

ALBION PARK QUARRY

ANNUAL REVIEW

Period 01 July 2023 – 30 June 2024



TITLE BLOCK

Name of operation	Albion Park Quarry
Name of operator	Cleary Bros (Bombo) Pty Ltd
Development consent #	10639/2005; SSD10369
Name of holder of development consent	Cleary Bros (Bombo) Pty Ltd
Annual Review start date	1/7/2023
Annual Review end date	30/6/2024
<p>I, Mark Hammond, certify that this audit report is a true and accurate record of the compliance status of the Albion Park Quarry for the period 1 July 2023 to 30 June 2024 and that I am authorised to make this statement on behalf of Cleary Bros (Bombo) Pty Ltd.</p> <p>Note</p> <p>a) The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</p> <p>b) The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</p>	
Name of authorised reporting officer	Mark Hammond
Title of authorised reporting officer	Head of Sustainability
Signature of authorised reporting officer	
Date	30/1/2025

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Abbreviations

10639/2005	Former Development Consent #10639/2005
AQMP	Air Quality Monitoring Program
AR	Annual Review
BiMP	Biodiversity Management Plan
BIMP	Blast Management Plan
CB	Cleary Bros (Bombo) Pty Ltd
DC	Development Consent SSD10369
DP	Deposited Plan
DRG	Department of Resources and Geoscience of the Department
DPE	Department of Planning, Housing and Infrastructure
EMS	Quarry Environmental Management Strategy (SSD10369)
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EPL	Environment Protection Licence
HMP	Heritage Management Plan
HVAS	High Volume Air Sampler
L _{Aeq(15min)}	Continuous Equivalent Noise Level for a 15 Minute Period
MW	Monitoring Well
NMP	Noise Monitoring Program
QEMP	Quarry Environmental Management Plan (10639/2005)
RMP	Rehabilitation Management Plan
RS	Rehabilitation Strategy
SSD10369	State Significant Development SSD10369
WMP	Water Management Plan

Internal Document Control

Version	Description	Prepared By	Reviewed By	Prepared Date
1	Initial Draft	M Hammond	T Kalajzich	27/9/2024
2	Final for publication	M Hammond	M Hammond	30/9/2024
3	Updated to include Addendum 1	M Hammond	M Hammond	30/1/2025

1. INTRODUCTION

1.1 Statement of Compliance

Were all conditions of the relevant approvals complied with?	
Development Consent #10639/2005	No
Development Consent SSD10369	No
Environmental Protection Licence #299	No

Refer to Section 6 for further information on the non-compliances recorded in the reporting period.

1.2 Background

Cleary Bros (CB) has extracted and processed hard rock from the Albion Park Quarry since the 1960's. On 30 September 2024, the Department of Planning and Environment (now DPHI) granted development consent for CB to extend quarrying into the Stage 7 area under SSD10369. This consent will replace the previous development consent (10639/2005) which permitted extraction from Stages 1-6, and is in the process of being surrendered. As both development consents were in operation during the reporting period, both are considered in the preparation of the Annual Review.

Cleary Bros were also granted development consent by Shellharbour City Council on 10 May 2007 for an access road linking the quarry extraction area to Cleary Bros processing area.

Operation of the hard rock quarry is licensed by the Environment Protection Authority (EPA) under Environmental Protection Licence 299. The Environmental Protection Licence (EPL) was most recently amended by the EPA on 28 May 2024 to extend the premises footprint in line with the Stage 7 approval.

The location of the property is shown on Figure 1.

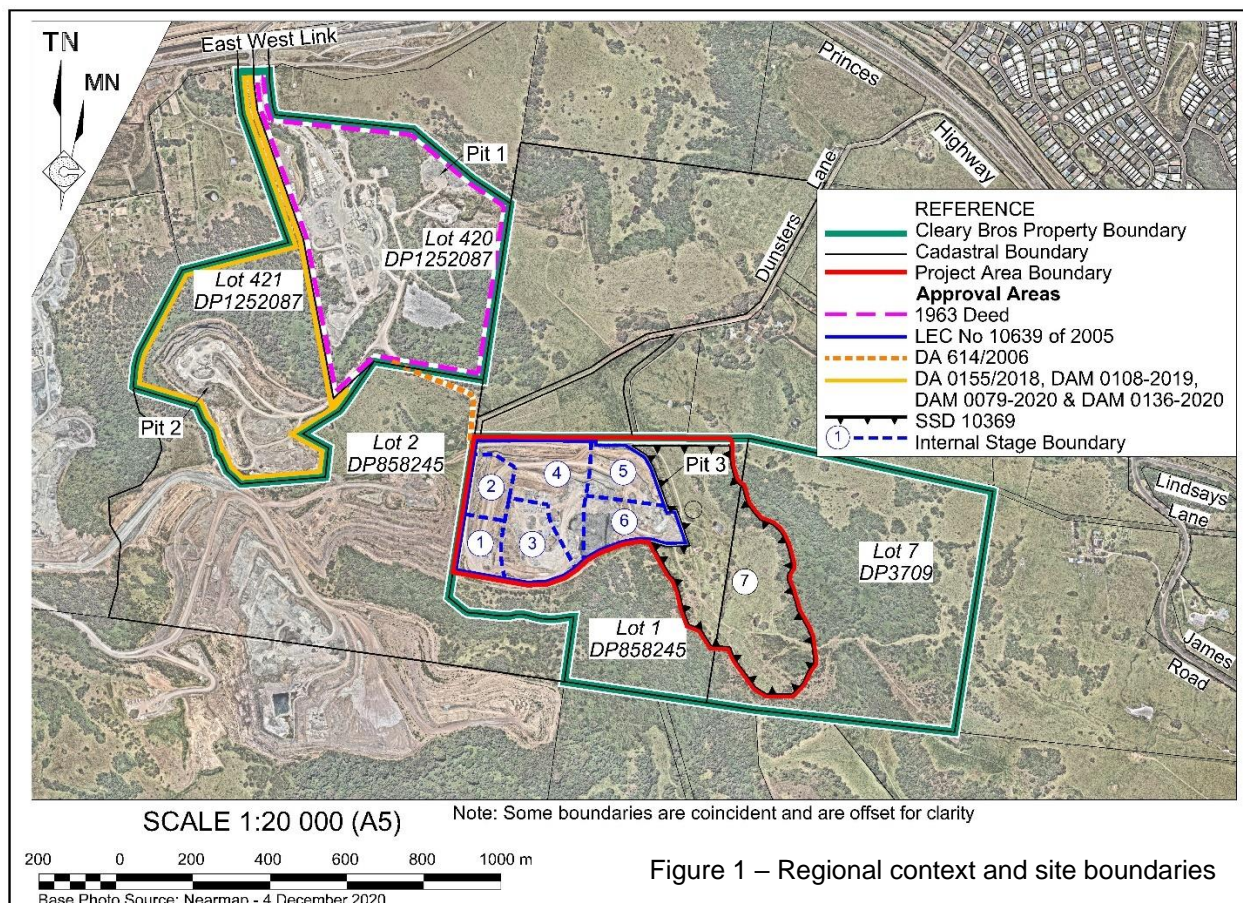


Figure 1 – Regional context and site boundaries

1.3 Objectives of the Annual Review

The objectives of this Annual Review are to satisfy the reporting requirements of SSD10369 and 10639/2005 as reproduced below:

Condition	Requirement	Where addressed
Schedule 3 Condition 9 A31	<p>The Applicant must:</p> <ul style="list-style-type: none"> a) provide annual production data to the DRG using the standard form for that purpose; and b) include a copy of this data in the Annual Review. <p>The data must be provided using the relevant standard form and a copy of the data must be included in the Annual Review.</p>	Annexure A
B29	The Applicant must review the air quality monitoring program annually and report any updates to the program in the annual review required by condition D10.	Section 3.2
Schedule 4 Condition 33 B32	<p>Each year, the Applicant must:</p> <ul style="list-style-type: none"> • review the Water Management Plan; • update each sub-plan; and • report the results of this review in the Annual Review, including: <ul style="list-style-type: none"> • the results of monitoring; • details of the review for each sub-plan; • amendments to the sub-plans; and • details of the measures undertaken/ proposed to address any identified issues. <p>The Applicant must report on water extracted from the site each year (direct and indirect) in the Annual Review, including water taken under each water licence.</p>	Sections 3 & 5.1
Schedule 4 Condition 38	The Applicant must include a progress report on the implementation of the Vegetation Management Plan in the Annual Review .	Sections 3.9 & 5.3
Schedule 4 Condition 44	The Applicant must include a progress report on the Rehabilitation Management Plan in the Annual Review .	Section 3.9 & 5.4
Schedule 4 Condition 53	The Applicant must include a progress report on the Heritage Management Plan in the Annual Review	Section 5.5
Schedule 4 Condition 60 B93	<p>The Applicant must describe what measures have been implemented to minimise the amount of waste generated by the development in the Annual Review.</p> <p>The Applicant must monitor and report on the effectiveness of waste minimisation and management measures in the Annual Review referred to in condition D10.</p>	Section 5.6
Schedule 6 Condition 2	<p>By the end of September each year, or other timing as may be agreed by the Secretary, the Applicant must submit a report to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must:</p> <ul style="list-style-type: none"> (a) describe the development (including rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year; (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against: 	This Document

Condition	Requirement	Where addressed
D10	<ul style="list-style-type: none"> • the relevant statutory requirements, limits or performance measures/criteria; • the monitoring results of previous years; and • the relevant predictions in the documents referred to in condition 2 of Schedule 3; <p>(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;</p> <p>(d) identify any trends in the monitoring data over the life of the development;</p> <p>(e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and</p> <p>(f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the development.</p> <p>By the end of September in each year after the commencement of quarrying operations in the Stage 7 extraction area, or other timeframe agreed by the Planning Secretary, a report must be submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary. This review must:</p> <p>(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;</p> <p>(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, including a comparison of these results against the:</p> <ul style="list-style-type: none"> (i) relevant statutory requirements, limits, or performance measures/criteria; (ii) the environmental risk assessment prepared as part of the environmental management strategy required by condition D1; (iii) requirements of any plan or program required under this consent; (iv) monitoring results of previous years; and (v) relevant predictions in the documents listed condition A2(c). <p>(c) identify any non-compliance or incident which occurred in the previous financial year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;</p> <p>(d) evaluate and report on:</p> <ul style="list-style-type: none"> (i) the effectiveness of the noise and air quality management systems; and (ii) compliance with the performance measures, criteria, and operating conditions of this consent; <p>(e) identify any trends in the monitoring data over the life of the development;</p> <p>(f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and</p> <p>(g) describe what measures will be implemented over the next financial year to improve the environmental performance of the development.</p>	

2. SITE DESCRIPTION AND ACTIVITIES

2.1 Site Identification

The site comprises Lot 1 DP 858245 and Lot 7 DP 3709 (active quarry) and Lot 23 DP 1039967 (processing plant, site entrance product storage and sale). The haul road connecting the quarry to the processing plant traverses Lot 2 DP 858245. Lots 1 and 7 are owned by Bridon Pty Ltd, a member of the Cleary Bros group of companies. Lot 23 is owned by CB and Lot 2 is owned by Holcim. The site is located within the Shellharbour City Council Local Government Area. Access to the extraction area is from East-West Link Road via the processing plant. The land approved for extraction has an area of 34 hectares.

The quarrying process involves removing overburden from the hard rock resource, fracturing the rock by blasting, primary in pit crushing using a mobile crushing plant, loading the crushed rock on to off-road trucks for delivery to the processing plant. At the processing plant hard rock is crushed, screened and classified into various products for stockpiling on site prior to sale and delivery. Backfilling of the western parts of the sandstone base has commenced using overburden extracted during the quarrying process.

2.2 Works Completed in Period

Surface and normal quarry production was carried out during the reporting period of July 2023 to June 2024 and has continued across the base of the extraction area as shown on Figure 2 to a maximum depth of approximately 51mAHD. Quarrying in the current reporting period was primarily from the southeastern part of Stage 6 and the northern part of Stage 4, along with preparatory works and extraction in stage 7a in the latter months of the reporting period.

For the Stage 7 development, the following works were undertaken during the current reporting period:

- Retirement of the Stage 1 biodiversity credits required under SSD10369.
- Clearing of vegetation required to permit quarrying to FY25.
- Installation of sediment and erosion controls.
- Installation of new and relocated monitoring equipment (continuous noise monitor, real time particulate monitors, HVAS, weather station, spring-fed dam groundwater monitoring bores).
- Demolition of the Belmont house, and associated works (refer Section 3.8).
- Topsoil and overburden stripping of part of Stage 7a.
- Commencement of construction of amenity barrier around northeastern boundary of Stage 7a.
- Planting of vegetation screens along northern boundary of project and eastern boundary of Stage 7a.

2.3 Works to be completed in the Next Period

In the period July 2024 to June 2025 quarry extraction will continue in Stage 7a. Activities that will be undertaken include:

- Continued vegetation clearing within the Stage 1 biodiversity credits area in late FY25.
- Finalisation of Archival Report for the Belmont.
- Completion of amenity barrier along northeastern boundary of Stage 7a.
- Planting of tree screen along eastern ridgeline.
- Infill planting of vegetation screens along northern boundary of project and eastern boundary of Stage 7a.
- Rehabilitation of the upper western bench(es) within Stage 7a.
- Continued backfill and rehabilitation of parts of Stages 1-4.
- Relocation of the dry-stone wall within Stage 7a to the northern property boundary.
- Ecological surveys and planning for the establishment of a Biodiversity Stewardship Agreement site on Cleary Bros property.

2.4 Quarry Production

During the reporting period covered by this Annual Review, one annual return was forwarded to NSW Department of Regional NSW (formerly NSW Trade and Investment), covering the 12 months ending 30 June 2023. This return indicates a total of 769,826 tonnes of site-won material was sold from the quarry, which included 17,222 tonnes of concrete returns from Cleary Bros sites incorporated into Enviropave, as well as 1,001 tonnes of overburden, and which equates to the total hard rock extracted from the extended quarry area of 751,603 tonnes. A copy of the return up to 30 June 2023 to NSW Industry and Investment is included as Annexure A. The next annual return to NSW Department of Regional NSW is due by 31 October 2024.

In the current reporting period, 434,638 tonnes of blue rock (latite) and 233,790 tonnes of red rock (agglomerate) were extracted from the extension area and sold. The hard rock quarry products produced in the reporting period were below the maximum of 900,000 tonnes permitted under the current DC. An additional 18,207 tonnes of material produced from concrete returns from Cleary Bros sites were sold from the site during the reporting period.

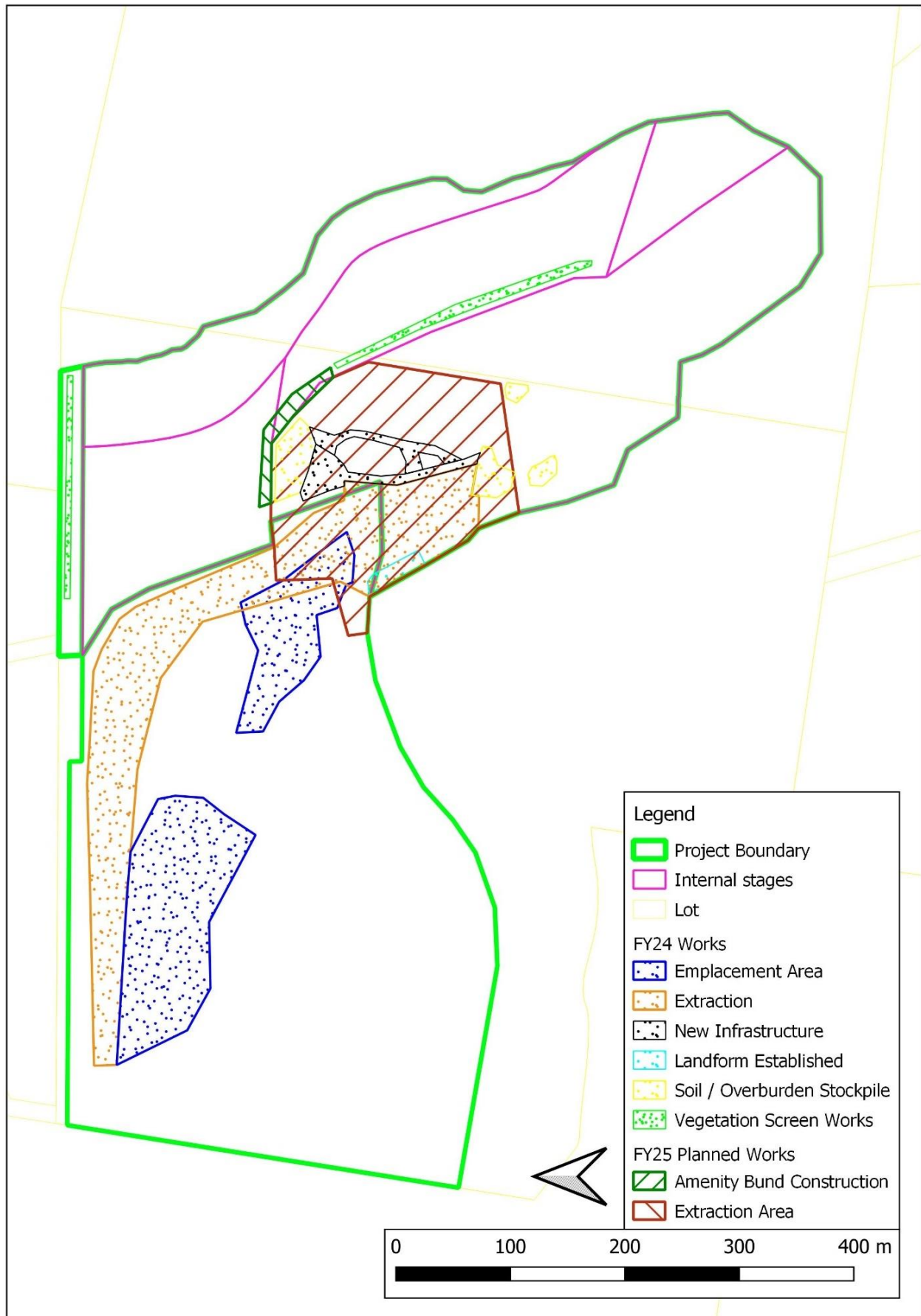


Figure 2 – Works Completed in FY24 and Works Planned for FY25

3. REVIEW OF ENVIRONMENTAL PERFORMANCE

3.1 Meteorological Monitoring

3.1.1 Standards and Performance Measures

The Development Consent and Environmental Protection Licence require the monitoring of meteorological parameters on the site for the life of the project. Section 6.2 of the EMS details the following parameters will be continuously monitored at the site and averaged over 10 minute intervals.

Parameter	Units
Temperature at 2 and 10 metres	°C
Total Solar Radiation at 10 metres	W/m ²
Wind direction at 10 metres	degrees
Wind speed at 10 metres	m/s
Sigma theta at 10 metres	degrees
Rainfall	mm/hr

3.1.2 Environmental Performance

Cleary Bros operated a weather station for the majority of the current reporting period adjacent to the former *Belmont* homestead, which has been in operation in this location since 2005. The weather station was relocated 150 metres north in April 2024 to allow quarrying to commence in Stage 7a. The weather station is capable of monitoring all of the parameters required by the EMS, and can be contacted in near real time through the mobile telecommunications network. This data has been reviewed regularly throughout the current reporting period to ensure the continued functioning of the system.

Rainfall in the current reporting period has been above average, with 1367.8 mm recorded compared with the long term average of 1,169mm (data sourced from SILO dataset for -34.6, 150.8 for the period 1889-2024, sourced from www.longpaddock.qld.gov.au/silo/point-data). It was, however, heavily skewed to the last 3 months of the reporting period, with 50% (673.94 mm) falling between April 2024 and June 2024. Rainfall totals have been below average for most other months, albeit the months of August, November and December 2023 recorded moderately or well-above average falls. Figure 3 presents the monthly rainfall totals throughout the reporting period.

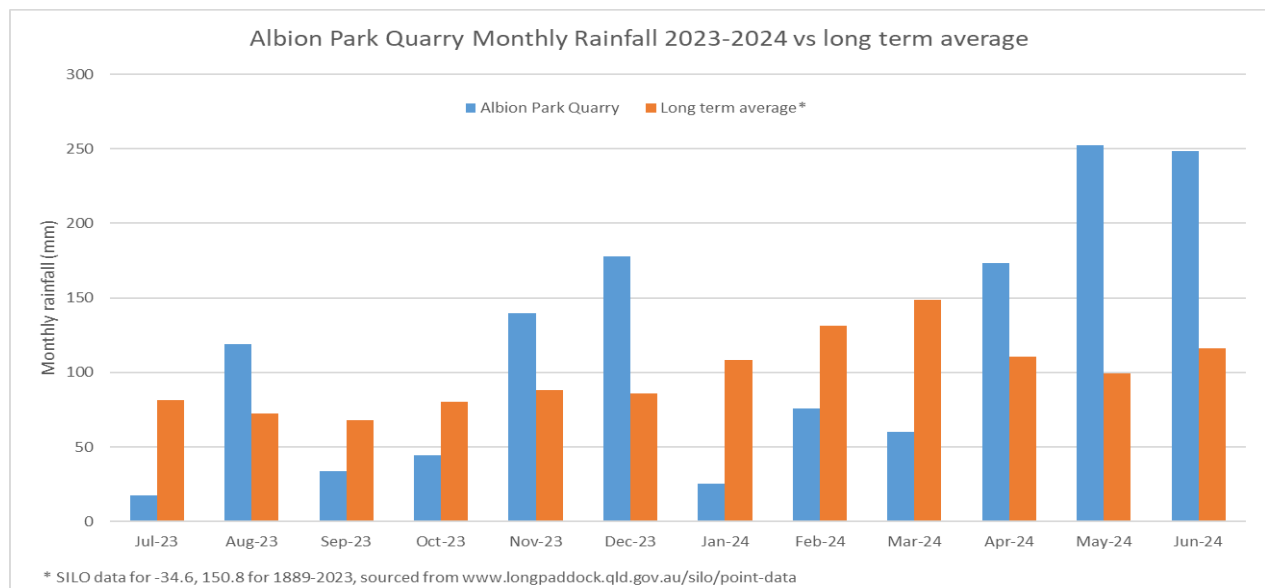


Figure 3 – Rainfall measured for the site in FY24 vs the long term average

3.1.3 Compliance Assessment

The weather station has operated well throughout the reporting period and in line with requirements.

3.2 Air Quality

3.2.1 Standards and Performance Measures

Both 10639/2005 and SSD10369 contain specific limits relating to air quality, including for particulate matter fractions (PM_{2.5} and PM₁₀) and total suspended particulates (TSP). EPL299 was updated in May 2024 to include specific requirements for the monitoring of ambient air quality using continuous real time dust monitors. Previously EPL299 included a requirement to monitor deposited ash and insoluble solids with no specific compliance limits. The current air quality criteria specified in SSD10369 for particulate matter are as follows, however they are subject to certain exclusions and clarifiers as listed in the DC. These air quality criteria also form the air quality objectives of the EMS.

Particulate Fraction	Averaging period	Criteria
PM ₁₀	Annual	25 µg/m ³ (total)
	24 hour	50 µg/m ³ (incremental)
PM _{2.5}	Annual	8 µg/m ³ (total)
	24 hour	25 µg/m ³ (incremental)
TSP	Annual	90 µg/m ³ (total)

Cleary Bros are also required to ensure that no offensive odours are emitted from the site, and to implement all reasonable and feasible measures to reduce the greenhouse gas emissions of the project.

3.2.2 Environmental Performance

CB has implemented a range of controls to minimise the potential generation of dust from the project, as described in the EMS. The dust mitigation measures feed into a Trigger Action Response Plan (TARP), providing feedback in real time as to the effectiveness of the control measures. The key controls implemented on the site during the reporting period include:

- All traffic entering and leaving the site use the sealed entrance road off the East West Link.
- All vehicles leaving the unsealed area are directed over a vehicle wheel wash.
- Street sweeper is used regularly to remove any material from the entrance and surrounding roads.
- Speed limits on site are no greater than 30 km/h.
- Misting sprays are installed at key transfer points of the processing plants.
- A water truck is used to suppress dust on haul roads, and also as required at key transfer points.
- Equipment servicing undertaken in line with OEM requirements to reduce emissions.
- Soil stripping has been minimised to those areas planned for extraction over the next 12 months, with soil stripping activities postponed during strong winds.

An Air Quality Monitoring Program was prepared in February 2024 to assess the effectiveness of the control measures, and includes the use of one High Volume Air Sampler (HVAS) which measures PM₁₀, and three continuous real time particulate monitors, which measure relative levels of PM_{2.5}, PM₁₀, and TSP. The HVAS and particulate monitors were relocated to their new locations in March 2024. ALS Laboratory Group were engaged during the reporting period to service the HVAS in accordance with AS/NZS3580.9.6-2015: *Methods for Sampling and Analysis of Ambient Air – Determination of Suspended Particulate Matter – PM10 High Volume Sampler with Size Selective Inlet – Gravimetric Method*.

The locations of the air quality monitoring sites, analytes, frequencies, and purpose of each are as follows.

EPL ID	Location	Analyte	Units	Frequency	Purpose
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Station ID					
1 A2	A2 – approximately 250m north of quarry extraction area	PM _{2.5} , PM ₁₀ , TSP	µg/m ³	Continuous	Trigger Action Response Plan
2 APD3	A3 – approximately 450m ESE of quarry entrance	PM _{2.5} , PM ₁₀ , TSP	µg/m ³	Continuous	Trigger Action Response Plan
3 APD4	A4 – approximately 300 east of Stage 7 extraction area	PM _{2.5} , PM ₁₀ , TSP	µg/m ³	Continuous	Trigger Action Response Plan
- A1	Co-located with A2	PM ₁₀	µg/m ³	24hr; 1 in 6 days Annual average	Assess compliance with air quality criteria



APD4 – Continuous real time particulate monitor in operation

During the reporting period, Cleary Bros also operated 4 depositional dust gauges as per the below table, which were serviced monthly by technicians from ALS Laboratory Group, with sampling and analysis in accordance with *AS/NZS 3580.10.1-2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulates – Deposited Matter – Gravimetric Method*. These monitoring sites were discontinued at the end of the reporting period following the implementation of the modernised Air Quality Monitoring Program.

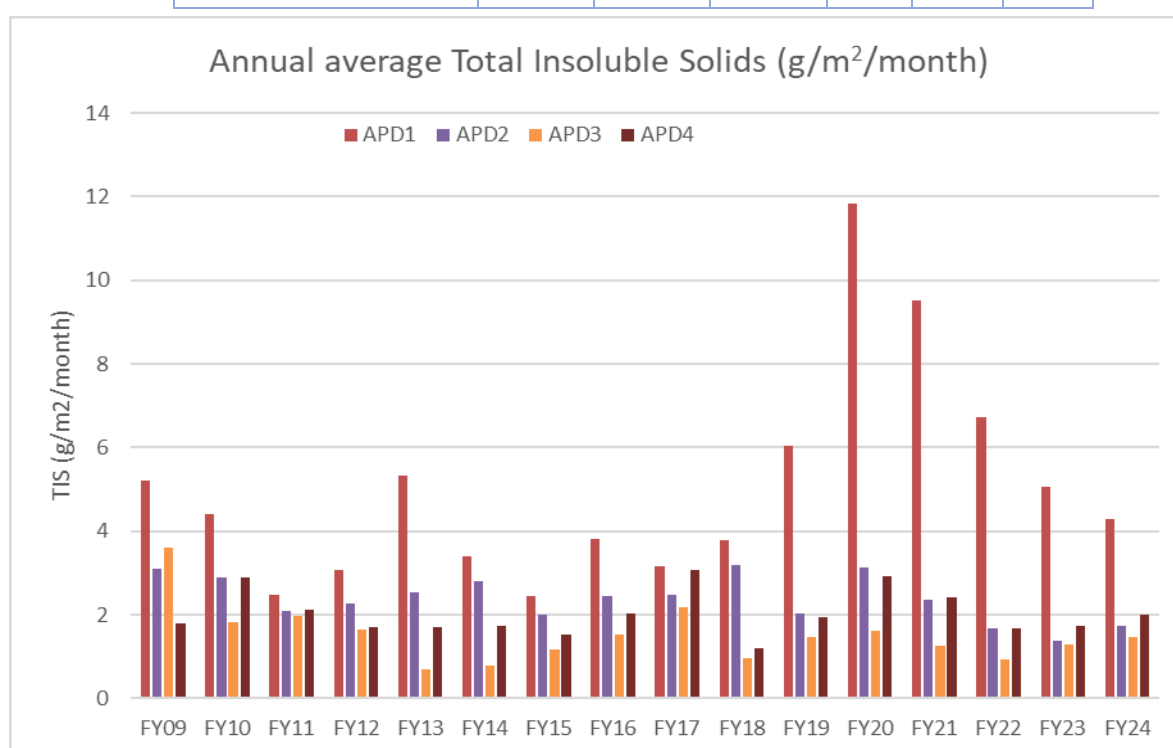
Station ID	Location	Analyte	Units	Frequency
APD1	Within 100m of the premises entrance gate	Ash Insoluble Solids	g/m ² /mth	Monthly
APD2	Rinker property, north west of Kyawana	Ash Insoluble Solids	g/m ² /mth	Monthly
APD3	Dunsters Land, southwest of The Cottage	Ash Insoluble Solids	g/m ² /mth	Monthly
APD4	Northern boundary, east of the gate to Belmont	Ash Insoluble Solids	g/m ² /mth	Monthly

3.2.3 Air Quality Monitoring

Deposited Dust

The following table provides a summary of concentrations of Total Insoluble Solids and Ash (g/m²/month) for the four deposited dust monitoring gauges at the Albion Park Quarry. This monitoring was discontinued at the end of the reporting period, and will not be included in future Annual Reviews.

Total Insoluble Solids	2023/24 Reporting Period			Historical Results		
	Min	Ave	Max	Min	Ave	Max
APD 1	0.6	4.3	8.6	0.1	5.1	26.8
APD 2	0.9	1.7	3.5	0.1	2.4	12.6
APD 3	0.3	1.5	4.8	0.1	1.4	8.6
APD 4	0.7	2.0	4.7	0.1	2.0	13.3



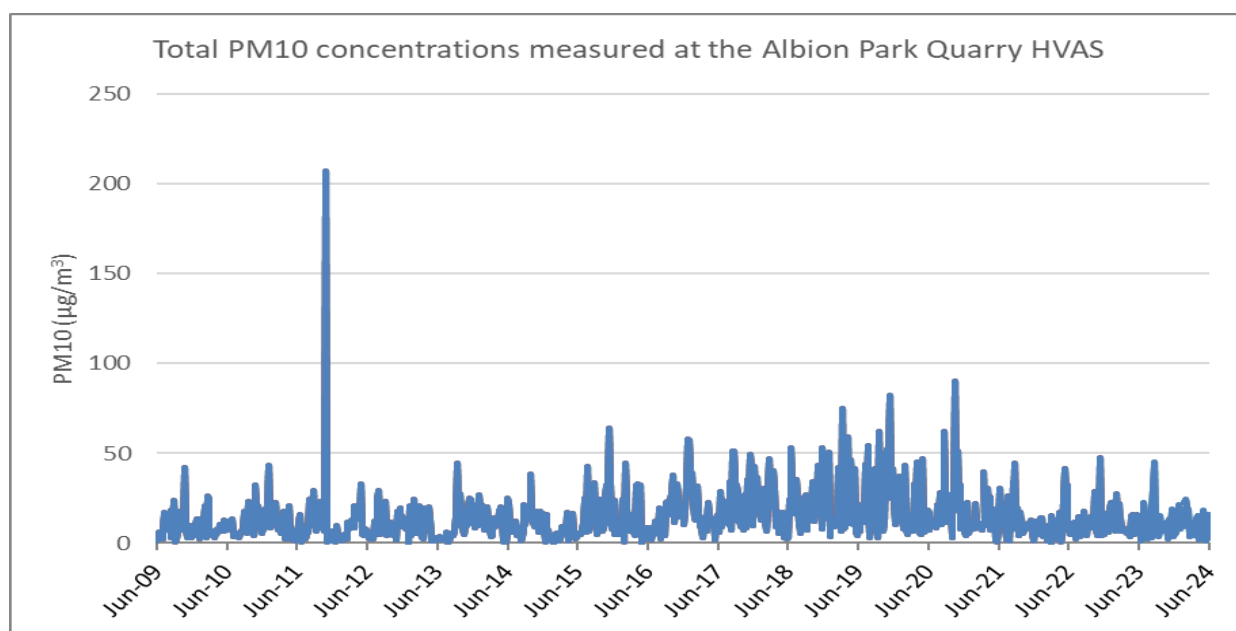
PM₁₀

The following table provides a summary of PM₁₀ concentrations (µg/m³) for the High Volume Air Sampler at the Albion Park Quarry, with the following graph showing the historical trend in PM₁₀ concentrations. Incremental impacts were determined by subtracting the average PM₁₀ levels measured by the NSW Government Albion Park South air quality monitor (TEOM unit) from the data recorded by the site HVAS unit.

PM ₁₀	2023/24 Reporting Period				Historical Results		
	Min#	Ave#	Incr. max	Max#	Min#	Ave#	Max#
HVAS	1.2	10.8	11.8	45.0	0.0	14.1	207.0
DC criteria		25	50*				
EIS Prediction (Stage 7a at R1)		17.2	18.2	47.5			

total PM₁₀ measured at the site – not incremental impact

* Limit applies to incremental impact – increase due to development on its own



Based on the data from the HVAS and utilising the ratio of PM_{2.5} to PM₁₀ to TSP as recorded by the real time particulate monitors, estimates for the concentrations of PM_{2.5} and TSP can be calculated using the data from the HVAS as tabulated below.

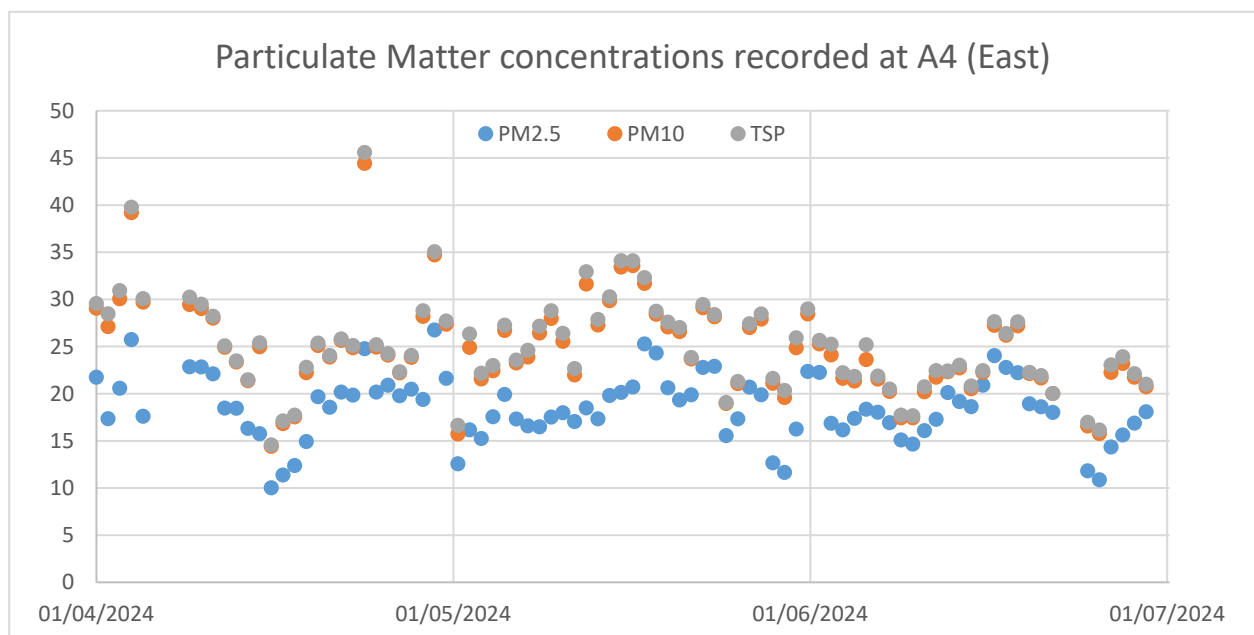
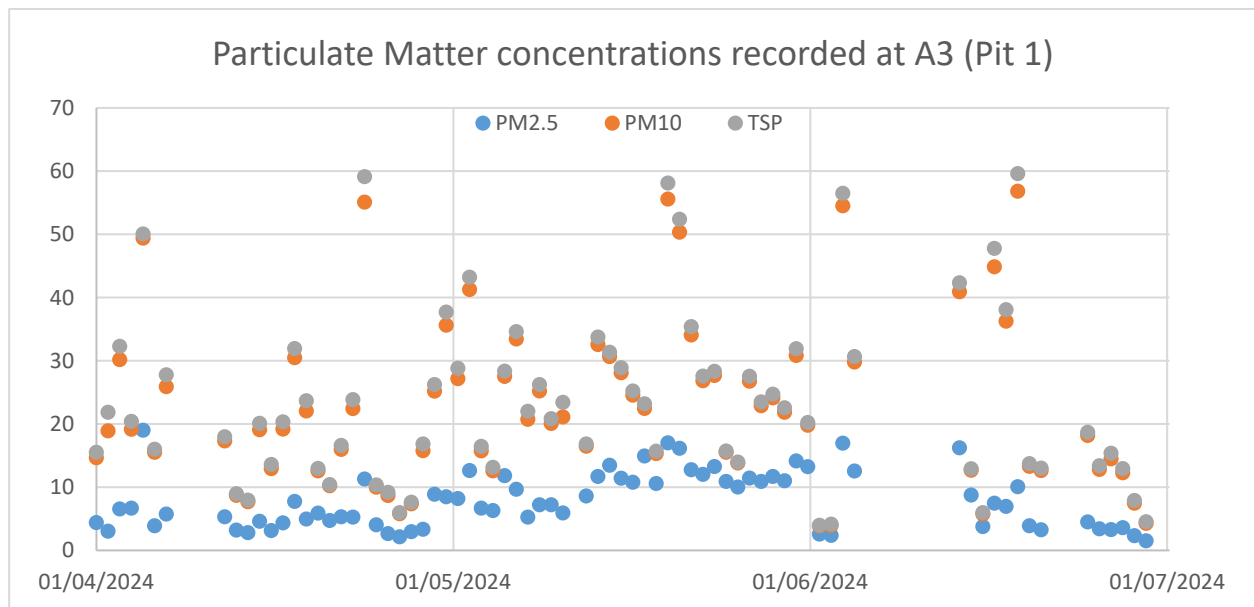
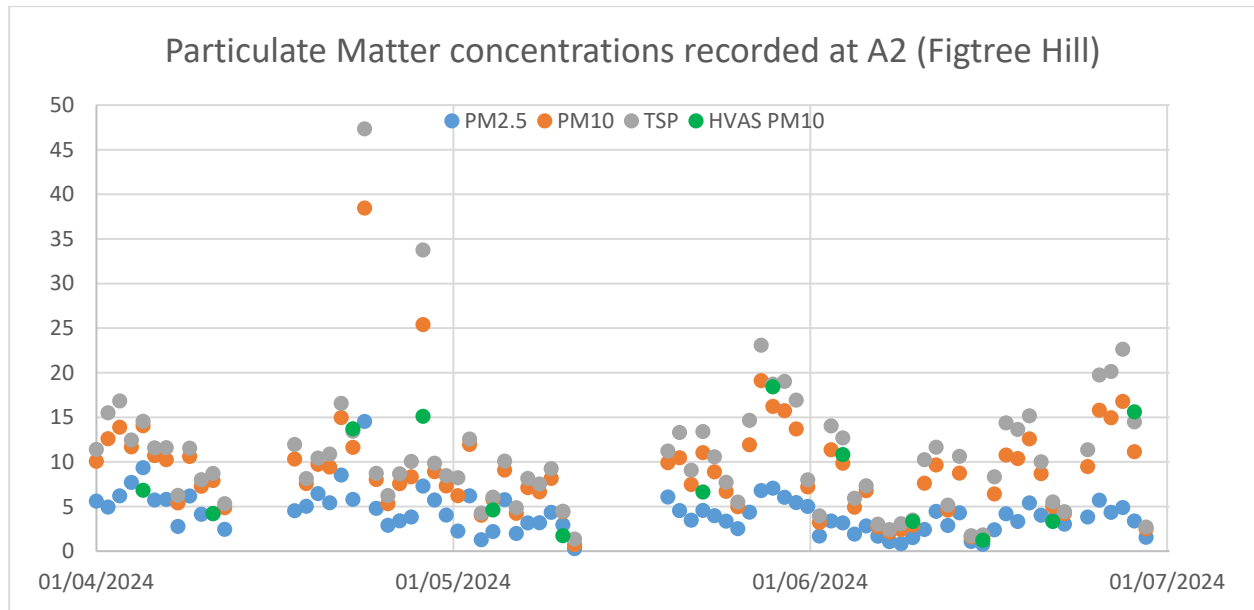
PM _{2.5}	2023/24 Reporting Period				Historical Results		
	Ratio	Ave#	Incr. max	Max#	Min#	Ave#	Max#
Estimated PM_{2.5} from PM₁₀ ratio	0.477	5.2	5.6	21.5	0.0	6.7	98.7
DC criteria		8	25*				
EIS Prediction (Stage 7a at R1)		6.9	2.4	19.4			

TSP	2023/24 Reporting Period				Historical Results		
	Ratio	Ave#	Incr. max	Max#	Min#	Ave#	Max#
Estimated TSP from PM₁₀ ratio	1.306	14.1	15.4	58.8	0.0	18.4	270
DC criteria		90					
EIS Prediction (Stage 7a at R1)		36.1					

total particulate matter fraction measured at the site – not incremental impact

Real Time Particulate Monitoring

The principal objective of the real time particulate monitors is to provide a means to continuously monitor and respond to any instances of elevated particulate matter as a result of quarrying activities. There is no EPA Approved Method for their use, and the monitors cannot measure to the same standard as the HVAS or other real time monitoring equipment using EPA Approved Methods. Nevertheless, they are able to provide an indication of relative particulate matter concentrations, as well as an opportunity to measure different fractions of particulate matter including PM_{2.5} and TSP. A graph of the average daily concentrations of particulate matter as recorded by the monitors are graphed for each monitor. For monitor D2, the co-located HVAS PM₁₀ measurements are also shown for comparison.



