



Ardmore Park Quarry

Annual Review

1 January 2022 - 31 December 2022



Site information

Site Name	Ardmore Park Quarry
Address	5152 Oallen Ford Road, Bungonia NSW, 2580
Project Approval	PA 07_0155 (Mod 3)
Environmental Licence	EPL 13213

Company information

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Author (Company)	Date	Changes	Reviewer (Company)	Date	ID
James Hammond Rhys Thompson (4Pillars Environmental Consulting)	30/03/2023	N/A	Stephen Wall (Multiquip Aggregates)	30/03/2023	V1
Rhys Thompson (4Pillars Environmental Consulting)	06/04/2023	Additional detail provided in Section 11 as requested by DPE on 6/4/23.	Stephen Wall (Multiquip Aggregates)	06/04/2023	V2

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I. Title block

Name of operation	Ardmore Park Quarry Project
Address	5152 Oallen Ford Road, Bungonia, 2580, NSW
Operator	CEAL Ltd, trading as Multiquip Quarries
Project approval	PA 07_0155 (Mod 3)
Environment licence	13213
Annual review start date	1 January 2022
Annual review end date	31 December 2022

I **Stephen Wall** certify that this audit report is a true and accurate record of the compliance status of ARDMORE PARK QUARRY for the period 1 January 2022 - 31 December 2022 and that I am authorised to make this statement on behalf of MULTIQUIP QUARRIES.

Note: 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.

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).

Signature of authorised reporting officer(s)		
Name of authorised reporting officer(s)	Mr James Hammond	Mr Rhys Thompson
Title of authorised reporting officer(s)	Authorised Environmental Representatives, signing on behalf of Mr Wall	
Date (doc ID)	06/04/2023 (V2)	

II. Statement of compliance

Were all conditions of compliance adhered to during the reporting year?

Approval: PA 07_0155 NO

Non-compliances identified during 2022 reporting year.

Approval	Condition	Subject	Status	Reference
PA 07_0155	Schedule 3 Condition 29(g)	Publishing of truck movement data		Section 10

Table 1: Non-compliance risk level key.

Risk level	Colour	Description
High		Potential for significant environmental consequences regardless of likelihood.
Medium		Potential for serious environmental consequences but unlikely OR potential for moderate environmental consequences with moderate likelihood.
Low		Potential for moderate environmental consequences but is unlikely to occur OR potential for low environmental consequences but is likely.
Administrative		No potential for environmental harm

1. Introduction

1.1 Project description

Ardmore Park Quarry (**the Quarry**) is a sand and hard rock quarry owned and operated by CEAL Ltd, trading as Multiquip Quarries (**Multiquip**). The project is located 4 km south of Bungonia village and 25 km south east of Goulburn in the Southern Tablelands region of New South Wales. The Quarry falls within the Goulburn-Mulwaree Council (**GMC**) local government area. The regional and local context of the Quarry are presented in Figure 1 and Figure 2, respectively.

The Quarry operates under Project Approval 07_0155 (the **Approval** or **Project Approval**) and is designated as a State Significant Development (**SSD**), per the (now repealed) *State Environmental Planning Policy (Major Projects) 2005*, by the Department of Planning, Industry and Environment (**DPIE**), now the Department of Planning and Environment (**DPE**). The Project Approval was issued by the Minister for Planning in September 2009, with quarrying activities commencing in 2017. The 3rd Modification to the Project Approval was granted in October 2020, but the increase in scale approved under Modification 3 is yet to be implemented, pending the development and approval of required management plans and road upgrades.

The Quarry is approved under Modification 3 for an annual extraction rate of 580,000 tonnes per annum (t/pa); however, as above, the Quarry is currently limited to the previous scale of 400,000 t/pa. The permitted hours of quarrying operations are between 7 am to 6 pm between Monday to Friday, and 7 am to 1 pm on Saturday. Loading and dispatch of quarried materials are permitted between 5 am to 6 pm Monday to Friday, and 6 am to 1 pm on Saturdays. Neither quarrying nor product loading and dispatch is permitted under the Approval on Sunday or public holidays.

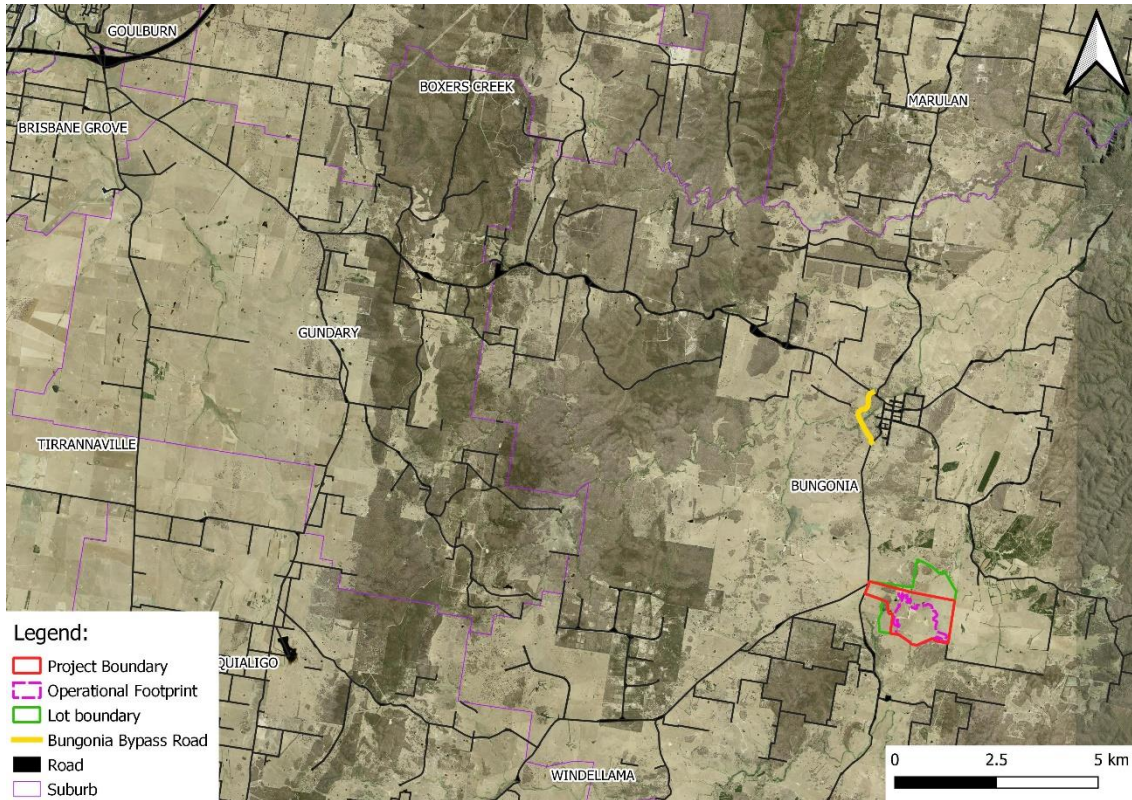


Figure 1: Regional context surrounding the operation.

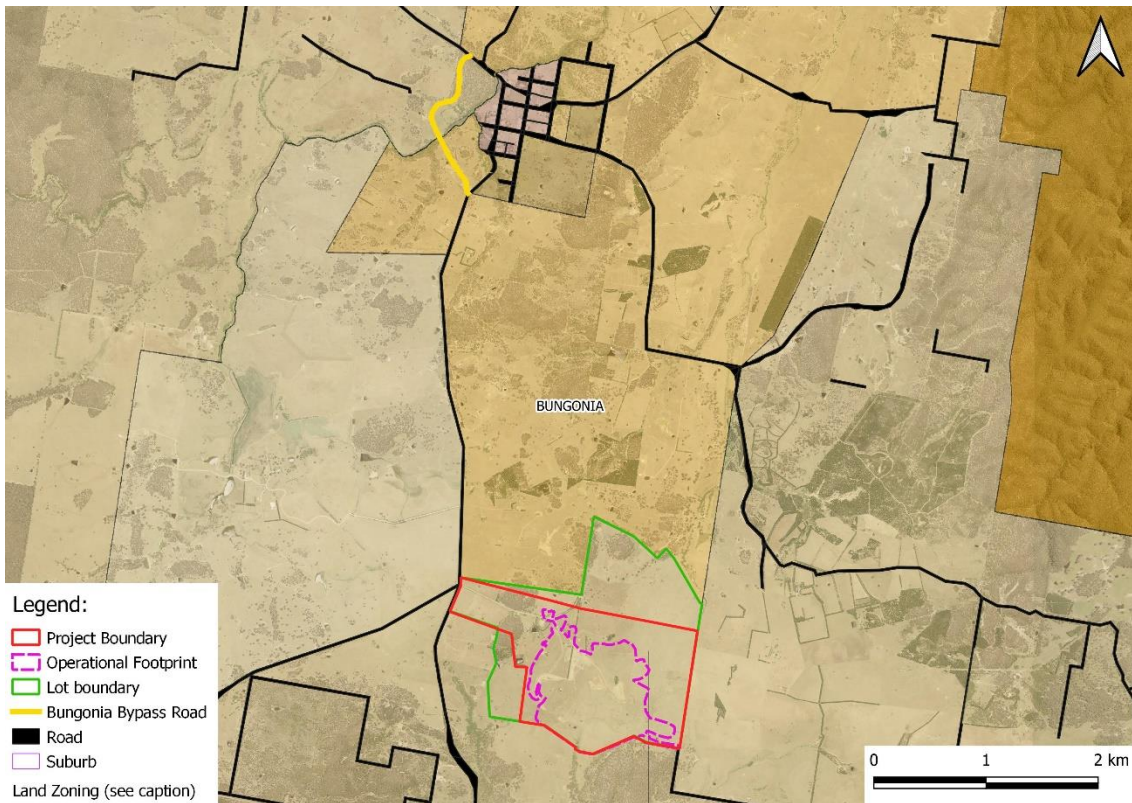







Figure 2: Near-context surrounding the operation. Zoning shown is as follows: C1, C3, RU1, RU2, RU5.

