nil	Functional	Survived Fire
6/02/2018	12	Medium	Possum (small)	518588 6758616	Pink Bloodwood	Nil	Nil	Good	Nil	Nil	Nil	Good	Nil	Common Brushtail Possum x 1	Nil	Functional	Survived Fire	Old signs of brushtail possum	Nil	Functional	Survived Fire

10th August 2021

Newmans Quarrying

PO Box 292

Yamba NSW 2464

Attention: Mark Newman

Re: Nest Box Monitoring – Episode 5 of Stage 1 - Lot 2 DP 1055044 Tullymorgan-Jackybulbin Road

1.0 - Introduction

The proposal to expand quarrying operations at Lot 2 DP 1055044 Tullymorgan-Jackybulbin Road was approved by the Minister for Planning on the 5th May 2016 (SSD 6624). The preparation of a Nest Box Management Plan was identified as an additional requirement from the EIS (GHD 2015) and Biodiversity and Rehabilitation Management Plan (GHD 2017). This Plan identified nest boxes be installed in a number of stages, the first stage specified that prior to the clearing of vegetation, 12 nest boxes would be installed to provide habitat for any displaced hollow dependant fauna. The specific requirements of these nest boxes was summarised as follows:

- Five small nest boxes with entrances smaller than 50 mm;
- Four medium nest boxes with entrances of 50-150 mm; and
- Two larger nest boxes with entrances exceeding 150 mm.

A fifth medium sized nest box was installed due to anomalies between the individual and total tallies in Table 4-2 of the Slys Quarry Nest Box Management Plan (GHD 2017).

In accordance with the Nest Box Plan of Management, monitoring must be undertaken twice per year for a period of five years.

Past monitoring events have found the following:

- Year one where initial round of monitoring in October 2018 found three of the 12 (25%) nest boxes showed signs of occupation. Two of the medium sized nest boxes (numbers 6 and 8) had glider leaf nests in them whilst the large nest box designed for small owls had been recently used by a possum, presumably a Common Brushtail Possum (*Trichosurus vulpecula*). The second round of monitoring in April 2019 found six of the 12 (50%) nest boxes showed signs of occupation. This included a Gould's Long-eared Bat (*Nyctophilus gouldi*) using Nest Box 1 (two chamber bat box) along with active marsupial glider nests in Nest Box 4 (Parrot design), Nest Box 6 (parrot design) and Nest Box 8 (rear entry glider). Older signs of occupation were recorded in Nest Box 3 (small possum) with a disused glider nest and Nest Box 10 (small owl) with a possum nest.

At the end of Year 1, no feral species (i.e. European Honey Bee or Common Myna) were recorded using the nest boxes and only some minimal maintenance was required to remove ants using a medium sized parrot box (Nest Box 9) and some repositioning of Nest Box 11 so that it remained in a firm position in the recipient tree.

- Year two where the first round of monitoring on the 28th December 2019 found eight of the 12 (67%) nest boxes had been destroyed by the Myall Creek Bushfire that burnt through this area on the 20th and 21st November 2019. Of the remaining four nest boxes, two were found to contain wildlife with two Sugar Gliders (*Petaurus breviceps*) using Nest Box 4 and a Common Brushtail Possum (*Trichosurus vulpecula*) using Nest Box 11. A follow up survey in September 2020 found both of the nest boxes had been unused for some time. From a maintenance perspective, no feral species (i.e. European Honey Bee or Common Myna) were recorded using the four nest boxes that remain undamaged from the fire and there was a recommendation to replace those boxes lost in the fire during the next round of monitoring.

2.0 - Episode Five Monitoring Details

The site was accessed on the 2nd May 2021 for the purposes of inspecting the remaining nests boxes which had survived the fire and the eight replacement nest boxes installed in September 2020. A ladder with a fall arrest (belay and harness) system was used to access each nest box so that species could be positively identified and that any maintenance activities could be performed at that time.

3.0 - Monitoring Results

Three of the twelve nest boxes showed recent signs of use by native wildlife. Nest Box 1 was occupied by two Gould's Long-eared Bats (*Nyctophilus gouldi*) whilst a Sugar Glider (*Petaurus breviceps*) was found in Nest box 10 (Plate 1-1). Some leaves consistent with Brushtail Possum was observed in Nest box 2 and is likely to be a Common Brushtail Possum (*Trichosurus vulpecula*). Two of the inhabited nest boxes were replacement boxes installed after the 2019 wildfire. The Gould's Long-eared Bats were found in a specific two chambered bat box which has been previously used by micro bats in the past.

From a maintenance perspective, no feral species (i.e. European Honey Bee or Common Myna) were recorded and all boxes had remained intact on the recipient tree.



Plate 1-1. Nest box 10 with Sugar Glider.



Plate 1-2. Nest box 1 with two Gould's Long-eared Bats.

4-0 - Discussion and Conclusion

Monitoring has confirmed that some fauna have returned to the area 18 months after the wildfire event in November 2019. During this round of monitoring there was evidence of both flying and non flying mammals using the nest box installation area with bats, glider and possum inhabiting one quarter (i.e 25%) of the installed nest boxes. The observation of Gould's Long Eared Bats at the two chambered bat box which has been used by this species in the past indicates periodic or at least seasonal use. Meanwhile, the presence of a Sugar Glider in one of the replacement nest boxes and the age of the leaves within the nest would indicate this nest box was taken up quickly after its installation in spring 2020. Meanwhile, the presence of a few fresh leaves and some hairs consistent with brushtail possum indicate they also remain in the area.