3.2.4 Odour and Greenhouse Gas Emissions

There are no sources of odour on the site. No blasts generated visible or odorous fume during the reporting period.

Cleary Bros has implemented the following measures to minimise greenhouse gas emissions associated with the project during the reporting period:

- Hire of larger capacity Cat 777 haul trucks for use on site instead of smaller Cat 773 trucks, which improves the diesel efficient of material movement while also reducing dust emissions.
- Commencement of construction of a “bridge” across the floor of the quarry to reduce elevation gain required when hauling from the extraction area, and thus GHG emissions.
- Servicing of all equipment in line with OEM requirements to ensure efficient operation.

Cleary Bros currently reports emissions from facilities in accordance with the requirements of the National Greenhouse and Energy Reporting Act (NGER). Emissions associated with the 2023-2024 will be reported prior to the 31 October 2024, in accordance with NGER.

3.2.5 Interpretation and Effectiveness of the Air Quality Management System

Average annual deposited dust measurements in all four dust depositional gauges show levels equal to or lower than the longer term average. Similarly, PM₁₀ measurements as recorded by the HVAS are significantly lower than the long term average. This is in part reflective of the continued above average rainfall experienced during the reporting period, and also testament to the effective dust mitigation strategies employed throughout those drier parts of the year. PM₁₀ levels as recorded by the HVAS met the Air Quality Criteria of the DC, and were also less than the EIS prediction during the reporting period. Levels of PM_{2.5} and TSP as estimated from the HVAS data and utilising the ratios of these parameters as recorded by the real time monitors also demonstrates compliance with the Air Quality Criteria. Annual average concentrations of these parameters were well below EIS predictions, while the maximum daily PM_{2.5} level estimated from the HVAS PM₁₀ data was slightly above the EIS prediction. The EMS objectives related to air quality have been met during the reporting period.

Works have been undertaken in the past 12 months to improve dust levels on this site, including improvements to the vehicle wheel wash, which is aimed at reducing drag-out along the sealed access road. The real time dust monitoring network has also been deployed, and with the existing daily site inspections by the Quarry Supervisors, bolsters the ability of site personnel to take action as any issues emerge.

While the real time particulate monitors have provided a valuable contribution to the air quality monitoring network on the site, Cleary Bros continue to experience some reliability issues. This includes short periods without remote connectivity, and delays in receiving some alerts. Cleary Bros are working with the manufacturer to address these deficiencies, and are also exploring alternate web-based platforms to improve reliability of data capture. Nevertheless, the real time monitoring system has provided a beneficial tool to the quarry over the last few months of the reporting period.

3.3 Noise

3.3.1 Standards and Performance Measures

The Development Consent specifies noise criteria for eleven residences surrounding the project site. There are no specific requirements related to noise or noise monitoring in the EPL for the project. The Noise criteria for the project are as follows.

Residences	Noise Criteria L _{Aeq} 15minute	Predicted noise levels (Stage 7a) L _{Aeq} 15minute
R1 - The Cottage	49*	48
R2 - The Hill	46*	46
R3 - Approved Residence	48*	50
R5 - Porto Santo	42	40
R4, R6, R7, R8, R9, R10, R11	40	various (<30 – 39)

* negotiated agreement in place

The EMS objective relevant to noise requires noise levels at R5 attributable to quarrying to be less than or equal to the noise criteria in the table above (42 dB(A)).

3.3.2 Environmental Performance

CB has implemented a range of controls to minimise noise emissions associated with the project, as described in the EMS. The key controls implemented on the site in the reporting period includes:

- Extraction in Stage 7 has commenced in Stage 7a, to maximise acoustic shielding of the active extraction area from the nearest residences in later stages of the quarry.
- An amenity barrier has been constructed along the boundary of Stages 5 and 6, with a new barrier currently being constructed along the northern boundary of Stage 7a.
- Positioning of equipment within the quarry to maximise shielding from quarry faces.
- Speed limits on site are no greater than 30 km/h.
- All equipment is fitted with broadband reversing alarms.
- Equipment servicing undertaken in line with OEM requirements to reduce noise emissions.
- Monitoring noise emissions from higher impact equipment operating in surface areas including dozers and drill rigs, to ensure installed noise suppression equipment is effective.
- Surface activities are prioritised where possible for favourable weather conditions, and limited as far as possible during noise enhancing conditions.
- Monitoring of noise levels in accordance with the Noise Monitoring Program, including a real time noise monitor which allows quarry activities to be modified in the event of elevated noise levels.

Cleary Bros has also negotiated an agreement with the owner of residences R1, R2, and R3 to allow higher noise levels, and as such the above noise criteria do not apply for these residences.

A Noise Monitoring Program was prepared in March 2024 to assess the effectiveness of the control measures, and includes the use of real time noise monitoring and attended monitoring. During the reporting period, Cleary Bros undertook short term noise monitoring on a monthly basis, and engaged SLR Consulting to undertake the biannual noise compliance monitoring. During the reporting period, no crushing equipment was located on the uppermost bench, and as such monitoring of crushing equipment was not required. The current noise monitoring requirements are summarised in the table below.

Monitoring Type	Monitoring Location	Frequency	Monitoring Method
Real-time Noise Monitoring	N2 – Quarry Extraction Area – Stage 7 North Boundary	24 hours a day, 7 days a week	Real-time noise monitoring data will be logged on a 15-minute basis with summarised statistical data.
Noise Compliance Monitoring	N1 - R1 "The Cottage", N2 - Extraction Area, N3 - R5 "Deer Farm"	Biannual	Operator-attended noise compliance monitoring will be conducted twice each financial year, once during the winter months, and once at another time of the year and to include the "short-term activities" if they are undertaken during the year.

Monitoring Type	Monitoring Location	Frequency	Monitoring Method
Short Term Noise Monitoring	N1 - R1 "The Cottage"	Monthly (when surface activities undertaken)	Attended monitoring for two consecutive 15 min sample intervals recording LAeq-15minute and noise sources.
Primary Crushing Equipment Monitoring	N1 - R1 "The Cottage"	Within 3 days of each blast on uppermost bench where processing occurs.	Attended monitoring for two consecutive 15 min sample intervals recording LAeq-15minute and noise sources.

In addition to the above, attended and unattended noise monitoring was undertaken in July and August 2023 in accordance with the previous Noise Management Plan approved under LEC10639/2005.

3.3.3 Noise Monitoring Results

The annual noise survey required under the previous Noise Management Plan was conducted from 28 July to 4 August 2023. During the survey, prevailing weather conditions were at times outside those nominated in the development consent, with the consequence that the limits indicated were not always applicable. Interpolation of the dataset with the data gathered from the onsite meteorological station allowed the extraction of noise monitoring data under conforming weather conditions. Based on this extracted dataset, the noise contribution from quarrying and processing operations at each of the sensitive receptors is outlined in the table below. For further information, see Annexure D, which includes the complete Noise Monitoring Report. Monitoring results from the previous 2 annual surveys are also included for comparison.

Monitoring Location	2023 results	10639/2005 Criteria	EIS Prediction	2022 results	2021 results
The Cottage	34	35	N/A	35	33
The Hill	32	35	33	33	32
Greenmeadows Estate	38	41	41	37	40

A SiteHive continuous real time noise monitor was installed at location N1 in March 2024 with a trigger level alert to notify quarry management in the event of high noise levels. However, the monitor regularly recorded triggers that were not related to quarry operations, including from wind in the trees and bird noises. The monitor was therefore relocated in mid-April 2024 to the current location at N2, at the northern boundary of Stage 7, alongside a fence line in cleared paddocks. This location is not affected by wind blowing through trees, however false triggers are still recorded at times from birds perched on the nearby fence posts. Similarly, buffering noises are commonly recorded during periods of strong winds, which are largely unavoidable. Nevertheless, the monitor records the direction, a photograph, and an audio extract of any trigger, allowing these to be investigated. A trigger level of 55 dB(A) was utilised, as the modelled maximum noise level associated with surface activities in Stage 7a at this location. While most alerts recorded to date have been unrelated to quarry operations, during periods of noise enhancing winds (light south to southwesterly winds), the continuous noise monitor has been useful in measuring noise emissions of the surface activities, and adjusting activities as needed. This has particularly been the case when drilling near the surface, where the noise monitor has informed adjustments to the location and screening for the drill rig.

While the real time noise monitor has been useful for managing surface activities, it is unlikely that it will provide a useful management tool for regular quarrying activities, due to the background noise contributions that will lead to an exponential increase in false alerts if a lower trigger level were to be used.

The continuous noise monitoring program has demonstrated that noise levels are significantly influenced by meteorological conditions, with light south to southwesterly winds significantly amplifying quarry noise emissions at the monitor. Conversely, at all other times, quarry activities are very unlikely to meet the trigger level.

The continuous noise monitor was validated as part of the compliance monitoring undertaken in June 2024, with measured noise levels within 2 dB(A), in line with the requirements of the Noise Monitoring Program.



N2 – SiteHive Continuous real time noise monitor in operation

Attended compliance monitoring for SSD10369 was undertaken once during the reporting period on 13 June 2024 by acoustic personnel from SLR Consulting. This was undertaken while surface activities were being undertaken in Stage 7a (D11 dozer) and during a period of noise enhancing conditions, therefore representing the worst case for noise emissions at locations N1 and N2. In addition, noise emissions from the adjoining Holcim Quarry contributed to measured noise levels at N1 and N2. Noise levels associated with the Albion Park Quarry were measured as follows (refer Annexure E for full report).

Monitoring site	CB Quarry contribution (LA _{eq} -15min)	Measured noise level (LA _{eq} -15min)	Criteria (as per NPfl adjustments) (LA _{eq} -15min)
N1	48-50	51	54*
N2	55	55	N/A
N3	<34	49	40

* noise-enhancing conditions

Noise monitoring of surface activities was undertaken in April, May, and June 2024, as required under the Noise Monitoring Program. Monitoring in April and May was undertaken by Cleary Bros personnel, while the June 2024 survey was undertaken by personnel from SLR Consulting as part of the compliance assessment. Results of the surface noise monitoring program are summarised in the table below.

N1 Month	CB Quarry contribution (LA _{eq} -15min)	Cumulative noise level (LA _{eq} -15min)	Wind conditions	Trigger (as per NPfl adjustments) (LA _{eq} -15min)
April 2024	<43	47	Light N	49
May 2024	38	42-44	Light SW*	54
June 2024	48-50	51	Light SW*	54

* noise-enhancing conditions

Measurement of noise emissions from the operation of individual items of plant was undertaken following the noise compliance monitoring in June 2024 to verify the predicted noise levels from the EIS, and assess the need for further noise attenuation of equipment. The D11 dozer and the drill rig were the two items of plant expected to significantly influence overall noise levels associated with the quarry. The following table provides the measured noise levels of these items with the maximum noise levels used for EIS modelling.

Equipment	Measured Sound Power Level (dBA)	EIS Modelled Sound Power Level (dBA)
D11 dozer	112	120
Drill rig	114	118

3.3.4 Interpretation and Effectiveness of the Noise Management System

All noise levels measured as part of the compliance and short term noise monitoring were within the noise criteria and EIS predictions, once adjusted for noise enhancing conditions where applicable, and met the EMS objectives related to noise. Measured noise emissions of the equipment expected to have most impact on noise levels were well below the noise levels used for modelling in the EIS, demonstrating the effectiveness of the existing noise attenuation equipment installed on these items of plant. It is expected that noise emissions will reduce into the 2024-2025 reporting period as surface activities are completed and extraction of lower benches commences, and once the amenity barrier is constructed.

3.4 Blasting

3.4.1 Standards and Performance Measures

The Development Consent and Environmental Protection Licence for the project are consistent in their approved blasting criteria at nearby sensitive receptors. Section 3.4 of the EMS outlines these criteria (refer table below), while Section 6.2 describes how compliance will be assessed. A blast monitoring station is permanently installed adjacent to the nearest sensitive receptor, *The Cottage* residence, on the neighbouring Fig Tree Hill property. In addition, since commencement of blasting in Stage 7, a portable blast monitor has been installed on the southern boundary of Cleary Bros property to monitor blast emissions at the closest residences southeast of the site. The criteria applicable to these monitors, as well as other blasting-related objectives from the EMS are described in the table below. When blasting is to occur within 40 metres of the northern boundary of the quarry property, a portable blast monitor will also be located at the property boundary at the point closest to the blast. The DC and EPL also set restrictions on the timing of blasts and blast frequencies.

Objective	Maximum Airblast Overpressure dB(L Peak)	Maximum Peak Particle Velocity mm/s	Allowable Exceedance
Residence on privately owned land or other sensitive receiver	115	5	5% of the total number of blasts over a financial year.
	120	10	0%
	135	200	0%
Ensure safety of persons and property	<ul style="list-style-type: none"> No visible dust or blast fume beyond boundary No flyrock beyond area predicted by Flyrock Model No damage to public infrastructure 		

3.4.2 Environmental Performance

The Drill and Blast Form and MIC Calculation Form were completed for each blast, with each blast design reviewed by a blast engineer prior to loading and firing the shot. The MIC Calculation Form was updated during the reporting period to include calculations of required buffer zones as per the Flyrock Model.

Cleary Bros website was updated ahead of each blast with details on the next shot and notifications provided to all stakeholders who had requested notification of blasts with a two-hour window of the time of

firing. Cleary Bros contacted all fenceline neighbours prior to the first blast in Stage 7 to identify those who wished to be notified of blasts. All blasting was undertaken between 9am and 5pm on weekdays only (none on public holidays), with no more than one blast fired in any week during the reporting period. No requests were received during the reporting period for a property inspection to request the baseline condition of a building, and no claims of damage to buildings or structures have as a result of blasting have been received.

An exclusion zone was established around each blast, with the area checked prior to firing to ensure no personnel were within the exclusion zone. Each blast was video recorded to observe extent of dust and monitor for any blast fume. No observable blast fume was generated for any blast during the reporting period, with visible dust from each blast dissipating within the site. The permanent blast monitor was in use adjacent to *The Cottage*, which recorded blast emissions for each shot. A concrete plinth was installed at the southern boundary during the reporting period, with a portable monitor attached to record blast emissions for each blast in the Stage 7 area. No blasting was undertaken within 40 metre of the property boundary, and as such no fenceline monitoring was undertaken, as the site model demonstrates that blast emissions at distances greater than 40 meters are likely to be significantly below the boundary fenceline criteria.

Dilapidation surveys were undertaken of the residential buildings on the Figtree Hill property in February 2024. Access was not available to the other buildings on the property during the reporting period, and as such updated dilapidation surveys could not be prepared for these ancillary buildings.

3.4.3 Blast Monitoring Results

Blast monitoring results for the 2023-2024 reporting period from the permanent blast monitor at *The Cottage* are summarised in the table below. A complete record of blast monitoring results for the period is included as Annexure E.

The Cottage Blast Monitoring	2023/24 Reporting Period					Historical Results	
	# blasts	Average	# > 5%	% > 5%	Max	Average	Max
Overpressure (dbL)	33	103.4	2	6%	119.1	104.9	115.6
DC limits				≤5%	120		
EIS Prediction				≤5%			
Vibration (mm/s)	33	1.2	0	0%	2.6	1.9	7.4
DC limits				≤5%	10		
EIS Prediction				≤5%			

Three blasts were fired within the Stage 7 area in the current reporting period, with the monitoring results from these blasts also recorded by the southern blast monitor. Vibration was recorded at less than 1mm/s for each blast at this location, and airblast overpressure less than 102 dBL, well below the project blast criterion.

3.4.4 Blast Monitoring Results Interpretation

All blast monitoring results were recorded below the maximum criteria specified in the Development Consent, however two blasts recorded airblast overpressure above the 5% criterion of 115 dBL, such that 6% of blasts were above 115 dBL. This non-compliance was reported to DPHI, and the Blast Management Plan updated with additional control measures to reduce the likelihood of further non-compliances, and to meet the EMS objective related to blast emissions. The highest vibration recorded at the permanent blast monitor at *The Cottage* was 2.6mm/s, well below all vibration criteria. The average vibration and air overpressure for the current reporting period were considerably lower than the historical average, reflecting blasting in closer proximity to the monitor during the current reporting period with reduced MIC. All EMS objectives related to blasting have been met during the reporting period, with the exception of the 5% blasting criteria described above.

3.5 Surface Water

3.5.1 Standards and Performance Measures

Both 10639/2005 and SSD10369 require the implementation of a Water Management Plan (incorporating a Surface Water Management Plan), which outlines the monitoring requirements related to surface water management. The DC also requires the water quality monitoring of any discharges from the quarry extension area, mirroring the conditions of the EPL.

The following monitoring schedules are in place to meet the requirements of the surface water management plan, which also form the EMS objectives related to surface water.

Location	Analyte	Units	EPL Limit	WMP trigger	Frequency
Quarry Discharge	pH	pH units	6.5 – 8.5		Daily during discharge
	Turbidity	NTU	32.2		
	Discharge rate	ML/d	N/A		
WC1 (Watercourse 1) WC2 (Watercourse 2) WC3 (upstream on Watercourse 6) WC4 (downstream on Watercourse 6)	Electrical Conductivity	µS/cm		N/A	Biannually
	pH	pH units		6.5 – 8.0	
	Oil and Grease	mg/L		10	
	Turbidity	NTU		26	
	TDS	mg/L		842	
	Major Ions (Ca, K, Mg, Na, Cl, SO ₄)	mg/L		N/A	

The EIS for the Albion Park Quarry predicted that the operations would have negligible impact on surface water quality, however releases of water captured in the quarry sump may be required to sustain natural surface water flow volumes of the local watercourses. The EIS predicted a reduction in surface water flows in Watercourse 6 as quarrying lowered the groundwater level immediately surrounding the extraction area.

3.5.2 Environmental Performance

CB has implemented the Surface Water Monitoring Program at the Albion Park Quarry, with all routine sampling undertaken as required by the table above. Sediment fencing has been installed along the north, eastern, and southern extents of Stage 7a, while a diversion bund was effectively established along the western boundary due to the initial cut in this area. Quarrying has been undertaken to prevent any new intersection of clean water catchments. All excavated areas drain to the sump within the extraction area which retained sufficient capacity at all times during the reporting period to capture all runoff in a 1% AEP 24-hour storm event. Excess water accumulated with the sump has been tested against the discharge criteria above and discharged once complying with the criteria. Treatment of the water in the sump was not required during the reporting period to meet the discharge criteria. There has been no new disturbance within 40 metres of any mapped watercourse during the reporting period. There are no acid-producing materials on the site.

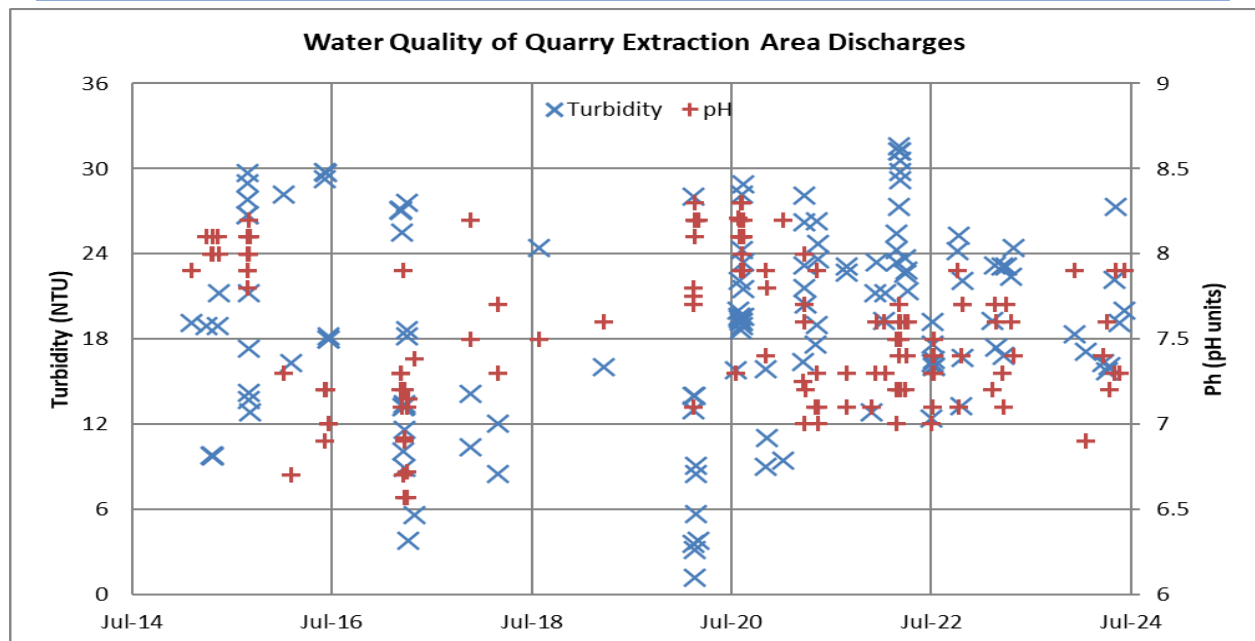
3.5.3 Surface Water Monitoring Results

A summary of surface water monitoring results for the period is displayed in this section, separated into the various components as described in the table above. For each analyte, the range and average of the current period's monitoring are displayed, alongside the historical range and average. For each analyte and where practicable, a historical graph is also included showing the variations in measurements for each sample point throughout the historical monitoring period. The water quality of the watercourses around the extraction area are also compared to the criteria adopted in the current Water Management Plan.

Quarry Extension Discharge Monitoring

During the reporting period, water was discharged from the sump in the Quarry Extension on 9 occasions across 9 days, with daily sampling of water quality for pH and turbidity. It is estimated that approximately 92ML of water was discharged from the quarry pit across the reporting period. All discharges occurred during or shortly before or after rainfall events.

Analyte	Unit	2023/24 Reporting Period			Historical Results			DC limit	EPL limit
		Min	Ave	Max	Min	Ave	Max		
pH	pH units	6.9	7.5	7.9	6.6	7.6	8.3	6.5 – 8.5	6.5 – 8.5
Turbidity	NTU	15.7	19.1	27.3	1.2	19.4	31.6	32.2	32.2



All discharges from the Quarry Extension complied with the limits of the EPL and DC for turbidity and pH during the current reporting period.

The EIS recommended the surface release of captured water to be undertaken in short bursts associated with rainfall events, rather than uniform minor releases, and this has been achieved in the current reporting period through the release of water associated with rainfall events throughout the year. The EIS predicted the project would not have a significant impact on water quality, as EPL limits are in place to govern the water quality of any discharges. As previously stated, all EPL limits were complied with in the current reporting period for all discharges from the Quarry Extension.

Main Holding Dam Monitoring

Rainfall runoff exceeded the capacity of the Main Holding Dam (EPL4) on one occasion during the reporting period leading to an overflow of this dam. This dam is outside of the area covered by the Development Consent, however the EPL requires daily monitoring during any discharge from the dam. On one sampling event, the total suspended solids (TSS) was measured at 77 mg/L, greater than the EPL limit of 50 mg/L. At the time of this exceedance, flooding was experienced across many coastal areas of NSW, and a Disaster Declaration was in place for the Shellharbour City Local Government Area (amongst many other LGA's). Nevertheless, Cleary Bros reported the exceedance to the EPA and investigated the exceedance, determining that the significant rainfall (192mm) falling in the two days immediately preceding and during the dam overflow, caused accumulated runoff to far exceed the capacity of the dam. The pH level of 7.6 was in line with the requirements of the EPL.

Watercourse West of Quarry Manager's Office Monitoring

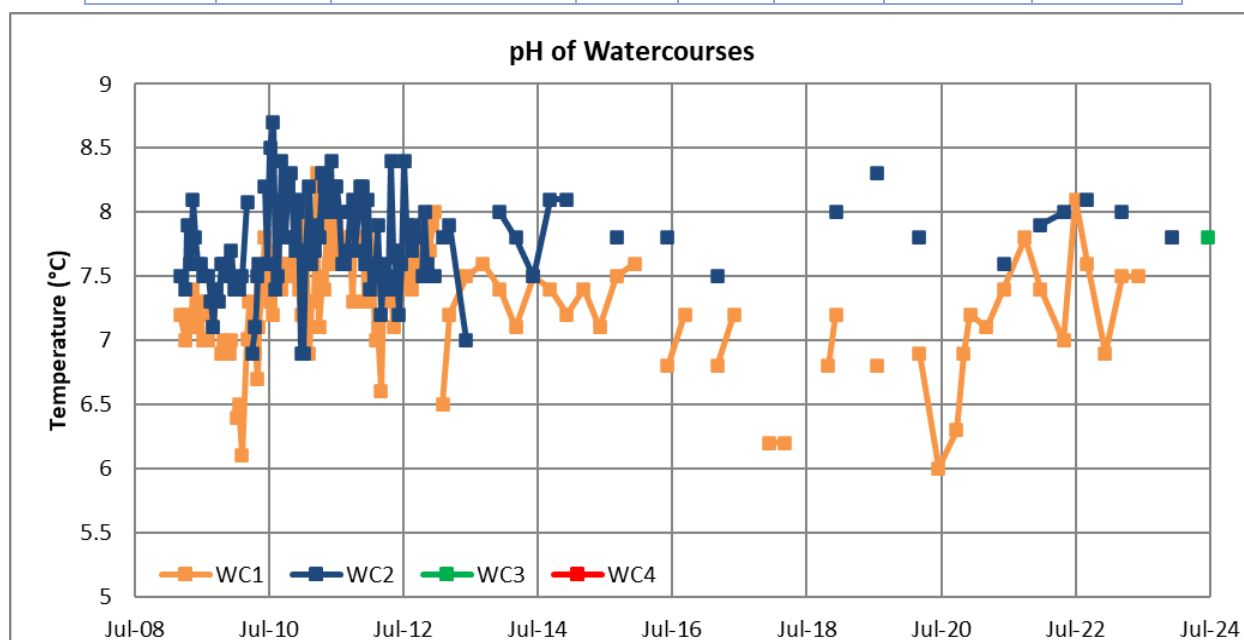
On the same day as the overflow of water from the Main Holding Dam, the pH and total suspended solids were also measured in the watercourse at the causeway in accordance with the requirements of the EPL (EPL7). This monitoring point is not related to the Development Consent for the Quarry Extension, and there are no licence limits associated with this monitoring point. The pH of the water measured during this overflow was measured at 7.9 pH units, while the TSS was measured at 98 mg/L.

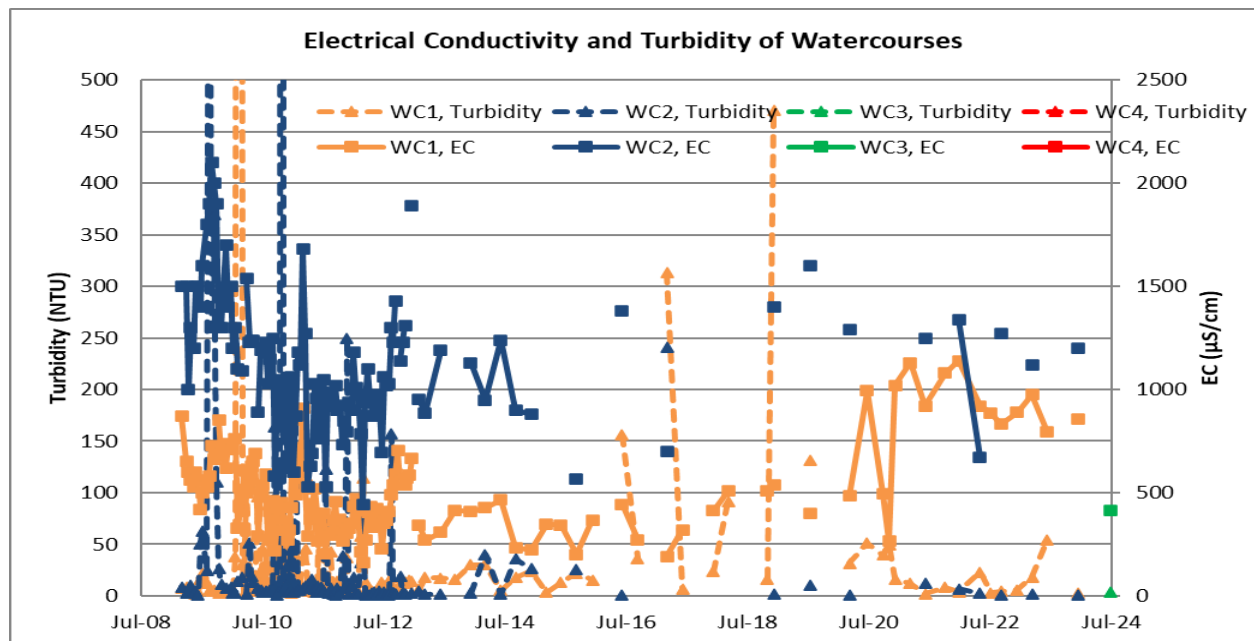
Watercourse Monitoring

Monitoring of the water quality of natural watercourses adjacent to the Quarry Extension was undertaken on a biannual basis during the reporting period. This includes sampling of Watercourse 1 (WC1) and Watercourse 2 (WC2) south of the existing extraction area, and an upstream (WC3) and downstream (WC4) site on Watercourse 6 east of the Stage 7 area. Sampling of Watercourse 6 commenced late in the reporting period following the approval of the current Water Management Plan, and as such, limited data is available for this site. On all but one occasion, WC1 and WC2 were dry at the time of sampling. The results of this monitoring have been separated into logical analyte groupings below.

Field measurements (EC, pH, Turbidity)

Analyte units	Site	2023/24 Reporting Period	Historical Results			WMP trigger	EPL limit
			Min	Ave	Max		
EC µS/cm	WC1	858	160	500	1,140	N/A	N/A
	WC2	1,200	443	1,114	2,100	N/A	N/A
	WC3	412				N/A	N/A
	WC4	dry				N/A	N/A
pH pH units	WC1	7.8	6.0	7.3	8.3	6.5 – 8.0	N/A
	WC2	7.8	6.9	7.8	8.7	6.5 – 8.0	N/A
	WC3	7.8				N/A	N/A
	WC4	dry				6.5 – 8.0	N/A
Turbidity NTU	WC1	3.1	2.0	71	5,890	26	N/A
	WC2	0.7	0.5	79	5,040	26	N/A
	WC3	3.3				N/A	N/A
	WC4	dry				26	N/A





pH and EC have both been within the historical ranges for WC 1 and WC2 in the current reporting period, albeit with only a single sample able to be collected, as most sampling was scheduled for months that were dryer than their average. Turbidity was very low across all sites, representing negligible sediment load in the watercourse at the time of sampling. All field measurements were within the WMP trigger values for the reporting period.

Oil and Grease

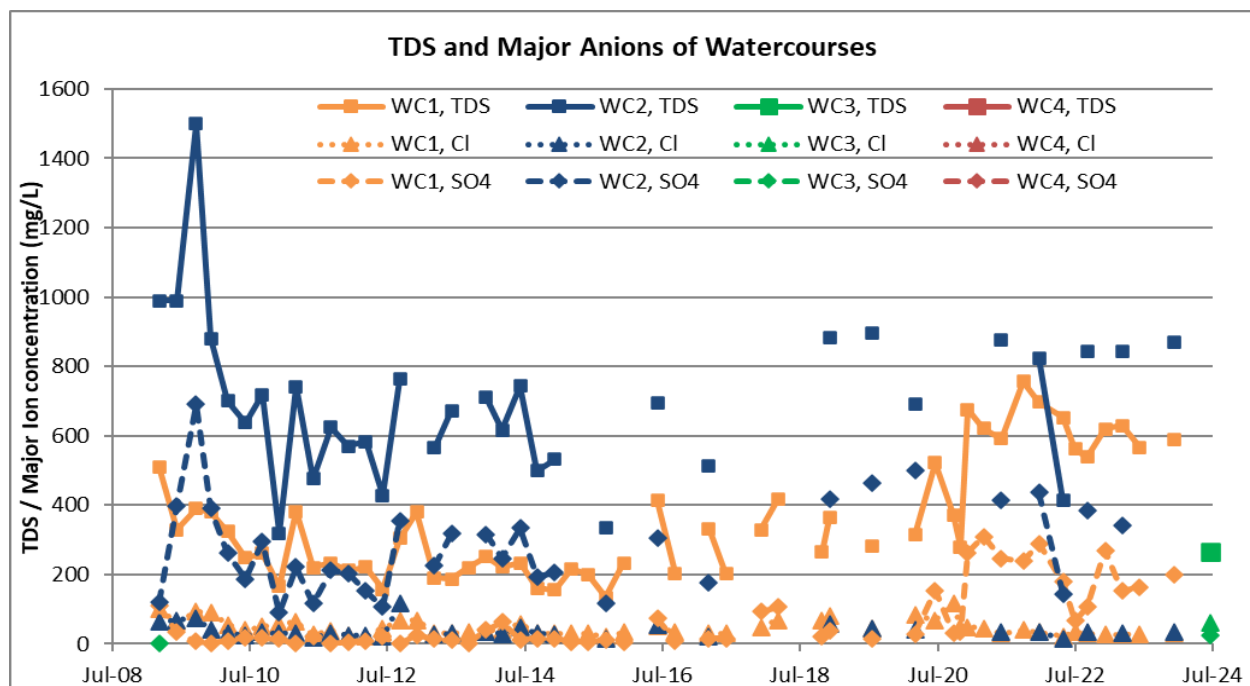
Oil and Grease was measured below the limit of reporting of 5 mg/L for all samples during the current reporting period. These results are consistent with the historical monitoring for these sites, where the concentration of Oil and Grease has consistently remained below the limit of reporting. This is in line with EIS predictions that quarry operations would have no discernible impact on water quality.

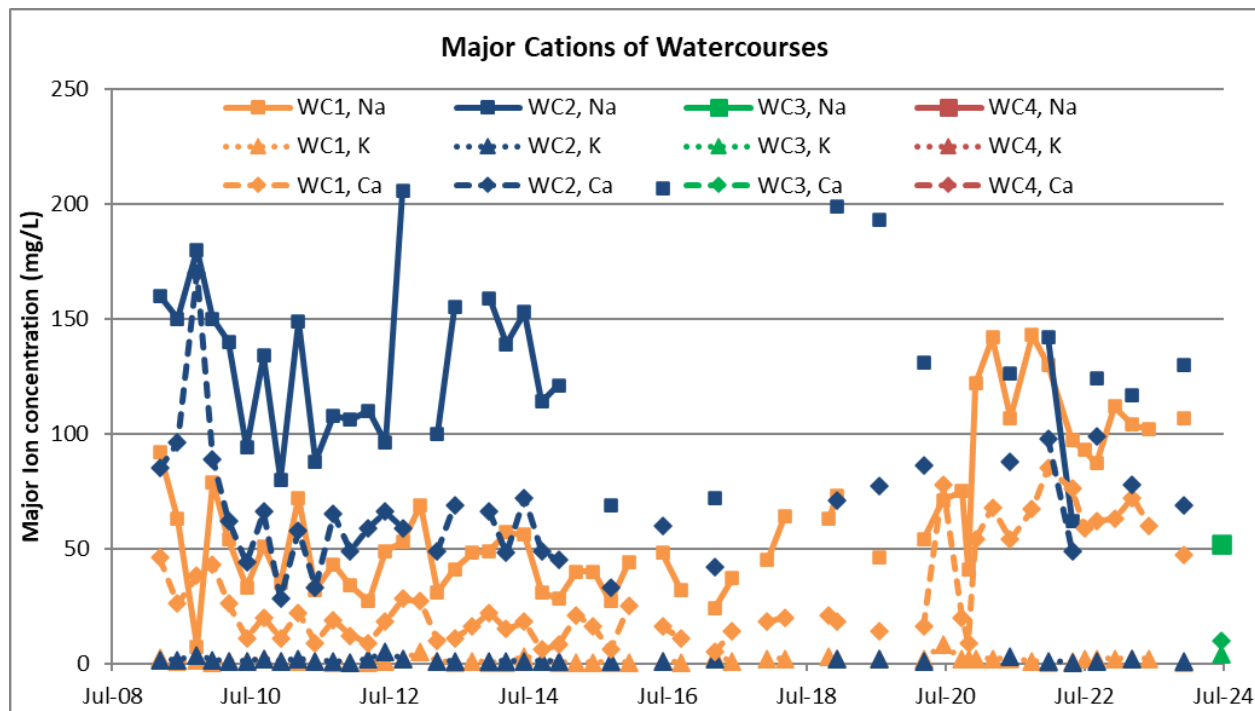
Total Dissolved Solids (TDS), Major Cations and Anions

Analyte units	Site	2023/24 Reporting Period	Historical Results			WMP trigger	EPL limit
			Min	Ave	Max		
TDS mg/L	WC1	589	135	353	756	842	N/A
	WC2	870	320	699	1,500		
	WC3	264					
	WC4	dry					
Ca mg/L	WC1	47	5	29	85	N/A	N/A
	WC2	69	28	67	170		
	WC3	10					
	WC4	dry					
K mg/L	WC1	<1	<1	2	8	N/A	N/A
	WC2	1	<1	2	5		
	WC3	4					
	WC4	dry					
Mg	WC1	24				N/A	N/A

Analyte units	Site	2023/24 Reporting Period	Historical Results			WMP trigger	EPL limit
			Min	Ave	Max		
mg/L	WC2	45					
	WC3	11					
	WC4	dry					
Na mg/L	WC1	107	7	61	143	N/A	N/A
	WC2	130	62	131	207		
	WC3	52					
	WC4	dry					
Cl mg/L	WC1	32	20	47	117	N/A	N/A
	WC2	33	14	38	116		
	WC3	60					
	WC4	dry					
SO ₄ mg/L	WC1	200	<1	66	310	N/A	N/A
	WC2	436	90	283	690		
	WC3	26					
	WC4	dry					

Concentrations of Total Dissolved Solids and major cations and anions were all consistent with the historical ranges for each site. The TDS of WC2 was marginally above the WMP trigger level, however on review it was determined that this result is typical of this site, with levels typically between 800 and 900 mg/L for the past six years, and no further action is required. Magnesium ion concentration was added to the sampling program with the most recent update to the WMP, and as such there is no historical data for this analyte, and it hasn't been included in the graphs below.