	C1	C1 National Parks and Nature Reserves		RU2	RU2 Rural Landscape
	C3	C3 Environmental Management		RU5	RU5 Village
	RU1	RU1 Primary Production			

1.2 AR overview

Under Condition 5 of Schedule 5 of the Project Approval, Multiquip must submit an Annual Review (**AR**) to DPE at the end of March of each calendar year. The document describes quarrying and other project related activities conducted in the last 12 months (the **reporting period**). Additionally, key management priorities for the next reporting period are outlined. The reporting period adopted for the purposes of the AR is consistent with the Project Approval and Modification 3, being *the last 12 months or the previous calendar year*, respectively. As such, the reporting period for the 2022 AR is 1 January 2022 - 31 December 2022.

The AR functions as the primary mechanism for review of environmental performance for regulators, management, and stakeholders. It details any non-compliances within the reporting period.

This document is submitted on an annual basis to DPE and is published on Multiquip's website once approved [[LINK](#)].

1.3 Key personnel

Key personnel responsible for environmental management at the Quarry are presented in Table 2, below.

Table 2: Site contacts.

Name	Role	Email
Stephen Wall	Quarry Manager	stephen.w@multiquip.com.au
Alexander Cox	Environmental Officer (internal)	alexander.c@multiquip.com.au
James Hammond	Environmental Officer (external)	james@4pillars.com.au

2. Approvals

2.1 Existing approvals

The Quarry operates under an SSD project approval. In October 2020, the Minister for Planning issued a determination under Section 75J of the *Environmental Planning and Assessment Act 1979* to approve Modification 3 to PA 07_0155 (**Mod 3**) to increase the extraction area of the quarry, and to modify the permitted operating hours for product transportation and dispatch. As noted above, Modification 3 is yet to be implemented and the Quarry is operating within the relevant constraints of Modification 2.

Further to this, the Quarry operates under Environment Protection Licence (**EPL**) 13213, which permits extractive activities and the processing of extractive materials. Several Water Access Licences (**WAL**) are held by the Quarry permitting the utilisation of water from the Goulburn Fractured Rock groundwater aquifer and other near-surface aquifers, and Bungonia Creek.

Wicket Soil Extraction was approved by GMC in 2001 and modified in 2015 (MOD/0109/1415). The approval permits the extraction of small quantities of clay rich

basalt soils used in the construction of surfaces utilised for sport activities and cricket wickets. A summary of currently active approvals is provided below in Table 3.

Table 3: Summary of Approvals and Licences.

Approval	Consent authority	Issued	Reference
Project approval	NSW Department of Planning, Industry and Environment	2009	PA 07_0155 (Modification 3)
Environment Protection Licence	NSW Environment Protection Authority	2009	13213
Water access licence	Water NSW		30111
	Water NSW		41848
	Water NSW		25390
Wicket Soil Extraction	Goulburn Mulwaree Council	2015	MOD/0109/1415

2.2. Modifications and amendments

Project Approval PA 07_0155 has been modified on three occasions since the commencement of the Ardmore Park Quarry project to date.

- Modification 1 (2010): Realignment of the entranceway to the quarry to the intersection of Oallen Ford Road and Lumley Road.
- Modification 2 (2013): Approval for local sales of a limited number of quarried products along specified local routes, in addition to the approval principal haul route of Oallen Ford Road and Jerrara Road to the interchange at South Marulan.
- Modification 3 (2020): Approval for expansion of the extraction area by 3.5 hectares, and to increase the annual production rate from 400,000 to 580,000 t/pa. Extension of the operating hours in the morning period.

Environment Protection Licence 13213 (**the EPL**) was most recently varied during the reporting period on 28 November 2022, with the below changes:

- Inclusion of PRP U1 (and associated temporary inclusion associated licence conditions) for the licensed discharge trial
 - Including additional sampling points and monitoring requirements
- Inclusion of PRP U2 requiring an investigation of reuse options available to limit discharges from the premises.

The EPL was also varied on 11 March 2019 which was discussed in the 2019-20 Annual Environmental Management Review (AEMR).

3. Operations summary

3.1 Quarrying

The extraction of sand and basalt occurred throughout the reporting period. A total of 260,303 t of this material was dispatched from the quarry for sale, following quarrying, washing, and processing, as appropriate, as well as a stock build-up of 37,186 t (a total of 297,489 t). The main products dispatched from the Quarry to customers were sand and sand related products (approx. 82%). Sand from the quarry is primarily purchased by consumers to produce ready-mix concrete for developments in the greater Sydney and Goulburn regions. A lesser proportion of rock, aggregate and road base from processed basalt was sold to customers throughout the year (approx. 18%) for landscaping, erosion control, roadmaking, and for ready-mix concrete, with rock sales shown to be decreasing slightly compared to the previous reporting period. Overall, a lower quantity of material was produced in this reporting period as compared to the previous. A summary of production is presented in Table 4.

Sand and basalt resources were derived from two active mining pits in 2022, located in the south-eastern (the "White Pit") and eastern (the "Rock Pit") portions of the quarry, respectively. Removal of overburden in the approved part of the quarry continued in the reporting period, which allows access to the sand extraction pit. As the project progresses, it is expected that the extent of the three active quarrying areas will join.

Extraction was unable to take place in a third pit (the "Old Pit") in the south-west of the Quarry due to an accumulation of water within this pit hampering safe operations. In line with Schedule 3 Condition 12 of the Project Approval, an EPL variation to permit discharges from the site was submitted to the NSW EPA and approved in November 2022.

Table 4: Production summary (table taken from the October 2015 Annual Review Guideline).

Material	Approved limit (source)	Previous reporting period (actual)	This reporting period (actual)	Next reporting period (forecast)
Waste Rock / Overburden	N/A	N/A	N/A	N/A
ROM Coal / Ore	N/A	N/A	N/A	N/A
Coarse reject	N/A	~36,587 t	29,714	~40,000 t
Fine reject (Tailings)	N/A	~36,587 t	29,714	~40,000 t
Saleable product	580,000 t (Mod 3)	365,869 t	297,489	400,000 t

3.2 Compliance and returns

The Annual Return for EPL 13213 was lodged with the NSW EPA on 17 October 2022, covering the 2020-21 licence year of 21 August 2021 – 20 August 2022. Three non-compliances were raised in the Annual Return, relating to the following issues:

- Monitoring of groundwater (flow + water quality) at one location not completed due to damage to bore.
- Insufficient flow measurements obtained from one spring sampling location.
- The EPL requires activities to be carried out in accordance with an outdated Water Management Plan, whereas activities are actually carried out in accordance with an updated plan.

Non-compliance with one conditional requirement within PA 07_0155 (Mod 3) during the reporting period was identified in the Independent Environmental Audit and is discussed in further detail in Section 10 of this AR.

3.3 Roadworks

During the reporting period, roadside drainage works were undertaken over the entire length of the haul route, having commenced in late 2021. This was followed by a program of heavy patching in April 2022 which was managed by Goulburn Mulwaree Council (Council) and targeted the most heavily impacted areas. Roadworks were hindered by wet weather during the reporting period.

3.4 Truck movements

Truck movements are tracked and recorded via the use of the on-site weighbridge. Each month, the data for the preceding month is reviewed and assessed, with a summary report completed and published on the company website. The truck movement summary for the reporting period is presented in Table 5, below.

Table 5: Truck movement summary, 2022.

Month	Total truck movements (In + Out)	Daily average truck movements (In + Out)
January	722	31
February	1070	47
March	1137	45
April	874	44
May	1122	43
June	1245	50
July	1059	41
August	1238	46
September	1051	42
October	912	38
November	1304	50
December	1028	45
2022 Total	12762	

4. Activities proposed in the previous AR

Activities that were expected to occur in 2022 as listed in the 2021 Annual Review are as follows, along with their status.

Table 6: Activities proposed in the 2021 Annual Review and current status.