Cursory observations during the survey point to many hollow bearing trees being destroyed by the fire so the overall value or role nest boxes provide to hollow dependent fauna may increase over the next few years, something that continued monitored will be able to measure.

Should you require any additional information please contact me at your convenience.

Kind Regards,



Ben Lewis
Director
Lewis Ecological Surveys

References

GHD (2015). *Environmental Impact Statement*. Prepared for Proposed Quarry Expansion at Lot 2 DP 1055044, Tullymorgan-Jackybulbin Road, Mororo

GHD (2017). *Slys Quarry Nest Box Plan of Management*. Report prepared for Newman Quarrying Pty Ltd.

GHD (2017a). *Biodiversity and Rehabilitation Management Plan*. Prepared for Quarry Expansion at Lot 2 DP 1055044, Tullymorgan-Jackybulbin Road, Mororo

Lewis, B. D (2019). *Nest Box Monitoring – Episode 2 (May 2019)*. Stage 1 Slys Quarry Tullymorgan. Report prepared for Newman Quarrying by Lewis Ecological Surveys.

Lewis, B. D (2020). *Nest Box Monitoring – Episode 3 (January 2020)*. Stage 1 Slys Quarry Tullymorgan. Report prepared for Newman Quarrying by Lewis Ecological Surveys.

Table A1. Nest box register at Year 3 encompassing monitoring episodes 1-5.

Installation Date	Nest Box Number	Nest Box Size	Nest Box Type	Easting Northing	Tree Species	Monitoring Episode 1 (October 2018)				Monitoring Episode 2 (April 2019)				Monitoring Episode 3 (December 2019)				Monitoring Episode 4 (September 2020)				Monitoring Episode 5 (May 2021)			
						Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements	Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements	Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements	Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements	Fauna Use	Feral Animal Activity	Nest Box Condition	Maintenance Requirements
6/02/2018	1	Small	Microbat (2 chamber)	518703 6758648	Pink Bloodwood	Nil	Nil	Good	Nil	Gould's Long-eared Bat	Nil	Good	Nil	Nil	Nil	Functional	Survived Fire	Nil	Nil	Functional	Nil	Gould's Long-eared Bat x 2	Nil	Functional	Nil
6/02/2018	2	Medium	Barn Owl	518703 6758648	Pink Bloodwood	Nil	Nil	Good	Nil	Ants	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to "Barn Owl" Installed	Few leaves - possible possum	Nil	Functional	Nil
6/02/2018	3	Small	Microbat (2 chamber)	518659 6758655	Needlebark Stringybark	Nil	Nil	Good	Nil	Glider nest - old	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to "Microbat Box" Installed	Nil	Nil	Functional	Nil
6/02/2018	4	Medium	Parrot	518659 6758655	Needlebark Stringybark	Nil	Nil	Good	Nil	Glider nest (active)	Nil	Good	Nil	Sugar Glider x 2	Nil	Functional	Survived Fire	Old glider nest	Nil	Functional	Cleaned some ant nest and spider web material from entrance	Old glider nest	Nil	Functional	Nil
6/02/2018	5	Small	Microbat (2 chamber)	518707 6758662	Needlebark Stringybark	Nil	Nil	Good	Nil	Nil	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to new show new tree location and "Microbat Box" installed	Nil	Nil	Functional	Nil
6/02/2018	6	Medium	Parrot/nightjar	518707 6758662	Needlebark Stringybark	Glider nest - Sugar or Squirrel Glider	Nil	Good	Nil	Glider nest (active) - Sugar or Squirrel Glider	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to new show new tree location and "Parrot/Nightjar Box" installed	Nil	Nil	Functional	Nil
6/02/2018	7	Small	Microbat (2 chamber)	518565 6758642	Rough-barked Apple	Nil	Nil	Good	Nil	Nil	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to "Rear Entry Glider Box" installed	Nil	Nil	Functional	Nil
6/02/2018	8	Medium	Rear Entry Glider	518565 6758642	Rough-barked Apple	Glider nest - Sugar or Squirrel Glider	Nil	Good	Nil	Glider nest (active) - Sugar or Squirrel Glider	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to "Possum Box" installed	Nil	Nil	Functional	Nil
6/02/2018	9	Large	Glider (large rear entry)	518660 6758644	Rough-barked Apple	Nil	Ants - native spp	Good	Clean entrance - completed on the day	Nil	Ants - native spp	Good	Clean entrance again - completed on the day	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to new show new tree location and "Large Rear Entry Glider Box" installed	Nil	Nil	Functional	Nil
6/02/2018	10	Medium	Parrot Box	518660 6758644	Rough-barked Apple	Possum nest - Probably Common Brushtail Possum	Nil	Good	Nil	Possum nest (old) - Probably Common Brushtail Possum	Nil	Good	Nil	na	na	Destroyed by fire	Replace with new box	na	na	New Cyplas Nest Box	Update register to new show new tree location and "Parrot Box" installed	Sugar Glider	Nil	Functional	Nil
6/02/2018	11	Large	Possum (large)	518588 6758616	Pink Bloodwood	Nil	Nil	Good	Readjusted in tree to firmly position - completed on the day	Nil	Nil	Good	Readjusted in tree to firmly position - completed on the day	Nil	Nil	Functional	Survived Fire	Nil	Nil	Functional	Survived Fire	Nil	Nil	Functional	Nil
6/02/2018	12	Medium	Possum (small)	518588 6758616	Pink Bloodwood	Nil	Nil	Good	Nil	Nil	Nil	Good	Nil	Common Brushtail Possum x 1	Nil	Functional	Survived Fire	Old signs of brushtail possum	Nil	Functional	Survived Fire	Nil	Nil	Functional	Nil



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