3.5.4 Surface Water Monitoring Results Interpretation

Surface water flows have continued to be dependent on rainfall, with the watercourses largely intermittent following rainfall events. The catchment area of Watercourse 1 is now very small, with the former catchment almost entirely encapsulating within the quarry void, and dependent on quarry discharges to supplement flows, as was predicted in the EIS. The capture of water quality data for WC1 will continue to be only possible immediately following rainfall events.

WC2 is located in a wide low-gradient section of the watercourse with extensive alluvium, such that flows generally remain in the hyporheic zone outside of wetter periods. Pending safe access which will require further investigation, it may be beneficial to move the sample site 50 metres downstream to where the watercourse encounters a waterfall, and at which point there is likely to be surface water flows for extended periods between rainfall events.

The water monitoring program has demonstrated that in the current reporting period, water quality of quarry pit discharges and in the watercourses meet the requirements of the DC, EPL, and EMS objectives, and demonstrates no deterioration in water quality as predicted in the EIS for the project. It is envisaged that surface water discharges from the quarry sump will continue in line with the current reporting year, with the quarry pit continuing to enlarge into the Stage 7 area. All other EMS surface water objectives related to SSD10369 were met, with the exception of TDS of Watercourse 2. This site is not impacted by any surface water discharges or material indirect impacts associated with the quarry, and is likely to be related to the background environment for this site. Current procedures allow for an accurate representation of any longer term trends in surface water quality and any potential impacts on surface and groundwater quality in areas adjacent to the quarrying operations.

3.6 Groundwater

3.6.1 Standards and Performance Measures

Both 10639/2005 and SSD10369 require the implementation of a Water Management Plan (incorporating a Groundwater Management Plan and for SSD10369 also a Spring Fed Dam Monitoring Program), which outline the monitoring requirements related to groundwater management. The Water Management Plan was most recently approved on 14 March 2024. The current groundwater monitoring program requires the biannual sampling of ten groundwater monitoring bores within the network for a range of parameters, as

described in the table below. In addition, six monitoring bores incorporate water level loggers recording at 6-hourly intervals.

Analyte	Units
Water level	mbgl
Electrical Conductivity	µS/cm
pH	pH units
Redox Potential	mV
Temperature	°C
Major Cations (Ca, K, Mg*, Na)	mg/L
Major Anions (Cl, SO4)	mg/L

There are no groundwater quality criteria in the Water Management Plan or DC, with the results reviewed on receipt to detect any changes that may be attributable to quarrying activities. Groundwater level triggers for Stage 7a for further investigation, which also form part of the EMS objectives for groundwater, are as follows.

Monitoring Bore	Trigger level (mAHD)
MW1S	60.87
MW1D	43.01
MW2S	61.24
MW2D	53.74
MW4	105.8
MW5	No trigger applicable
MW6	64.7
MW9S	TBD
MW9D	116.14
MW10S	TBD

The EIS for SSD10369 predicted that quarrying operations are unlikely to impact the groundwater supply to any surrounding landholders. The groundwater objectives of the EMS include the performance criteria of no quarrying-related impacts to the spring-fed dams on the neighbouring property north of the Stage 7 area. The spring-fed dam monitoring program will be used to assess any impact to this water supply. There are no groundwater monitoring requirements in the EPL.

3.6.2 Environmental Performance

CB has implemented the Groundwater Monitoring Program at the Albion Park Quarry, with the two existing shallow and deep groundwater monitoring bores (MW1 and MW2) and three Stage 7 bores (MW4, MW5, MW6) measured biannually during the reporting period. Cleary Bros has also commenced the Spring-fed Dam Monitoring Program, with three new monitoring bores (MW9S, MW9D, and MW10S) installed during March 2024. These monitoring bores each have a piezometer installed, and the water quality was sampled once in June 2024. Photographs of the spring fed dams were also captured in June 2024, however for privacy reasons (these dams are located on a neighbouring property), they won't be included in the Annual Review. The locations of the monitoring bores are shown in Appendix 2.

3.6.3 Groundwater Monitoring Results

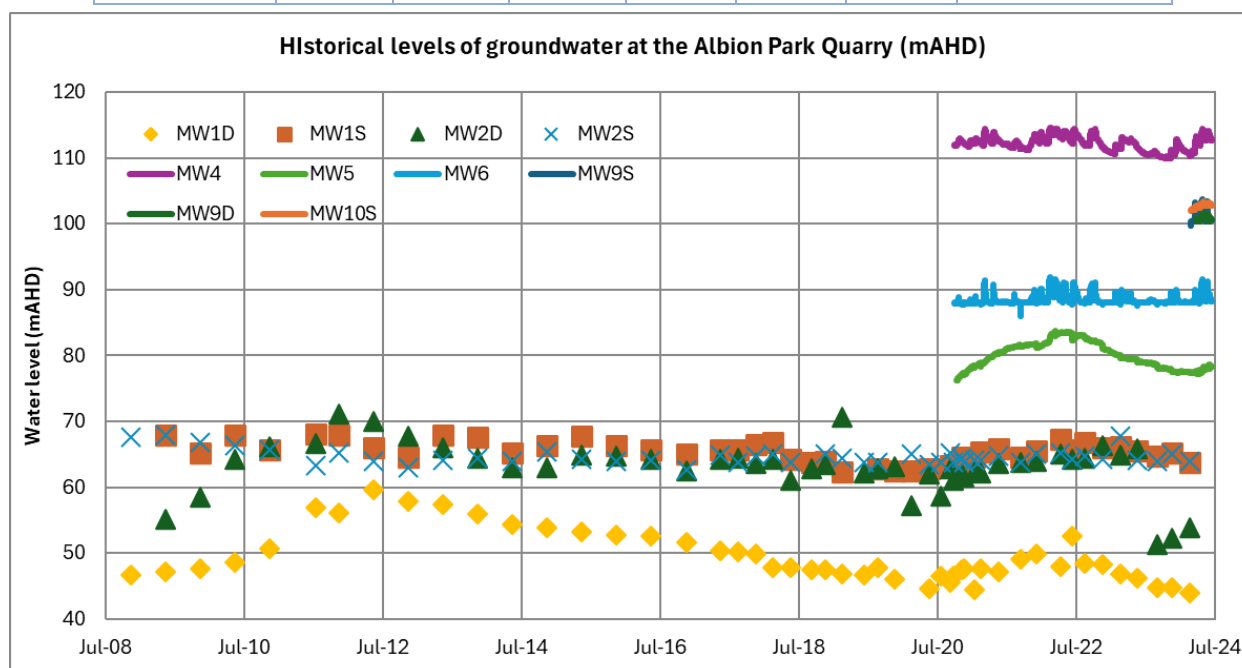
A summary of groundwater monitoring results for the period is displayed in this section, separated into analyte groupings monitored under the Water Management Plan. For each analyte, the range and average of the current period's monitoring are tabulated, alongside the historical range and average. For each

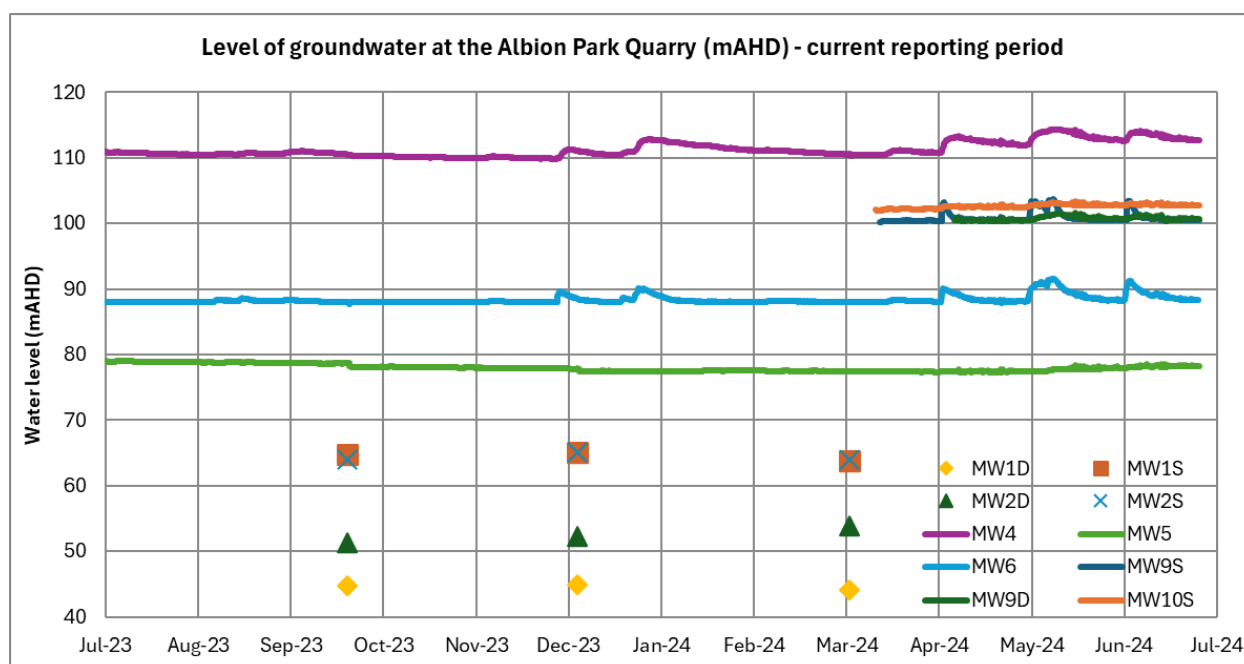
analyte, a graph is also included showing the historical variations in measurements for each groundwater bore since establishment. Note that only groundwater quality results for the existing monitoring bores (MW1 and MW2) are included as sampling within the new monitoring network has not been required since commencement of Stage 7. Magnesium ion was also added to monitoring suite in latest Water Management Plan, and as such has not been included in the analysis below due to the limited dataset. The Water Management Plan identifies groundwater level triggers for most monitoring bores, which are tabulated for comparison. As the Extraction Area is expected to be a groundwater sink, not a flow-through system, and there are no activities or materials that would be likely to result in groundwater quality impacts, there are no groundwater quality triggers for the Project. Instead, groundwater quality results are reviewed for any changes to individual bores for further consideration.

Groundwater Level (mAHD)

The groundwater levels within the monitoring network are summarised in the table below, with trends since bore installation shown in the graph below. An expanded graph for the current reporting period is also included to aid interpretation of the logged groundwater level data within the newer bores.

Monitoring Bore	2023/24 Reporting Period			Historical Results			Stage 7a trigger level
	Min	Ave	Max	Min	Ave	Max	
MW1D	44.04	44.56	44.84	44.43	49.74	59.58	43.01
MW1S	63.74	64.55	65.14	62.29	65.44	68.09	60.87
MW2D	51.24	52.44	53.84	55.18	63.71	71.06	53.74
MW2S	63.91	64.31	65.02	62.68	64.61	67.97	61.24
MW4	109.87	111.30	114.37	110.60	112.48	114.54	105.8
MW5	77.24	77.96	79.03	76.29	80.85	83.72	N/A
MW6	87.70	88.39	91.60	86.00	88.48	91.82	64.7
MW9S	99.64	100.92	103.65	N/A	N/A	N/A	TBD
MW9D	100.29	100.78	101.59	N/A	N/A	N/A	116.14
MW10S	102.00	102.64	103.39	N/A	N/A	N/A	TBD





Bores MW2D and MW9D recorded groundwater levels below the Stage 7a trigger levels in the current reporting period. Due to very low TDS results in the previous reporting period, MW2D was purged dry at the start of the current reporting period to ensure water samples reflected the quality of the groundwater at this location. The water level of MW2D has been on a steady increase since this time, reflective of the inherently very low permeability of the latite. The water level in the monitoring bore continues to increase, and it is expected that over coming months it will continue to rise until an equilibrium is reached with the surrounding groundwater. The ground level at bore MW9D is 104.57 mAHD, which is lower than the trigger level for this bore. As such, this trigger level is not appropriate for this bore and will need to be revised once at least 12 months of data is captured for this bore.

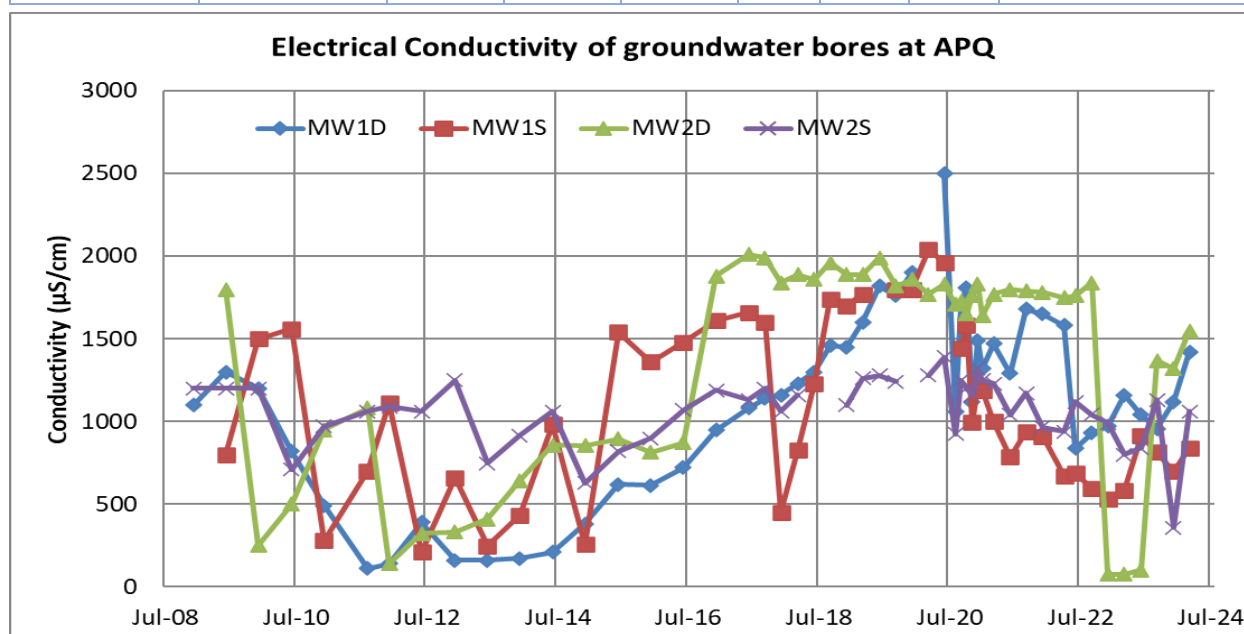
Other key observations for the reporting period include:

- Bores MW4, MW5, and MW9S respond quickly to significant rainfall events. It is likely that similar trends would be observed in bores MW1S and MW2S however the temporal resolution of these bores is limited. It is interesting that bore MW10S does not show this relationship, perhaps as the water level is stabilised by the springs on the northern side of the farm dams.
- Bores MW9S and MW9D follow very closely with the exception of the short term spikes observed in MW9S following significant rainfall events.
- Bore MW5 appears to follow a similar long-term pattern as the deep groundwater monitoring bores (MW1D, MW2D), albeit at a much stronger amplitude, reflective of its elevated position in the landscape. It also shows a slow recovery after sampling, as would be expected from a low permeability rock unit.
- Bore MW1D is likely approaching equilibrium following extraction close by in recent years.

Electrical Conductivity ($\mu\text{S}/\text{cm}$)

Analyte units	Site	2023/24 Reporting Period			Historical Results			Pre-quarrying maximum
		Min	Ave	Max	Min	Ave	Max	
EC $\mu\text{S}/\text{cm}$	MW1D	957	1166	1420	110	1090	2500	2700
	MW1S	698	784	840	211	1101	2040	1236
	MW2D	1320	1413	1550	75	1339	2010	2000

Analyte units	Site	2023/24 Reporting Period			Historical Results			Pre-quarrying maximum
		Min	Ave	Max	Min	Ave	Max	
	MW2S	358	849	1130	627	1079	1390	1305

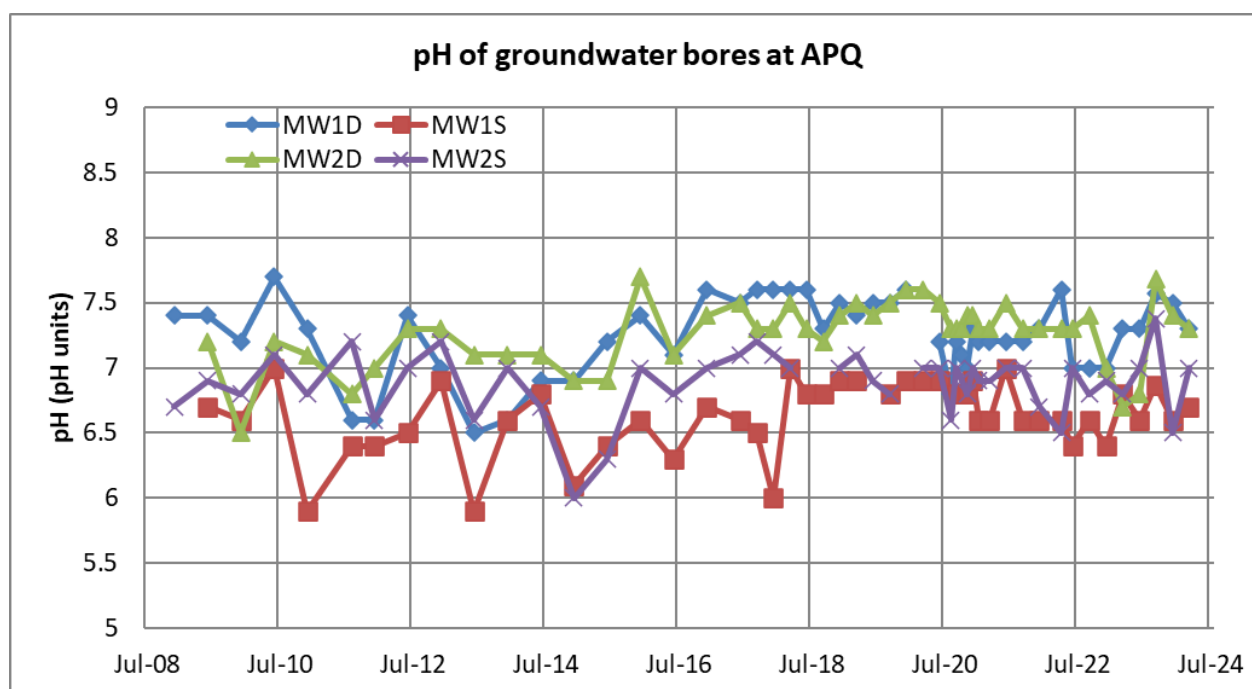


The electrical conductivity (EC) of groundwater bores have been highly varied throughout the historical period of monitoring, as has been the case in the current reporting period. MW2D has returned close to its historical EC following purging of the bore at the start of the reporting period. Meanwhile the shallow bores have shown some variability consistent with rainfall patterns, with lower EC recorded in the December 2023 sample following significant rainfall. With the exception of this result for bore MW2S, which was below the historical range, all results have been consistent with the historical ranges for the respective bores in the current reporting period.

pH

Analyte units	Site	2022/23 Reporting Period			Historical Results		
		Min	Ave	Max	Min	Ave	Max
pH pH units	MW1D	7.3	7.5	7.6	6.5	7.2	7.7
	MW1S	6.6	6.7	6.9	5.9	6.6	7.0
	MW2D	7.3	7.5	7.7	6.5	7.2	7.7
	MW2S	6.5	7.0	7.4	6.0	6.9	7.2

The pH measured in all groundwater bores has recorded variability within the typical narrow range. Deeper bores continue to be marginally alkaline, while shallow bores are neutral to marginally acidic. A single result for MW2S was slightly above the historical maximum pH for the bore in September 2023, but has since returned to its typical range.

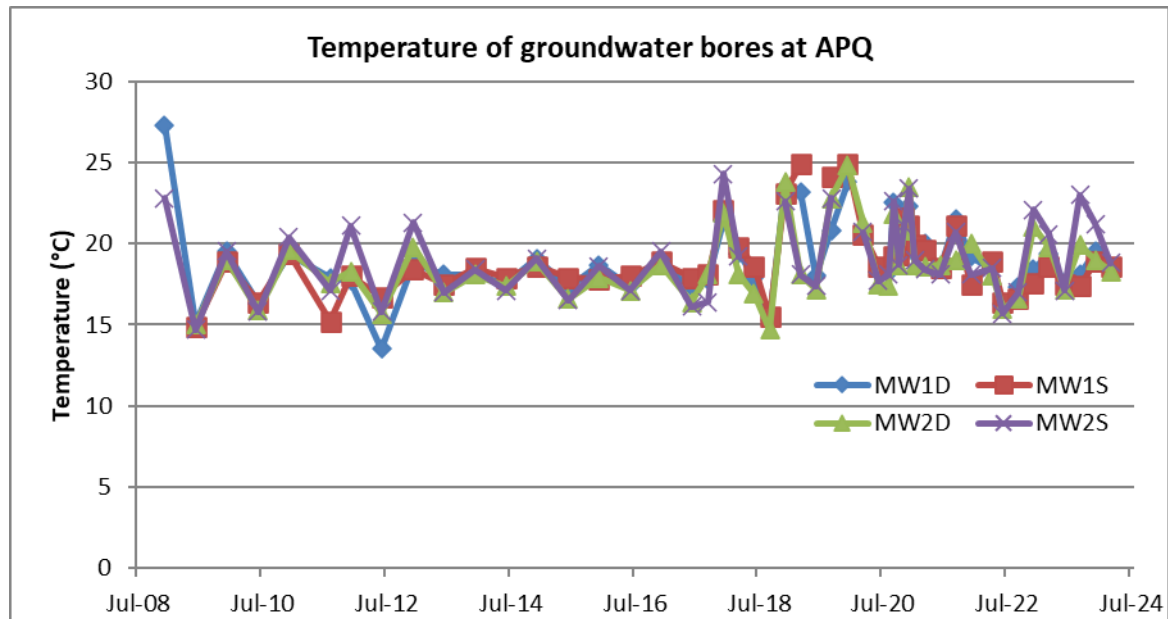


Redox Potential

Redox potential is a new analyte introduced to the monitoring suite following approval of the Water Management Plan for SSD10369, with only the newly installed bores (MW9S, MW9D, MW10S) analysed for redox potential. This parameter will be monitored in all bores on a biannual basis going forward, in line with the Water Management Plan.

Temperature

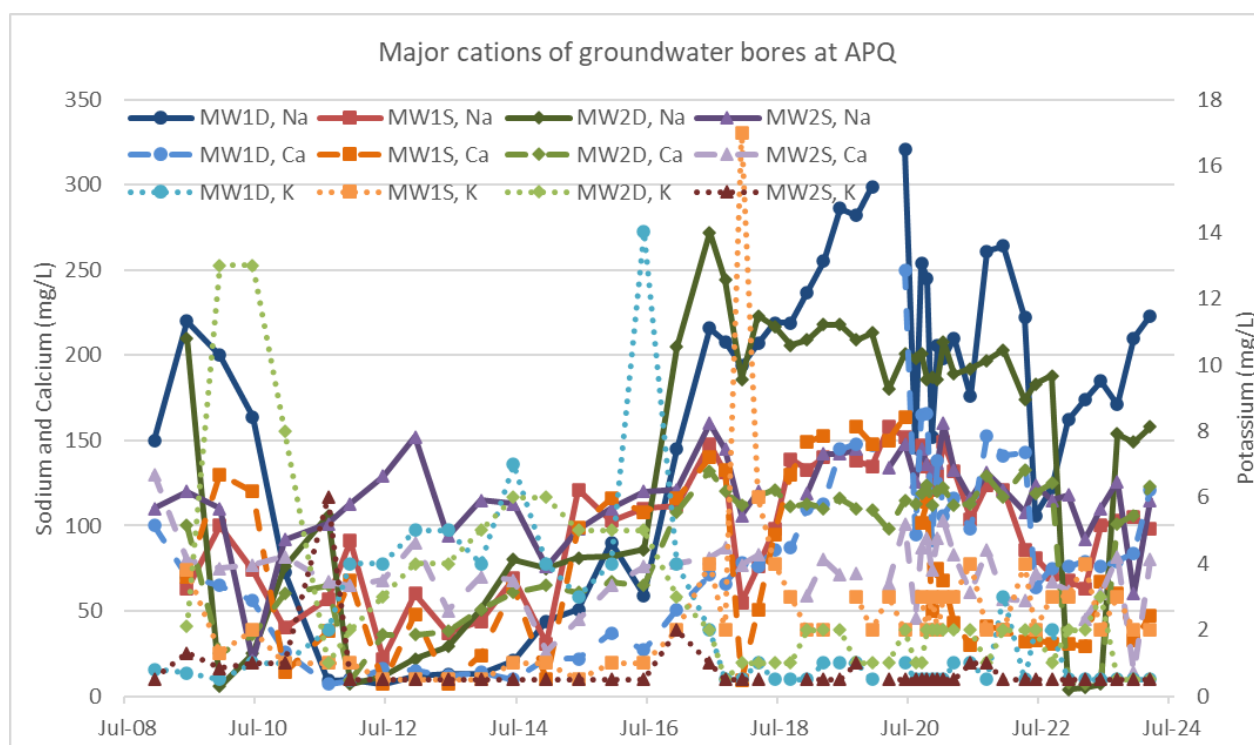
Analyte units	Site	2022/23 Reporting Period			Historical Results		
		Min	Ave	Max	Min	Ave	Max
Temperature °C	MW1D	18.1	18.7	19.5	13.5	19.0	27.3
	MW1S	17.4	18.3	18.9	14.9	18.9	24.9
	MW2D	18.3	19.1	19.9	14.7	18.7	24.8
	MW2S	18.8	21.0	23.0	14.7	19.0	24.3



Water temperature has fluctuated according to the season and remains consistent with the historical ranges for each bore.

Major Cations

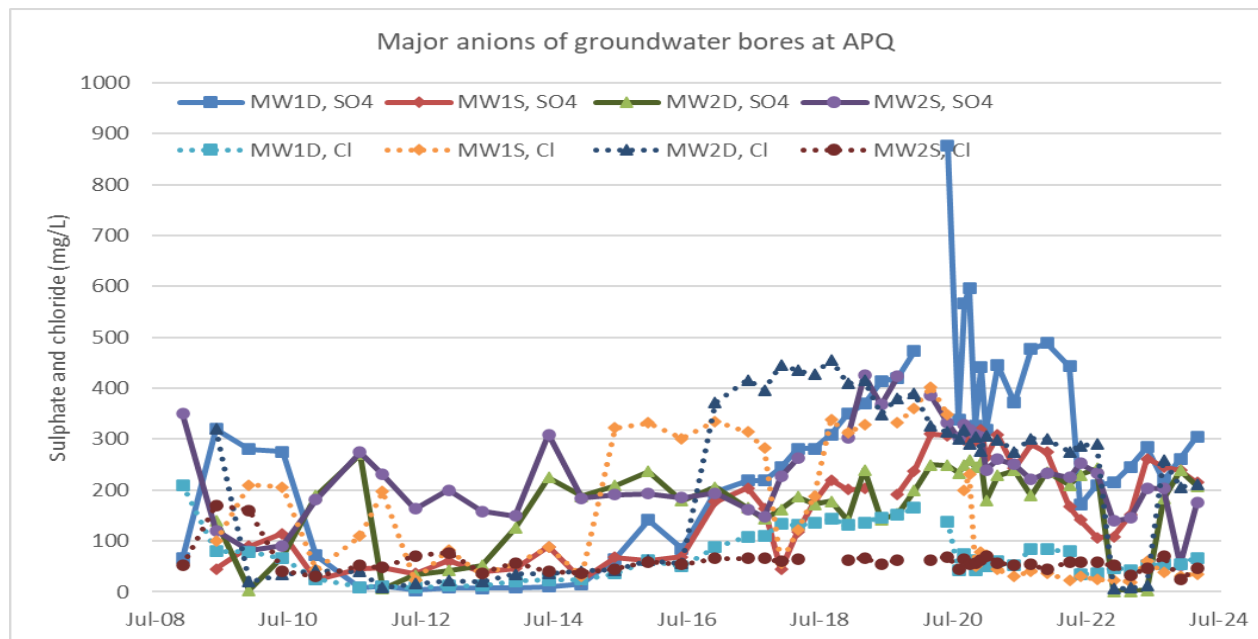
Analyte units	Site	2023/24 Reporting Period			Historical Results		
		Min	Ave	Max	Min	Ave	Max
Calcium mg/L	MW1D	79	95	121	7	83	250
	MW1S	33	47	60	7	77	164
	MW2D	101	110	123	7	88	133
	MW2S	14	59	82	26	73	130
Potassium mg/L	MW1D	<1	<1	<1	<1	2	14
	MW1S	2	2	3	<1	3	17
	MW2D	<1	<1	<1	<1	3	13
	MW2S	<1	<1	<1	<1	<1	6
Sodium mg/L	MW1D	171	201	223	7	162	321
	MW1S	98	102	105	22	99	158
	MW2D	149	154	158	4	143	272
	MW2S	60	100	126	21	120	160



Concentrations of all major cations have been generally consistent with the historical ranges of the respective bores, with some inherent variability in results typical of past trends. The concentrations of cations in MW2D have returned to historical levels in the current reporting period following purging of this bore.

Major Anions

Analyte units	Site	2023/24 Reporting Period			Historical Results		
		Min	Ave	Max	Min	Ave	Max
Chloride mg/L	MW1D	54	59	67	8	74	210
	MW1S	31	35	38	19	159	402
	MW2D	206	225	259	6	226	456
	MW2S	24	47	70	30	60	170
Sulphate mg/L	MW1D	219	262	305	3	266	877
	MW1S	215	233	246	23	162	319
	MW2D	183	210	239	1	168	270
	MW2S	53	144	203	81	238	425



Concentrations of major anions have been generally consistent with the historical ranges of the respective bores, with some inherent variability in results typical of past trends. The concentrations of anions in MW2D have returned to historical levels in the current reporting period following purging of this bore.

3.6.4 Groundwater Monitoring Results Interpretation

The groundwater monitoring program has provided an insight into the hydrogeological regime at the Albion Park Quarry, with the extended period of monitoring useful for highlighting any changes to groundwater quality and quantity that are outside of natural factors.

The current reporting period has been characterised by the continued variability of groundwater quality consistent with the historical period of monitoring. Short term and long term trends continue to be influenced by climatic drivers, with different bores influenced to differing extents dependent on the permeability of the latite strata. It is expected that climatic impacts will continue to be the primary driver of groundwater quantity and quality in the vicinity of the site, beyond the localised impacts predicted as part of the EIS.

The EIS for Stage 7a predicted localised drawdown of the groundwater table in the surrounding bores. This is yet to be observed in the newer bores due to the early stage of development, however some influence can be observed in bore MW1D in recent years as predicted, somewhat offset by the above average rainfall recorded over the same period. There appears to be negligible quarrying-related impacts to the groundwater levels in the shallow bores however, which are more closely linked to rainfall patterns. Meanwhile there appears to be negligible quarrying-related impacts to groundwater quality in any bores, as predicted by the EIS.

All activities related to groundwater management in the current reporting period have been undertaken as per the requirements of the DC and Water Management Plan for the project, and as such no non-compliances have been observed relating to groundwater management over this period. The monitoring program identified two bores that didn't meet the EMS objectives during the reporting period (MW2D and MW9D). MW2D was purged dry prior to the current reporting period due to apparent rainwater influence and is slowly recovering to its historical levels. Meanwhile the objective for MW9D is not appropriate for this site, as the objective level is above the ground level for the bore and simply not possible.

The groundwater monitoring program was updated in March 2024, and remains appropriate for the site. The refinement of the trigger values for the spring-fed dam monitoring bore levels will be undertaken once at least 12 months of data has been collected for these sites, and which will allow assessment of potential impacts to the spring fed dams as quarrying progresses north in the later years of the development, in line with the EMS objective.

3.7 Site Water Balance

3.7.1 Standards and Performance Measures

SSD10369 requires the amount of water extracted annual to be reported in the Annual Review. Cleary Bros is also required to hold the required water licences for any water extracted and used on the site in accordance with the Water Management Act 2000.

3.7.2 Environmental Performance

During the reporting period, Cleary Bros held three Water Access Licences (WALs) permitting the extraction of groundwater from the Sydney Basin South Groundwater Source. These WALs and their share components are as follows:

- WAL41971 – 15 units
- WAL44507 – 60 units
- WAL44508 – 50 units

During the current reporting period, each share component equated to a right to extract 1 ML of groundwater from the Sydney Basin South Groundwater Source, allowing Cleary Bros to extract up to 125ML of groundwater. Cleary Bros held Works Approval 10WA122753 on WAL41971, for the extraction / intersection of groundwater via the quarry excavation. Cleary Bros has applied to consolidate the above WALs into a single licence, and also to include the above Works Approval on the consolidated licence, however at the end of the reporting period this application was still processing with WaterNSW.

Cleary Bros also held WAL36711 for the Illawarra Rivers Water Source (surface water) however no shares were held under this WAL (zero allocation licence).

Cleary Bros also maintains dams on the broader landholdings which capture water for use on site under harvestable rights, as well as excluded dams used to capture sediment-laden water within the extraction area, with this water reused on site for dust suppression, or discharged where the water is within licence limits.

Cleary Bros has recorded water movements on the site as follows:

- Rainfall recorded via the site weather station, as well as estimated using the SILO dataset.
- Rainfall runoff estimated using the runoff coefficients adopted in the Water MP.
- Evaporation from the site water storages estimated from Mortons Shallow Lake evaporation using the SILO dataset (for -34.60°S, 150.80°E).
- Water use and discharge from the quarry sump estimated based on pump run hours and nominal flow rates.
- Water level (and volume) changes based on estimated changes in the water level of the sump.

Using the above data, the site water balance for the 2023-2024 reporting period is summarised below.

Key	Metric	ML
R_D	Rainfall falling on sump	12.7
R_O	Rainfall runoff from sump catchment	252.2
E_v	Evaporation from sump	9.5
T_{OUT}	Pumped transfers from sump	228.4
ΔS	Change in sump volume	+ 7.5
Groundwater inflow (E_v + T_{OUT} + ΔS – R_D – R_O)		-19.5

The site water balance suggests that the quarry sump returned an excess of 19.5 ML of surface water runoff to the groundwater system during the reporting period. These outflows largely balance out the ~13.9 ML of groundwater modelled to have been intercepted by the extraction area during the reporting period.

Cleary Bros has not received any complaints relating to water supply in the current reporting period, and is not aware of any landowner whose water supply has been adversely affected by the site.

3.7.3 Compliance Assessment

The Annual Review has confirmed the predictions from the Water MP that due to the sensitivity of the rainfall runoff and pumped transfers data points, there is likely to be a relatively broad uncertainty with regard to the total groundwater inflow figure. To improve the sensitivity of the rainfall runoff figures, a piezometer recording changes in water level was installed in the quarry sump after the end of the 2023-2024 reporting period to allow for accurate calculations of surface runoff. To improve the certainty of the pumped transfers volumes, Cleary Bros plan to install a flow meter on this point in the 2024-2025 reporting period. Both of these changes will improve the sensitivity of these calculations, thereby improving the accuracy of the calculation of groundwater inflows.

Cleary Bros has extracted and used water on the site in line with the requirements of the Water Management Act 2000, with the groundwater take from the Sydney Basin South Water Source modelled at 13.9 ML, which is less than the 130 ML of take permitted under the combined WALs.

3.8 Cultural Heritage

3.8.1 Standards and Performance Measures

The Development Consent requires the preparation of a Historic Heritage Management Plan (HHMP). The HHMP requires the following activities to be undertaken to mitigate the impacts to cultural heritage values associated with the site:

- Archival recording of the Belmont Homestead
- Preparation and publication of a Heritage Interpretation Plan (HIP)
- Collection and recovery of items from the Belmont
- Archaeological investigation of the Belmont
- Relocation of dry stone walls
- Monitoring of potential impacts to The Hill Complex

In addition, SSD10369 requires that works cease in the event a suspected Aboriginal object or human remains is encountered, and that all surface disturbance activities are supervised by an employee who is trained to recognise potential Aboriginal objects.

The EMS objectives relevant to heritage include sharing the HIP on Cleary Bros website and providing the HIP to the Shellharbour Museum, providing stakeholders with an opportunity to recover items of interest from the *Belmont*, reconstruction of dry stone walls in a publicly accessible location, as well as minimising the visual and blasting impacts associated with the project on *The Hill Complex*, including undertaking biennial dilapidation surveys of the structures.

3.8.2 Environmental Performance

Cleary Bros removed the *Belmont* homestead during the reporting period in accordance with the HHMP. Prior to its removal, the Heritage Interpretation Plan (HIP) was completed in line with the methodology in the HHMP, and provided to Council. The HIP includes a 3D digital internal and external interpretive model of the Belmont and surrounds, as well as an animation which charts the changes to the Wentworth Hills landscape over time. Following advice from Shellharbour Council, a user guide was also created to provide instructions on how to navigate the HIP. The HIP is publicly accessible via Cleary Bros website: www.clearybros.com.au/belmont.

Prior to the removal of the *Belmont*, Cleary Bros contacted all stakeholders as required under the HHMP, as well as placing a public notice in the Illawarra Mercury and on Cleary Bros social media pages, to provide two opportunities to view the house and identify any fabric that they wished to retain. This offer was well taken up by those stakeholders directly contacted, however there was minimal interest generated from the public notice or social media posts. Most stakeholders negotiated alternate times to view the house outside of the nominated times, which Cleary Bros accommodated.

Following the expressions of interest process, a broad inventory of items for recovery was identified. There were some instances where multiple stakeholders requested the same item, and where possible these were split between interested parties. Where not possible, owners of heritage-listed properties within the Wentworth Hills landscape were given priority.

The *Belmont* was carefully deconstructed to retain the maximum identified materials as possible. Unfortunately a majority of the softwood timber cladding, floorboards, and softwood framing materials were significantly affected by borers or wood rot, and could not be salvaged. However most other items were able to be retained and were collected by stakeholders. The following is a summary of materials salvaged from the *Belmont*.

- 1 x Finial
- 2 x Terracotta chimney pots
- 1 x Front door highlight and mechanism
- 7 x light switches
- 1 x Roof-mounted water tank
- 1 x Underfloor vent and 1 x wall vent
- ~500 x bricks from the chimneys
- ~60 x lengths of timber from the architraves and picture rails
- 35 x lengths of skirting boards
- 8 x double hung windows
- 5 x 4-panelled doors with locking mechanisms and door frames (most missing door jams)
- 18 x bullnose and 40 x straight corrugated iron roof sheets
- 25 x lengths of external timber boards
- 12 x lengths of hardwood timber floorboards
- ~20m² of internal timber floorboards
- ~70 x lengths of structural timber from all parts of the building (floors, walls, roof).
- 12 x Pieces of stone foundations
- Various other notable items salvaged during deconstruction and provided to Shellharbour Museum

As part of the demolition and in line with the HHMP, Cleary Bros engaged archaeologists from Biosis Pty Ltd to undertake an archaeological excavation of the area around the *Belmont*. The archaeological excavation was undertaken around the entire perimeter of the *Belmont* as well as in the vicinity of the former dairy and bails. A report is currently being prepared by the archaeologists to address the objectives of the archaeological excavation. Similarly Archival Recording was undertaken by an archaeologist from Biosis during and following the demolition of the *Belmont*, building on the previous Archival Recording undertaken prior to demolition. The complete Archival Recording is currently being compiled, and will be provided to Shellharbour City Council once completed.