Proposed activity	Status
<p>Completion and lodgement of Modification 3 Environmental Management Plans (EMPs).</p> <ul style="list-style-type: none"> • Environmental Management Strategy • Water Management Plan • Landscape Management Plan • Environmental Management Program • Waste Management Plan 	<p>Not completed</p> <p>In March 2022, DPE provided correspondence to the effect that no further action would be taken regarding the review and approval of submitted management plans until the investigation into potential non-compliances identified on site reached the appropriate stage and status. As such, no further management plans were submitted.</p>
<p>Implementation of Management Plans for Mod 3 following approval from the Department</p>	<p>Not completed</p> <p>As above, the Department has not yet provided approval of the submitted management plans.</p>
<p>Continuation of mining activities at the site. Indicatively expected to be 400,000 tpa to be increased to 580,000 tpa when appropriate documentation etc. is approved</p>	<p>Completed</p> <p>Mining activities continued during the reporting period, remaining below the 400,000 tpa threshold.</p>
<p>Further rehabilitation and landscaping of visual bunds, pending approval from DPE</p>	<p>Not progressed</p> <p>On 20 July 2022 CEAL Ltd was given a Development Control Order (DCO) which effectively prohibited the proposed activities and was in force for the rest of the reporting period. No activities were carried out prior to or following the finalisation of the DCO.</p>
<p>Completion of Independent Environmental Audit, including site inspection, with final report to be provided to DPE within 6 weeks of completion</p>	<p>Completed</p> <p>The Independent Environmental Audit was conducted in 2022 covering the period of 21 November 2018 to 19 April 2022. The final report and response to recommendations was submitted to DPE on 25 October 2022, within 6 weeks of completion.</p>
<p>Monitoring</p> <ul style="list-style-type: none"> • SWL of bores monthly • Deposited dust monthly • Water sampling quarterly and annually • Particulate matter continuously (assessed monthly) • Noise quarterly 	<p>Completed</p> <p>All monitoring was carried out as required, excepting the minor non-compliances discussed in Section 3.2 Compliance and returns. Noise monitoring was undertaken twice during the reporting period; in February and November. This was</p>

Proposed activity	Status
	consistent with the requirements of the 2021 Noise Monitoring Program Monitoring results are presented in Section 5.
Submission of modification to Project Approval (Modification 4) to ensure activities align with Approval (as per Section 10).	<p>Not completed</p> <p>In March 2022 and following verbally, DPE provided correspondence to the effect that no action would be taken regarding the review and approval of documents until the investigation into potential non-compliances identified on site reached the appropriate stage and status.</p> <p>As such, a modification to the Project Approval was not submitted.</p>
Attendance at three Community Consultative Committee (CCC) meetings, including conducting a tour of the Project site	<p>Completed</p> <p>CCC meetings were held in March, July, and November during the reporting period. A tour of the Project site for committee members and note taker was conducted prior to the March meeting.</p>
Submission of EPL variation to remove identified bores from EPL	<p>Not completed</p> <p>Due to other priorities with the EPL, including the variation to permit controlled water discharges.</p>
Submission of EPL variation to permit controlled water discharges from the site	<p>Completed</p> <p>Following extensive assessment and discussion with the EPA and other stakeholders, final documentation was submitted on 16 November 2022, and the EPL was varied on 28 November 2022, to include an 8-month discharge trial and re-use options investigation.</p>

5. Environmental performance

5.1 Monitoring points



Figure 3: Monitoring locations.

5.2 Meteorological data

The average monthly temperatures recorded by the on-site weather station (location shown in Figure 3, "PM10_W") ranged between 6.8°C to 21.5°C throughout the reporting period. The temperature range observed is heavily influenced by the Quarry's elevation within the Southern Tablelands Region. Average temperature is presented in Figure 4, along with site data from 2021.

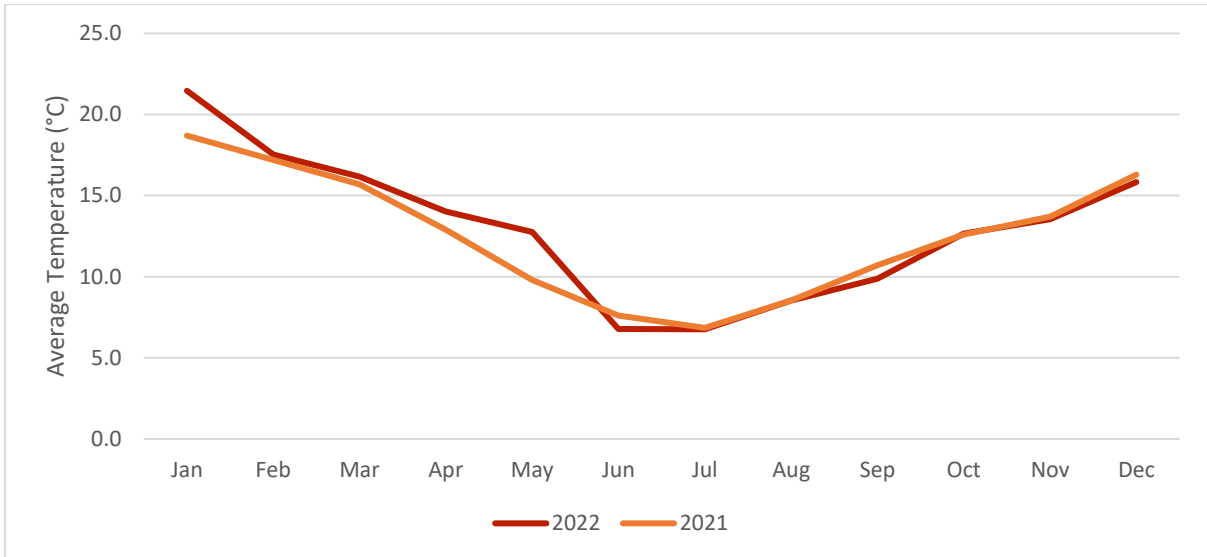


Figure 4: Average monthly temperature recorded at the site, 2022 and 2021.

Data collected during 2021 indicated a reduced level of rainfall in comparison to 2021, with approximately 648 mm of rain recorded compared to 1013 mm observed in the previous year (Figure 5).

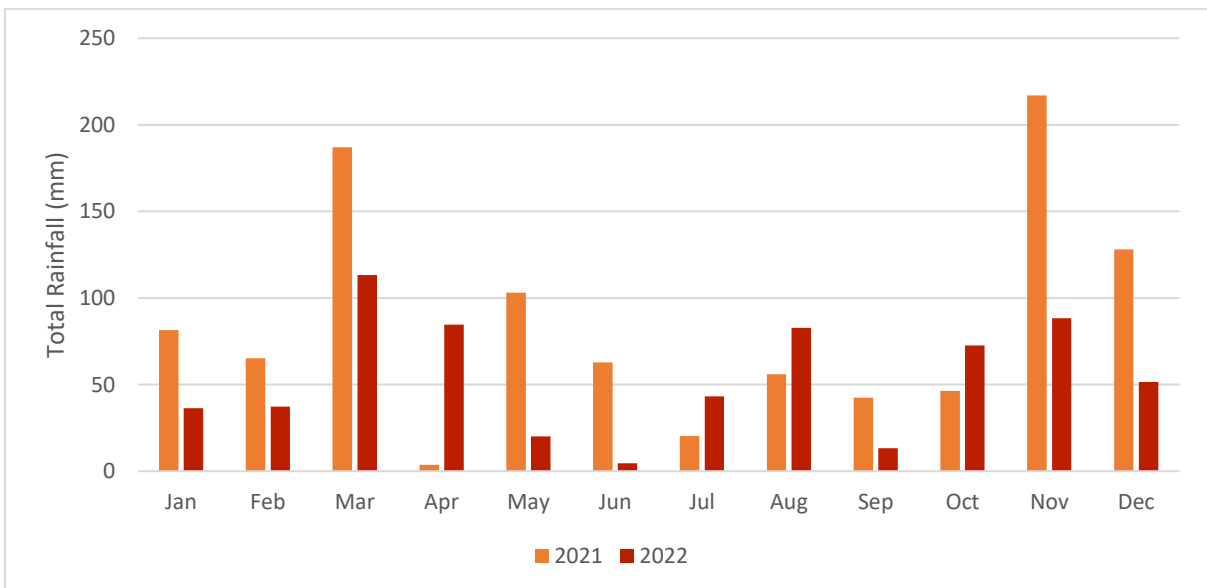


Figure 5: Total monthly rainfall recorded at on-site weather station, comparison of 2021 and 2022.

Records from the Goulburn weather station of the NSW Government’s New South Wales Air Quality Monitoring Network were unavailable and could not be compared.

5.3 Air quality

Air quality emissions from the Project are managed through the following actions:

- Regular application of water to haul roads using a water cart to increase soil moisture and prevent the generation of dust;
- Application of water to hard-rock processing plant feed hopper and crushers;

- Locating the crushing plant within the hard rock processing area of the quarry, a significant distance from neighbouring properties; and
- Avoiding stripping soils during windy periods.

To ensure that air quality emissions are sufficiently controlled, monitoring for deposited dust and particulate matter are undertaken.

Deposited Dust

The Quarry undertakes monthly deposited dust monitoring as per the requirements of EPL 13213. The air quality monitoring network established around the Quarry includes four deposited dust gauges located at the quarry site, and at nearby receivers, to determine whether quarry activities generate dust in excess of the permitted air quality limits. The deposited dust gauges are situated in locations clear of obstructions which may interfere with the collection of fugitive dust emissions at the established monitoring points. As per Figure 3, the "Lochmoor Lodge" and "Olsiers" dust gauges are located to the west of the extraction area. The "Front Entrance" dust gauge captures emissions at the entrance to the site, and the "Inverary Park" dust gauge monitors dust emissions at the adjacent neighbouring premises to the north-eastern side of the active extraction area.

Samples collected are analysed at a NATA-accredited laboratory, with the insoluble solids fraction of the total sample used to assess compliance with the air quality criteria specified in Condition 7 of Schedule 3 of the Approval (4 g/m²/month total, 2 g/m²/month incremental). Results for 2022 are presented in Figure 6.