The existing dry stone walls within the Project footprint (walls 3 and 4) were not disturbed during the current reporting period, and remain in their original location as shown in the below photographs. Wall 3 may be relocated to extend wall 5 in the next reporting period, depending on the availability of a suitably experienced dry stone waller. Wall 4 is within Stage 7c, and will not be impacted by the project for a number of years. The reconstructed wall 5 remains in its present location at the northern boundary of the Stage 7 area, where it can be viewed by members of the public from Dunsters Lane.



Dry stone walls within the project footprint (Left: Wall 3; Right: Wall 4)

Cleary Bros undertook dilapidation surveys of the two residences associated with *The Hill Complex* during the reporting period, prior to commencing quarrying activities in Stage 7. This will provide a baseline from which to assess any future impacts to these structures. Due to the current use of the property, access was not available at this time to undertake dilapidation surveys of the remaining structures on this property. Surveys of the remaining structures will be undertaken once access is available, noting prior baseline surveys have been undertaken previously under 10639/2005. Monitoring of all blasts was undertaken in accordance with the Blast Management Plan, with no blasts recording emissions above the 0% exceedance criteria that would require further surveys. The vegetation screen along the northern boundary of Stage 7 was commenced in the current reporting period, with more detail on this provided in Section 3.10. Cleary Bros also held preliminary discussions with the owners of *The Hill Complex* regarding additional plantings that could be undertaken closer to the homesteads, however the priority at this stage is to establish the nominated vegetation screens on Cleary Bros property.

Cleary Bros engaged archaeologists from Biosis, with assistance from Registered Aboriginal Parties from the Illawarra Local Aboriginal Land Council to deliver cultural heritage training to all employees at the Albion Park Quarry during the reporting period, including the quarry supervisors and managers who oversaw all vegetation clearing and soil stripping activities during the reporting period. No suspected human remains or Aboriginal objects were encountered on the site during the reporting period.

3.8.3 Compliance Assessment

Cleary Bros has undertaken all project works in the reporting period in accordance with the HHMP. All EMS objectives related to cultural heritage have been met or are on track to achieve, with the exception of the blasting criteria as described in Section 3.4.

3.9 Biodiversity

3.9.1 Standards and Performance Measures

SSD10369 requires the implementation of a Biodiversity Management Plan while 10639/2005 requires the implementation of a Revegetation Management Plan. The Revegetation MP covers the restoration of formerly cleared agricultural lands to bolster the remnant vegetation communities south of the Stages 1-6 area. These works are now complete and in a maintenance phase, and have been incorporated into the Biodiversity MP approved in March 2024. The Biodiversity MP also describes the retirement of biodiversity credits prior to impacting the biodiversity values of the Stage 7 area. Four stages for credit requirement are identified, with a requisite number of credits for different ecosystems and species required for each. The

Biodiversity MP also describes the process for establishing a Biodiversity Stewardship Agreement on Cleary Bros landholding adjacent to the site, as well as various actions to be undertaken to minimise direct and indirect impacts to biodiversity associated with the project. As part of the Biodiversity MP, Cleary Bros will also undertake biannual inspections of the areas adjacent to the project, including an annual quantitative survey of vegetation within defined survey plots on the site.

The biodiversity objectives of the EMS include:

- Establishment of a Biodiversity Stewardship Agreement.
- Retirement of biodiversity credits prior to impacts to biodiversity for each stage.
- Reduction of weed threat in buffer zones.

There are no specific requirements in the EPL relating to biodiversity.

3.9.2 Environmental Performance

Cleary Bros commissioned Niche Environment and Heritage to undertake preliminary surveys to support the establishment of a Biodiversity Stewardship Agreement (BSA) on land generally south of the extraction area within Cleary Bros landholding. In addition, discussions were held with representatives of the Credit Supply Taskforce, to confirm the suitability of the site for the establishment of a BSA. The preliminary surveys also identified some targeted improvement works that could be undertaken prior to the establishment of the BSA to maximise the value of the BSA. Cleary Bros are planning to undertake these targeted improvement works in 2024-2025 followed by detailed surveys that will allow the formalisation of the BSA in 2025-2026.

Cleary Bros purchased a total of 8 credits of PCT1300 (*Whalebone Tree – Native Quince dry subtropical rainforest on dry fertile slopes, southern Sydney Basin Bioregion*) during the reporting period from two existing stewardship sites within the Illawarra region. These credit purchases satisfied the Stage 1 biodiversity credit requirements for the site. These credits were formally retired on the 2nd and 3rd of May 2024, prior to any disturbance of vegetation within the areas of mapped PCT1300 on the site. Cleary Bros wrote to the Planning Secretary on 3rd May 2024 confirming the retirement of these credits, which was subsequently accepted as meeting the requirements of the Stage 1 biodiversity credits.

Following the retirement of the Stage 1 biodiversity credits, Cleary Bros cleared vegetation from a section of the Stage 1 biodiversity area that was required for immediate quarrying in line with the process described in the Biodiversity MP. This included the clearing of 5 hollow bearing trees in the area immediately southeast of the existing Stage 6 extraction area. One stag previously identified during the BDAR for the Stage 7 area had fallen naturally since the original surveys. Cleary Bros engaged an ecologist from Niche Environment and Heritage to oversee these clearing activities.

Prior to clearing, all trees, including those habitat trees without hollows, were knocked several times with an excavator bucket to encourage fauna to vacate. Trees were inspected before and after knocking and prior to clearing for any visible signs of fauna. There were no signs of current use by native fauna species prior to clearing and no native fauna species were observed to be injured or killed during clearing. Several Peron's Tree Frogs were observed in two trees following clearing. All trees were left for several days to allow any remaining fauna to disperse on their own. One tree contained an empty bird's nest which was not currently in use and was checked following clearing.

No farm dams were disturbed during the current reporting period, however one farm dam is planned for dewatering in the 2024-2025 period.

Under the former Revegetation Management Plan and new Biodiversity Management Plan, native vegetation restoration works during the current reporting period were focused on the maintenance of the establishing vegetation in the revegetation area, as well as primary and secondary weed control in the remnant forest areas. Weed control across all areas was undertaken to encourage native plant growth, with both primary control of woody weeds and ascending vines, as well as targeted control of exotic grasses and annuals around recent plantings, and some high priority weeds identified on site (Lantana, Moth vine,

African Boxthorn and Blackberry). A total of 186 hours was spent undertaking revegetation and weed controls works on the site in the current reporting period.

Revegetation contractors from Good Bush Pty Ltd were engaged to assist with these efforts. An ecologist from Good Bush Pty Ltd undertook the biannual inspection and annual survey of the vegetation management areas. The thirteen permanent survey plots were surveyed as part of the annual survey, with an additional 5 plots established and surveyed around the perimeter of the Stage 7 area in line with the requirements of the Biodiversity MP. The 5 additional plots are within the buffer area for Stage 7, which may be exposed to indirect impacts of the development. The surveys within these additional plots undertaken in this reporting period provide a baseline from which to assess changes to weed threats within the buffer area of Stage 7. A summary of key observations from the annual survey are as follows.

Survey method

A wide-angle photograph was taken looking diagonally across the plot from the northeast corner peg. Each plant species within the plot was identified to genus and species and the abundance and percentage cover of each species within the plot recorded. Notes were made on the presence of significant species, evidence of browsing by feral animals and general condition of the vegetation

Significant flora species

Several listed threatened plant species and a number of regionally rare species were recorded in the vegetation management plan. During the assessment for this report the following information was gathered in relation to presence and condition of these significant plant species.

Common Name	Botanical Name	Condition
Threatened Species		
White Wax Flower	<i>Cynanchum elegans</i>	Existing plant within Zone 5 has died since the last survey – it was previously noted that this individual was senescing due to increased canopy cover.
Illawarra Zieria	<i>Zieria granulata</i>	Not observed
Illawarra Socketwood	<i>Daphnandra johnsoni</i>	Large population with many suckering stems identified within plot 8.2. Population healthy and expanding
Scrub Ironwood	<i>Gossia acmenoides</i>	Not observed
Regionally Rare Species		
Native Holly	<i>Alchornea ilicifolia</i>	Common and abundant, regenerating
Actephila	<i>Actephila lindleyi</i>	Not observed
Scrub Wilga	<i>Geijera salicifolia</i>	Common and abundant, regenerating
Olivers Sassafras	<i>Cinnamomum oliveri</i>	Single plant observed within plot 8.2
Myrtle Ebony	<i>Diospyros pentamera</i>	Single plant observed within plot 8.1

Weed control

Weeds have proliferated within the fenced revegetation areas (Zones 1,2,3) since the last report but the majority of these weeds are annual weeds and grasses. Weed control has been carried out within these areas but the focus has been to control annual weeds and grasses around the base of establishing trees

to reduce competition. This method will see a reduction in overall weed control requirements once the trees have become established and there is reduced light availability for annual weeds to colonise.

Plantings

Success of plantings has been variable within the different areas planted over the duration of the project. The plantings within Zones 1, 2 and 3 compounds have finally after many years of slow growth began to take off and the Red Cedars, Eucalyptus spp. and Melaleuca have all begun to establish a tall canopy and will in time have canopy connectivity which will assist exclusion of ground weeds, annual weeds and grasses.

The more recent plantings within Zones 4 and 5 planting compounds have mostly remained fairly small and a loss of approximately 10% of these plantings has been observed. Some particular species are growing extremely well and this will be used as an indicator of species selection for future plantings.

Ongoing revegetation maintenance including lifting guards, hand weeding and spraying management rings will be required to further assist the establishment of these plantings.

Animal or human interference

Grazing was observed within the fenced areas however this is most likely the result of Wallabies and Eastern Grey Kangaroo that have the ability to jump or find ways under these fences. There was no evidence that goats have entered the fenced compounds.

Riparian zone

Water from the quarry has been emptying intermittently into the creek to the south for several years. This is quite variable, depending upon local rainfall and the need to de-water the quarry. Inspection of the creek below the outlet pipe found no obvious negative impact from the quarry water.

3.9.3 Compliance Assessment

Cleary Bros has undertaken all project works in the reporting period in accordance with the requirements of the Biodiversity Management Plan and Revegetation Management Plan. All EMS objectives related to biodiversity have been met or are on track to achieve.

The following recommendations were made by the ecologist as part of the annual survey, which will form the basis of revegetation efforts in 2024-25.

- Continued treatment of Lantana working from areas of good bush toward the more weed infested areas within the intact remnant vegetation areas to assist natural regeneration.
- Treatment of Madeira Vine to control further spread of this highly invasive weed from Zone 6 downstream.
- Continued revegetation maintenance around plantings to assist canopy establishment to eventually exclude annual weeds and grasses.
- Targeted frilling of invasive canopy species such as African Olive (*Olea europaea* subsp. *cuspidata*) and Orange Firethorn (*Pyracantha angustifolia*) within the entire site.

In addition, works in 2024-25 will continue ahead of the final surveys required for the establishment of the BSA.

3.10 Rehabilitation and Land Management

3.10.1 Standards and Performance Measures

SSD10369 requires the implementation of a Rehabilitation Strategy (RS) and Rehabilitation Management Plan (RMP) while 10639/2005 requires the implementation of a Rehabilitation Management Plan only. The

RS and updated RMP were both approved in March 2024 and describe measures for the rehabilitation of the entire extraction area, including those areas approved under 10639/2005. SSD10369 also requires the boundaries of the approved extraction area to be marked by a registered surveyor, and that these boundaries are clearly marked at all times. SS10369 also requires the undertaking of a detailed feasibility study and final landform design within 5 years of commencing quarrying operations within the Stage 7 area. Both SSD10369 and 10639/2005 require the lodgement of a rehabilitation bond to ensure the effective rehabilitation of the site, however they differ in the methodologies for the calculation of the bonds.

The objectives of the EMS relevant to rehabilitation include:

- Progressive rehabilitation:
 - No importation of contaminated material to the site.
 - Vegetation composition commensurate with reference sites.
- Stability and liabilities of final landform:
 - No significant active erosion or landform instability within final landform.
 - Geotechnical assessment determines retained highwall are stable.
 - Safety bunds and catch berms installed along final highwalls.
 - Water quality in retained dams meets discharge criteria without treatment.
 - Maintenance of final landform commensurate with rural landholdings

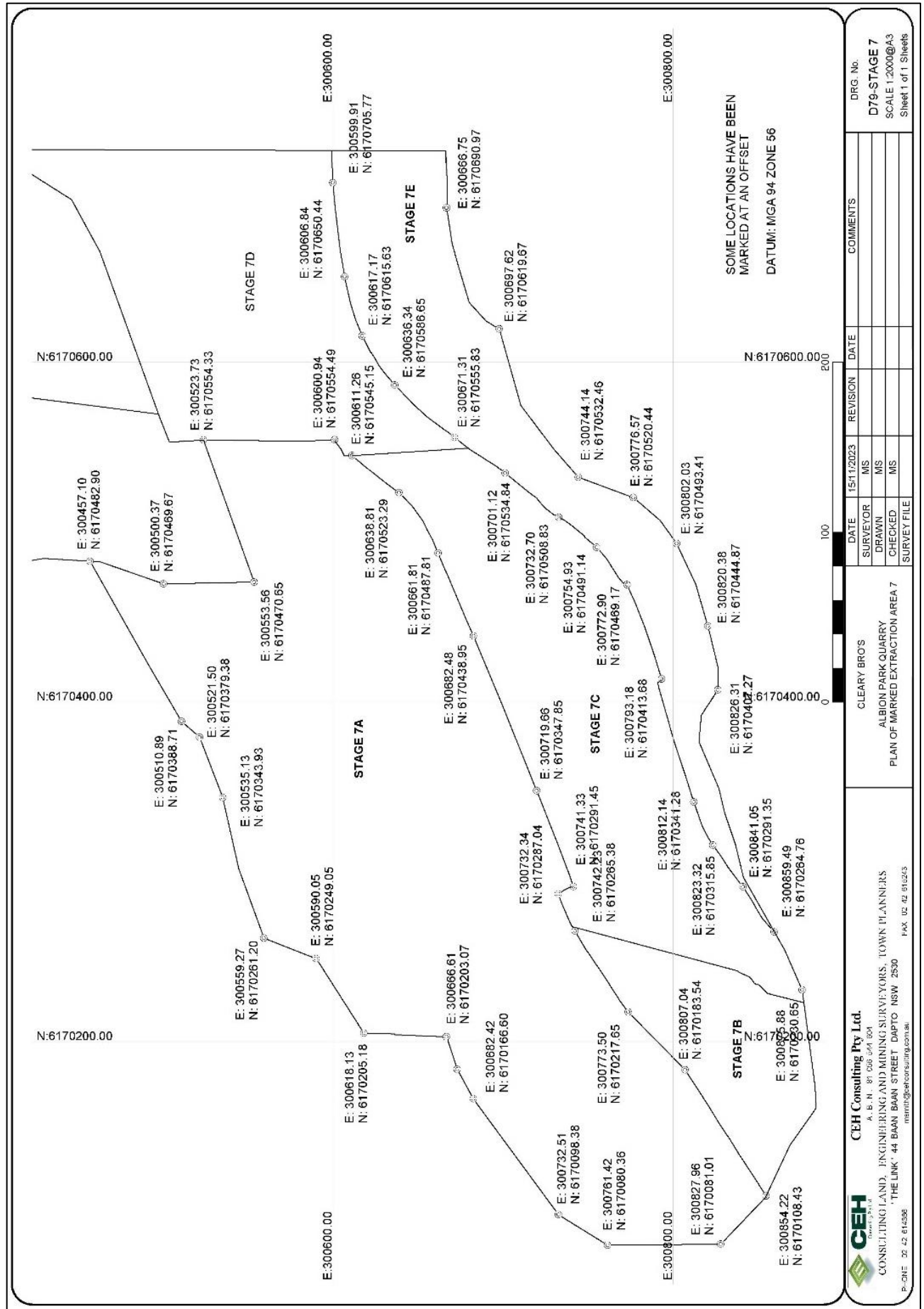
There are no specific requirements in the EPL relating to rehabilitation.

3.10.2 Environmental Performance

The boundaries of the Stage 7 area and internal stage boundaries were pegged by a registered surveyor in November 2023, with a survey plan subsequently prepared. Note that due to thick vegetation in some parts of the site, an offset from the boundary was pegged, which was noted on the survey pegs. This survey plan is shown below, and was provided to the Planning Secretary on 11 December 2023. During all vegetation clearing and initial soil stripping works within close proximity to the project boundary, a surveyor was engaged to assist the equipment operators and ensure all activities remained within the disturbance limits of the project.

Cleary Bros has implemented a Permit to Disturb process for all vegetation clearing and soil stripping works associated with the Albion Park Quarry. Given the various constraints across the Stage 7 area, and especially within the first year of the project, this was an essential control to ensure compliance with the requirements of SSD10369 and the various management plans. A number of Permit to Disturbs were issued progressively throughout reporting period, allowing increased disturbance limits once, for example, biodiversity credits were retired or archaeological works were completed. The current permit continues to limit disturbance, which during the current reporting period for example, restricted disturbance to avoid impacts to any farm dams or dry stone wall 3, which were both close to the current disturbance footprint. The Permit to Disturb also nominates any specific controls associated with the works, such as the expected depth of soil resources to retain, and the requirement for a surveyor to guide works when working close to the project boundary. The Permit to Disturb will continue to be utilised in the next reporting period as a critical control related to a number of environmental aspects.

Topsoil across the area stripped in the reporting period was highly variable and at times non-existent, with rock outcropping on or near the surface in many areas. Approximately 1,300 m³ of topsoil was stripped and stockpiled from the Stage 7a area ahead of rock extraction in the current reporting period. A further 15,000 m³ of overburden was stockpiled within the footprint, which will be used for constructing the amenity barrier around the northeast corner of Stage 7a, as well as for rehabilitation of the western highwall once this area progressively becomes available for rehabilitation.



Initial extraction included the northernmost extent of the western boundary of Stage 7a during the reporting period. This area was excavated in line with the final landform design, incorporating a 10 metre wide bench below a 7 metre highwall face. Rehabilitation of this initial area will be undertaken in the next reporting period, with heavy vehicle access to this area for rehabilitation works maintained until vegetation establishment.

Other rehabilitation works commenced during the reporting period include the vegetation screens. All three vegetation screens were sprayed to create a layer of mulch, with additional mulch imported to the northern and Stage 7a vegetation screens where accessible. The northern and Stage 7a screens were planted with a total of 3,030 grass, tree and shrub species as listed in the below table and photograph (below left).

Common Name	Botanical Name	Number
Fringed Wattle	<i>Acacia fimbriata</i>	60
Sickle Wattle	<i>Acacia falcata</i>	60
Maiden's Wattle	<i>Acacia maidenii</i>	60
River Oak	<i>Casuarina cunninghamiana</i>	240
Swamp Oak	<i>Casuarina glauca</i>	120
Coastal Grey Box	<i>Eucalyptus bosistoana</i>	180
Moreton Bay Fig	<i>Ficus macrophylla</i>	20
White Kunzea	<i>Kunzea ambigua</i>	60
Bracelet Honey Myrtle	<i>Melaleuca armillaris</i>	60
White Feather Honey Myrtle	<i>Melaleuca decora</i>	60
Brown Kurrajong	<i>Androcalva fraseri</i>	30
White topped box	<i>Eucalyptus quadrangulata</i>	80
Club Mat-Rush	<i>Lomandra longifolia</i>	1,000
Blue flax lily	<i>Dianella caerulea</i>	1,000
Total		3,030

There was significant ground moisture at the time of planting, with springs in some locations causing waterlogged conditions. Due to the wet ground conditions, irrigation was not installed at the time of planting, with seedlings inspected each week to assess the need for watering or irrigation. Unfortunately, many seedlings succumbed to grazing from herbivores over the weeks following planting, with significant losses in some areas. A trail camera was installed to better understand the cause of the losses, with native macropods the main culprit, particularly at the southern end of the Stage 7a screen near the farm dam. To combat this grazing pressure, a 3-strand electric fence was installed around the northern vegetation screen. The growth of seedlings and trail camera footage will continue to be monitored in the following reporting period, and management strategies adapted as required to ensure vegetation establishment and ongoing growth. If the fencing is found to be effective at reducing grazing pressures, a similar fence will be installed around the Stage 7a vegetation screen.

The eastern vegetation screen has not yet been commenced with the exception of the initial mulching works, however the focus at this stage remains on the two vegetation screens in close proximity to the current extraction area.

Within the existing extraction area (Stages 1 to 6), vegetation growth along the southern batter (hydroseeded in 2020-2021) has shown excellent growth, with some acacias within the seed mix now reaching maturity (refer photo below right). Similarly, areas of rehabilitated overburden within Stages 1-4 are now well established as a future agricultural domain.



New plantings within the northern vegetation screen



Acacias and Eucalypts establishing along the southern batter seeded in 2020

Through these initial rehabilitation works and based on experience gained from rehabilitation of other parts of the site, opportunities for improvement to the Rehabilitation MP have been identified, including:

- Greater consideration for the use of spray-seeding over the use of tubestock. This will allow for improved coverage and generally improved long term revegetation, and has been particularly effective along the southern batter of the Stages 1-6 area.
- Change of methodology for the eastern vegetation screen to consider the use of fewer mature plantings instead of the currently proposed wide screen with diverse plantings. A single row of tall growing local species will provide improved screening at distance for this location, and with increased chance of success, considering the difficulty with accessing this part of the property. This will improve the success of the screen, and will allow for this land to continue to be utilised for agriculture without compromising the growth of the plants within the screen.
- Incorporating fencing and trail cameras to exclude grazing animals and assess effectiveness.
- Review installation of irrigation where soils are saturated near the surface.

3.10.3 Compliance Assessment

Cleary Bros has undertaken all project works in the reporting period in accordance with the requirements of the Rehabilitation Strategy and Rehabilitation Management Plan. The EMS objectives related to progressive rehabilitation have been met during the current reporting period or are on track to achieve. The EMS objectives related to the final landform have not yet been achieved, however activities undertaken during the current and previous reporting periods have provided a foundation to achieve these objectives across the site in the future.

Rehabilitation activities planned to be undertaken in the next reporting period include the following:

- Fencing of Stage 7a screen if shown to be effective on northern screen.
- Replacement plantings of northern and Stage 7a vegetation screens.

- Trial the use of hydroseeding with the Stage 7a vegetation screen.
- Planting of mature stock for the eastern vegetation screen.
- Rehabilitation of the first section of the western benches of Stage 7a, including overburden placement and revegetation in line with the RMP.
- Germination trials of soil from areas of *Zieria granulata*.

3.11 Visual Amenity

3.11.1 Standards and Performance Measures

SSD10369 requires Cleary Bros to implement all reasonable measures to minimise the visual and off-site lighting impacts associated with the development, to shield views of quarrying operations from users of public roads and private residences, and to construct a tree screen along the northern boundary of Stage 7 within 2 years of commencing quarrying within Stage 7. The EMS describes the visual mitigation measures employed at the site, while the RMP describes the methodology for the installation of the vegetation screen along the northern boundary of Stage 7. The EMS includes an objective for the establishment of the vegetation screen along the northern boundary of Stage 7 within 2 years.

There are no specific requirements in the EPL relating to rehabilitation.

3.11.2 Environmental Performance

Cleary Bros operate within the extraction area between 7 am and 6 pm Monday to Friday (and 7am to 1pm on Saturdays). No quarrying activity is undertaken outside of these hours, and there is no permanent or temporary lighting used within this area, such that there is no possibility of impacts from external / off-site lighting associated with SSD10369.

During the current reporting period, Cleary Bros commenced stockpiling overburden and topsoil for the construction of the amenity barrier around the northeastern boundary of Stage 7a. This material will be used to construct the barrier in the early parts of the next reporting period. Furthermore, Cleary Bros commenced the installation of the vegetation screens in the current reporting period, including the screen along the northern boundary of Stage 7. Further information on these screens was included in Section 3.10. Cleary Bros has also at the present time retained the existing vegetation following dry stone wall 3 within Stage 7a. This vegetation will be retained as long as reasonably practicable, providing additional screening of current quarrying activity while the Stage 7a vegetation screen establishes.

3.11.3 Compliance Assessment

Cleary Bros has met the requirements of SSD10369 in the current reporting period associated with visual impact. One opportunity for improvement that has been identified during the current reporting period is that orange (high visibility) sediment fence should not be used where it may be visually intrusive, and that the traditional dark green sediment fence should be used in these areas. While the use of orange sediment fence on the site is not visually intrusive from public roads or private residences, it is more visually apparent than green fencing would otherwise be.

3.12 Waste Management

3.12.1 Standards and Performance Measures

SSD10369 requires Cleary Bros to minimise the waste generated by the site, classify waste and dispose of at appropriately licenced facilities. SSD10369 also prohibits waste from being received at the site unless permitted via a specific EPL or Resource Recovery Order. Finally, SSD10369 requires any demolition works to be undertaken in accordance with *AS2601 The Demolition of Structures*.

There are no specific requirements in the EPL relating to waste management.

3.12.2 Environmental Performance

All wastes were managed in accordance with the EMS during the current reporting period. The following tables describes the management of wastes on site.

Waste	Treatment	How undertaken during current reporting period
Waste Overburden	Reused	Stockpiled for amenity bund and used for reshaping quarry excavation.
Metal waste (including from the Belmont)	Recycled	Placed in scrap metal skip and collected by a metal recycler
Waste oil	Recycled	Stored in waste oil tank and collected by Transpacific for recycling at licenced treatment facility
Batteries	Recycled	Collected by local contractor for recycling
Oil filters (drained)	Recycled	Crushed and placed in scrap metal skip
Cardboard	Recycled	Stored in waste receptacles and collected by Flagstaff for recycling.
Plastic wastes	Disposed	Placed in general waste bin. Collected by JJ Richards and disposed of at a licenced waste facility.
Food waste and similar	Disposed	Placed in general waste bin. Collected by JJ Richards and disposed of at a licenced waste facility.
Asbestos materials (Belmont)	Disposed	Removed by Class A asbestos licence holder, placed in lined skip and collected by Bin City for disposal at Cleanaway Kemps Creeks waste facility.
Miscellaneous construction waste (Belmont)	Disposed	Collected by local waste contractor for disposal at Dunmore Waste Disposal Depot.

Due to the demolition of the *Belmont* homestead, a number of one-off wastes were generated during the reporting period. Many materials were recovered and repurposed by others, as described in Section 3.8, while the remaining wastes were managed as described in the table above.

Cleary Bros engaged Rare Environmental to manage the demolition of the *Belmont* homestead, in accordance with AS2601, while also working with archaeologists from Biosis to maximise the retention of heritage fabric where possible. Site personnel from Rare Environmental held a Class A asbestos licence allowing for the safe removal and disposal of all asbestos materials within the building.

No sewage was treated or disposed on site during the reporting period. No waste including VENM/ENM was received in the area approved by SSD10369 of 10639/2005 during the reporting period.

3.12.3 Compliance Assessment

Cleary Bros has met the requirements of SSD10369 in the current reporting period associated with waste management and demolition.

3.13 Hazardous Materials

No hazardous materials or dangerous goods were stored within the footprint of SSD10369 during the reporting period. Explosives materials were brought to the site on the day of each blast, with unused materials removed from the site following blasting. All explosives were managed in accordance with the

Dangerous Goods Code and Explosives Control Plan for the site, in accordance with the requirements of the *Work Health and Safety Act 2011*.

3.14 Bushfire and Emergency Management

During the current reporting period, Cleary Bros undertook the following activities in accordance with the EMS and Emergency Management Plan for the site:

- Prepared a Bushfire Emergency Management and Evacuation Plan (BEMEP) for the site, and provided a copy to the Illawarra Local Emergency Management Committee and Albion Park Rural Fire Service.
- Maintained firebreaks around the property in line with the BEMEP.
- Maintained a water cart on site at all times which was available to respond to any fires as required.
- Updated and tested the Pollution Incident Response Management Plan (PIRMP) in line with the *Protection of the Environment Operations (General) Regulation 2022*.
- Undertook additional emergency drills in line with the Emergency Management Plan.

4. COMMUNITY

4.1 EMS Requirement

The Annual Review is to include a summary of complaints received during the past year comparing this to complaints received in previous years.

The EPL requires a legible record of all complaints relating to pollution incidents. Both the QEMP and the EPL specify a protocol to be followed in relation to complaints including recording action taken regarding the complaint.

4.2 Tabulated Results

One environmental complaint was received during the current reporting period, relating to dust and material tracking at the entrance to the quarry. This complaint was investigated to determine the cause and whether existing controls were adequate to reasonably minimise community impacts as a result of the project. Further information regarding this complaint is described in Section 4.3, while a comparison with previous years' complaints is summarised below.

Year	Environmental Complaints	Year	Environmental Complaints
2007/2008	1	2016/2017	7
2008/2009	2	2017/2018	6
2009/2010	0	2018/2019	3
2010/2011	5	2019/2020	14
2011/2012	6	2020/2021	3
2012/2013	4	2021/2022	2
2013/2014	2	2022/2023	2
2014/2015	5	2023/2024	1
2015/2016	2		

4.3 Environmental Complaints Results Interpretation

A summary of the complaints received is provided in the table below:

Date	Description of Complaint	Status
30 April 2024	Complaint regarding dust build-up and dust in the air at the entrance to the quarry (anonymous complaint received via EPA).	Closed out

Dust management practices were reviewed in line with the complaint, including the subsequent implementation of the updated Air Quality Monitoring Program. Cleary Bros have continued the existing strategies of regular sweeping of the entrance road and adjacent areas on the East West Link Road.

4.4 Community Consultative Committee

Cleary Bros operates a Community Consultative Committee (CCC) for the Albion Park Quarry. Three meetings of the CCC were held in the current reporting period, in July and December 2023, and April 2024.

The April 2024 meeting included a site visit to allow community and stakeholder representatives an opportunity to review the preliminary works associated with the commencement of Stage 7. Minutes of these meetings are available on Cleary Bros website. Following a review of the composition of the CCC, it was determined that the CCC could benefit from having an additional community representative. The CCC is currently seeking to fill this additional community representative position in line with the CCC Guidelines.

4.5 Access to Information

Cleary Bros operates a website which includes all information that is required to be publicly available. For 10639/2005, this information is available at www.clearybros.com.au/albion-park/, while for SSD10369, additional information is available at www.clearybros.com.au/apq7/. Following surrender of 10639/2005, all information will be consolidated onto the one page. Information on these websites includes:

- Contact phone number to make enquiries or make a complaint
- Information on the next blast
- Development consents, EPL, EPBC approval
- EIS
- Management Plans and Strategies including the PIRMP and current Staging Plan
- Last 5 years of:
 - Monitoring results for EPL monitoring requirements
 - Annual Reviews
 - Independent Environmental Audits
 - Community Consultative Committee meeting minutes
 - Complaints Registers
- Link to the Heritage Interpretation Plan

5. INDEPENDENT ENVIRONMENTAL AUDIT

Cleary Bros mostly recently commissioned ERM to carry out an Independent Environmental Audit in the current reporting period as required under 10639/2005. The audit included a site inspection on 7 November 2023, with the audit covering the period of 6 November 2020 to 7 November 2023. The report was submitted to the DPHI and made publicly available on Cleary Bros website.

In the Executive Summary of the audit report, ERM stated that “The Site has established the control systems generally required for the stage of development i.e. operational. All staff interviewed demonstrated a high level of understanding of requirements and a commitment to the application of the requisite management systems and plans.” The findings identified during ERM’s Independent Environmental Audit were largely administrative in nature. The below table summarises the progress of the corrective actions undertaken to address the non-conformances of the 2023 Independent Environmental Audit. The next independent environmental audit, which is the first required under SSD10369, will be undertaken in the first quarter of 2025.

Condition Number	Auditor Comment	Auditor Recommendation	Progress of Corrective Actions
10639/2005 Sch 4 C 15	<p>...For the audit period there was one reported exceedance of air quality criteria outlined in this condition:</p> <ul style="list-style-type: none"> 16 November 2020, PM10 (24-hour incremental impact) = 52.6 µg/m3... 	As CB implemented the improvements from the incident investigation, and there have been no further exceedances, there is no further recommendations associated with this non-compliance.	No further action required.
10639/2005 Sch 4 Cond 30	...It is noted that the WMP [Water Management Plan] still contains mention of the Sewage Treatment Plan, which is no longer active on Site and should therefore be removed from the plan...	An update of the WMP is recommended to reflect the Sewage Treatment Plan being no longer in use at the Site.	COMPLETED An updated Water Management Plan has been prepared and was approved in March 2024.
10639/2005 Sch 4 Cond 41	The Rehabilitation Management Plan was revised on 18 October 2017 prior to the planned commencement date of Stage 5 and 6 (i.e. 3 May 2018) and approved by DPE as per the 2020 IEA.	The Rehabilitation Management Plan should be reviewed, updated and submit to DPE. The update should be undertaken to the satisfaction of the Secretary.	COMPLETED An updated Rehabilitation Management Plan has been prepared and was approved in March 2024.
EPL L2.1	Exceedances of the TSS criteria for Point 4 of EPL299 were noted (refer to audit report for further detail).	Uncontrolled discharges correlated to high rainfall events, including during the “Disaster Declaration” by Shellharbour City LGA in March 2022, have resulted in exceedances of the TSS during the audit period. On the basis of this, the auditors do not have any recommended actions for this condition. Further, CB have undertaken incident investigations and provided notifications to the EPA as deemed appropriate.	No further action required.
EPL M6.2	The Cleary Bros website directs the public to call a hotline number displayed on the	It is recommended that the phone number is also	COMPLETED

Condition Number	Auditor Comment	Auditor Recommendation	Progress of Corrective Actions
	Albion Park Quarry website for enquiries regarding environmental management. The auditor tested the hotline number and found it to be working. It is noted that the phone number listed for Albion Park is named "Albion Park Quarry Blast Contact Line", which does not entirely identify the number as the appropriate number to lodge a complaint.	identified as a "complaints line" on the website, to ensure that this is clear to the public.	Text on website has been updated to state "For enquiries regarding environmental management or to make a complaint, please call:...".

6. NON-COMPLIANCES

There was one non-compliance with the conditions of SSD10369 in the current reporting period, which related to the exceedance of the 5% allowable exceedance criteria for airblast overpressure. Two blasts in the Stage 7 area recorded airblast overpressure above the 5% criteria of 115 dBL, such that 6% of blasts were above 115 dBL. Each of these two blasts were investigated in line with the Blast Management Plan requirement to investigate any blast recording airblast overpressure above 115 dBL at a sensitive receiver. The findings from these investigations identified different contributing factors for the two blasts, with additional control measures introduced following these blasts to reduce the likelihood of further non-compliances. This non-compliance was reported to DPHI, and the Blast Management Plan updated with the additional control measures and submitted to DPHI for approval.

There was one non-compliance with the conditions of 10639/2005 in the current reporting period, which related to the failure to update the Rehabilitation Management Plan (RMP) every 5 years, as required by Schedule 4 Condition 41. This non-compliance was identified during the independent environmental audit and was caused by an administrative oversight of this requirement. At the time of the audit, Cleary Bros had already engaged a specialist consultant to update the RMP. The updated plan was subsequently approved by the Planning Secretary in March 2024.

There was one non-compliance with the conditions of EPL299 during the reporting period, which related to the exceedance of the Total Suspended Solids limit for water overflowing from the Main Holding Dam (EPL4) on 7 June 2024. At the time of this exceedance, flooding was experienced across many coastal areas of NSW, and a Disaster Declaration was in place for the Shellharbour City Local Government Area (amongst many other LGA's). Nevertheless, Cleary Bros investigated the exceedance, determining that the significant rainfall (192mm) falling in the two days immediately preceding and during the dam overflow, caused accumulated runoff to far exceed the capacity of the dam. The investigation determined that the existing controls in place were appropriate for the site and were effective in reducing the risk of any harm given the circumstances of the severe weather event. Cleary Bros notified the EPA immediately on receiving the monitoring results on 18 June 2024 (ref: 30790), with further requested information provided on 1 July 2024.

7. REVIEW OF ENVIRONMENTAL MANAGEMENT SYSTEM

7.1 Overview

SSD10369 requires that the Environmental Risk Assessment (ERA) be reviewed annually to assess the effectiveness of the risk management measures. Similarly, the Development Consent requires all strategies, plans, and programs to be reviewed within 3 months of submission of the Annual Review. Cleary Bros have incorporated this document review process into the Annual Review, to ensure that any improvements to these documents are linked to the performance of the project, as assessed as part of the Annual Review.

7.2 Environmental Risk Assessment

The Environmental Risk Assessment (ERA) was reviewed prior to commencing the Annual Review to assist with assessing the planned control measures to manage each environmental aspect. Once Sections 3 and 4 of the Annual Review were completed, the ERA was again reviewed in detail to assess the effectiveness of the controls, and make any changes as required, given the results from the previous year and the current stage of the development. A number of minor changes were made, with the inclusion of some additional controls and removal of other redundant or completed controls, while some changes were also made to the risk rating where appropriate based on the learnings of the Annual Review, or for example for cultural heritage, where the likelihood of impacts were significantly reduced due to the current stage of the project.

The ERA remains a live document as part of Cleary Bros HSEQ Management System, with the then current version included in the next revision of the EMS.

7.3 Environmental Management Strategy

The Albion Park Quarry has operated for many years, demonstrating an excellent conformance history with the requirements of the various approvals and licences, and maintaining its social licence to operate. While additional requirements have been introduced this reporting period due to the commencement of SSD10369, EPBC Act approvals, and an updated Environmental Protection Licence, the management systems of the site are mature, and were already largely meeting the requirements of these new or amended statutory requirements. Nevertheless, many improvements have been introduced in this reporting period to reflect the amended requirements and commitments made by Cleary Bros as part of the Stage 7 development, as incorporated into the EMS and supporting management plans.

As part of the Annual Review, the Environmental Management Strategy (EMS) has been reviewed to ensure the control measures remain effective, and updated where improvements have been identified by the Annual Review. For the current reporting period, this has led to a number of minor changes to the management strategies in the EMS, as well as various minor corrections and clarifications elsewhere within the Strategy. This includes improvements to control measures including:

- Air Quality Monitoring Program
- Noise Monitoring Program
- Revegetation methodologies, including for the vegetation screens.

As described in Section 3.2, the Air Quality Monitoring Program has seen deficiencies in the reliability of communications for the real time particulate monitors in the reporting period. Cleary Bros are working with the supplier to improve these issues, and while they have continued to form an integral management tool to the EMS, their reliability is not as good as it could be. Other improvements to the processes for servicing and calibration of the monitors have also been identified. This will include regular rotation of the real time particulate monitors around the site to ensure each monitor is co-located with the HVAS on a regular basis. This should improve the accuracy of the data captured by these units, noting that they are not intended to be used for assessing conformance with the air quality criteria.

With the completion of the compliance noise monitoring, the Noise Monitoring Program can now be updated to include a measured trigger level for the real time noise monitor – an estimate based on EIS modelling has been used previously.

Improvements to the revegetation methodologies will reflect those changes proposed for the Rehabilitation Management Plan, based on the initial implementation of these works in the current reporting period, and past rehabilitation success on the site.

The Bush Fire Emergency Management and Evacuation Plan has also been updated as part of the Annual Review. Minor changes have been made to contact details and supporting maps, and a copy will be provided to the Illawarra Local Emergency Management Committee and Albion Park Rural Fire Service.

7.4 Supporting Management Plans

7.4.1 Biodiversity Management Plan

The Biodiversity Management Plan has been reviewed as part of the Annual Review, and remains current and relevant for the site.

7.4.2 Blast Management Plan

The Blast Management Plan has been updated and submitted to the Planning Secretary for approval following the non-compliance with the blasting criteria identified during the Annual Review. The additional control measures considered as part of this review have nevertheless been included in blast planning practices.

7.4.3 Historic Heritage Management Plan

The Historic Heritage Management Plan has been reviewed as part of the Annual Review, and remains current and relevant for the site.