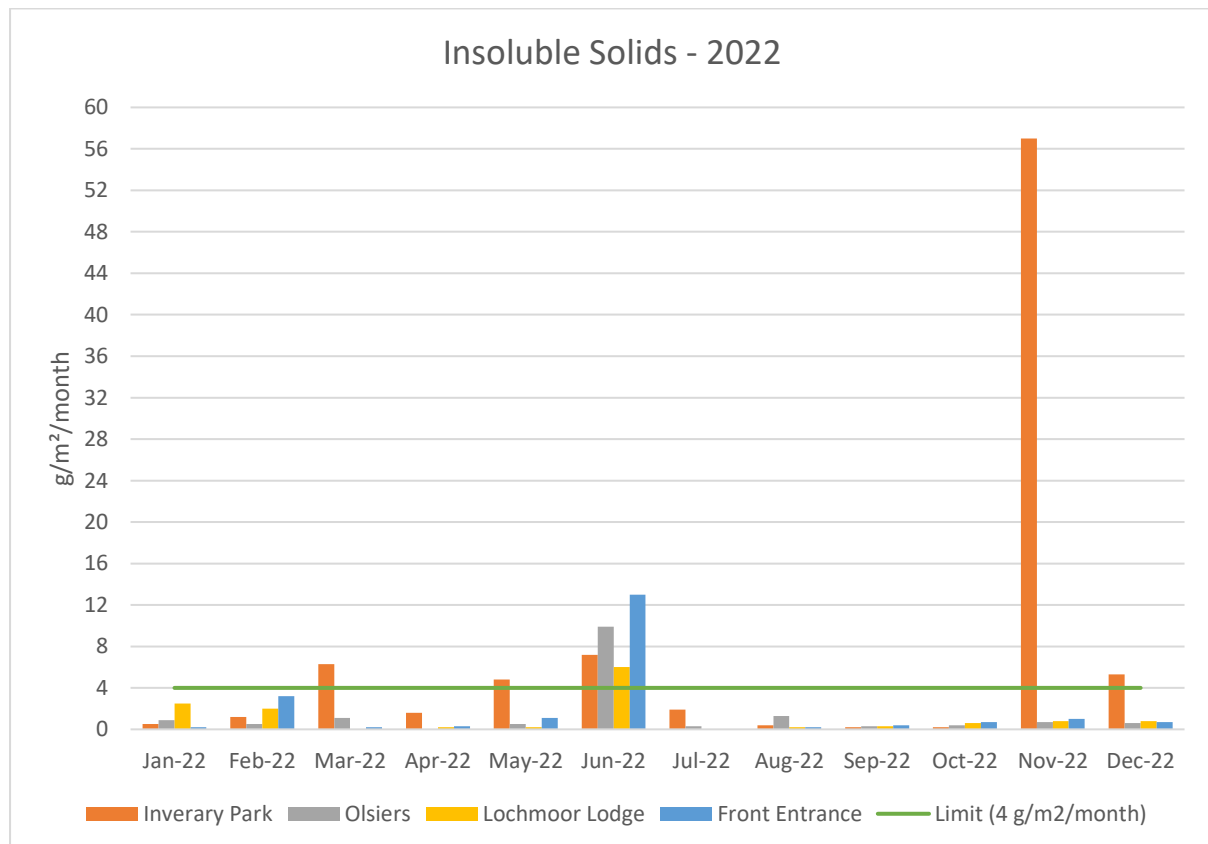


Figure 6: 2022 Deposited dust (insoluble solids) results. Limit of 4 g/m²/month for total impact of particulate matter emissions generated by the project is presented as a blue line.

As shown in the graph, there were a total of ten instances where the primary results for insoluble solids were greater than the total limit, across five months (March, May, June, November, and December).

To inform an assessment of the obtained results, a review of meteorological data and the composition of the matter as analysed by the lab was undertaken, along with aerial imagery of surrounding properties, and site activities. The outcome for each of the results is summarised in Table 7. While the limit in the Project Approval is for insoluble solids, these are not necessarily directly correlated with quarrying activities, as this result includes both combustible matter and ash. Combustible matter includes organic material (e.g. pollen, grass), while the ash fraction accounts for the non-combustible mineral content (i.e. soil dust) which could be caused by soil disturbance during quarrying activities.

Table 7: Review of elevated deposited dust results.

Month	Cause	Exceedance generated by Project?
March	High proportion of combustible matter in the sample, ash fraction below limit.	No
May	Elevated levels of combustible matter in the sample, ash fraction below limit.	No
June	High proportion of combustible matter in the sample, ash fraction below limit.	No
November	Composition of sample mostly insoluble (i.e. ash), so likely soil dust. Some wind experienced from the direction of the quarry, but the majority from other directions. Elevated readings were not reflected at on-site dust gauge between the quarry and the sampling point in question, which would be expected if the quarry activities had contributed to the exceedance. No crushing activities were undertaken during the monitoring period. Results are an isolated spike compared to all other months.	No
December	Elevated levels of combustible matter in the sample, ash fraction below limit.	No

Overall, data for all other months, and the long-term average deposited matter results (Table 8) indicate that the project has a high degree of compliance with the performance criteria, especially when excluding the single result from the Inverary Park dust gauge during November (57 g/m²/month) which is considered an outlier.

Table 8: Average deposited dust (insoluble solids) results for 2022.

Monitoring location	Insoluble solids (g/m ² /month)	
	2022 Average	2022 Average excl. Nov
Inverary Park	7.2	2.7
Olsiers	1.5	-
Lochmoor Lodge	1.4	
Front Entrance	1.9	
Limit (4 g/m ² /month)		

Particulate matter

Air quality criteria for particulate matter emissions generated by the project are specified in Condition 7 of Schedule 3 of the Project Approval, with limits prescribed for Particulate matter < 10 µm (PM₁₀) and Particulate matter < 2.5 µm (PM_{2.5}). These limits are 25 µg/m³ over an annual averaging period and 50 µg/m³ over a 24 hour averaging period for PM₁₀, and 8 µg/m³ (annual) and 25 µg/m³ (24 hour) for PM_{2.5}.

Particulate matter emissions are measured by two Sensirion SPS30 Particulate Matter Sensors installed with Atmos 22 and Atmos 41 weather stations, which have been established at two locations within the Quarry Site - PM (E) and PM (W), respectively - as shown on Figure 3. These sensors are real-time optical particle counters (OPCs), which obtain measurements based on the incoming particles scattering the incoming light, the extent of which is then detected by a photodiode and converted into real-time particle count and mass concentration values. This allows the sensors to record the levels of various particulate matter fractions simultaneously, including PM1.0 (0.3 to 1.0 µm), PM2.5 (0.3 to 2.5 µm), PM4.0 (0.3 to 4.0 µm), and PM10 (0.3 to 10.0 µm), rather than requiring manual collection and analysis of filters for individual fractions. The weather stations where the particulate matter sensors are installed record a variety of parameters including temperature, wind and gust speed, rainfall, humidity, and wind direction. All of the data is automatically and continuously uploaded to an online portal, from which it can be observed or downloaded. The particulate matter data gathered can then be compared to the obtained weather data, to determine if and how the weather conditions influence the particulate matter readings obtained.

The raw data from each unit is downloaded and analysed monthly, to allow comparisons with the prescribed criteria.

The data for 2022 as a 24 hour average is presented in Figure 7 and Figure 8 for PM₁₀ and PM_{2.5}, respectively, with the Project Approval limits included on the graphs. As shown, while particulate matter levels recorded by both units were slightly elevated at times, they were generally stable, and remained below their respective limits throughout the year.

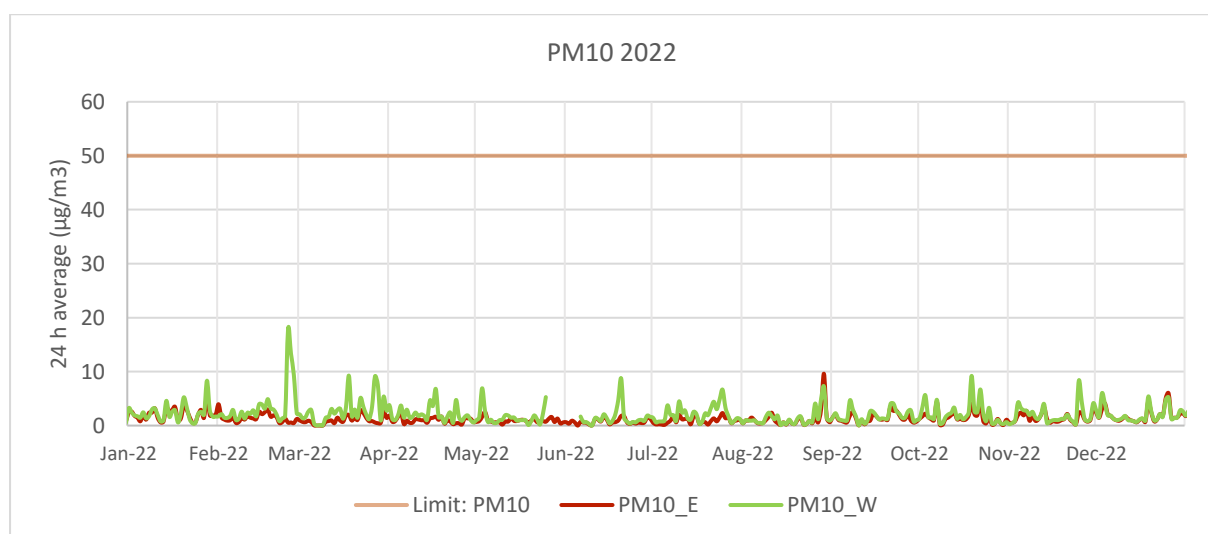


Figure 7: 2022 PM₁₀ data for both units, 24-hour averaging, with Project Approval limit.

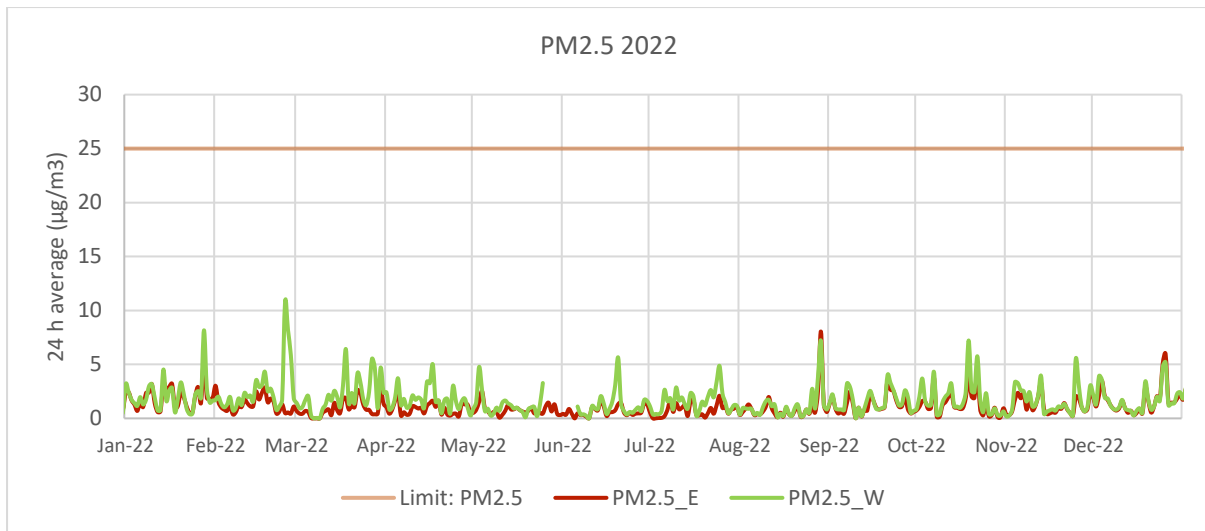


Figure 8: 2022 PM_{2.5} data for both units, 24-hour averaging, with Project Approval limit.

All of the data collected was assessed to determine the particulate levels on an annual averaging basis, for comparison with the prescribed limits, as shown in Table 9. The levels recorded at both monitoring locations were compliant with the limits.

Table 9: 2022 PM_{2.5} and PM₁₀ data for both units, annual averaging, with Project Approval limits.

Monitor	Pollutant	
	PM2.5	PM10
PM10-E	1.1	1.3
PM10-W	1.7	2.2
Limit (Annual average)	8	25
Compliant?	Yes	Yes

5.4 Noise

Site noise is managed through the use of appropriately maintained equipment, commitment to permitted operating hours, and the construction and maintenance of bund walls around activities. Machinery is located in areas where potential transmission of noise to off-site receivers is limited. Community complaints regarding noise are investigated and acted upon, with a lack of these suggesting an appropriate level of noise generation. Compliance with noise criteria is confirmed through regular noise monitoring assessments performed by an external consultant.

Pulse White Noise Acoustics Pty Ltd were engaged to conduct attended noise monitoring in February and November 2022. The reports prepared for these assessments are uploaded to the Multiquip website upon completion. Noise measurements are obtained from neighbouring properties, or accessible public land close to the receivers, as appropriate. The summary of noise results obtained is presented in Table 10. The project was considered compliant with noise criteria during all monitoring periods. Noise monitoring will continue throughout 2023.

Table 10: Summary of noise results, 2022.

Date	Location (EPL #)	Average Estimated Quarry L(A)eq 15 min	Compliance
03/02/2022	Inverary Park (3)	<30	Yes
	Lochmoor (6)	<33	Yes
	Bungonia bypass road	<25	Yes
	Jerrara Road	<47	Yes
08/11/2022	Damar Lodge (4)	<40	Yes
	Lochmoor (6)	<35	Yes
	5194 Oallen Ford Road	<30	Yes
	Inverary Park (3)	<30	Yes
	Bungonia bypass road	<25	Yes
	Jerrara Road	<48	Yes

5.5 Water

5.5.1 Groundwater level

Measurement of standing water level is carried out on a monthly basis at 10 monitoring bores on and around the site as per the requirements of EPL 13213. Monitoring data collected indicates that groundwater levels in all bores are generally stable and constant over time.

A summary of standing water level for all bores measured throughout the reporting period has been presented below in Table 11, with monthly measurements presented in Figure 9.

As reported in the 2021 Annual Review, bore BHS6 (EPL Point 14) was damaged and could therefore not be monitored during the 2022 reporting period. An EPL variation to remove the monitoring requirements associated with this bore from the EPL was intended to be submitted during the reporting period, but was not possible due to other priorities with the EPL, as discussed in Section 4.

Table 11: Summary of bore standing water levels during 2022.

Name (EPL #)	Min. of SWL (m)	Max. of SWL (m)	Average of SWL (m)
BH6 (14)	14.3	14.5	14.4
BHAP1 (5)	6.2	8.6	7.4
BHAP10 (8)	27.2	28.2	27.7
BHAP5 (6)	22.9	24.7	23.8
BHAP6 (7)	60.5	63.0	61.8
BHS1 (18)	7.1	9.3	8.4
BHS2 (19)	2.3	4.7	3.9
BHS3 (20)	2.5	3.6	3.2
BHS4 (21)	5.4	6.1	5.8
BHS5 (22)	7.1	7.7	7.5

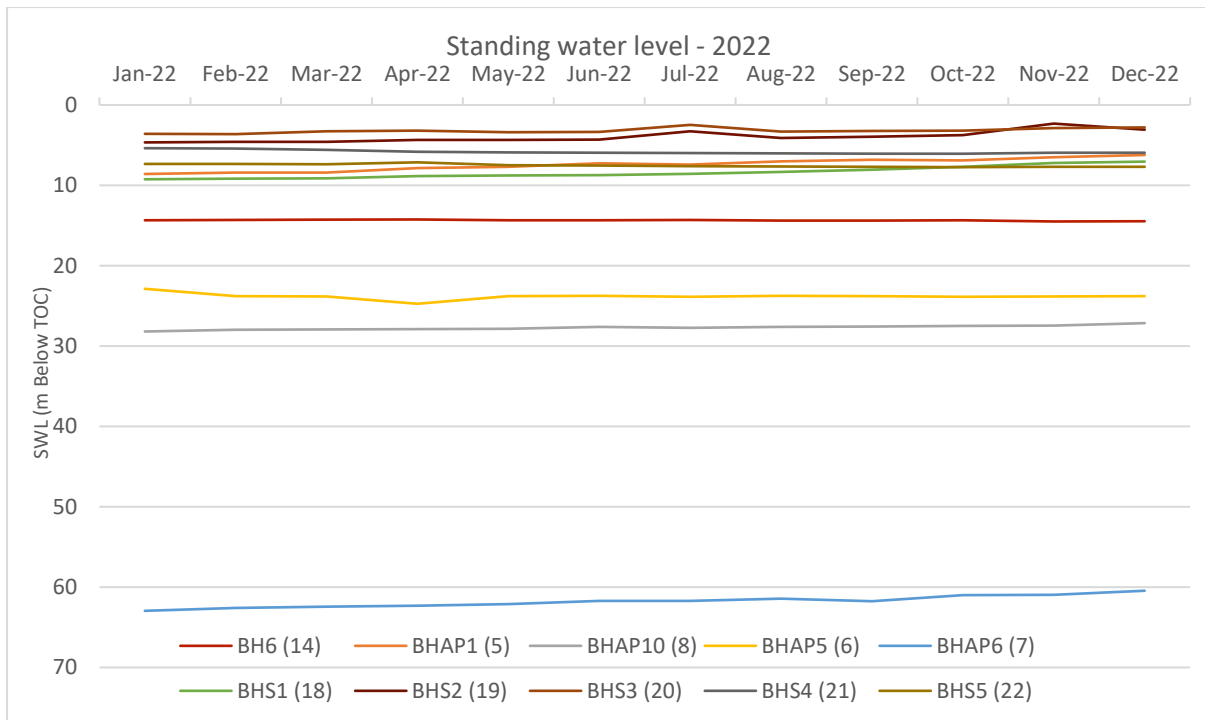


Figure 9: Monthly bore standing water level measurements during 2022.

Average standing water level at BHAP6 (the production bore) increased throughout 2022 in comparison to the previous reporting periods (2019-21). Although remaining in use, the consumption of water from BHAP6 was decreased during this period, as shown in Section 6. There is a trend of increasing groundwater level in this aquifer, with monthly measurements presented in Figure 10.