7.4.4 Rehabilitation Strategy and Rehabilitation Management Plan

The Rehabilitation Management Plan has been reviewed, and opportunities to improve the implementation of the plan have been identified through the Annual Review process. These include changes to the methodologies for implementing the vegetation screens to ensure their success, and greater reliance on the use of spray-seed applications, due to their proven success on the site. The Rehabilitation Management Plan will be revised to include these proposed changes, and submitted to the Planning Secretary for approval. Minor changes to the Rehabilitation Strategy will be required to ensure consistency with the Rehabilitation MP.

7.4.5 Water Management Plan

The Annual Review has identified that the water level criteria for bore MW9D is not appropriate for this site, as the trigger level was chosen prior to final site selection for this bore. Once at least 12 months of water level data has been collected for this bore and the other shallow bores forming the spring-fed dam monitoring program, the Water Management Plan will be updated with a revised trigger level for these bores. Until such time, the Water Management Plan remains current and relevant for the site, and will continue to guide water management practices on the site.

8. CONCLUSION

Quarrying and processing operations at the Cleary Bros Albion Park Quarry have operated in line with the conditions of approval and the Environmental Protection Licence for the project in the current reporting period, with the exception of three identified non-compliances. This includes one non-compliance with the conditions of the EPL during a period of extreme rainfall for which a Disaster Declaration was in place for the Shellharbour City LGA. An administrative non-compliance with the conditions of 10639/2005 was identified in relation to the update of the Rehabilitation Management Plan, which was nonetheless in the process of being addressed at the time the non-compliance was identified. Lastly, an exceedance of the blasting criteria was identified, due to 6% of blasts during the reporting period exceeding 115 dB(L), one percentage point above the 5% limit. In general, management practices currently in place have been effective at reducing the impacts on air quality, biodiversity, surface water, groundwater, and the amenity of nearby sensitive receivers to acceptable levels.

Predictions and assumptions made as part of the EIS have been shown to be largely valid, generally in line with or less than that predicted.

Water monitoring has shown the receiving waters surrounding the extraction area are meeting compliance criteria, with no significant impact to groundwater and surface water resources as a result of the quarry excavation. Monitoring of vegetation communities adjacent to the extraction area has identified no observable sign of stress related to water availability or otherwise. Rehabilitation works undertaken on the project to date have been very effective, although difficulties have been encountered in the current reporting period due to grazing pressure from native herbivores, with alternate strategies proposed to boost success in the next reporting period. The current reporting period has seen significant growth and canopy development in areas revegetated in previous years.

Depositional dust and particulate matter monitoring have shown that the current controls to minimise dust generation on site have largely been effective at achieving compliance with the air quality criteria, with measured levels that can be attributed to the Quarry mostly below that predicted from the EIS for the project. Cleary Bros has also implemented continuous particulate monitors during the current reporting period, which have been effective since introduction of providing a real-time approach to managing any emerging dust issues on the site and thereby minimising particulate emissions associated with the quarry.

Noise compliance monitoring has shown that even during periods of noise enhancing conditions, the project is able to meet the noise criteria for the site. The continuous noise monitor introduced during the reporting period has allowed quarry management to respond to emerging issues in real time, adjusting operations to ensure noise emissions from site activities are no greater than EIS predictions, and as low as reasonably practicable given the constraints of the site.

Improvement proposed as part of the Annual Review will be adopted in the revised EMS, and implemented in the following reporting period.

ANNEXURE A - DEPARTMENT OF REGIONAL NSW RETURN – 2022-2023**Extractive Materials Return
2022-2023****Regional
NSW**

Form S1 – Period Ending 30 June 2023

Quote RIMS ID in all correspondence

Quarry Id: 1290 Rims ID: 400492 Operators Name: CLEARY BROS (BOMBO) PTY LTD Address: PO BOX 210 PORT KEMBLA NSW 2505 Email: [REDACTED] Quarry Name: ALBION PARK QUARRY Quarry Address: 81 EAST WEST ROUTE, CROOM NSW 2527	Inquiries please telephone: (02) 4063 6713 Completed or Nil Returns Email – mineral.royalty@planning.nsw.gov.au Postal Address (see below)
	<i>Please amend name, postal address and location of mine or quarry if incorrect or incomplete.</i>

The return should be completed and forwarded to **Senior Advisory Officer, RESOURCE ECONOMICS, STRATEGY, PERFORMANCE & INDUSTRY DEVELOPMENT, DEPARTMENT OF REGIONAL NSW, PO BOX 344 HUNTER REGION MAIL CENTRE NSW 2310 on or before 31 October 2023**. 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, Resources Policy

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

Typical Geology: Latite and Tuffaceous agglomerate

Nearest Town to Quarry: Albion Park Rail

Local Council Name: Shellharbour City Council

Deposited Plan and Lot Number/s of Quarry: Lot 1 DP858245, Lots 420 and 421 DP1252087

Email Address of Operator: [REDACTED]

Name of Owner or Licensee: Cleary Bros (Bombo) Pty Ltd

Postal Address of Licensee: PO Box 210, Port Kembla NSW 2505

Licence/Lease Number/s (if any)

From Mining, Exploration & Geoscience (NSW Mineral Resources): N/A

From Crown Lands or other NSW Department: N/A

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: Bridon Pty Ltd, PO Box 210, Port Kembla NSW 2505

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** [REDACTED] **DATE: 31/10/2023**
- **CONTACT PERSON for this return:** Mark Hammond, Quality and Environment Manager
- **NAME (Block letters):** MARK HAMMOND **Telephone:** 02 4275 1000

Extractive Materials Return 2022-2023



Regional
NSW

Form S1 – Period Ending 30 June 2023

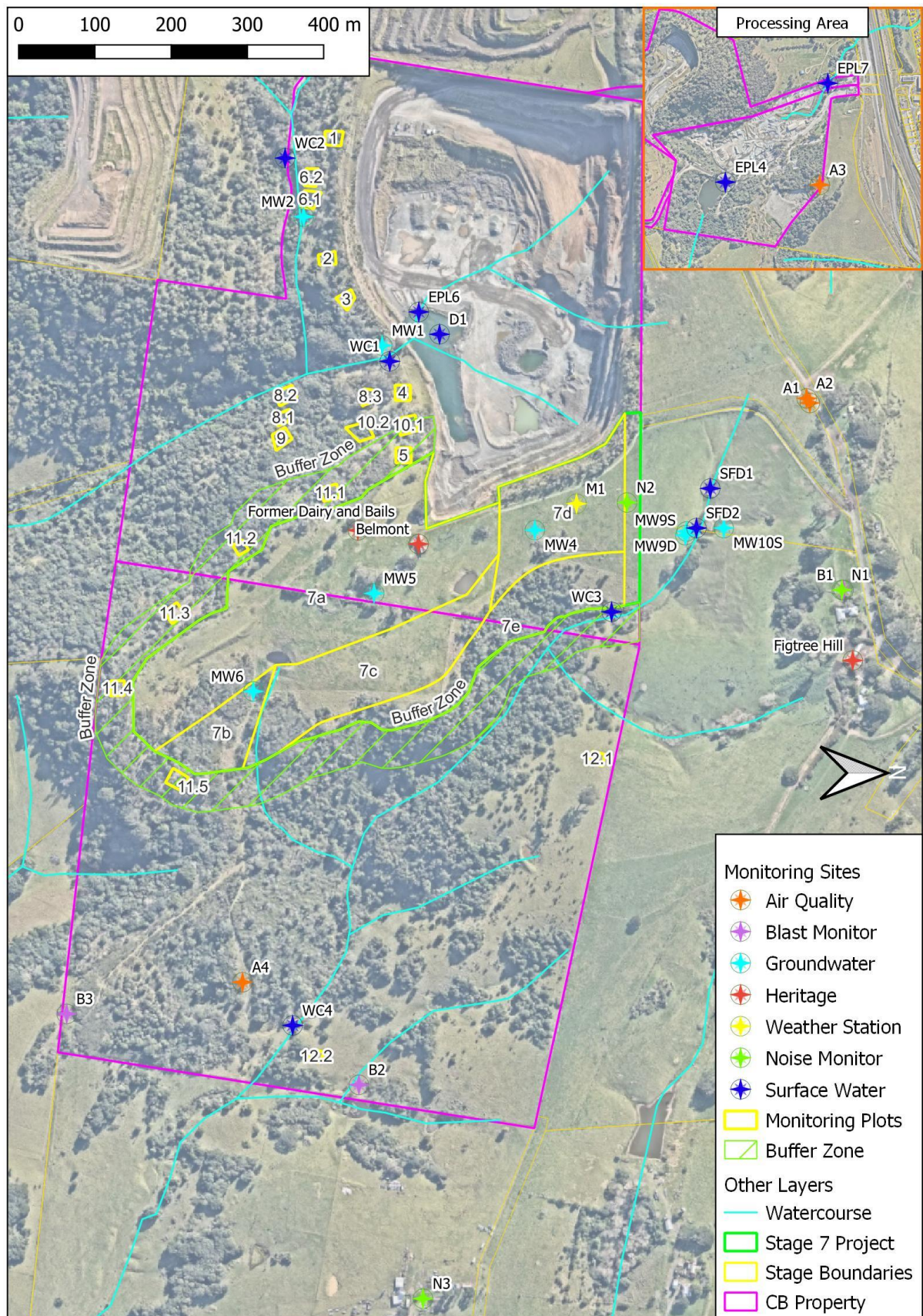
Sales During 2022-2023

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	Armour Rock, spalls, shot rock, gabion, scour	51,383
Over 30mm to 75mm	70mm crushed rock, rock fill, ballast	10,479
5mm to 30mm	20mm, 14mm, 10mm, 7mm, 5mm aggregates and blends	231,690
Under 5mm	Crusher dust and related products, bedding sand	129,910
Natural Sand		0
Manufactured Sand	Manufactured sand	39,138
Prepared Road Base & Sub Base	DGB, DGS, SMZ	289,003
Other Unprocessed Materials		0
Recycled Materials		
Crushed Coarse Aggregates		
Over 75mm		0
Over 30mm to 75mm		190
5mm to 30mm		0
Under 5mm		0
Natural Sand		0
Manufactured Sand		0
Prepared Road Base & Sub Base		17,032
Other Unprocessed Materials		0
River Gravel		
Over 30mm		0
5mm to 30mm		0
Under 5mm		0
Construction Sand	Excluding Industrial	0
Industrial Sand		0
Foundry, Moulding		0
Glass		0
Other (Specify)		0
Dimension Stone	Building, Ornamental, Monumental	0
Quarried in Blocks		0
Quarried in Slabs		0
Decorative Aggregate	Including Terrazzo	0
Loam	Soil for Topdressing, Garden soil, Horticultural purposes)	1,001
TOTAL SITE PRODUCTION		769,826
Gross Value (\$) of all Sales		
Type of Material	Latite and tuffaceous agglomerate	
Number of Full-Time Equivalent (FTE) Employees	Employees: 30	Contractors: 10

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

ANNEXURE B - ENVIRONMENTAL MONITORING LOCATIONS



ANNEXURE C - MONITORING RESULTS FOR 2023-2024**Groundwater Monitoring Results**

	MW 1D			MW 1S		
	Sep-23	Dec-23	Mar-24	Sep-23	Dec-23	Mar-24
pH (pH units)	7.6	7.5	7.3	6.9	6.6	6.7
Conductivity (µS/cm)	957	1120	1420	813	698	840
TDS (mg/L)	654	786	799	596	511	452
TSS (mg/L)	33	89	282	33	2.5	2.5
Temperature (°C)	18.1	19.5	18.5	17.4	18.9	18.6
Alkalinity (mg/L)	285	310	290	179	98	136
Sulphate (mg/L)	219	261	305	246	239	215
Chloride (mg/L)	54	55	67	38	31	35
Calcium (mg/L)	79	84	121	60	33	47
Sodium (mg/L)	171	210	223	103	105	98
Potassium (mg/L)	0.5	0.5	0.5	3	2	2
Dissolved Arsenic (mg/L)	NR	NR	<0.001	NR	NR	NR
Dissolved Cadmium (mg/L)	NR	NR	<0.001	NR	NR	NR
Dissolved Chromium (mg/L)	NR	NR	<0.001	NR	NR	NR
Dissolved Copper (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Iron (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Lead (mg/L)	NR	NR	<0.001	NR	NR	NR
Dissolved Mercury (mg/L)	NR	NR	<0.001	NR	NR	NR
Dissolved Nickel (mg/L)	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Dissolved Zinc (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ammonia (mg/L)	<0.01	<0.01	0.14	<0.01	<0.01	<0.01
Nitrate (mg/L)	0.2	<0.01	3.12	0.33	0.39	<0.01
TKN (mg/L)	0.4	1.1	2.3	1	1.3	1.1
Total Phosphorus (mg/L)	0.06	<0.1	0.55	0.17	0.17	<0.1
TOC (mg/L)	10	5	5	23	23	20
Oil & Grease (mg/L)	<5	<5	<5	<5	<5	<5
BOD (mg/L)	<2	<2	2	<2	<2	<2
Depth (mbgl)	25.1	25.0	25.8	5.1	4.7	6.1

NR = Not Required

	MW 2D			MW 2S		
	Sep-23	Dec-23	Mar-24	Sep-23	Dec-23	Mar-24
pH (pH units)	7.7	7.4	7.3	7.4	6.5	7
Conductivity (µS/cm)	1370	1320	1550	1130	358	1060
TDS (mg/L)	870	868	956	863	323	694
TSS (mg/L)	154	49	200	218	44	164
Temperature (°C)	19.9	19	18.3	23	21.2	18.8
Alkalinity (mg/L)	261	240	251	368	98	306
Sulphate (mg/L)	183	239	208	203	53	175
Chloride (mg/L)	259	206	211	70	24	47
Calcium (mg/L)	101	106	123	82	14	80
Sodium (mg/L)	154	149	158	126	60	115
Potassium (mg/L)	<1	<1	<1	<1	<1	<1
Dissolved Arsenic (mg/L)	NR	NR	NR	NR	NR	NR
Dissolved Cadmium (mg/L)	NR	NR	NR	NR	NR	NR
Dissolved Chromium (mg/L)	NR	NR	NR	NR	NR	NR
Dissolved Copper (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Iron (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dissolved Lead (mg/L)	NR	NR	NR	NR	NR	NR
Dissolved Mercury (mg/L)	NR	NR	NR	NR	NR	NR
Dissolved Nickel (mg/L)	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Dissolved Zinc (mg/L)	<1	<1	<1	<1	<1	<1
Ammonia (mg/L)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nitrate (mg/L)	0.04	0.13	0.48	0.84	0.54	0.8
TKN (mg/L)	0.3	0.4	0.4	0.8	0.9	0.5
Total Phosphorus (mg/L)	<1	<1	<1	<1	<1	<1
TOC (mg/L)	8	2	2	12	7	4
Oil & Grease (mg/L)	<5	<5	<5	<5	<5	<5
BOD (mg/L)	<2	<2	3	<2	<2	<2
Depth (mbgl)	23.2	22.2	20.6	10.4	9.3	10.3

NR = Not Required

	MW4		MW5		MW6	
	Sep-23	Dec-23	Sep-23	Dec-23	Sep-23	Dec-23
pH (pH units)	7.7	7.3	10.2	10.8	7.72	8.2
Conductivity (µS/cm)	752	775	556	580	569	651
TDS (mg/L)	496	570	334	366	362	438
TSS (mg/L)	42	20	39	42	25	43
Temperature (°C)	18.1	18.8	18.1	19.8	19	18.8
Alkalinity (mg/L)	402	402	60	64	246	268
Sulphate (mg/L)	25	33	52	58	16	17
Chloride (mg/L)	39	38	119	124	66	51
Calcium (mg/L)	68	61	7	6	54	62
Magnesium (mg/L)	26	26	<1	<1	15	15
Sodium (mg/L)	99	94	105	108	64	68
Potassium (mg/L)	<1	<1	9	8	6	6
Depth (mbgl)	6.4	5.9	38.2	39.6	6.7	6.3

	MW9S	MW9D	MW10S
	Jun-24	Jun-24	Jun-24
pH (pH units)	7.04	7.92	6.35
Conductivity (µS/cm)	325.3	211.1	190.3
Temperature (°C)	16.6	17.7	17
Sulphate (mg/L)	8	38	11
Chloride (mg/L)	20	374	32
Calcium (mg/L)	26	112	3
Magnesium (mg/L)	9	58	3
Sodium (mg/L)	32	184	33
Potassium (mg/L)	1	3	0.5
Depth (mbgl)	4.1	3.8	2.4

Watercourse Quality Monitoring Results

	WC1			WC2		
	Sep-23	Dec-23	Mar-24	Sep-23	Dec-23	Mar-24
pH (pH units)	dry	858	dry	dry	1200	dry
Conductivity (µS/cm)	dry	7.8	dry	dry	7.8	dry
Turbidity (mg/L)	dry	23.7	dry	dry	24.1	dry
Temperature (°C)	dry	3.1	dry	dry	0.7	dry
TSS (mg/L)	dry	<5	dry	dry	<5	dry
TDS (mg/L)	dry	589	dry	dry	870	dry
Sodium (mg/L)	dry	107	dry	dry	130	dry
Potassium (mg/L)	dry	<1	dry	dry	1	dry
Calcium (mg/L)	dry	47	dry	dry	69	dry
Sulphate (mg/L)	dry	200	dry	dry	436	dry
Chloride (mg/L)	dry	32	dry	dry	33	dry
Alkalinity (mg/L)	dry	203	dry	dry	176	dry
Dissolved Copper (mg/L)	dry	<0.05	dry	dry	<0.05	dry
Dissolved Iron (mg/L)	dry	<0.05	dry	dry	<0.05	dry
Oil & Grease (mg/L)	dry	<5	dry	dry	<5	dry

NT = Not Tested

	WC3	WC4
	Jun-24	Jun-24
pH (pH units)	7.8	dry
Redox Potential (mV)	183	dry
Conductivity (µS/cm)	412	dry
Total Dissolved Solids (mg/L)	264	dry
TSS (mg/L)	<5	dry
Turbidity (NTU)	3.3	dry
Sodium (mg/L)	52	dry
Potassium (mg/L)	4	dry
Calcium (mg/L)	10	dry
Magnesium (mg/L)	11	dry
Sulphate (mg/L)	26	dry
Chloride (mg/L)	60	dry
Oil & Grease (mg/L)	<5	dry

Watercourse Flow Monitoring Results

Month	Flow (L/sec)	
	WC1	WC2
Jul-23	no flow	no flow
Aug-23	no flow	no flow
Sep-23	no flow	no flow
Oct-23	no flow	no flow
Nov-23	no flow	no flow
Dec-24	no flow	no flow
Jan-24	no flow	no flow
Feb-24	no flow	no flow
Mar-24	no flow	60
Apr-24	no flow	97.5
May-24	no flow	18
Jun-24	no flow	no flow

Stream West of Quarry Manager's Office

Date	pH (pH units)	Oil and Grease (mg/L)	(mg/L)
06/07/2023	7.9	<5	47
07/08/2023	8.1	<5	24
07/09/2023	8.1	<5	17
06/10/2023	8.6	<5	57
06/11/2023	8.6	<5	11
06/12/2023	8	<5	6
08/01/2024	7.7	<5	63
14/02/2024	8.1	<5	26
19/03/2024	7.72	<5	52
03/04/2024	7.8	<5	53
21/05/2024	8.1	<5	72
03/06/2024	8	<5	21

Quarry Extension Discharge Monitoring

Date	pH (pH units)	Turbidity (NTU)
06/12/2023	7.9	18.3
17/01/2024	6.9	17.1
19/03/2024	7.4	16.3
04/04/2024	7.6	15.7
12/04/2024	7.2	16.1
30/04/2024	7.3	22.2
06/05/2024	7.9	27.3
20/05/2024	7.3	19.1
07/06/2024	7.9	20

Deposited Dust Monitoring

All in g/m ² /mth	APD1		APD2		APD3		APD4	
Month	Ash	TIS	Ash	TIS	Ash	TIS	Ash	TIS
Jul-23	3.7	4.2	1.2	1.4	0.4	0.6	1.9	2.5
Aug-23	7.2	8.1	1.5	1.9	0.6	1	1	1.6
Sep-23	3.3	3.6	0.8	1.1	0.3	0.5	0.6	0.8
Oct-23	1.9	2.3	1.2	1.7	0.5	1	0.7	1.2
Nov-23	2.7	3.9	1.1	1.6	0.6	0.8	1.3	1.5
Dec-23	0.9	1.4	1.5	3.5	2.4	4	2.1	4.7
Jan-24	0.4	0.6	1	1.4	2.2	4.8	0.7	1
Feb-24	4.7	6.7	0.7	1.2	0.8	1.6	1.7	3.4
Mar-24	4.4	5.1	2.4	3	0.6	1.2	0.7	0.8
Apr-24	3.5	4.2	1.6	1.8	0.4	0.6	0.9	1.9
May-24	7.1	8.6	0.7	0.9	0.3	0.3	2.6	4.1
Jun-24	2.1	2.7	0.7	1.2	0.5	1.1	0.5	0.7

HVAC PM₁₀ Monitoring

Date	PM10 (µg/m ³)	Date	PM10 (µg/m ³)	Date	PM10 (µg/m ³)	Date	PM10 (µg/m ³)
04/07/2023	11.9	08/10/2023	3.4	06/01/2024	4.7	05/04/2024	6.8
10/07/2023	1.3	14/10/2023	7.5	12/01/2024	6	11/04/2024	4.2
16/07/2023	5.2	20/10/2023	15.4	18/01/2024	9.7	17/04/2024	5
22/07/2023	2.4	26/10/2023	7.9	24/01/2024	21.5	23/04/2024	13.7
28/07/2023	22.3	01/11/2023	9.5	30/01/2024	7.8	29/04/2024	15.1
03/08/2023	15.5	07/11/2023	6.4	05/02/2024	18.9	05/05/2024	4.6
09/08/2023	9.6	13/11/2023	9.7	11/02/2024	9.1	11/05/2024	1.7
15/08/2023	2.2	19/11/2023	11.4	17/02/2024	Power outage	17/05/2024	12.6
21/08/2023	10.6	25/11/2023	11.3	23/02/2024	22.4	23/05/2024	6.3
27/08/2023	4.6	01/12/2023	2.7	29/02/2024	24.4	29/05/2024	18.4
02/09/2023	2.8	07/12/2023	13.2	06/03/2024	20.1	04/06/2024	10.8
08/09/2023	18.6	13/12/2023	9.4	12/03/2024	18.4	10/06/2024	3.3
14/09/2023	30.8	19/12/2023	18.9	18/03/2024	3.5	16/06/2024	1.2
20/09/2023	45	25/12/2023	3.9	24/03/2024	7.1	22/06/2024	3.3
26/09/2023	8.2	31/12/2023	5.8	30/03/2024	11.3	28/06/2024	15.6
02/10/2023	12.8						

Blast Monitoring

Blast ID	Date	B1 - The Cottage		B3 - South	
		Overpressure (dBL)	Vibration (mm/s)	Overpressure (dBL)	Vibration (mm/s)
21/23	03/07/2023	106.9	1.17	NR	NR
22/23	11/07/2023	104.8	2.05	NR	NR
23/23	21/07/2023	104.5	0.75	NR	NR
24/23	25/07/2023	108.4	1.87	NR	NR
25/23	01/08/2023	106.1	0.82	NR	NR
26/23	08/08/2023	107.3	1.59	NR	NR
27/23	16/08/2023	101.1	1.89	NR	NR
28/23	22/08/2023	98.4	1.78	NR	NR
29/23	05/09/2023	96.3	2.08	NR	NR
30/23	12/09/2023	102.4	1.26	NR	NR
31/23	19/09/2023	96.3	1.74	NR	NR
32/23	03/10/2023	85.1	1.06	NR	NR
33/23	20/10/2023	101.9	2.55	NR	NR
34/23	10/11/2023	103.8	1.55	NR	NR
35/23	21/11/2023	102.2	1.16	NR	NR
37/23	01/12/2023	103.7	1.18	NR	NR
38/23	08/12/2023	110	0.95	NR	NR
39/23	19/12/2023	109	1.15	NR	NR
01/24	19/01/2024	85	0.3	NR	NR
02/24	02/02/2024	103.5	1.42	NR	NR
03/24	09/02/2024	101.1	0.53	NR	NR
04/24	13/02/2024	103.5	1.7	NR	NR
05/24	23/02/2024	85	0.3	NR	NR
06/24	01/03/2024	108.2	1.15	NR	NR
07/24	12/03/2024	102.2	0.88	NR	NR
8/24	22/03/2024	108.1	1.38	NR	NR
9/24	15/04/2024	109.2	1.34	NR	NR
10/24	01/05/2024	105.5	0.82	NR	NR
13/24	21/05/2024	107.5	0.56	NR	NR
12/24	28/05/2024	119.1	0.73	101.9	0.82
14/24	04/06/2024	85	0.3	NR	NR
15/24	14/06/2024	118.1	0.56	97.5	0.685
16/24	25/06/2024	103.7	0.54	97.5	0.674

NR = Not Required

ANNEXURE D - NOISE SURVEY – AUGUST 2023

QUARRY OPERATION NOISE MONITORING

**Albion Park Quarry Extension - Stages 5 & 6
August 2023**

Prepared for:

Cleary Bros (Bombo) Pty Ltd
39 Five Islands Road
PORT KEMBLA NSW 2505

SLR Ref: 610.04156.01100-R01
Version No: -v1.1
06 October 2023



PREPARED BY

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Cleary Bros (Bombo) Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.04156.01100-R01-v1.1	6 October 2023	Jason Rasquinha	Aaron McKenzie	Aaron McKenzie
610.04156.01100-R01-v1.0	5 October 2023	Jason Rasquinha	Aaron McKenzie	Aaron McKenzie

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APPENDICES

- Appendix A: Acoustic Terminology
- Appendix B: Noise Monitoring Graphs
- Appendix C: Site Contributions at Receivers

1 Introduction

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Cleary Bros (Bombo) Pty Ltd to conduct the 2023 annual noise compliance monitoring of its Albion Park Quarry Operations, Albion Park Rail, NSW.

Noise monitoring was undertaken during Winter 2023 including attended noise measurements and noise logging on the site and at the nearest receivers to assist in quantifying quarry noise levels. A noise model of the site was also utilised to assist in determining site contribution where the site was inaudible during noise monitoring. This report details the findings of the noise compliance assessment.

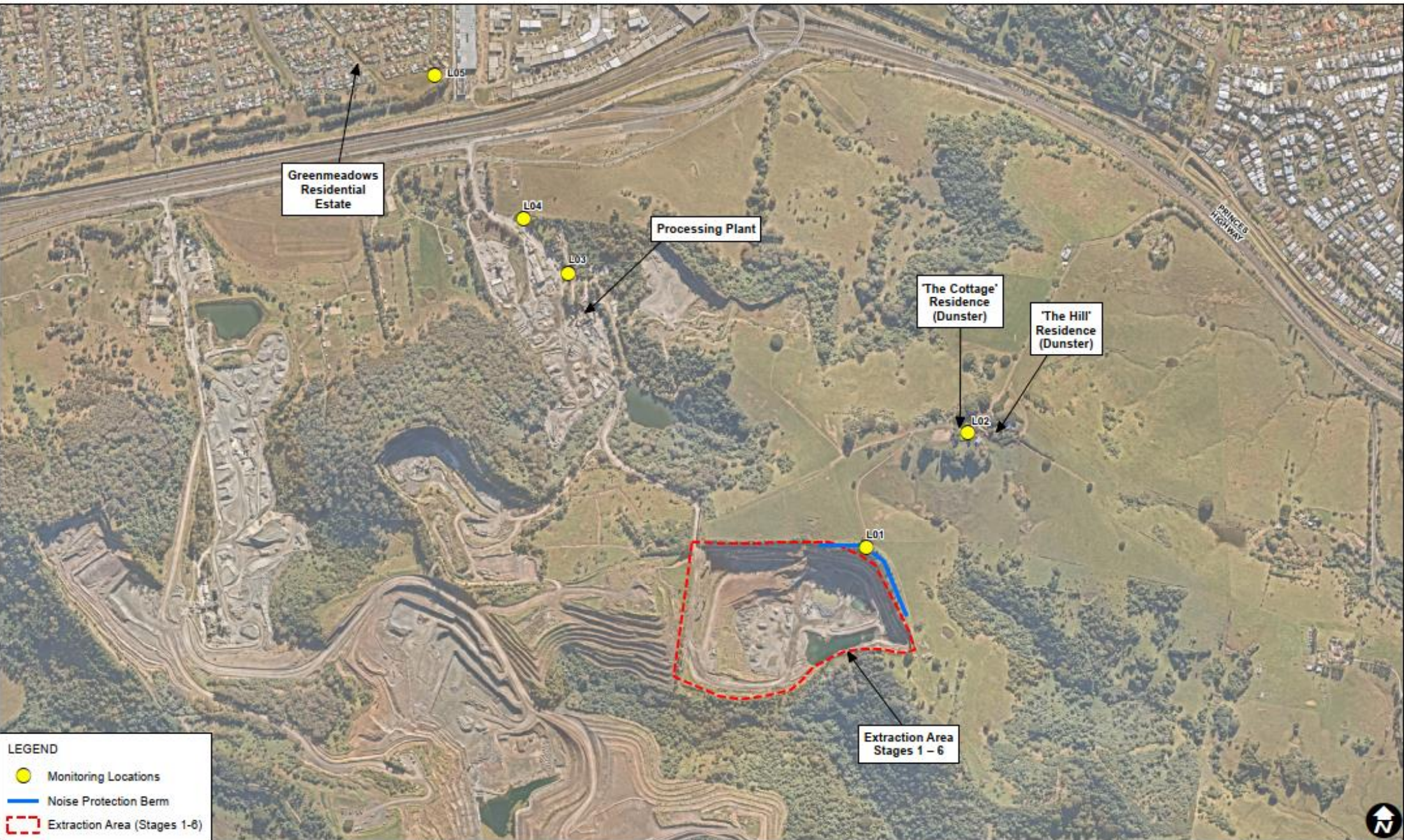
The following report uses specialist acoustic terminology. An explanation of common terms is provided in **Appendix A**.

2 Site Description

Albion Park Quarry is located at Albion Park around 1.2 km to the south of Princes Highway. A site map showing the location of the Albion Park Quarry Processing Plant and Quarry Extension Area (currently operating in the Stages 5/6 Extraction Area) and the nearest noise-sensitive receivers, is presented in **Figure 1**.

The Cottage residence is the nearest privately owned residence to the Quarry Extension Area and that the Greenmeadows Residential Estate is the nearest noise sensitive residential area affected by noise from the Processing Plant.

The 5 m high noise protection berm required under the original Development Consent to attenuate noise transmission from the Quarry Extension Area activities is shown in **Figure 1**.



LEGEND

- Monitoring Locations
- Noise Protection Berm
- Extraction Area (Stages 1-6)

0 150 300
m

Scale: 1:12,500 at A4
Coordinate System: GDA2020 MGA Zone 56

Date Drawn: 08-Aug-2023
Project Number: 610.04156

3 Quarry Environmental Management Plan

The criteria and procedures in the Quarry Environmental Management Plan (QEMP) for the Albion Park Quarry which relate to noise are as follows:

“4.5 NOISE LIMITS

4.5.1 Performance Objective

Source - Quarry development consent: schedule 4, conditions 4, 7 and 8; Access road consent: conditions 16, 17 and 18 (identical).

Requirement - Operational noise generated by the development must not exceed criteria specified in the Table below under conditions of wind speeds (10 metres above ground) of up to 0.5 metres per second and under temperature gradients of up to 0°C per 100 metres (Condition 4).

Receiver Locations	Noise Limits LAeq15min		
	Stages 1-2	Stages 3-4	Stages 5-6
“The Hill” residence (Dunster premises)	35	38	35
“The Cottage” residence (Dunster premises)	35	38	35
Approved rural worker’s dwelling (Dunster premises)	35	38	35
Greenmeadows residential estate	41	41	41

Verification - Noise measurement to be undertaken at the most affected point on the receptor boundary or within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary. Measurements to be undertaken by a qualified person on an annual basis during the Winter months. Results are to be included in the Annual Review. Noise monitoring procedures are included in the Noise and Blast Management Plan and summarised in section 6.2 of this QEMP.

Notification - Within seven days of detecting an exceedance of a noise limit in the table above, the exceedance is to be reported to the EPA, the Secretary and the owner of the property.”

“6.2 NOISE MONITORING

Source - Noise monitoring requirements are detailed in the Noise and Blast Management Plan and summarised below.

Location - Noise monitoring locations are as follows:

Location Type	Monitoring
Unattended monitor	Quarry Extension Area
Unattended monitor	Processing Plant
Residential Assessment Location (attended)	“The Cottage” (Fig Tree Hill Residence)
Residential Assessment Location (attended)	Greenmeadows Residential Estate

Operator attended monitoring and unattended noise logging shall be carried at all of the above locations, except as detailed under "Frequency".

Frequency - Unattended noise logging is to be carried out for a minimum period of seven days on an annual basis during the Winter months, and is to be accompanied by operator attended monitoring.

Method - Operator attended monitoring shall quantify and characterise the maximum (L_{Amax}) and the average ($L_{Aeq(15minute)}$) intrusive noise from quarrying over a 15 minute measuring period.

Unattended continuous noise logging shall be conducted to quantify overall ambient noise amenity levels resulting from quarrying and processing emissions and other environmental noise sources.

Measurements will be taken with acoustic instrumentation carrying current NATA or manufacturer calibration certificates. Instrument calibration will be checked before and after each measurement survey.

All noise measurements will be accompanied by qualitative and quantitative measurements of prevailing local weather conditions. The operator shall record any significant quarry generated noise sources and obtain the operating logs for quarry plant and equipment during the measurement period.

Performance Targets - Performance targets are summarised in Section 4.5 of this QEMP.

Assessment - Operator attended residential measurements are designed to confirm that noise generated by the development does not exceed the noise limits specified in the development consent (see Section 4.5 of this QEMP).

Unattended noise logger data shall be correlated with weather data and quarry operating conditions, with data from periods of unstable weather deleted. The results shall be presented graphically.

Review and reporting - The results of noise monitoring are to be included in the Annual Review.

In the event of any exceedance of relevant criteria, the matter will immediately be brought to the attention of the Quarry Production Manager, who will report the exceedance as required in Section 6.7 of this QEMP."

4 Operating Hours

Conditions 5 and 6, Schedule 4 of the 2017 Modified Quarry Extension DA Consent states that:

5. *“The Applicant must comply with the operating hours in Table 2.*

Activity	Days of the Week	Time
Drilling, rock breaking, loading and haulage of materials from quarry to processing plant, processing and stockpiling, overburden stripping and other stage preparatory works, all site construction activities, rehabilitation works, general plant and maintenance. Processing, crushing and screening and product transfer to stockpiles	Monday - Friday	7.00 am - 5.30 pm
	Saturday	7.00 am - 1.00 pm

Table 2: Operating Hours of the Development

6. *The following activities may be carried out at the premises outside the hours specified in Table 2:*
- the delivery of materials as requested by police or other authorities for safety reasons;*
 - emergency work to avoid the loss of lives, property and/or to prevent environmental harm;*
 - workshop activities and other maintenance work inaudible at the nearest affected receiver.”*

5 Site Equipment

In order to assist in assessing the noise emissions from the Quarry Extension and Processing Plant Area activities, the equipment operating during the 2023 noise survey was recorded and is presented in **Table 1**. Not all equipment was operating on all days of the noise survey.

Table 1 Quarry Extension and Processing Plant Area (Stages 5 & 6 Extraction Area Operations) Equipment Fleet – July/August 2023

Equipment Type	Fleet
Excavator - CAT 345	1
Excavator – Komatsu PC800	1
Excavator – Hitachi 1200	1
Excavator (26t)	1
Dump trucks – CAT 773 (50t)	1
Dump trucks – CAT 777 (100t)	3
Water truck	1
Loader – CAT 980	4
Loader - CAT 992	1
Blasthole Drill Rig	1

Equipment Type	Fleet
Grader	1
Dewatering Pump	1
Primary Crusher	1
Secondary Crusher	1
Level 1 Crusher	1
Quarry Pit Mobile Crusher & Screen	1
Jaw and Bone Crusher & Screen	1
Pugmill	1
Dozer – CAT D10	1

6 Instrumentation And Measurement Parameters

6.1 Noise Monitoring Equipment

All acoustic instrumentation employed throughout the monitoring programme was designed to comply with the requirements of AS IEC 61672.1-2004 “*Electroacoustics - Sound Level Meters*” and carried current NATA or manufacturer calibration certificates.

All instrumentation was programmed to continuously record statistical noise level indices in 15-minute intervals, which included the LA1, LA10, LA90 and the LAeq.

Instrument calibration was checked before and after each measurement survey, with the variation in calibrated levels not exceeding the acceptable variation of ± 0.5 dBA (in accordance with AS 1055).

Table 2 Acoustic Instrumentation

Location	Description	Type or Class	Serial Number
L01 – Near Extraction Area	Svan 977 Noise Logger	Type 1	99025
L02 – The Cottage Residence	Svan 977 Noise Logger	Type 1	98492
L03 – Near Processing Plant	Svan 977 Noise Logger	Type 1	99023
L04 – Weighbridge	Svan 977 Noise Logger	Type 1	98464
-	Brüel & Kjær 2250L Precision Sound Level Meter	Type 1	3005904
-	G.R.A.S 42 AG Sound Level Calibrator	Type 1	280550

6.2 Meteorological Station and Conditions during Noise Survey

Cleary Bros operate an on-site meteorological monitoring station. The collected weather data was used for the identification of periods when wind speeds of up to 0.5 m/s at 10 m above ground level were experienced (refer to **Section 3**).

Wind has the potential to increase noise at a receiver when it is light and stable and blows from the direction of the noise source. As the strength of the wind rises the noise produced by the wind will obscure noise from most industrial and transportation sources.

Wind effects must be considered when wind is a feature of the area under consideration. Where wind blows from the source to the receiver at speeds up to 3 m/s for more than 30% of the time in any season, wind is considered a feature of the area, and noise level predictions must be made under these conditions.

It was established in 2002 that noise enhancing downwind conditions are not a feature of this site, as defined in the Environment Protection Authority's (EPA's) *Industrial Noise Policy (INP)*.

7 Noise Monitoring

7.1 Unattended Noise Monitoring

Four unattended continuous noise loggers were installed at strategic positions within the site to capture the contributions from Albion Park Quarry. The on-site loggers were installed near the Extraction Area as well as in the Processing Plant Area near the crusher on 28 July 2023 for a period of 7 days.

The weather conditions would have had a minimal effect on the measured noise level at the two unattended monitoring locations (Processing Plant and Quarry Extension Areas) because of the proximity of the noise loggers to the Albion Park Quarry operations.

In order to derive the statistical noise levels for various daily time periods, the data was processed for the periods 0700 hours to 1800 hours (daytime), 1800 hours to 2200 hours (evening) and 2200 hours to 0700 hours (night-time). The calculated statistical ambient noise levels at each monitoring location are presented in **Table 3**.

The results from the noise loggers situated at the Extraction Area (L01), the Cottage Residence (L02), the Processing Plant (L03) and the Weighbridge (L04) are presented in **Table 3**. The noise monitoring graphs together with the wind speed, wind direction and rainfall measured at the on-site meteorological monitoring station are presented in **Appendix A**.

Table 3 Unattended Statistical Ambient Noise Level Summary (July/August 2023)

Logger Location	Daytime (dBA)				Evening (dBA)				Night-time (dBA)			
	LAeq	LA1	LA10	RBL	LAeq	LA1	LA10	RBL	LAeq	LA1	LA10	RBL
L01 – Extraction Area	62	64	61	40	51	42	40	33	52	39	35	29
L02 – Cottage Residence	52	61	50	37	45	47	43	38	42	42	39	29
L03 – Processing Plant	65	73	68	53	61	65	61	57	61	62	54	32
L04 – Weighbridge	65	65	58	48	57	55	52	47	60	51	48	33

Note 1: RBL = Rating Background Level.