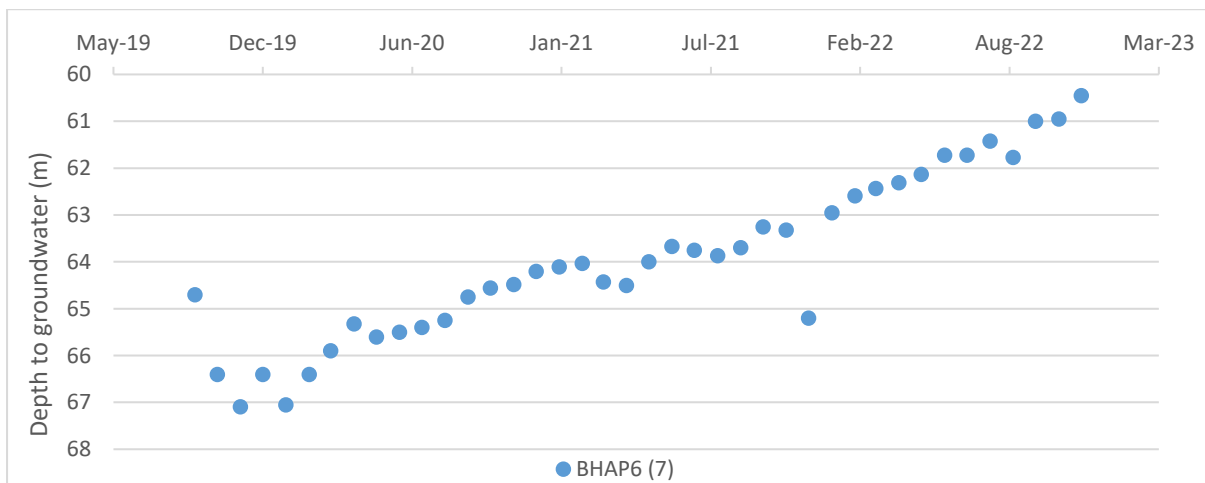


Figure 10: Standing water level BHAP6 (Production Bore).

5.5.2 Water monitoring

Water monitoring across the project site is undertaken in accordance with the Water Management Plan and requirements of the EPL, with samples collected quarterly from six of the 10 bores, and annually from the remaining four bores. Samples are collected from the three springs quarterly or during periods of flow, as appropriate. This monitoring

regime will continue in 2023. In 2022, all samples were obtained as required, excepting from bore BHS6, which was damaged as detailed in the 2021 Annual Review.

The below tables present a summary of the average groundwater monitoring results across 2022 calculated from the four regular quarterly sampling events. They have been summarised into general water properties (Table 12), anions and cations (Table 13) and hydrocarbons (Table 14). The results are generally comparable with previous observations, and hydrocarbons continue to be absent or at levels below detection/reporting, excepting a single result for Total +ve TRH at BHS3, of 200 µg/L. This was below the trigger value defined in the Water Management Plan, and as such no action was required excepting further monitoring.

Sampling results for the below analytes do not indicate any evidence of impact upon groundwater quality as a result of quarrying activities.

Table 12: General properties, average across 2022.

Name	Sulfate (mg/L)	EC (µS/cm)	pH	TDS (mg/L)
BHAP1	6.5	470	6.7	320
BHAP5	9	415	8.4	285
BHAP6	7.5	840	7.7	470
BHAP10	6.5	360	6.7	465
BH6	4	877.5	7.4	472.5
Phil's Spring	10.25	1275	7.375	725
Southern Spring	7.75	605	8	362.5
Western Spring	2	787.5	7.725	442.5
BHS1	3.75	300	6.125	230
BHS2	9.25	485	6.7	252.5
BHS3	3.75	485	6.475	322.5
BHS4	3	862.5	6.625	450
BHS5	23	972.5	7.45	540

Table 13: Anions and cations, average across 2022.

Name	Ca (mg/L)	Cl (mg/L)	K (mg/L)	Na (mg/L)	Mg (mg/L)
BHAP1	12.7	111.5	0.9	63.5	6.7
BHAP5	9.8	27.0	2.5	12.5	36.0
BHAP6	71.5	81.5	2.0	57.5	30.0
BHAP10	4.0	57.0	2.0	60.5	5.2
BH6	53.8	95.0	1.0	41.8	54.3
Phil's Spring	56.5	162.5	1.3	78.8	90.3
Southern Spring	28.5	66.3	1.0	35.3	38.5
Western Spring	25.5	132.5	1.4	67.8	38.3
BHS1	10.6	71.0	2.0	21.5	11.8
BHS2	15.0	78.5	2.0	53.5	16.0
BHS3	8.9	111.5	0.8	56.5	15.2
BHS4	52.3	44.5	1.0	28.0	62.8
BHS5	57.0	85.0	1.0	56.0	68.8

Table 14: Hydrocarbons, average across 2022.

Name	TRH (µg/L)	Xylene (µg/L)	Toluene (µg/L)	Benzene (µg/L)	Ethylbenzene (µg/L)
BHAP1	BDL	BDL	BDL	BDL	BDL
BHAP5	BDL	BDL	BDL	BDL	BDL
BHAP6	BDL	BDL	BDL	BDL	BDL
BHAP10	BDL	BDL	BDL	BDL	BDL
BH6	BDL	BDL	BDL	BDL	BDL
Phil's Spring	BDL	BDL	BDL	BDL	BDL
Southern Spring	BDL	BDL	BDL	BDL	BDL
Western Spring	BDL	BDL	BDL	BDL	BDL
BHS1	BDL	BDL	BDL	BDL	BDL
BHS2	BDL	BDL	BDL	BDL	BDL
BHS3	200	BDL	BDL	BDL	BDL
BHS4	BDL	BDL	BDL	BDL	BDL
BHS5	BDL	BDL	BDL	BDL	BDL

5.5.3 Springs

The Western Spring was visually assessed for flow monthly throughout the reporting period, with the manual estimation measurement method implemented in late 2021 at the Southern Spring continued monthly throughout 2022.

No flow was observed at the Western Spring during any of the monthly inspections, with the amount of water in the adjacent pond fluctuating slightly with rainfall. Samples were collected from this pond at the Western Spring during the year.

Observations at the Southern Spring were relatively stable throughout the reporting period when flow was observed. However, four months showed no flow. Riparian vegetation was visually assessed, and no changes were observed. Discharge from the quarry was commenced in December 2022 (refer to Section 2.2), with discharged water flowing along the same channel as the Southern Spring monitoring location. This is not captured in the Figure 11 graph as the monthly measurement was obtained prior to the commencement of discharge. However, in the next reporting period, it is expected that - due to the high volume - discharged water will dominate the observations at the Southern Spring monitoring location.

Phil's Spring is fitted with an electronic V-Notch weir monitoring device to continuously monitor flow rates. The average mean discharge (L/day) as calculated for each month is presented in Figure 12. Flow rate across the monitoring period fluctuated, with high readings in the first half and then lower readings than usual from June to November.

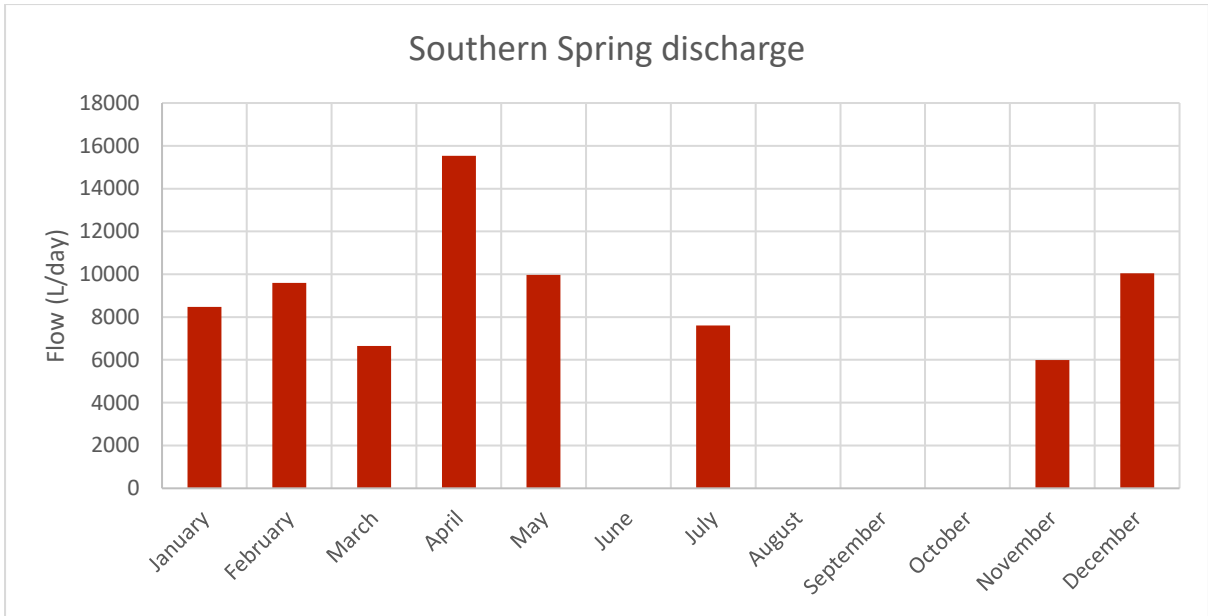


Figure 11: Mean discharge (L/day) observed at the Southern Spring monitoring location during 2022, using a manual estimation method, based on the observation of a single day.