The monitoring results and graphs indicate that the measured ambient noise levels at L01, L03 and L04 are predominantly from the Albion Park Quarry operations alone. The graphs clearly indicate the periods when the Albion Park Quarry was operating. The noise monitoring results from “The Cottage” indicate that the ambient environment is influenced by local noise sources and transport (local fauna, road and aircraft) noise.

During the deployment of the unattended noise monitor at the quarry extension area, it was observed that a front-end loader, two excavators, a mobile crusher, a dozer and dump trucks were operating in the extraction area.

7.2 Attended Monitoring

Operator attended noise monitoring was conducted at five locations including Greenmeadows residential estate to confirm the noise contributions from the site. Results of the operator attended noise surveys are provided in **Table 4**.

Table 4 Operator Attended Noise Survey Results

Location	Date/Start Time/ Weather	Primary Noise Descriptor dBA (15 minute)					Modifying Factors Applicable	Description of Noise Emissions and Typical Maximum Noise Levels (dBA)
		L _{Amax}	L _{A1}	L _{A10}	L _{A90}	L _{Aeq}		
L01 – Near Extraction Area	4/8/2023 11:14 21°C 2.1 m/s NNE	80	75	72	61	68	N/A	<i>Site related noise events:</i> APQ: Clearly audible Front end loader: 70 – 80 Dozer: 62 – 65 Loading truck: 60 - 65 L_{Aeq}(15minute) contribution: 68 dBA <i>Other noise events:</i> Birds : 50 – 60
L02 – “The Cottage” Residence	4/8/2023 11:40 21°C 1.7 m/s NE	59	49	43	39	42	N/A	<i>Site related noise events:</i> APQ: Inaudible L_{Aeq}(15minute) contribution: <29 dBA <i>Other noise events:</i> Traffic: 38 – 48 Birds: 43 – 58 Aircraft: 36 – 48 Impact: 59

Location	Date/Start Time/ Weather	Primary Noise Descriptor dBA (15 minute)					Modifying Factors Applicable	Description of Noise Emissions and Typical Maximum Noise Levels (dBA)
		L _{Amax}	L _{A1}	L _{A10}	L _{A90}	L _{Aeq}		
L03 – Near Processing Area	4/8/2023 10:36 20°C 2.5 m/s NNE	84	74	62	48	61	N/A	<i>Site related noise events:</i> APQ: Clearly audible Heavy vehicles: 56 – 77 Light vehicles: 46 – 62 Impacts: 52 – 55 Vehicle cleaning: 58 Horn: 84 L_{Aeq}(15minute) contribution: 61 dBA <i>Other noise events:</i> Aircraft: 60 – 70
L04 - Near Weighbridge	4/8/2023 12:17 21°C 1.2 m/s NE	83	76	65	53	63	N/A	<i>Site related noise events:</i> APQ: Clearly audible Heavy vehicle movements: 55 – 83 Idling trucks: 57 Airbrake: 66 L_{Aeq}(15minute) contribution: 63 dBA <i>Other noise events:</i> Aircraft: 50-55
L05 - Greenmeadows Residential Area	4/8/2023 12:51 20°C 2.1 m/s WNW	67	61	54	46	52	N/A	<i>Site related noise events:</i> APQ: Inaudible L_{Aeq}(15minute) contribution: <36 dBA <i>Other noise events:</i> Highway traffic: 45-56 Construction: 49-54 Aircraft: 53 – 67

It was observed that operations within the Extraction Area were inaudible at The Cottage residence. L_{Aeq}(15minute) and noise contributions from the site, at this location, was estimated to be below 29 dBA. The existing noise environment at this location is dominated by distant traffic, aircraft and local fauna. Attended measurements conducted at the Greenmeadows residential estate, indicated that the processing plant is inaudible and noise contributions from the site, at this location, was estimated to be below 36 dBA. The existing noise environment at this location is dominated by traffic on the Princes Highway, aircraft, and construction activities at a site located to the east of the receivers. It is noted that the winds between 1.2 to 2.5 m/s, were recorded at the APQ weather station during the attended measurements.

8 Noise Impact Assessment

In order to give an indication of the quarry noise level contributions at the nominated receiver locations, the noise level contributions were calculated based on analysis of the noise logger results in conjunction with noise modelling.

Operational noise levels from the Site have been predicted at the various assessment locations using the CONCAWE industrial noise algorithm in SoundPLAN. The model includes buildings and site noise sources, ground topography and ground type (ground absorption modelled as 0.9 for the surrounding grassland areas and 0.5 for the quarry processing and storage areas).

The noise model, developed to assess the proposed stage 7 quarry extension, was updated to include the unattended monitoring locations at the Processing Plant and the quarry Extraction Area as well as general plant and equipment locations over the monitoring period. The 10 m wind speeds measured at the APQ weather station during the monitoring period were greater than 0.5 m/s during the periods when the site was identified to be operational. Minimum wind speeds of 1 m/s to 2 m/s were measured when the site was operational between 12:00 pm and 1:30 pm on 31 July 2023. This period is considered representative of typical quarry operations during the monitoring period and has been used to model the noise impact at the assessment locations. A propagation difference between the two monitoring locations and the assessment locations has been calculated using the noise modelling results. The measured noise levels at the Processing Plant and Quarry Extension Area have been corrected based on this propagation difference, to determine the noise levels measured at the nearest receivers.

The 2017 Modified Consent Condition noise limits apply under calm conditions only (wind speeds up to 0.5 m/s at 10 m height). Accordingly, neutral (i.e. no wind) conditions have been taken into account for the assessment.

The calculated calm scenario quarry noise levels are summarised in **Table 5**.

Table 5 Calculated Daytime Noise Contribution of the Albion Park Quarry

Residences	Noise Limits LAeq (15 minute) (dBA)	Noise Contribution at Receivers LAeq (15 minute) (dBA) ¹
"The Hill" Residence (Dunster)	35	32
"The Cottage" Residence	35	34
Greenmeadows Residential Estate	41	38

Note 1: Calculated site noise contributions from the site during neutral conditions.

A review of the results in **Table 5** indicates that the Albion Park Quarry complies with the noise limits at all three assessment locations during calm conditions.

Appendix B presents the LAeq(15minute) noise level monitored at the Albion Park Quarry together with the calculated contribution from the site at all receivers. It should be noted that the noise charts in **Appendix B** only give an indication of the quarry noise contribution between 12:00 pm and 1:30 pm on 31 July 2023.

9 Conclusion

SLR has been engaged to conduct an operational noise compliance assessment of the Albion Park Quarry Processing Plant and Quarry Extension Area (currently operating in the Stages 5/6 Extraction Area).

Unattended noise monitoring was conducted at strategic locations within the site in order to measure the noise from the site operations. Additional unattended and attended monitoring was conducted at the assessment locations to determine the noise contributions from site activities.

In addition to noise monitoring, noise modelling was conducted to determine the noise contribution from the site at the nearest receivers under neutral weather conditions. A comparison of the noise levels predicted by the noise model and the observations from the attended measurements indicate that the site is predicted to comply with the noise limits at all assessment locations.

Appendix A:

Acoustic Terminology

1. Sound Level or Noise Level

The terms 'sound' and 'noise' are almost interchangeable, except that 'noise' often refers to unwanted sound.

Sound (or noise) consists of minute fluctuations in atmospheric pressure. The human ear responds to changes in sound pressure over a very wide range with the loudest sound pressure to which the human ear can respond being ten million times greater than the softest. The decibel (abbreviated as dB) scale reduces this ratio to a more manageable size by the use of logarithms.

The symbols SPL, L or LP are commonly used to represent Sound Pressure Level. The symbol LA represents A-weighted Sound Pressure Level. The standard reference unit for Sound Pressure Levels expressed in decibels is 2×10^{-5} Pa.

2. 'A' Weighted Sound Pressure Level

The overall level of a sound is usually expressed in terms of dBA, which is measured using a sound level meter with an 'A-weighting' filter. This is an electronic filter having a frequency response corresponding approximately to that of human hearing.

People's hearing is most sensitive to sounds at mid frequencies (500 Hz to 4,000 Hz), and less sensitive at lower and higher frequencies. Different sources having the same dBA level generally sound about equally loud.

A change of 1 dB or 2 dB in the level of a sound is difficult for most people to detect, whilst a 3 dB to 5 dB change corresponds to a small but noticeable change in loudness. A 10 dB change corresponds to an approximate doubling or halving in loudness. The table below lists examples of typical noise levels.

Sound Pressure Level (dBA)	Typical Source	Subjective Evaluation
130	Threshold of pain	Intolerable
120	Heavy rock concert	Extremely noisy
110	Grinding on steel	
100	Loud car horn at 3 m	Very noisy
90	Construction site with pneumatic hammering	
80	Kerbside of busy street	Loud
70	Loud radio or television	
60	Department store	Moderate to quiet
50	General Office	
40	Inside private office	Quiet to very quiet
30	Inside bedroom	
20	Recording studio	Almost silent

Other weightings (eg B, C and D) are less commonly used than A-weighting. Sound Levels measured without any weighting are referred to as 'linear', and the units are expressed as dB(lin) or dB.

3. Sound Power Level

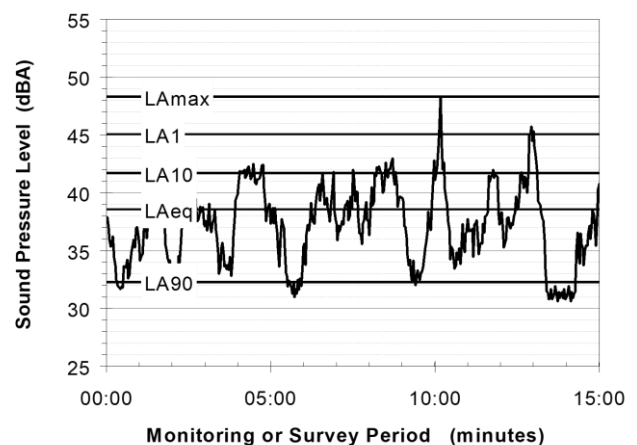
The Sound Power of a source is the rate at which it emits acoustic energy. As with Sound Pressure Levels, Sound Power Levels are expressed in decibel units (dB or dBA), but may be identified by the symbols SWL or LW, or by the reference unit 10^{-12} W.

The relationship between Sound Power and Sound Pressure is similar to the effect of an electric radiator, which is characterised by a power rating but has an effect on the surrounding environment that can be measured in terms of a different parameter, temperature.

4. Statistical Noise Levels

Sounds that vary in level over time, such as road traffic noise and most community noise, are commonly described in terms of the statistical exceedance levels LAN, where LAN is the A-weighted sound pressure level exceeded for N% of a given measurement period. For example, the LA1 is the noise level exceeded for 1% of the time, LA10 the noise exceeded for 10% of the time, and so on.

The following figure presents a hypothetical 15 minute noise survey, illustrating various common statistical indices of interest.



Of particular relevance, are:

LA1 The noise level exceeded for 1% of the 15 minute interval.

LA10 The noise level exceeded for 10% of the 15 minute interval. This is commonly referred to as the average maximum noise level.

LA90 The noise level exceeded for 90% of the sample period. This noise level is described as the average minimum background sound level (in the absence of the source under consideration), or simply the background level.

LAeq The A-weighted equivalent noise level (basically, the average noise level). It is defined as the steady sound level that contains the same amount of acoustical energy as the corresponding time-varying sound.

5. Frequency Analysis

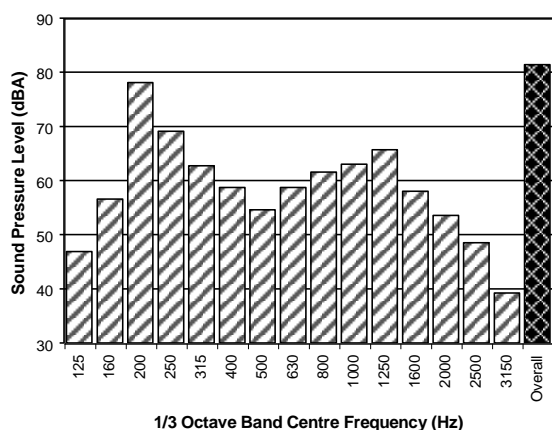
Frequency analysis is the process used to examine the tones (or frequency components) which make up the overall noise or vibration signal.

The units for frequency are Hertz (Hz), which represent the number of cycles per second.

Frequency analysis can be in:

- Octave bands (where the centre frequency and width of each band is double the previous band)
- 1/3 octave bands (three bands in each octave band)
- Narrow band (where the spectrum is divided into 400 or more bands of equal width)

The following figure shows a 1/3 octave band frequency analysis where the noise is dominated by the 200 Hz band. Note that the indicated level of each individual band is less than the overall level, which is the logarithmic sum of the bands.



6. Annoying Noise (Special Audible Characteristics)

A louder noise will generally be more annoying to nearby receivers than a quieter one. However, noise is often also found to be more annoying and result in larger impacts where the following characteristics are apparent:

- **Tonality** - tonal noise contains one or more prominent tones (ie differences in distinct frequency components between adjoining octave or 1/3 octave bands), and is normally regarded as more annoying than 'broad band' noise.
- **Impulsiveness** - an impulsive noise is characterised by one or more short sharp peaks in the time domain, such as occurs during hammering.
- **Intermittency** - intermittent noise varies in level with the change in level being clearly audible. An example would include mechanical plant cycling on and off.
- **Low Frequency Noise** - low frequency noise contains significant energy in the lower frequency bands, which are typically taken to be in the 10 to 160 Hz region.

7. Vibration

Vibration may be defined as cyclic or transient motion. This motion can be measured in terms of its displacement, velocity or acceleration. Most assessments of human response to vibration or the risk of damage to buildings use measurements of vibration velocity. These may be expressed in terms of 'peak' velocity or 'rms' velocity.

The former is the maximum instantaneous velocity, without any averaging, and is sometimes referred to as 'peak particle velocity', or PPV. The latter incorporates 'root mean squared' averaging over some defined time period.

Vibration measurements may be carried out in a single axis or alternatively as triaxial measurements (ie vertical, longitudinal and transverse).

The common units for velocity are millimetres per second (mm/s). As with noise, decibel units can also be used, in which case the reference level should always be stated. A vibration level V , expressed in mm/s can be converted to decibels by the formula $20 \log (V/V_0)$, where V_0 is the reference level (10^{-9} m/s). Care is required in this regard, as other reference levels may be used.

8. Human Perception of Vibration

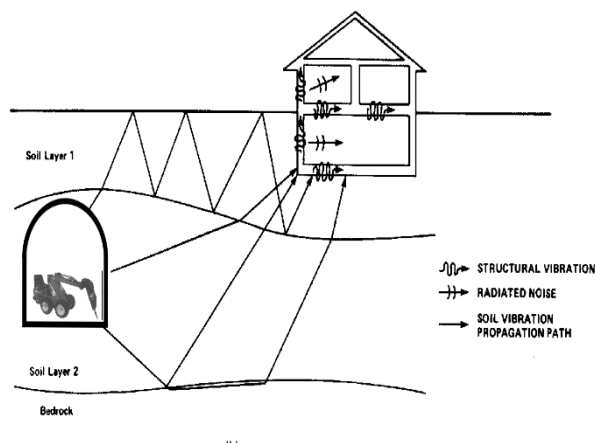
People are able to 'feel' vibration at levels lower than those required to cause even superficial damage to the most susceptible classes of building (even though they may not be disturbed by the motion). An individual's perception of motion or response to vibration depends very strongly on previous experience and expectations, and on other connotations associated with the perceived source of the vibration. For example, the vibration that a person responds to as 'normal' in a car, bus or train is considerably higher than what is perceived as 'normal' in a shop, office or dwelling.

9. Ground-borne Noise, Structure-borne Noise and Regenerated Noise

Noise that propagates through a structure as vibration and is radiated by vibrating wall and floor surfaces is termed 'structure-borne noise', 'ground-borne noise' or 'regenerated noise'. This noise originates as vibration and propagates between the source and receiver through the ground and/or building structural elements, rather than through the air.

Typical sources of ground-borne or structure-borne noise include tunnelling works, underground railways, excavation plant (eg rockbreakers), and building services plant (eg fans, compressors and generators).

The following figure presents an example of the various paths by which vibration and ground-borne noise may be transmitted between a source and receiver for construction activities occurring within a tunnel.



The term 'regenerated noise' is also used in other instances where energy is converted to noise away from the primary source. One example would be a fan blowing air through a discharge grill. The fan is the energy source and primary noise source. Additional noise may be created by the aerodynamic effect of the discharge grill in the airstream. This secondary noise is referred to as regenerated noise.

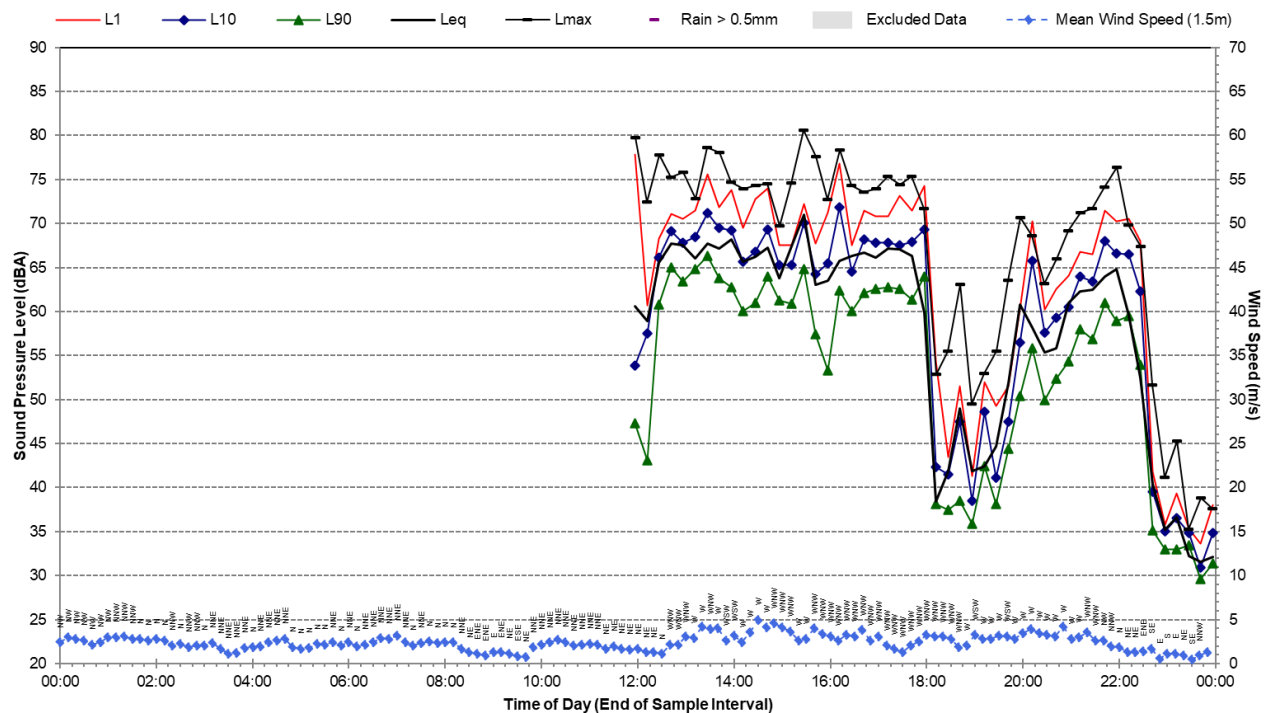
Appendix B:

Noise Monitoring Graphs

L01 – Near Extraction Area

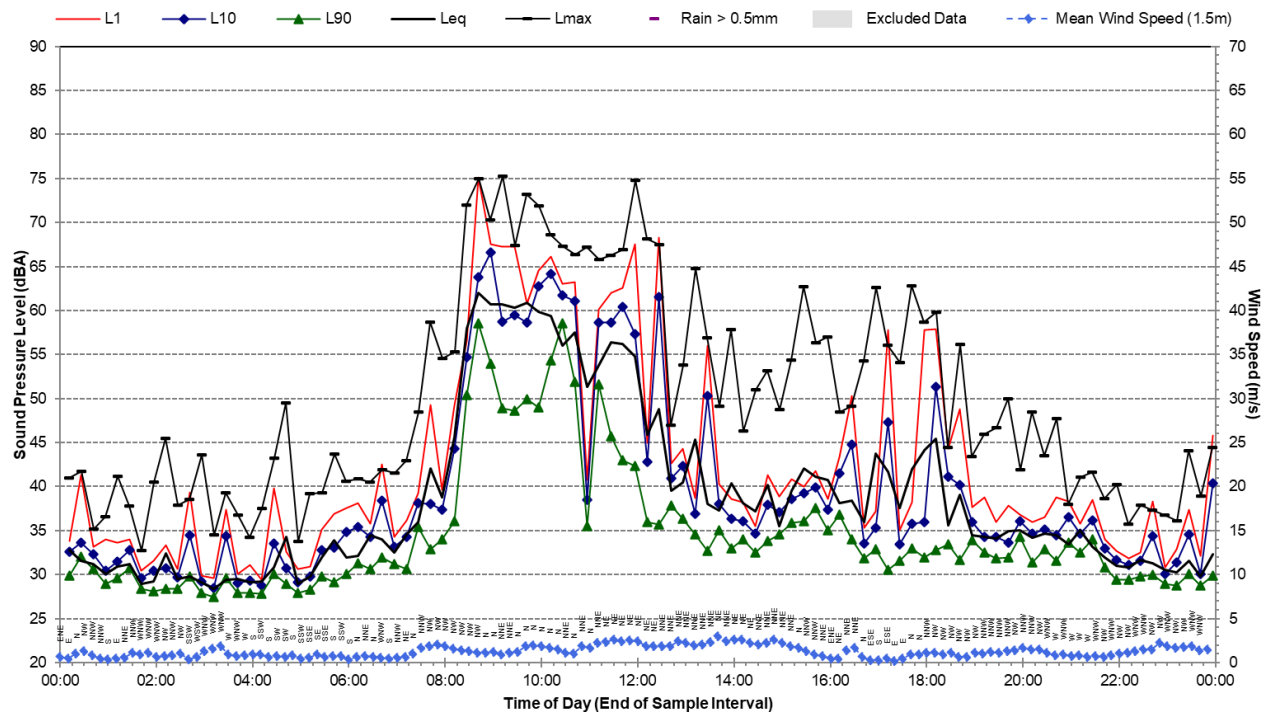
Statistical Ambient Noise Levels

L01 - Extraction Area - Friday, 28 July 2023



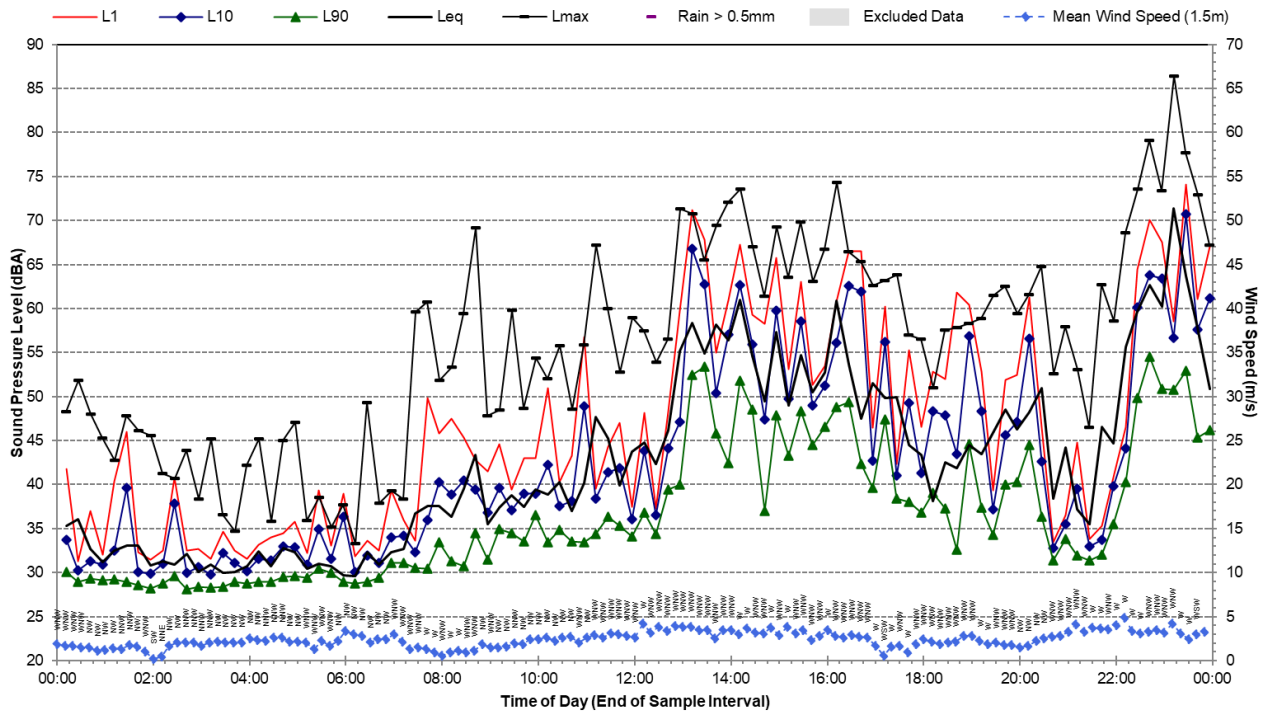
Statistical Ambient Noise Levels

L01 - Extraction Area - Saturday, 29 July 2023



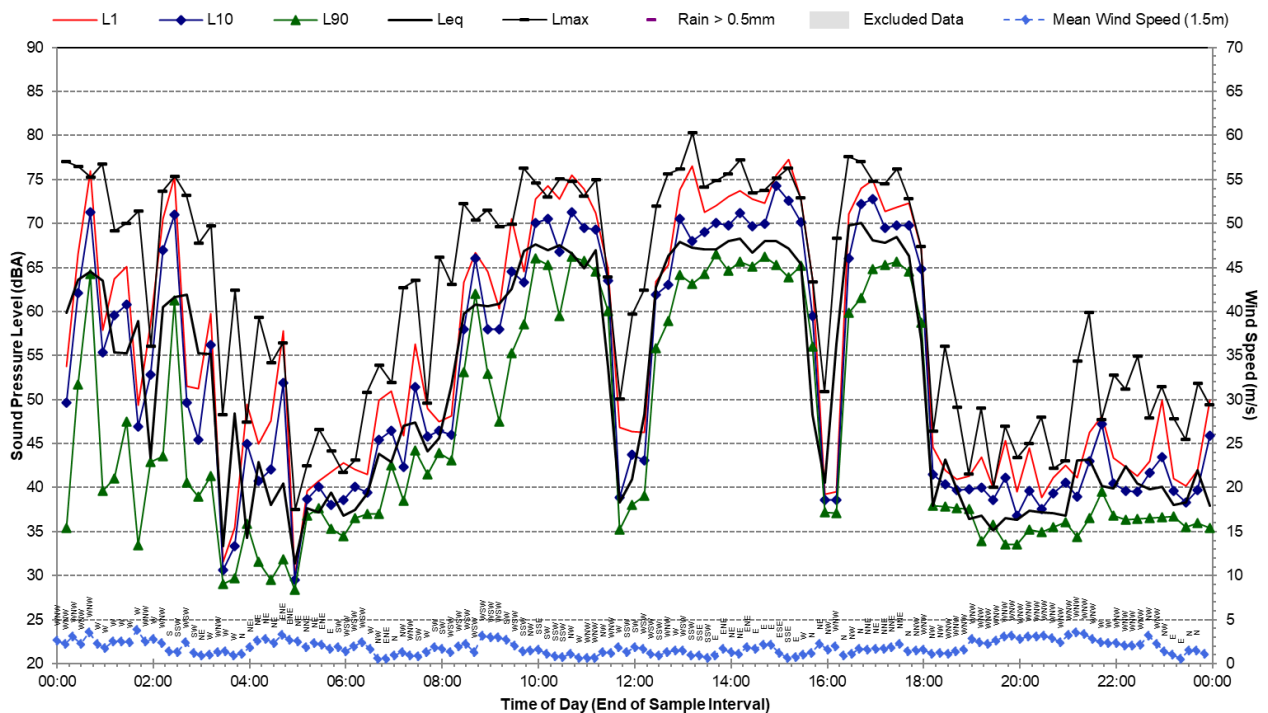
Statistical Ambient Noise Levels

L01 - Extraction Area - Sunday, 30 July 2023



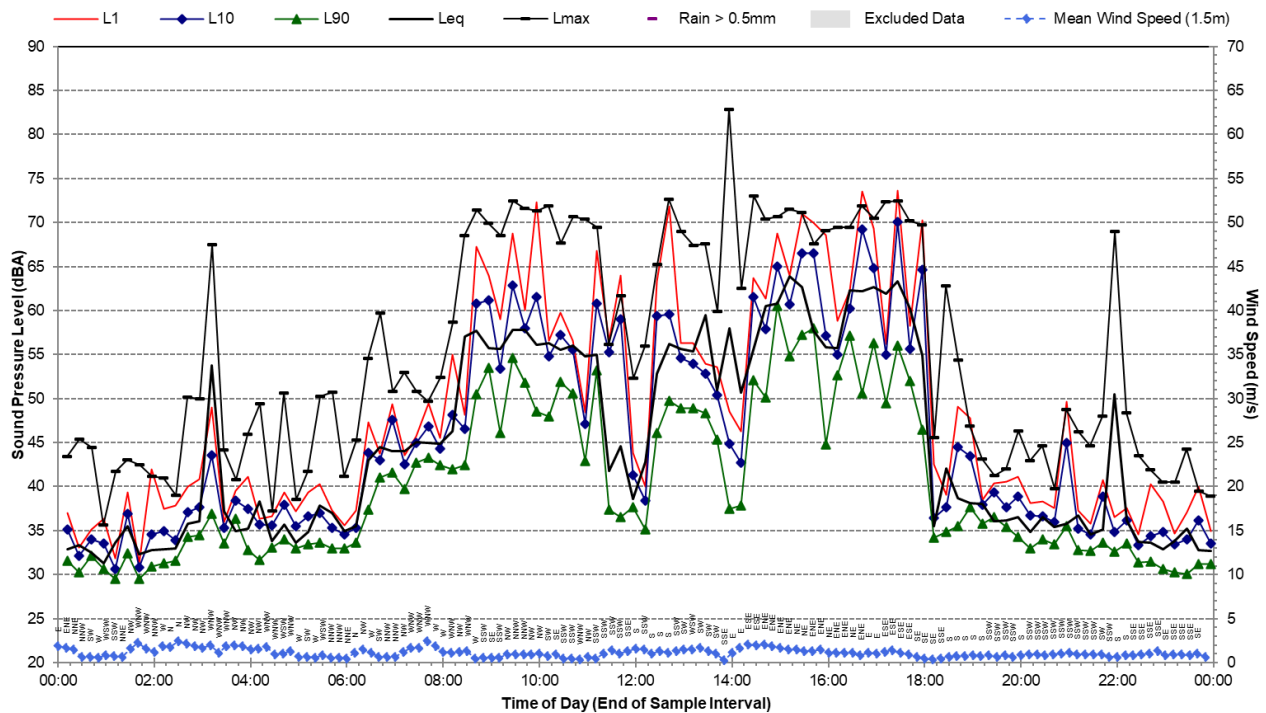
Statistical Ambient Noise Levels

L01 - Extraction Area - Monday, 31 July 2023



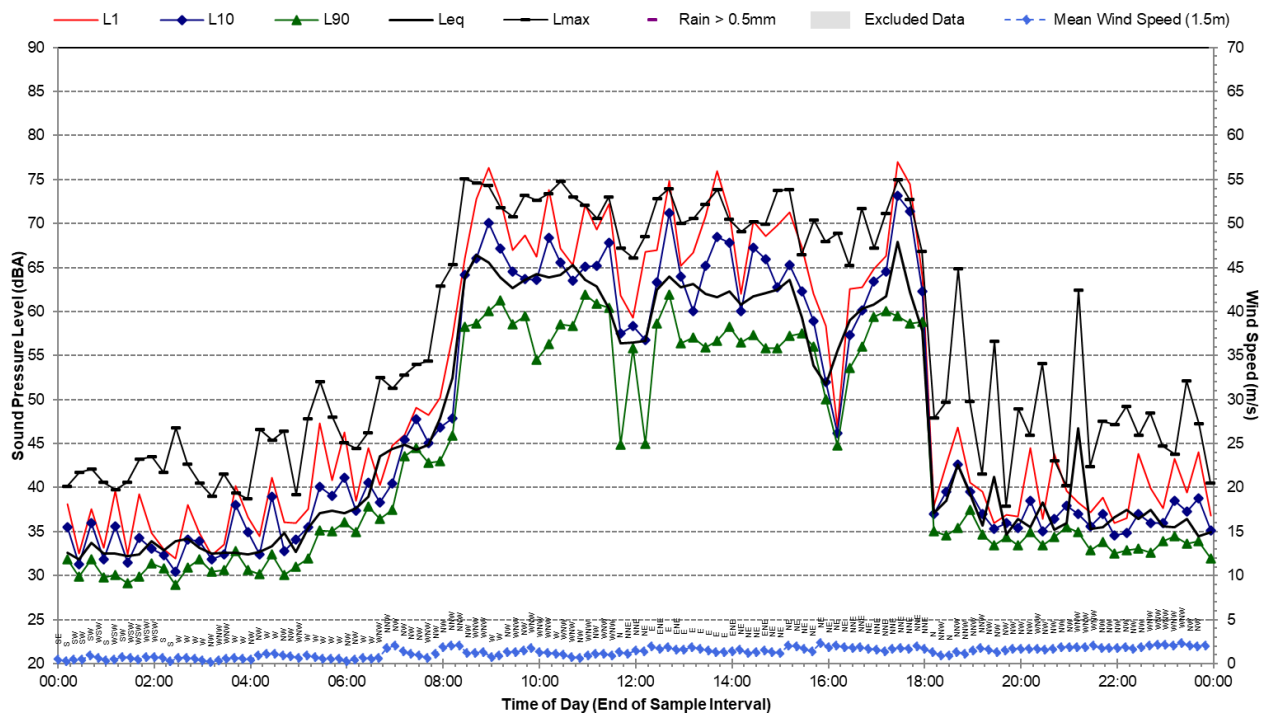
Statistical Ambient Noise Levels

L01 - Extraction Area - Tuesday, 1 August 2023



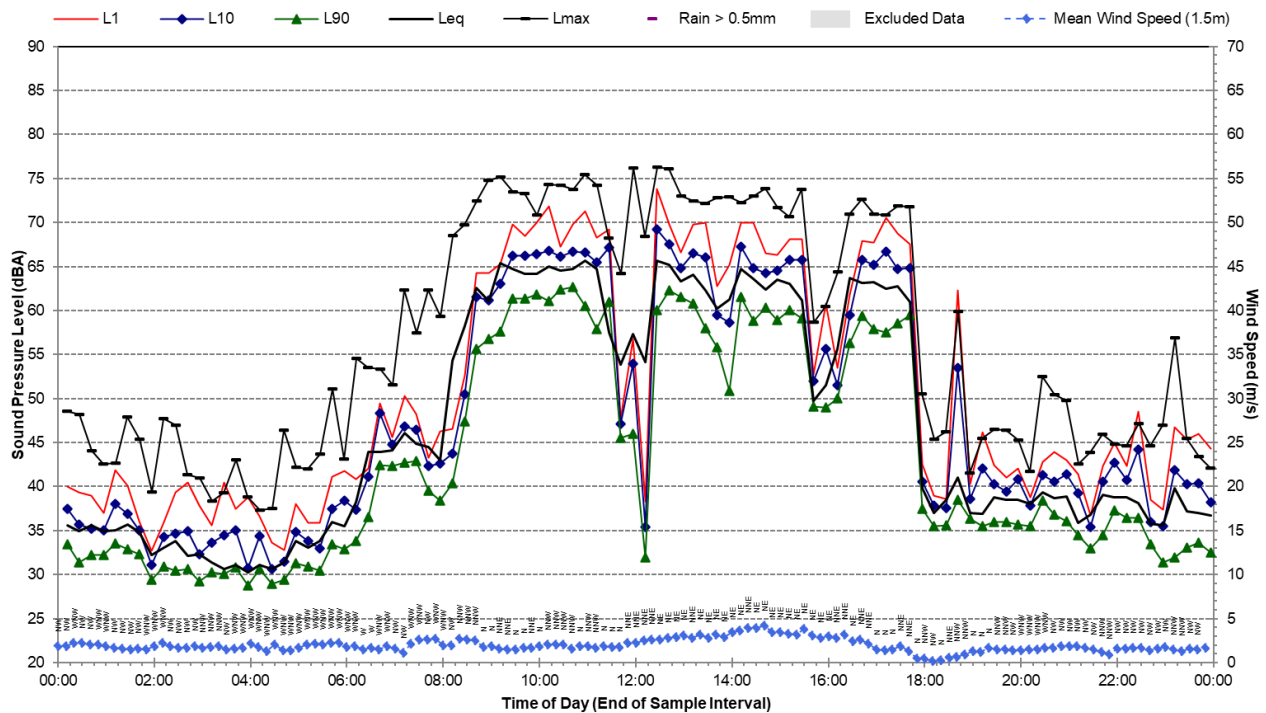
Statistical Ambient Noise Levels

L01 - Extraction Area - Wednesday, 2 August 2023



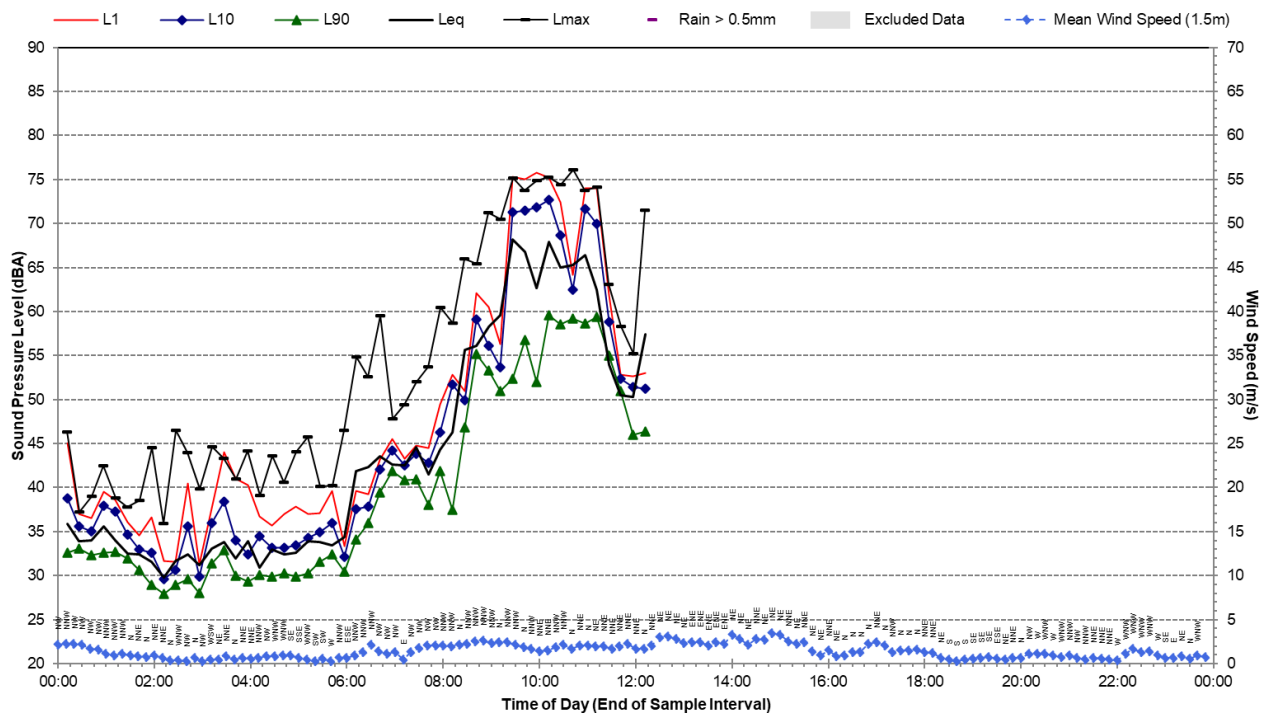
Statistical Ambient Noise Levels

L01 - Extraction Area - Thursday, 3 August 2023



Statistical Ambient Noise Levels

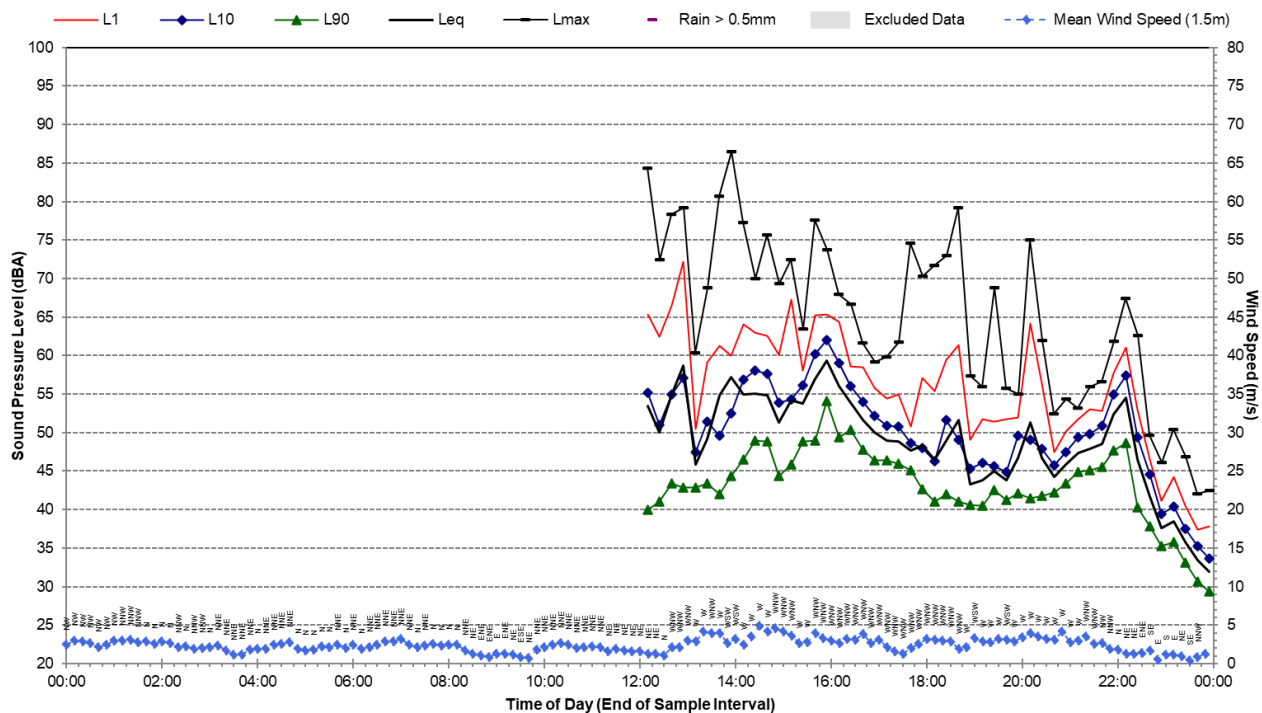
L01 - Extraction Area - Friday, 4 August 2023