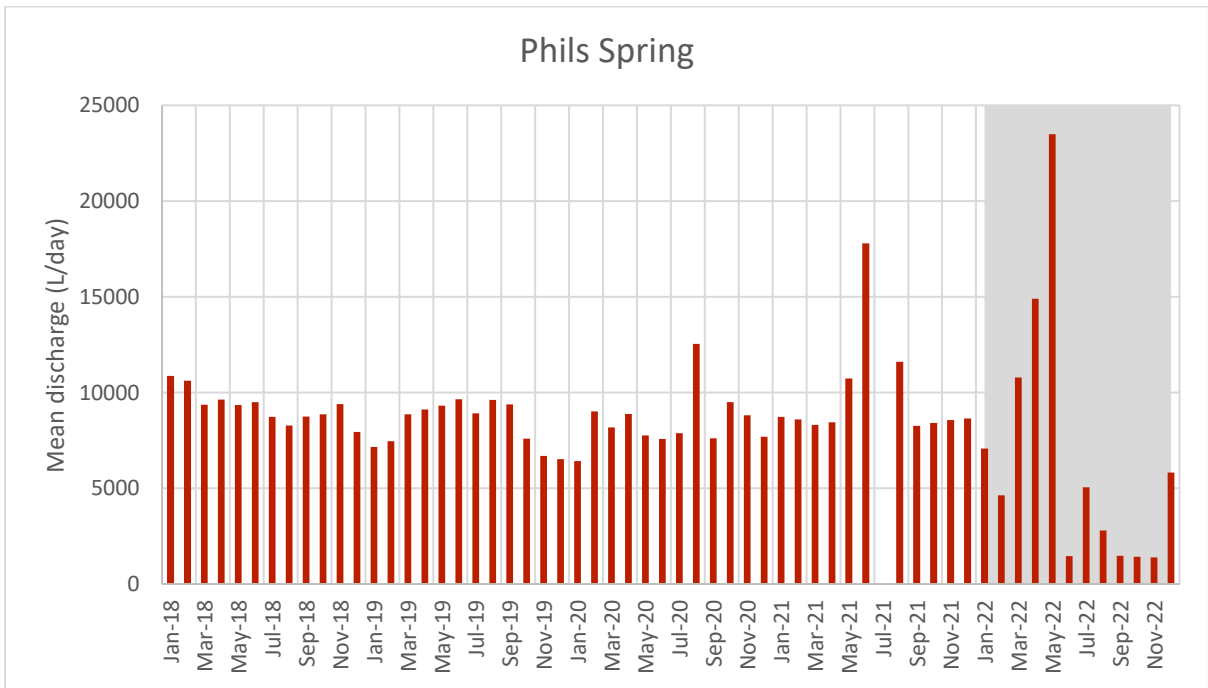


Figure 12: Mean discharge (L/day) observed at the Phils Spring monitoring location. Monitoring device was inactive between 4 June 2021 and 18 August 2021. The relevant period for this report is highlighted in grey.

5.5.4 Discharge-trial related monitoring

New monitoring requirements associated with the discharge trial (Condition U1 of the EPL) were included on the EPL following its variation in November 2022. This includes characterisation sampling of the on-site accumulated water prior to commencement of discharge, and monthly sampling during discharge, of both the on-site water and at three off-site locations. By the end of the reporting period, only one characterisation sample had been obtained, and no ambient water quality samples. This was compliant with requirements. Results from this sample are presented in Table 15, below.

Table 15: Results from characterisation sampling of water to be discharged, 2022.

Date	Sample	EC (µS/cm)	pH	Turbidity (NTUs)	TSS (mg/L)	COD (mg/L)	Oil and Grease (mg/L)
5/12/2022	S1	492	8.3	6.7	19	667	<5

5.6 Heritage

The Aboriginal Heritage Management Plan (**AHMP**) was updated and submitted to DPE in 2021, as detailed in the 2021 Annual Review. In March 2022, DPE provided correspondence to the effect that no further action would be taken regarding the review and approval of submitted management plans until the investigation into potential non-compliances identified on site reached the appropriate stage and status. There was no further update during the reporting period.

No artefacts or items of cultural value were recovered throughout 2022, and no areas identified in the AHMP as containing heritage items were disturbed.

5.7 Invasive species

No programs were conducted during the reporting period to manage invasive species. Historically the Quarry has been affected by foxes, deer, pigs, and rabbits.

6. Water management

Three active Water Access Licences (**WALs**) are currently held by the Ardmore Park Quarry. Two licences (30111 and 41848) are directed to the Goulburn Fractured Rock Aquifer, subject to the Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources, with the third WAL permitting water use from Bungonia Creek (25390).

WAL 30111 - "BHAP6" or "The Production Bore"

BHAP6 is a deep bore located at the centre of the Quarry property. Water from BHAP6 is generally used for dust suppression, amenities, truck washing, on-site concrete production, and rock washing. With the infrastructure installed to connect the accumulated water covered by WAL 41848 to the rock washing area, reliance on BHAP6 decreased during the reporting period.

WAL 41848 - "The Bubbler"

Water is obtained at a sled mounted pump located in the Old Pit quarry void, drawing from surface and intercepted groundwater water collected in the voids. Water from this point is utilised for sand washing, dust suppression, and rock washing, with infrastructure installed in late 2022 to allow for use of the water for rock washing as an alternative to BHAP6. In late 2022, the EPL was varied to allow discharge of water from the Old Pit offsite, which commenced on 9 December 2022. A large proportion of this water is surface water, with the Old Pit accumulating large volumes of water during heavy rain events.

WAL 25390

No water has been used under this WAL in 2022.

Water use for 2022 is summarised below in Table 16. Water usage from WAL 30111 remained generally consistent throughout the year, was reduced from previous years, well within the permitted entitlements. Water usage from WAL 41848 increased towards the end of the year, following the commencement of off-site discharge in accordance with the EPL variation. The majority of the water discharged was surface water that accumulated in the Old Pit rather than infiltrated groundwater. In the next reporting period, it is expected that the raw figures for WAL 41848 "use" will exceed the entitlement, as these figures do not differentiate between the high volume of accumulated surface water and infiltrated groundwater, although the WAL is specifically concerned with the groundwater resource. WaterNSW will be contacted in the next reporting period once this arises, and their feedback sought on a potential solution.

Table 16: Water entitlements and usage, 2022. Annual values are approximate as meter readings were not taken on the first and last day of the reporting period. Due to the faulty meters on WAL41848, these were changed, and as such meter readings are not presented. * One unit under the water sharing plan is equivalent to an entitlement of one ML.

BHAP6 (WAL 30111)				WAL 41848	
	First reading	Final reading	Total (m ³)	Approx. total usage 2022 (ML)	62.4
Date	4/01/2022	5/01/2023		Entitlement units (ML)	100
Reading (m ³)	128055	132524	4469	Approx. entitlement used 2022 (%)	62.4
	Approx. total usage 2022 (ML)		4.47		
	Entitlement units* (ML)		110		
	Approx. entitlement used 2022 (%)		4.06		

Meter readings since February 2018 are presented in Figure 13, which clearly shows the trend of reduced water take in recent years.

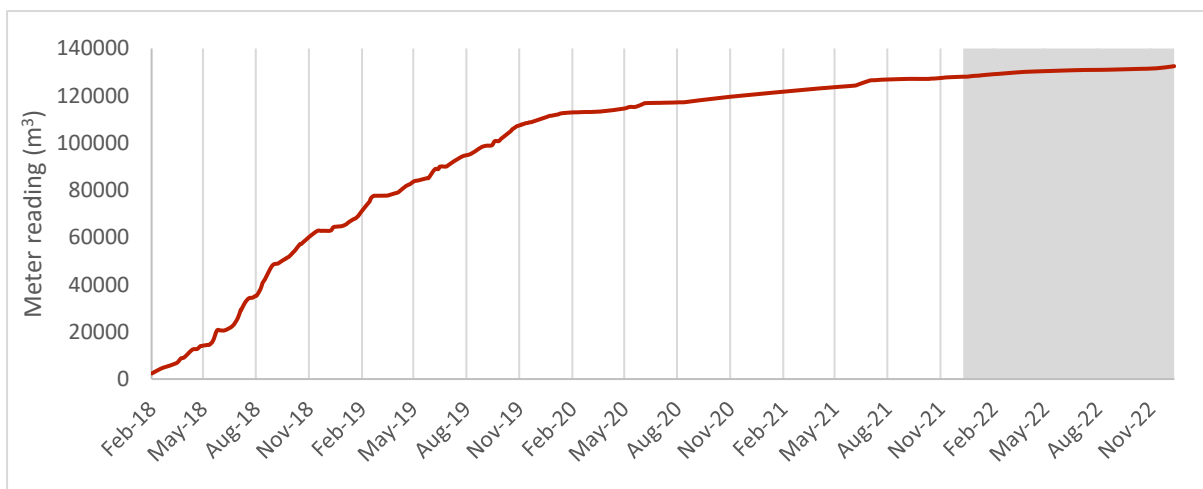


Figure 13: Meter readings (m³) for WAL 30111. The relevant period for this report is highlighted in grey.

7. Rehabilitation

No rehabilitation work was undertaken on previously disturbed land during the reporting period. Backfilling of the “Old Pit” in the south-west of the Approved Extraction Area was not possible due to the presence of accumulated water within the void. Backfilling of the “White Pit” in the south-east of the Approved Extraction Area with overburden was undertaken during 2022, with some areas close to attaining final landform. This will be continued in the next reporting period, alongside extractive activities. With the approval and commencement of discharge of water from the Old Pit in December 2022, it is anticipated that re-commencement of backfilling of the Old Pit may be possible in late 2023.

Further rehabilitation work proposed in the 24 December 2021 notification of non-compliances is pending, awaiting DPE’s direction. The revised Landscape Management Plan has not been submitted, due to the correspondence from DPE that no further action would be taken regarding the review and approval of submitted management plans until the investigation into potential non-compliances identified on site reached the appropriate stage and status.

8. Community

8.1 Community meetings

Three Community Consultative Committee (**CCC**) meetings were held by Multiquip in 2022 (March, July, November), as a forum for the provision of environmental monitoring data and to facilitate discussions relating to environmental performance. The minutes of these meetings are made available via the company website. Key concerns brought up by residents and members of the CCC during 2022 related to groundwater resources, noise, vegetation management, trucks, rehabilitation, road condition and safety, and the condition of various heritage items. Where possible, Multiquip acts on the concerns raised, or otherwise provides comments and clarification.