L02 – The Cottage Residence

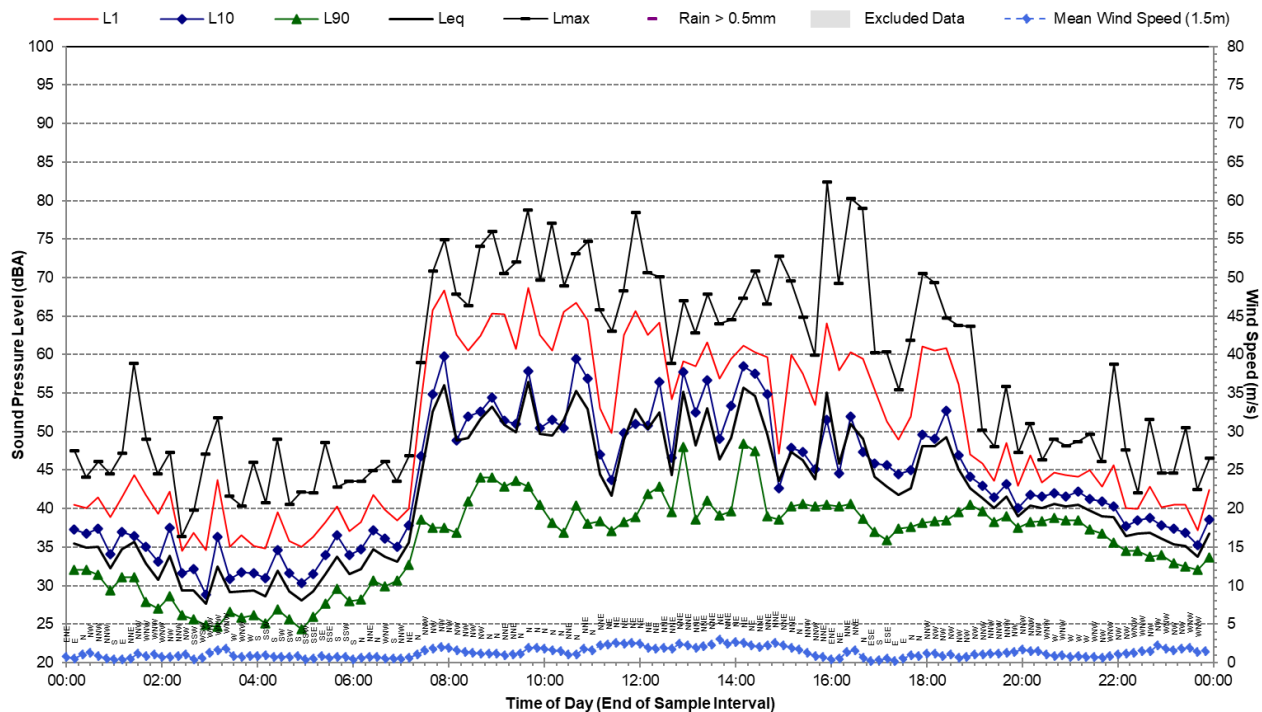
Statistical Ambient Noise Levels

L02 - The Cottage Residence - Friday, 28 July 2023



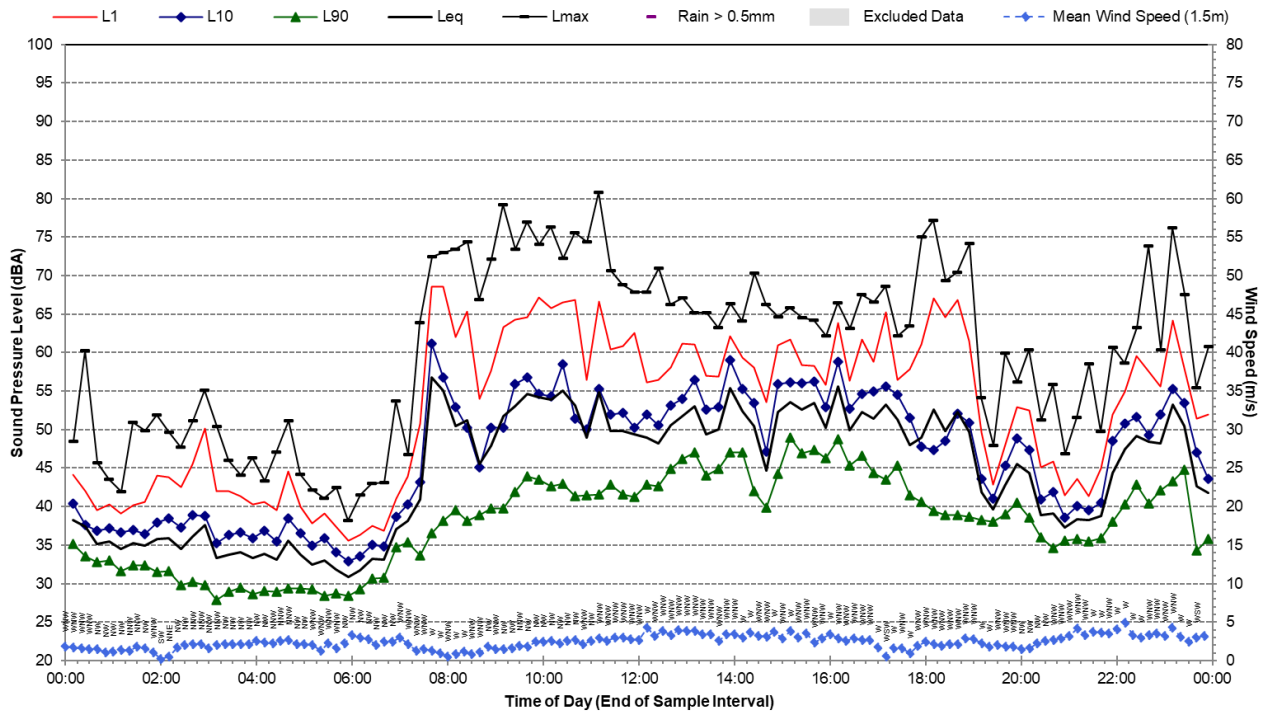
Statistical Ambient Noise Levels

L02 - The Cottage Residence - Saturday, 29 July 2023



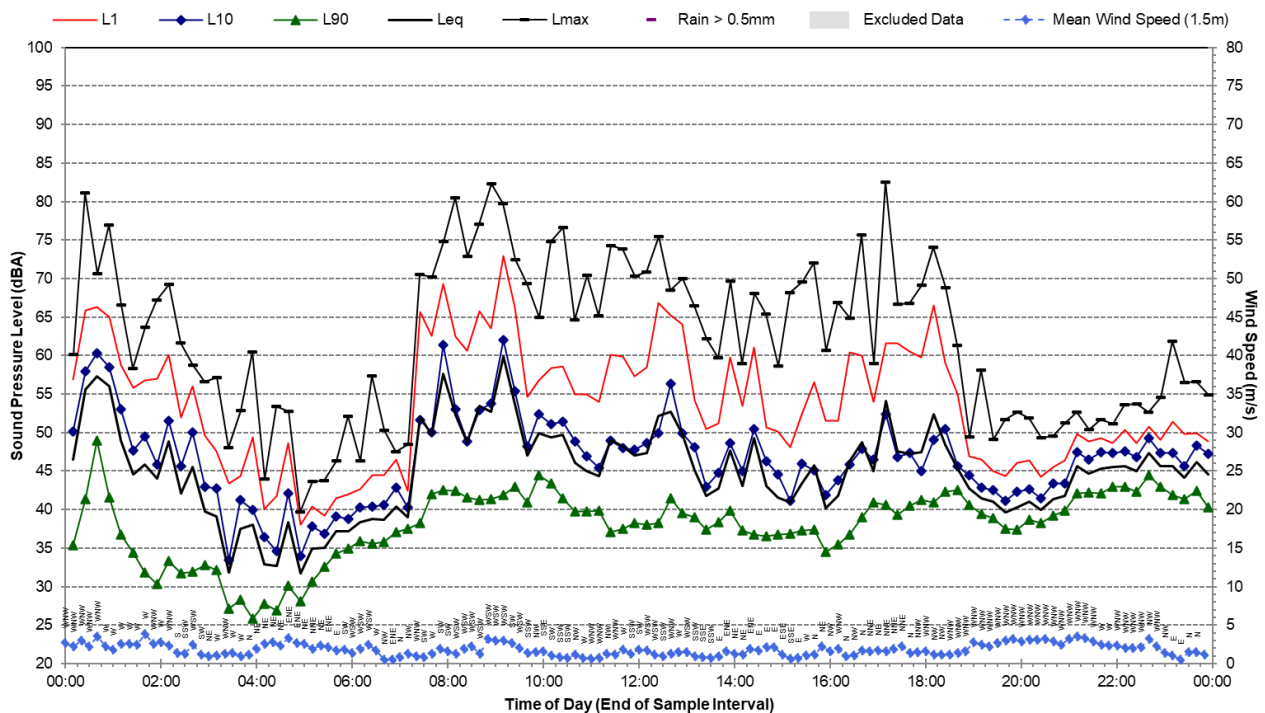
Statistical Ambient Noise Levels

L02 - The Cottage Residence - Sunday, 30 July 2023



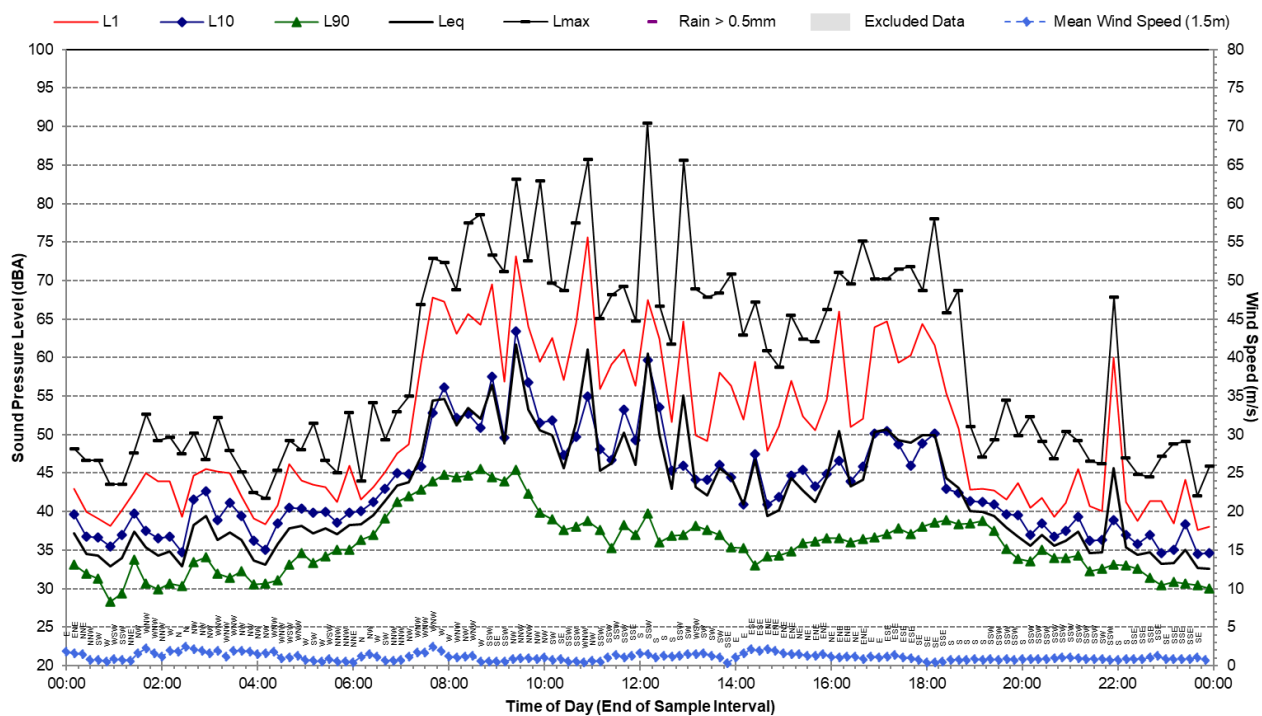
Statistical Ambient Noise Levels

L02 - The Cottage Residence - Monday, 31 July 2023



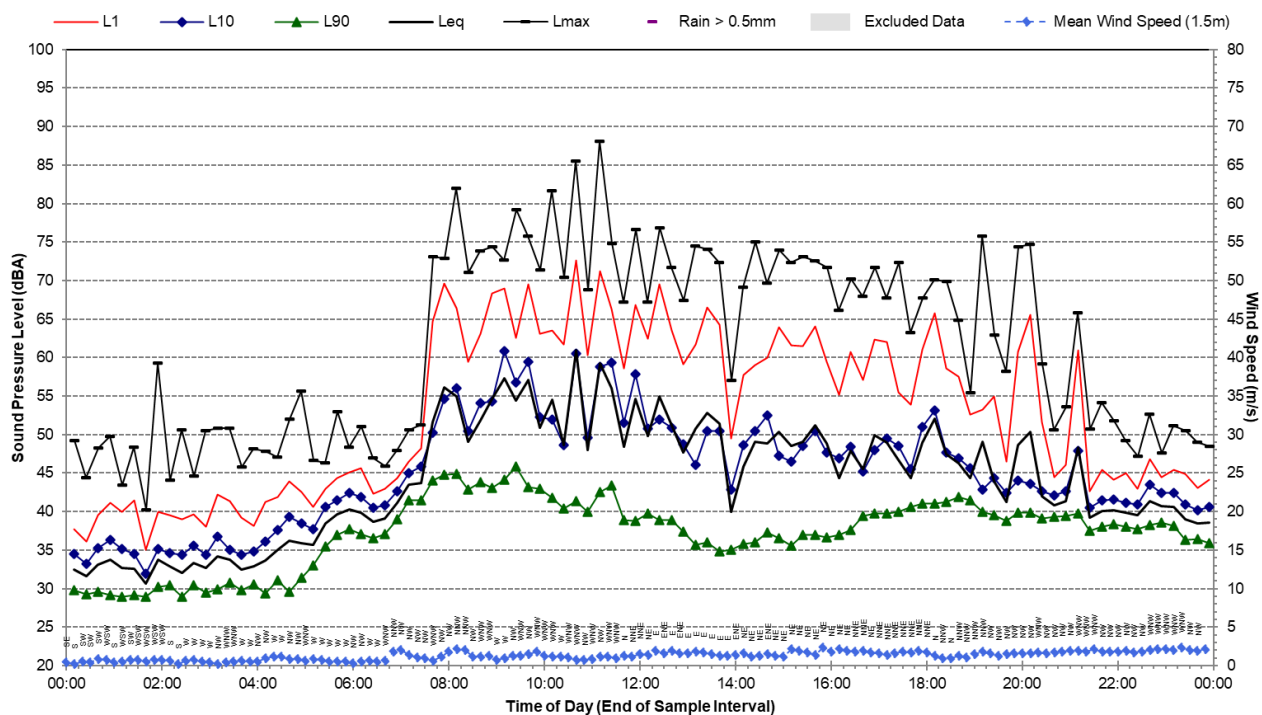
Statistical Ambient Noise Levels

L02 - The Cottage Residence - Tuesday, 1 August 2023



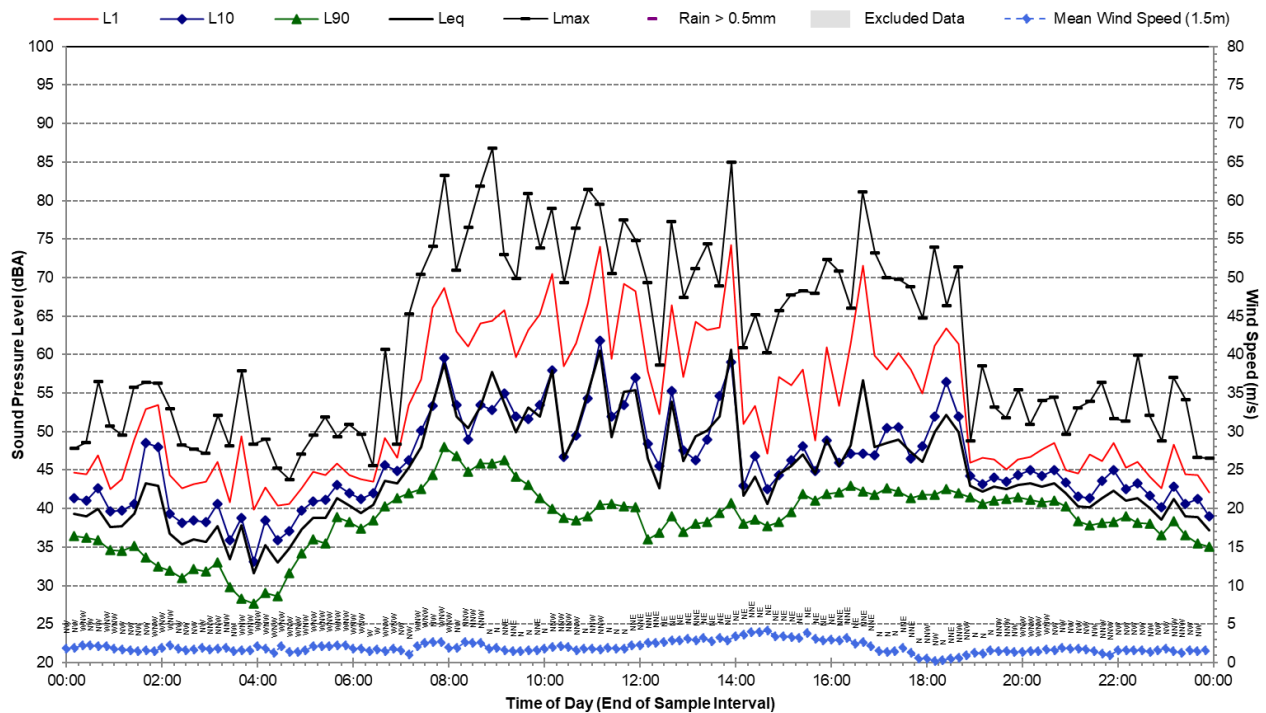
Statistical Ambient Noise Levels

L02 - The Cottage Residence - Wednesday, 2 August 2023



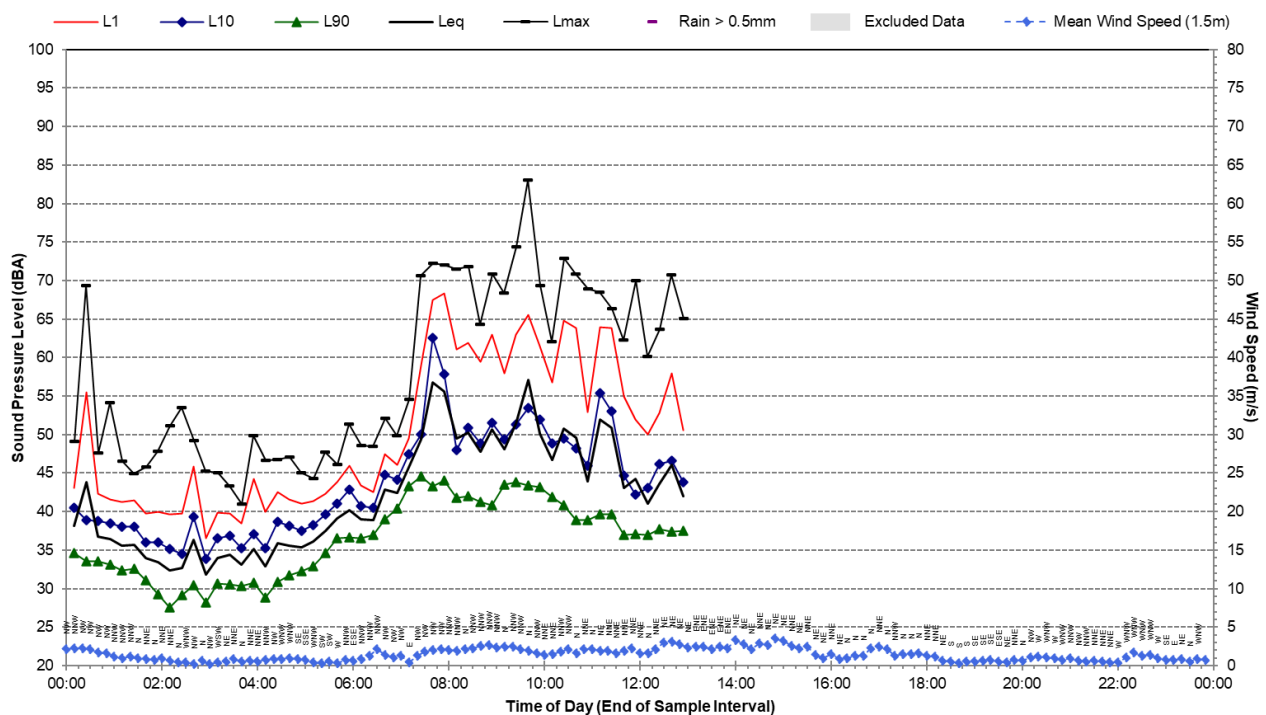
Statistical Ambient Noise Levels

L02 - The Cottage Residence - Thursday, 3 August 2023



Statistical Ambient Noise Levels

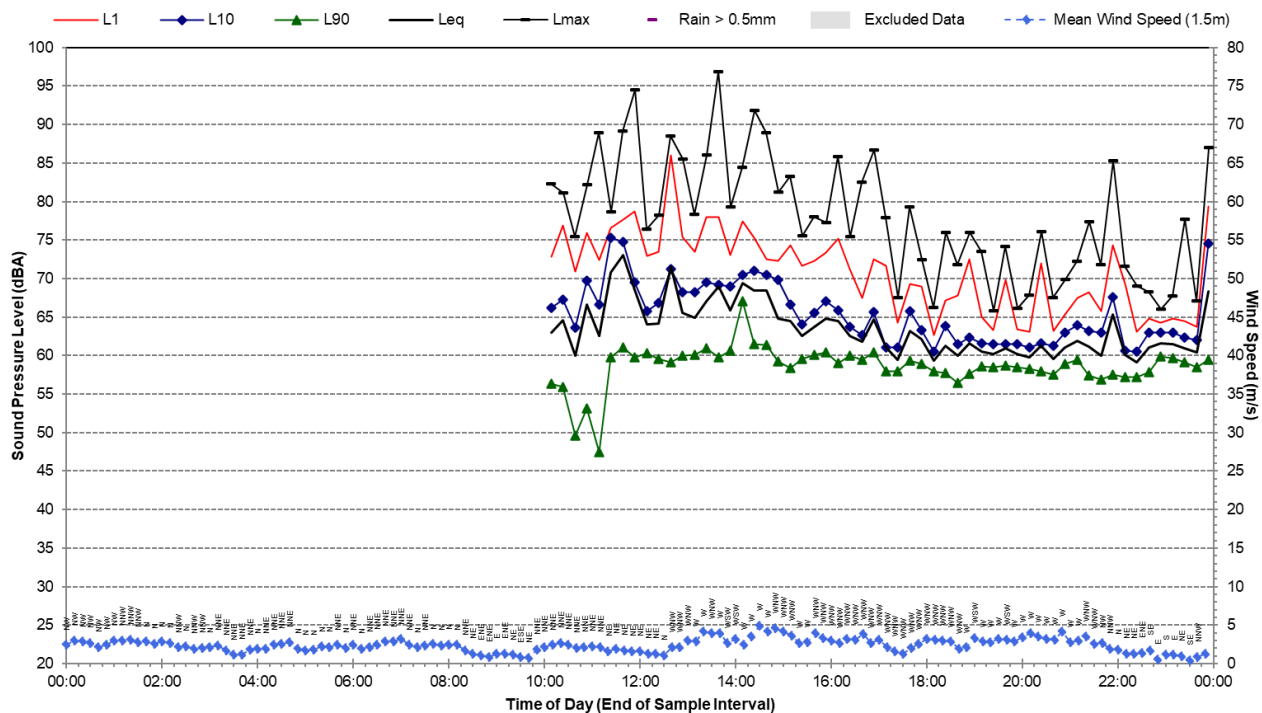
L02 - The Cottage Residence - Friday, 4 August 2023