8.2 Complaints

Three complaints were received by Multiquip during 2022, all of which related to noise. Where appropriate, complaints are followed-up, and corrective actions taken when required. The number of complaints is steadily decreasing, as follows: 2021 (six complaints), 2020 (11 complaints), 2019 (16 complaints), and the most recent complaint was received in May 2022. The complaints were received from one principal source within the local community, to the west of the quarry.

Complaints are recorded in an electronic register, with details of the complainant, date, time, method of delivery, the Multiquip contact who received the complaint, the subject of the complaint, information on corrective actions and additional comments noted. A summarised complaints report - i.e. with identifying information of the complainants removed - is updated as required and published to Multiquip’s website.

We understand that regulators (including the NSW EPA) may on occasion receive direct correspondence or complaints from community members regarding the quarry. Multiquip remains in liaison with regulators regarding these issues, and open to rectifying any

concerns raised. In 2022, no community complaints were formally passed on to Multiquip from regulators.

Notwithstanding complaints received, all available environmental monitoring data demonstrates a high level of compliance with the project’s performance criteria for noise.

Multiquip continues to operate a phone complaints line, however most complaints are made directly through site management personnel, due to their familiarity with complainants.

Table 17: Complaints received during 2022.

Date	Contact	Method	Topic	Description	Response
21/03/2022	SW	SMS	Noise	Alleged 47 dBA noise levels at residence, from rock crusher.	Multiquip representative attended complainant location to observe alleged noise.
26/04/2022	SW	SMS	Noise	Alleged 48 dBA peak noise levels from rock crusher.	None undertaken
24/05/2022	SW	SMS	Noise	Alleged constant 42 dBA noise levels from quarry.	None undertaken

9. Independent Environmental Audit

Schedule 5 Condition 6 of the Project Approval requires that an Independent Environmental Audit (IEA) is conducted every 3 years. To comply with this requirement, an IEA was conducted in 2022 by Ramboll Australia Pty Ltd (Ramboll) covering the period of 21 November 2018 to 19 April 2022. The final report was provided by Ramboll on 14 October 2022, and submitted to DPE along with responses to the recommendations raised within, on 25 October 2022, compliant with the 6-week period required by Schedule 5 Condition 7 of the Project Approval.

The IEA found that management of the project was to be considered of a generally adequate standard in relation to site management and environmental performance. The development was assessed as compliant with the Project Approval except for fourteen non-compliances, for which ten recommendations were made, as well as nine opportunities for improvement in relation to the Project Approval and/or the EPL. There were no findings of non-compliance with the conditions of the EPL. Non-compliances identified related to physical locations of works, water management, truck records, provision of data, administrative requirements, and the rehabilitation bond. Several non-compliances were considered closed-off or rectified prior to the completion of the IEA, and others were rectified during the reporting period.

The previous IEA was published by Groundwork Plus in January 2019, covering the period of November 2015 to November 2018. The next IEA is scheduled for early 2025.

10. Incidents and non-compliances

There were no environmental incidents at the quarry during the 2022 reporting year.

Elevated primary dust levels above the limit values prescribed in the Project Approval were observed on a number of occasions, however assessment of these results concluded that the levels could not be attributed to quarrying activities, and as such, the limits were not considered to have been exceeded. Details are provided in Section 5.3.

Non-compliance with one conditional requirement of PA 07_0155 (Mod 3) during the reporting period was identified in the Independent Environmental Audit, being Schedule 3 Condition 29(g), which is detailed below. The non-compliances raised in the 2021 Annual Review are ongoing, and have been briefly discussed in Section 10.2.

10.1 Schedule 3 Condition 29(g)

Overview

Schedule 3 Condition 29(g) requires that the Proponent must *keep accurate records of all laden truck movements to and from the site (including time of arrival and dispatch) and publish a summary of records on its website every month and in the Annual Review*. While accurate records of all truck movements are kept via the use of the on-site weighbridge, these records were not being published to the website as required, and were also not included in the 2021 Annual Review.

Causes and consequences

During 2021, a number of environmental management obligations were handed over to different individuals, due to staffing changes. It is expected that Schedule 3 Condition 29(g) was missed in this handover and associated potential miscommunication. Due to this, the truck movement data was not being uploaded as required.

Environmental impacts

There are no environmental impacts associated with the non-compliance. The impacts are administrative, as the lack of published data meant that there was potential oversight of operations by the public was reduced. As discussed, the data was obtained and kept on file, and could have been provided on request at any time throughout the reporting period.

Proposed actions

A truck movement summary report for 2022 was completed and uploaded to the company website on 21 October 2022. Since that date, truck movements have been assessed monthly, and summaries prepared. These summaries are published monthly as required, however currently on a three-month delay due to concerns with competition. This will be continued during the next reporting period. A summary of truck movements for 2022 has been included in Section 3.4 of this Annual Review, as required by Schedule 3 Condition 29(g).

10.2 Non-compliances identified in 2021 Annual Review

Updates to the three non-compliances identified in 2021 Annual Review that arose during the reporting period are discussed below.

Schedule 2 Condition 2(c)

CEAL Ltd was served with a Development Control Order from DPE on 20 July 2022 which prohibited activities being carried out in the majority of the areas relevant to the non-compliance. As such, the proposed management activities for these areas were not implemented during the reporting period, awaiting further direction from DPE.

Schedule 3 Condition 24(a)

The Aboriginal Heritage Management Plan (AHMP) was updated and submitted to DPE in 2021, as detailed in the 2021 Annual Review, effectively closing out the non-compliance. In March 2022, DPE provided correspondence to the effect that no further action would be taken regarding the review and approval of submitted management plans until further notice. although the AHMP was not reviewed and approved, the non-compliance is considered closed out.

Schedule 5 Condition 5A

As above, in March 2022, DPE provided correspondence to the effect that no further action would be taken regarding the review and approval of submitted management plans until further notice. As such, no further management plans were submitted or approved during the reporting period.

Annual Review are ongoing, and have been briefly discussed in Section 10.2.

10.2 Regulatory correspondence

A summary of correspondence received in relation to official cautions, warning letters etc. is provided in Table 18, below. All issues raised by various regulatory agencies are treated seriously and acted upon.

Table 18: Summary of official correspondence.

Date	Regulatory agency	Issue	Company Response
10/03/2022	NRAR	Direction to protect water source - decommissioning of bores on site	30/08/2022: Request for variation submitted to allow for rehabilitation of select bores.
20/07/2022	DPE	Development Control Order - conducting activities on areas outside of approved locations	DCO complied with, discussions ongoing.
08/09/2022	NRAR	Varied direction to protect water source - allowing for rehabilitation of select bores and	Complied with by due date (11/03/2023).

Date	Regulatory agency	Issue	Company Response
		decommissioning of others.	
25/11/2022	DPE	Warning Letter - VPA with Council not finalised, Annual production data not supplied to MEG and included in Annual Review	Responded on 16/12/2022: Extension requested for VPA (approved 1/2/2023). Data submitted to MEG and had been included in 2021 Annual Review v2, submitted on 01/07/2022.
28/11/2022	DPE	Show Cause - Rehabilitation Bond not reviewed within 3 months of 2018 IEA.	Responded on 16/12/2022: Cause shown. Eltirus engaged to review and revise the Rehabilitation Bond, due early next reporting period.
28/11/2022	DPE	Notice to Furnish information and records - Waste Management Plan	Responded on 04/01/2023: Information and records provided as requested.

11. Activities in the next reporting period

The following activities are proposed in 2023 (Table 19).

Table 19: Activities proposed in 2023.

Proposed activity	Timeframe
Continuation of mining activities at the site. Indicatively expected to be 400,000 tpa to be increased to 580,000 tpa when appropriate documentation etc. is approved	Ongoing
Close-out of NRAR Direction requiring rehabilitation and decommissioning of bores	March 2023
Further rehabilitation and landscaping of visual bunds, pending approval from DPE	Pending DPE
Monitoring <ul style="list-style-type: none"> • SWL of bores monthly • Deposited dust monthly • Water sampling quarterly and annually • Particulate matter continuously (assessed monthly) • Noise twice annually • Discharge sampling (characterisation and validation) as required • Discharge water quality sampling monthly during discharge • Ambient water quality sampling monthly during discharge 	Ongoing

Proposed activity	Timeframe
Submission of modification to Project Approval (Modification 4) to ensure activities align with Approval	Pending DPE
Attendance at all Community Consultative Committee (CCC) meetings	March and September 2023
Submission of EPL variation to remove identified bores from EPL	Mid-2023
Close-out of Development Control Order	Mid-2023
Completion and lodgement of Modification 3 Environmental Management Plans	Pending DPE
Discharge of water from Old Pit until empty, and follow-up earthworks	Late 2023
Submission of Enforceable Undertaking	Early/mid-2023
Finalise Voluntary Planning Agreement (VPA) with Goulburn Mulwaree Council and provide update to DPE accordingly, as per Schedule 2 Condition 13 of the Project Approval and DPE's 1 February 2023 extension approval	June 2023
Review and revise Rehabilitation Bond within 3 months of submitting Independent Environmental Audit, to the satisfaction of the Planning Secretary, as per Schedule 5 Condition 8 of the Project Approval	Early 2023

12. References

The Department of Planning and Environment. (2015). Annual Review Guideline. Sydney: NSW Government.