L03 - Processing Area

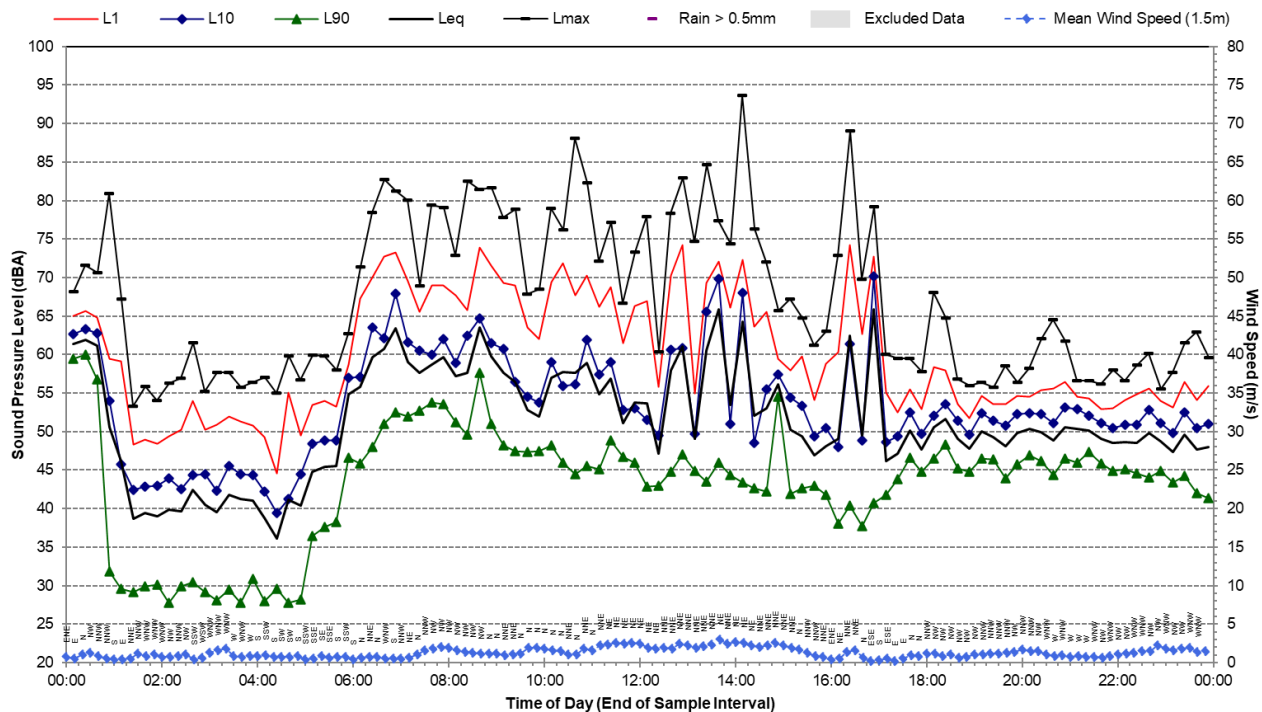
Statistical Ambient Noise Levels

L03 - Processing Area - Friday, 28 July 2023



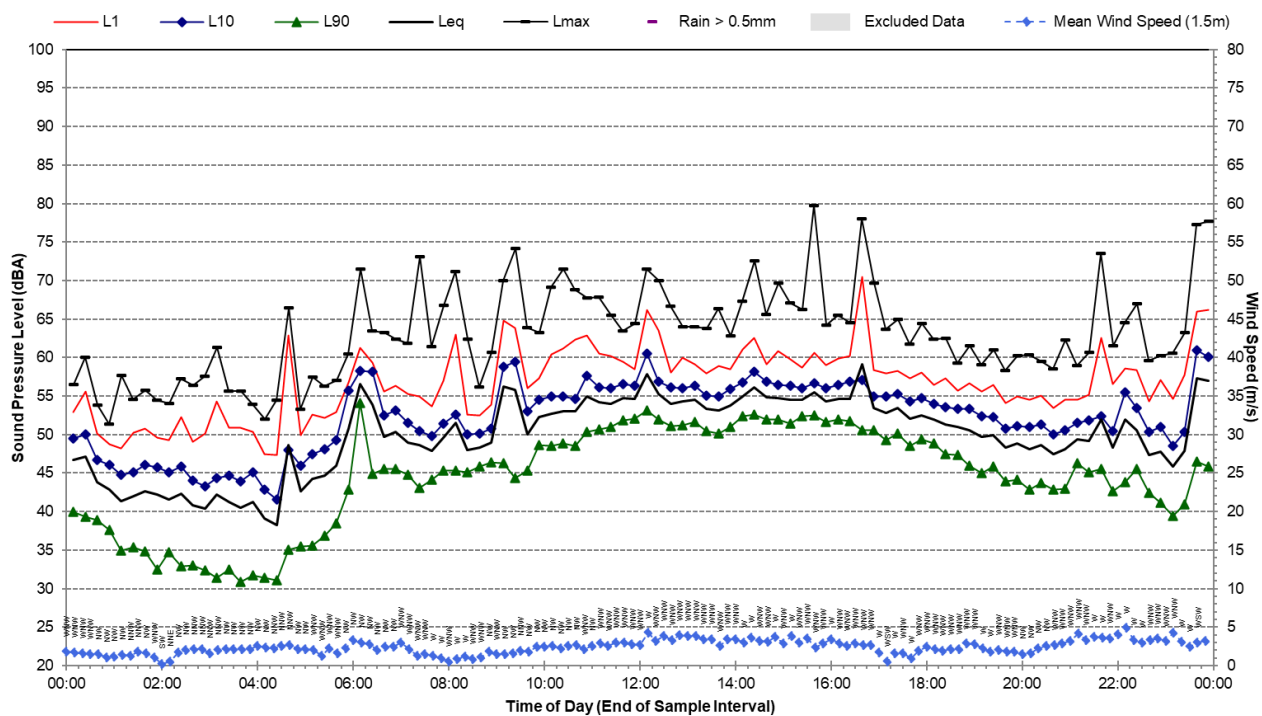
Statistical Ambient Noise Levels

L03 - Processing Area - Saturday, 29 July 2023



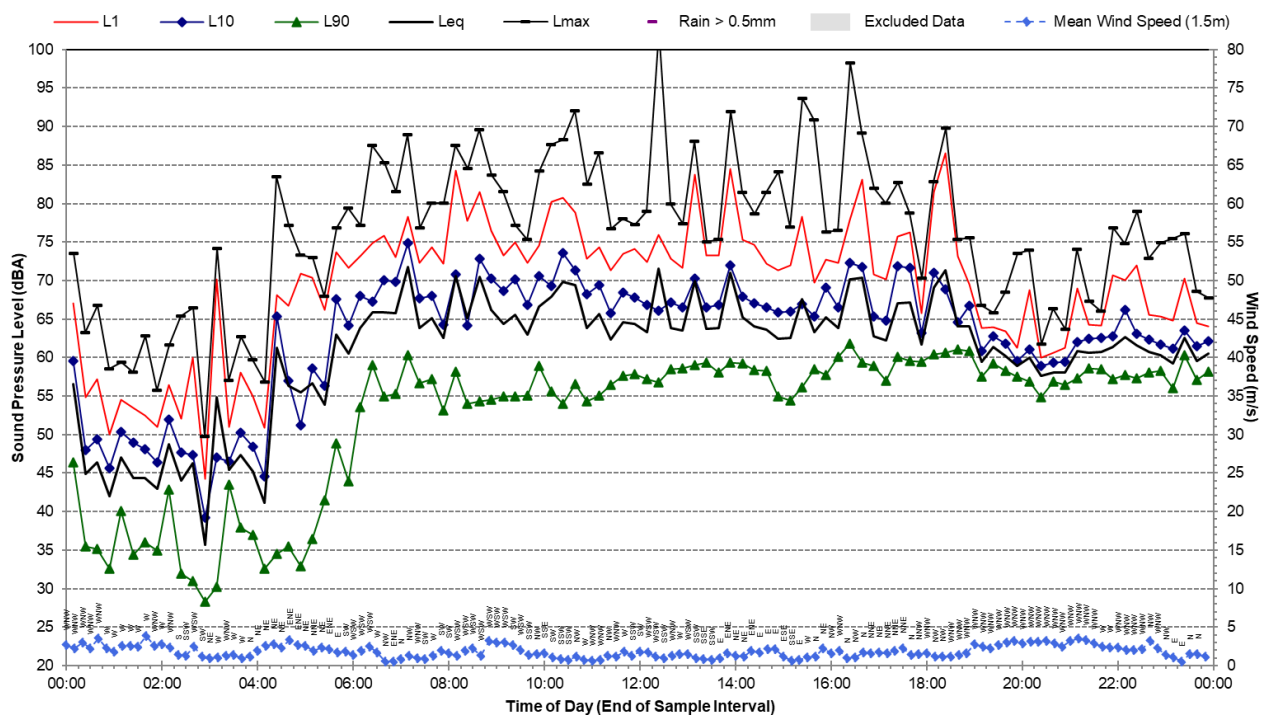
Statistical Ambient Noise Levels

L03 - Processing Area - Sunday, 30 July 2023



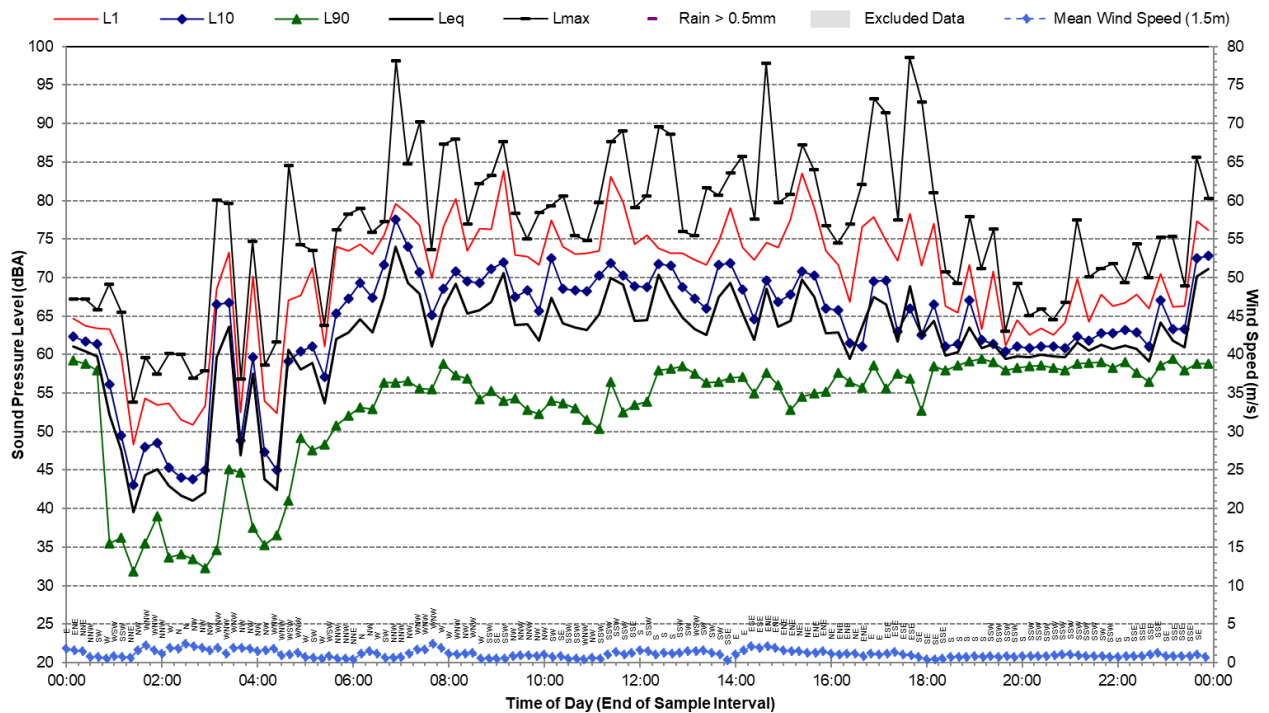
Statistical Ambient Noise Levels

L03 - Processing Area - Monday, 31 July 2023



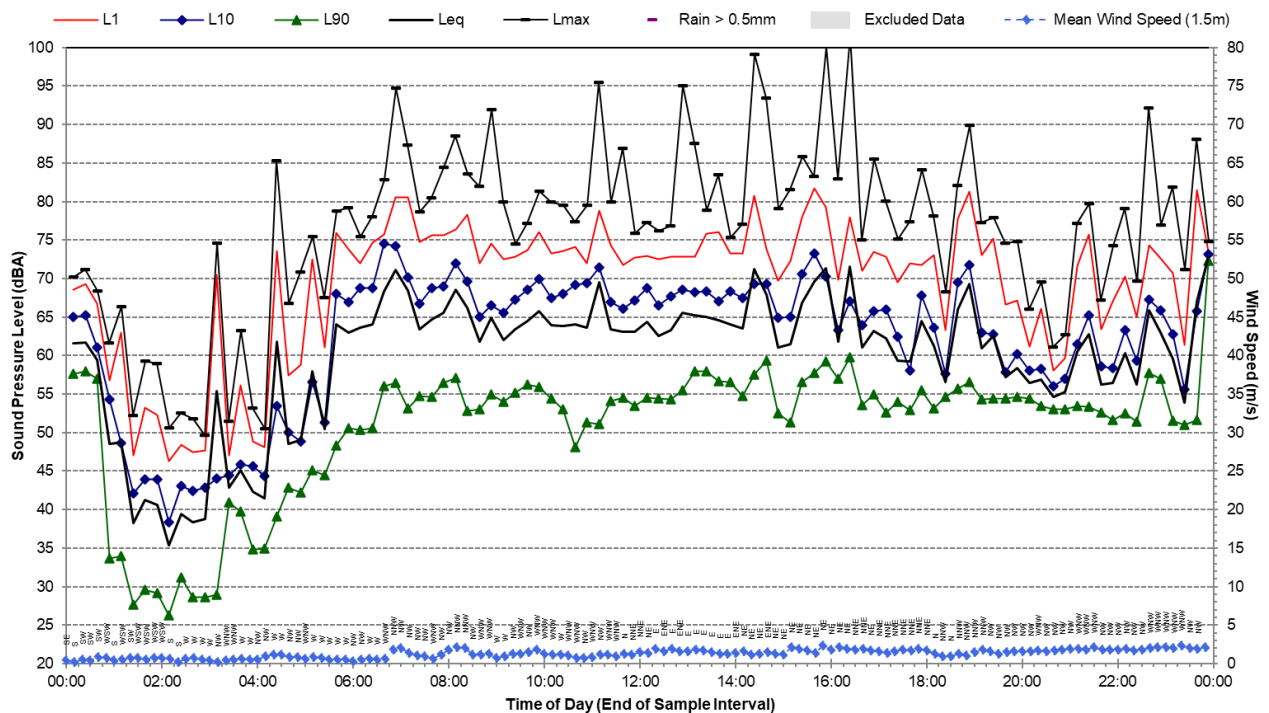
Statistical Ambient Noise Levels

L03 - Processing Area - Tuesday, 1 August 2023



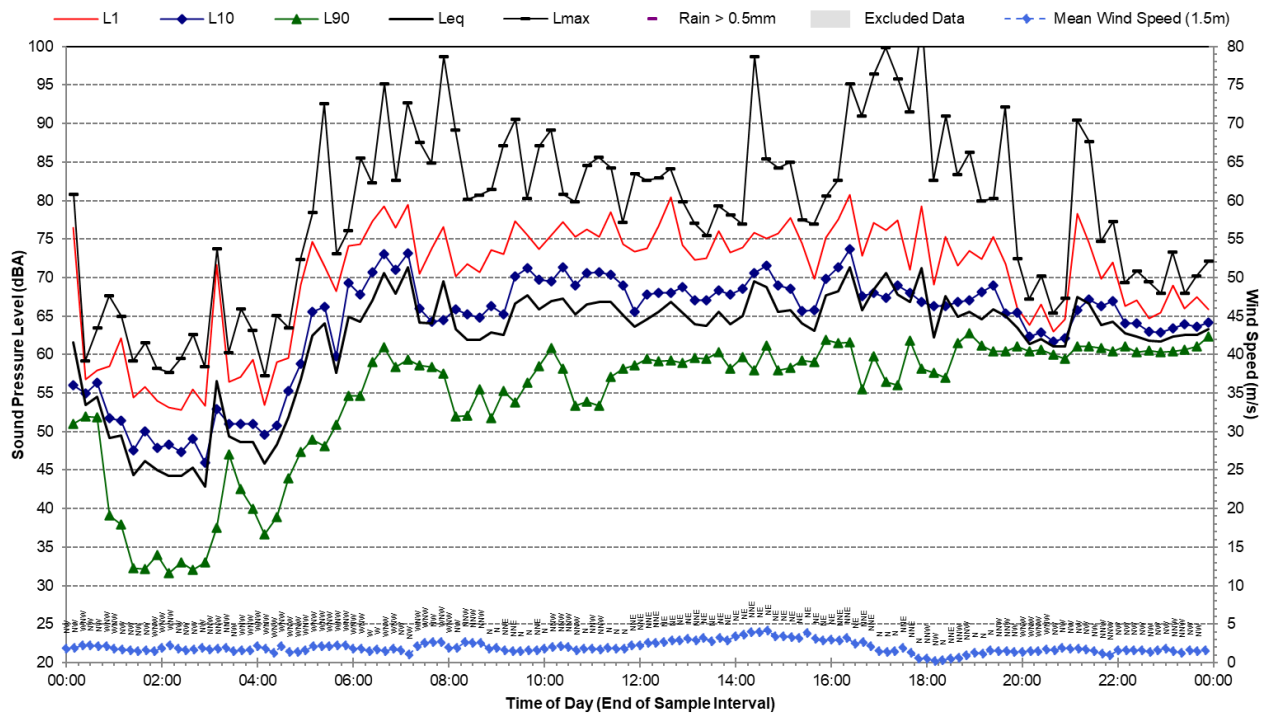
Statistical Ambient Noise Levels

L03 - Processing Area - Wednesday, 2 August 2023



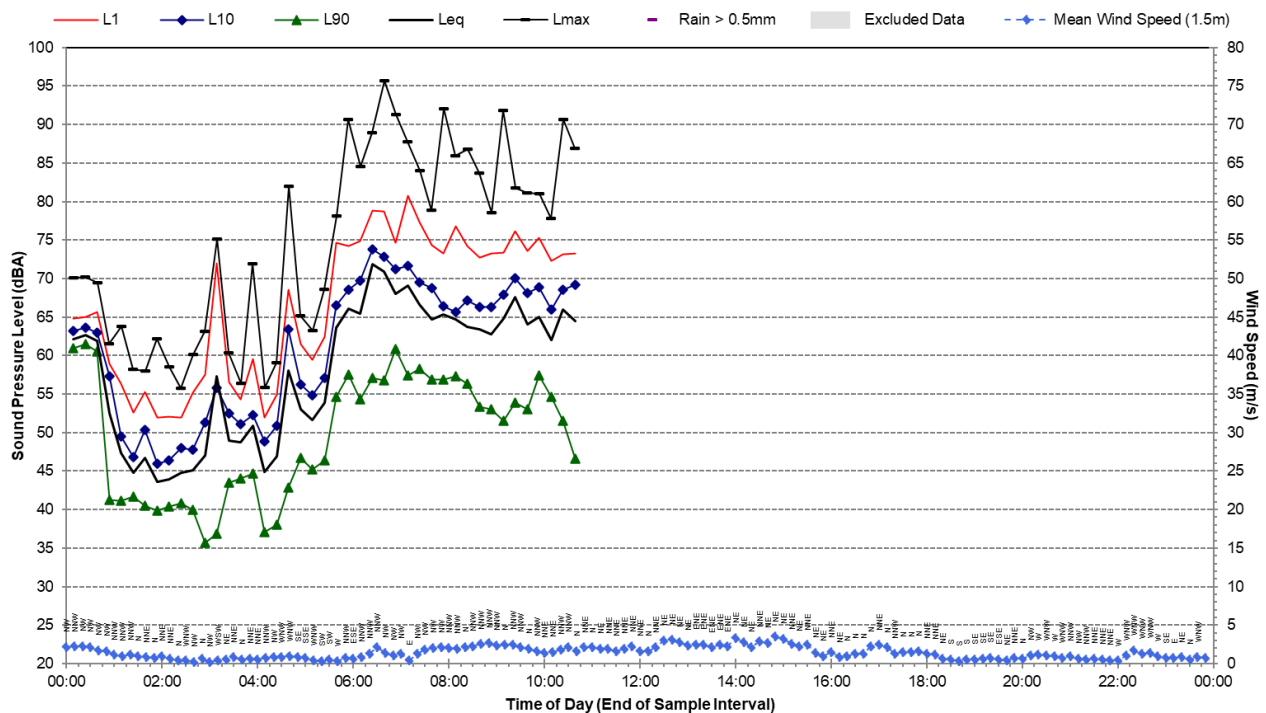
Statistical Ambient Noise Levels

L03 - Processing Area - Thursday, 3 August 2023



Statistical Ambient Noise Levels

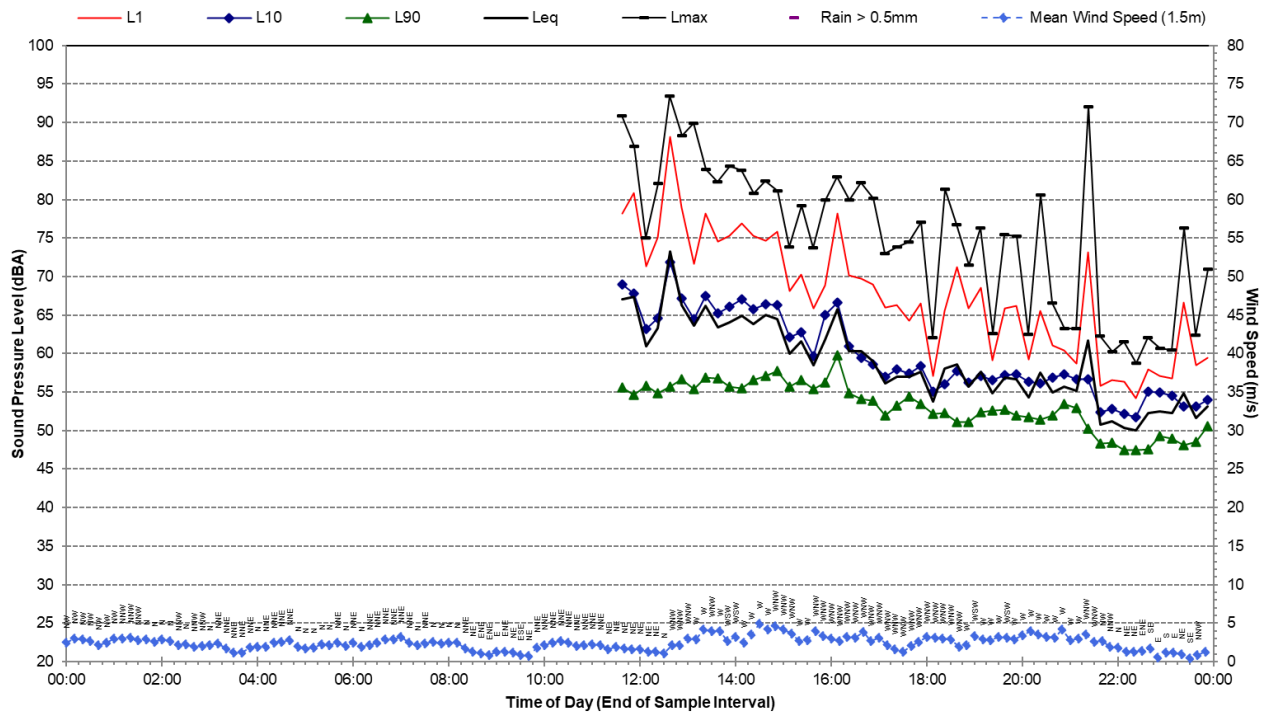
L03 - Processing Area - Friday, 4 August 2023



L04 – Weighbridge

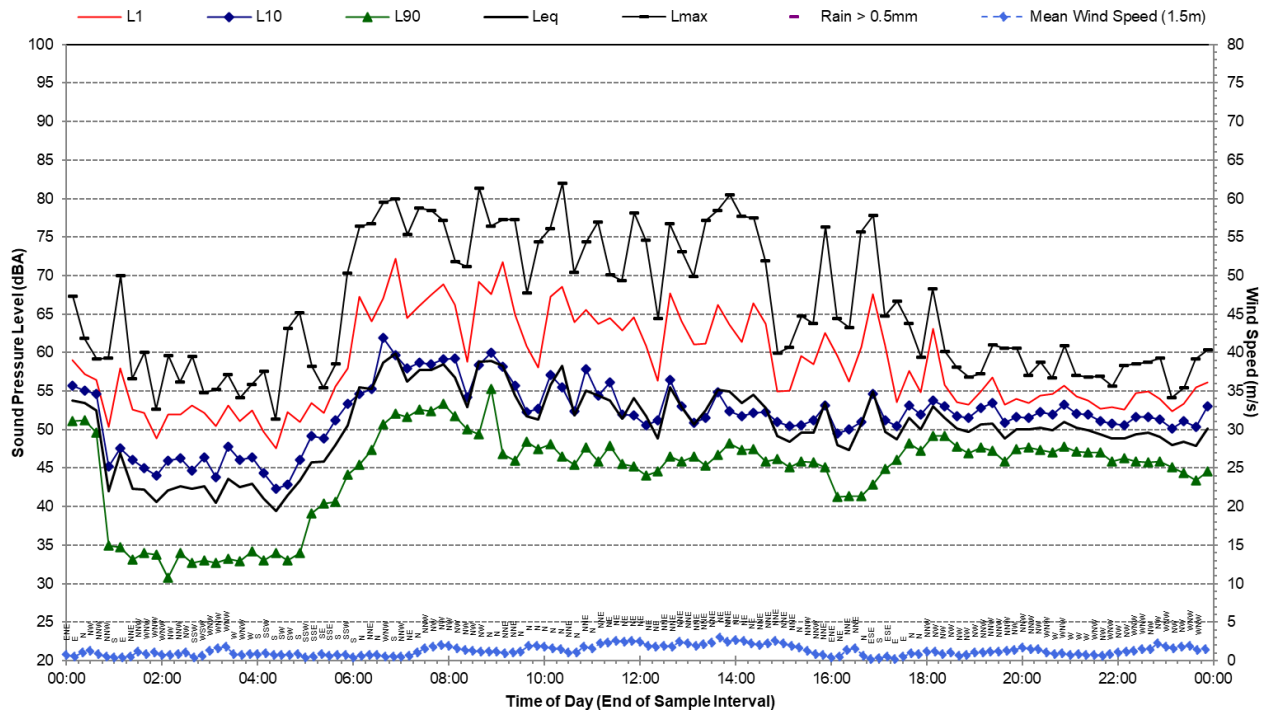
Statistical Ambient Noise Levels

L04 - Weighbridge - Friday, 28 July 2023



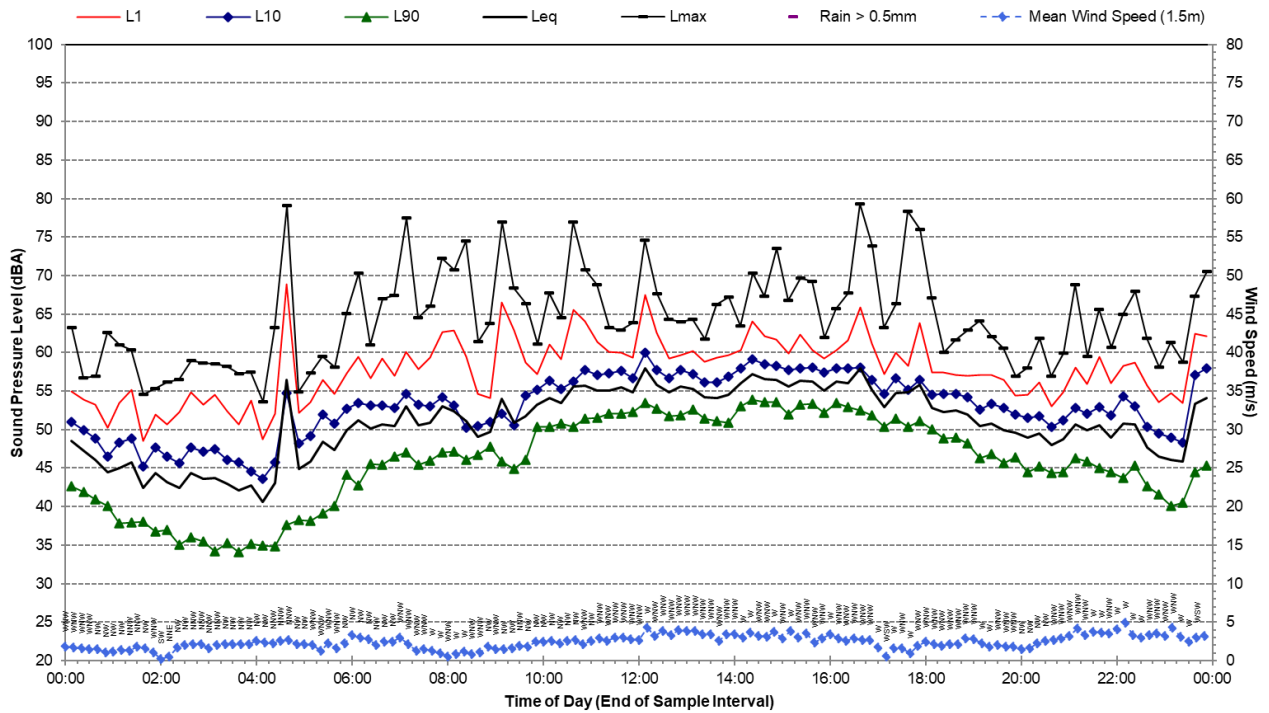
Statistical Ambient Noise Levels

L04 - Weighbridge - Saturday, 29 July 2023



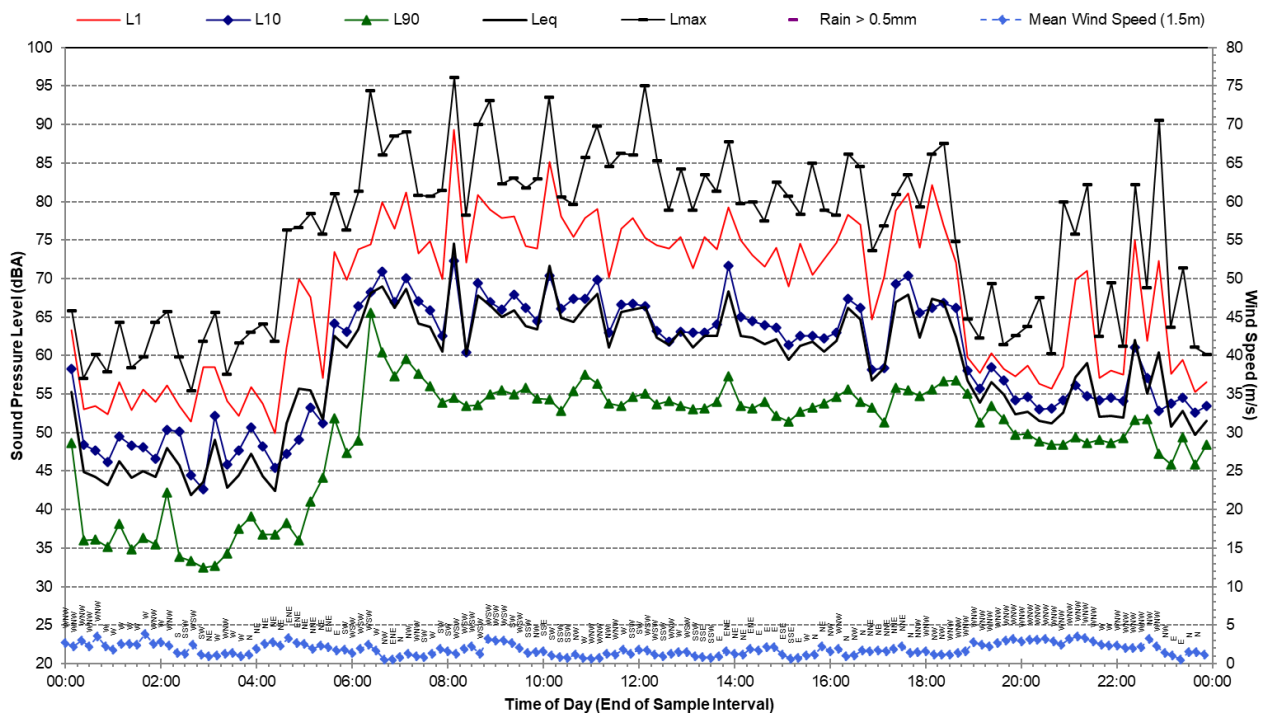
Statistical Ambient Noise Levels

L04 - Weighbridge - Sunday, 30 July 2023



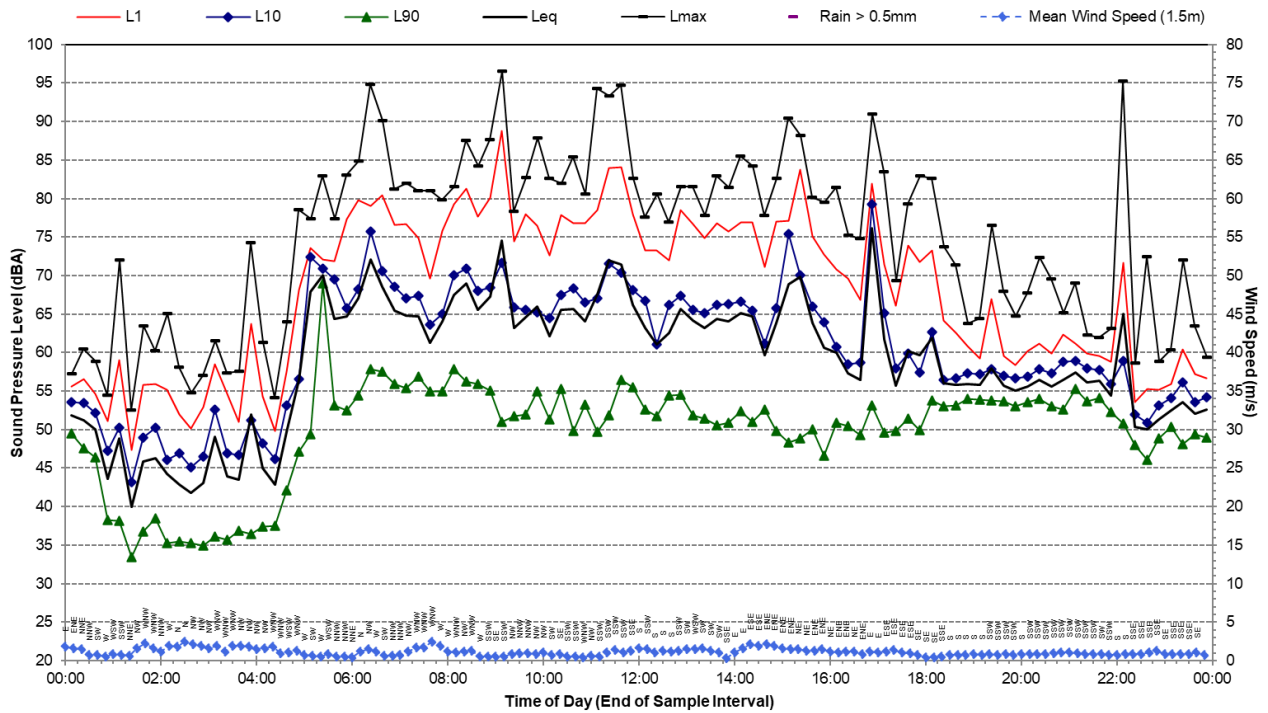
Statistical Ambient Noise Levels

L04 - Weighbridge - Monday, 31 July 2023



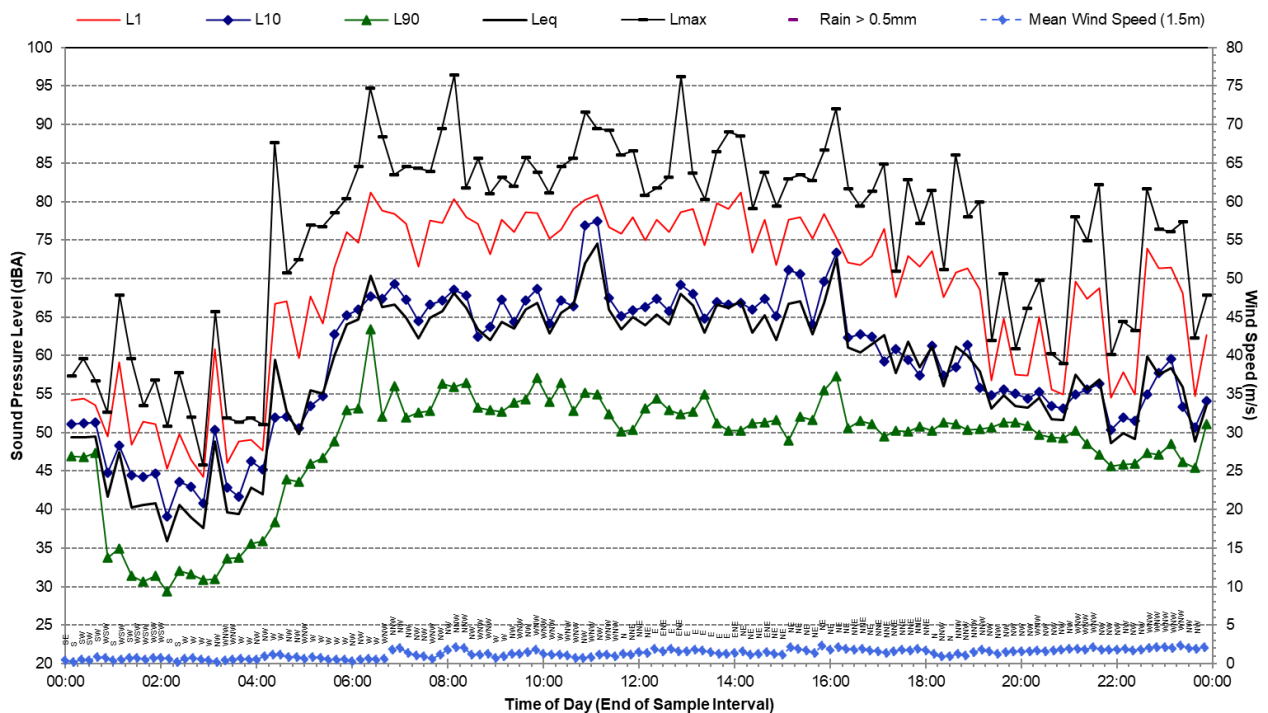
Statistical Ambient Noise Levels

L04 - Weighbridge - Tuesday, 1 August 2023



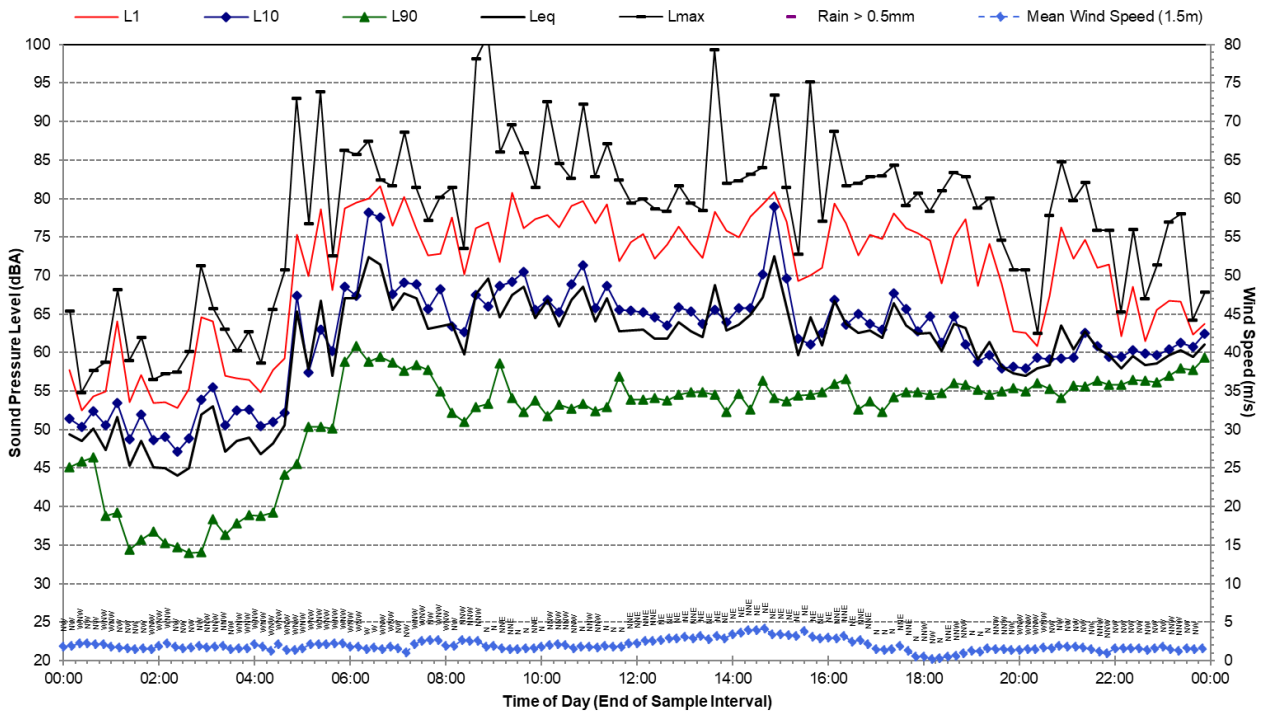
Statistical Ambient Noise Levels

L04 - Weighbridge - Wednesday, 2 August 2023



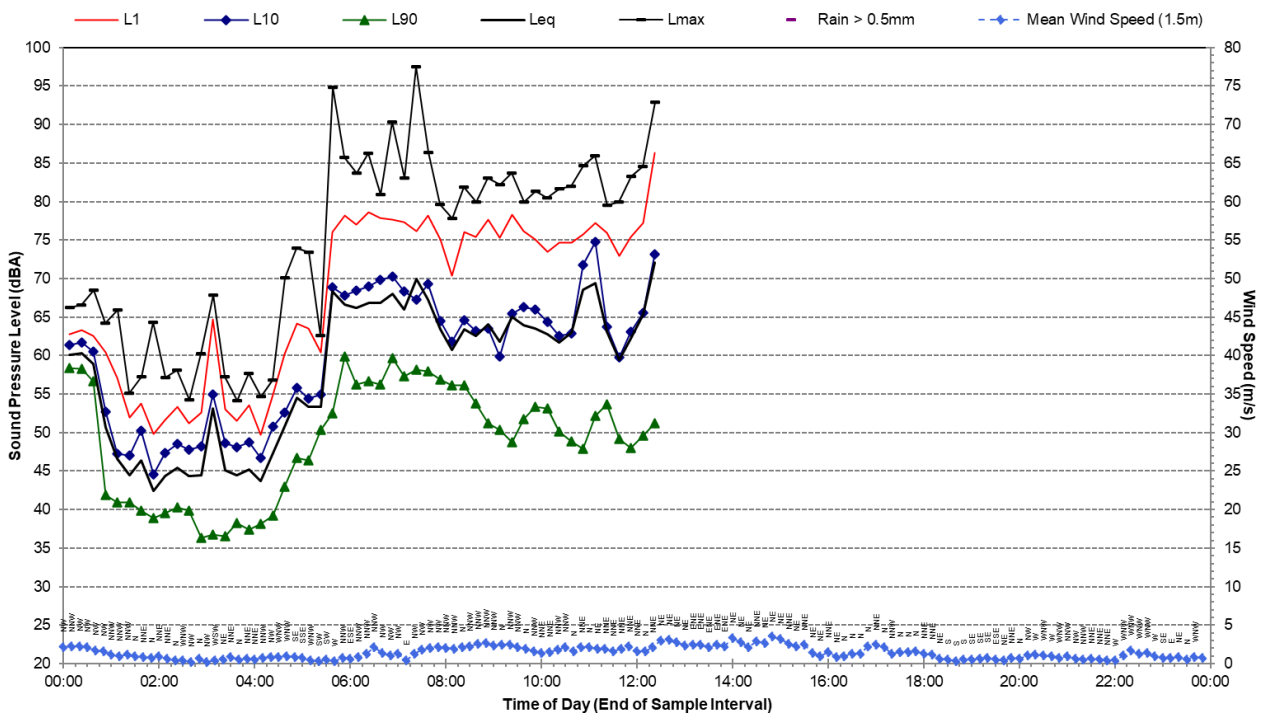
Statistical Ambient Noise Levels

L04 - Weighbridge - Thursday, 3 August 2023



Statistical Ambient Noise Levels

L04 - Weighbridge - Friday, 4 August 2023

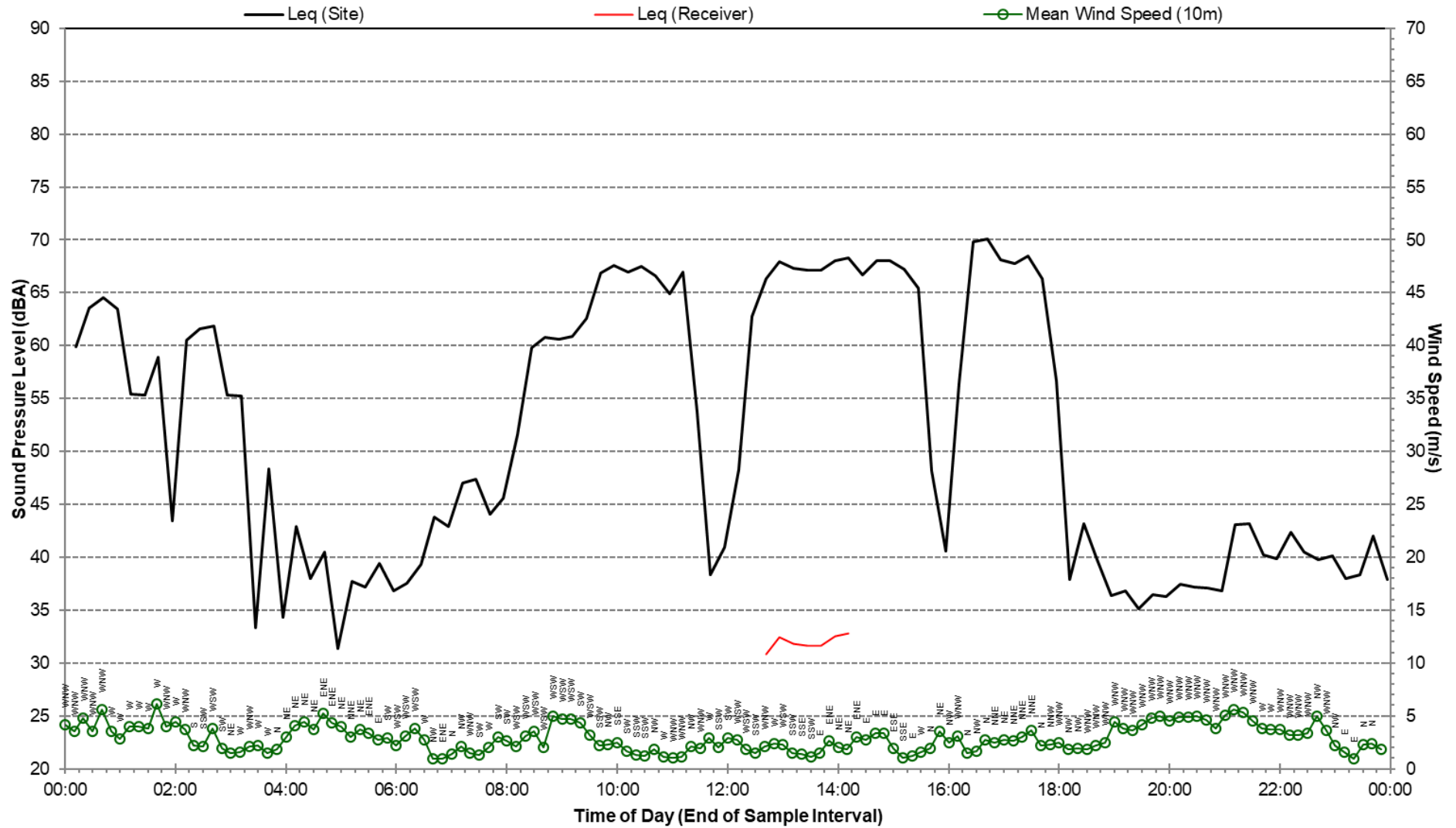


Appendix C:

Site Contributions at Receivers

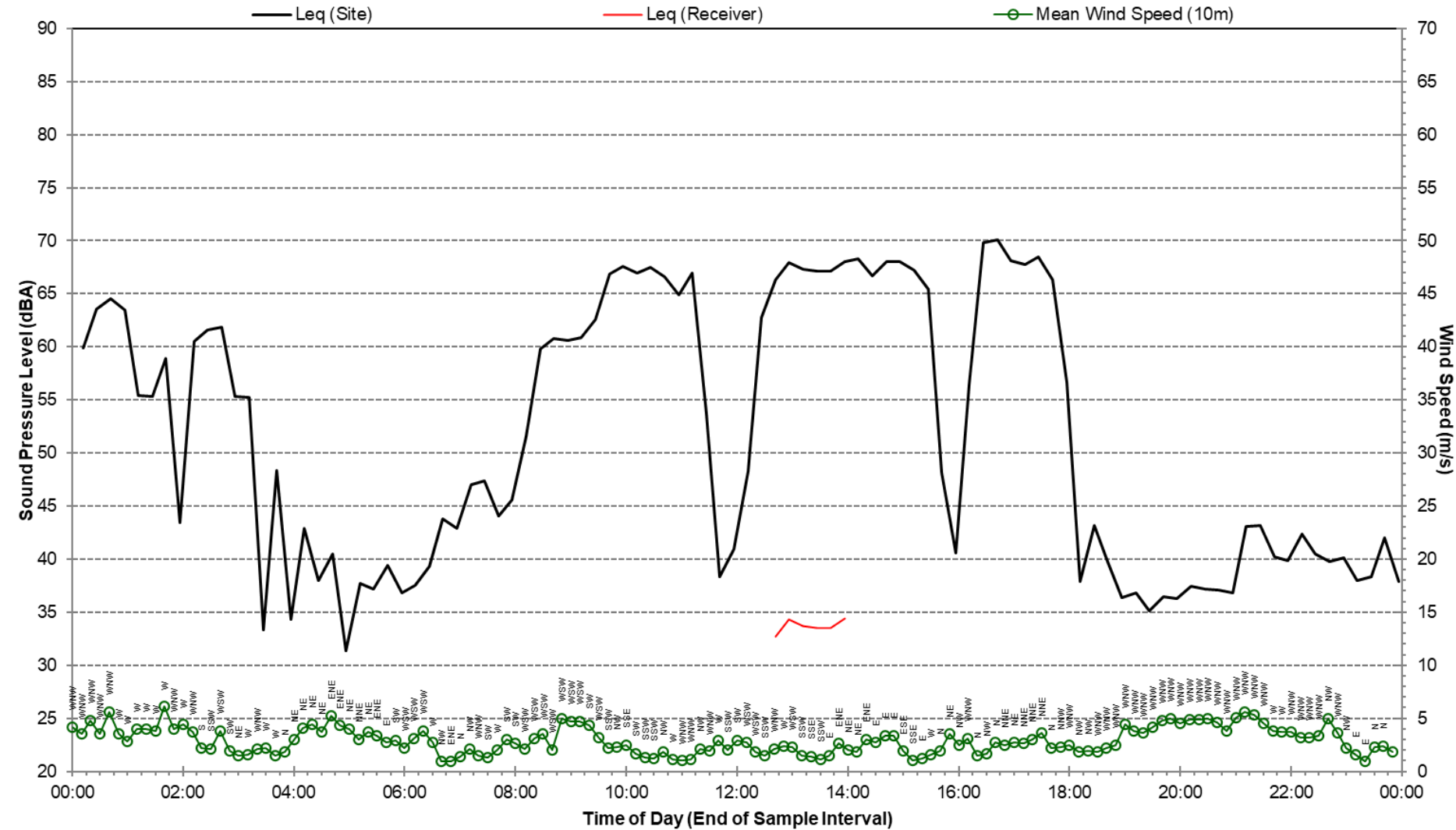
Statistical Ambient Noise Levels

Site Contribution - "The Hill" Residence - Monday, 31 July 2023



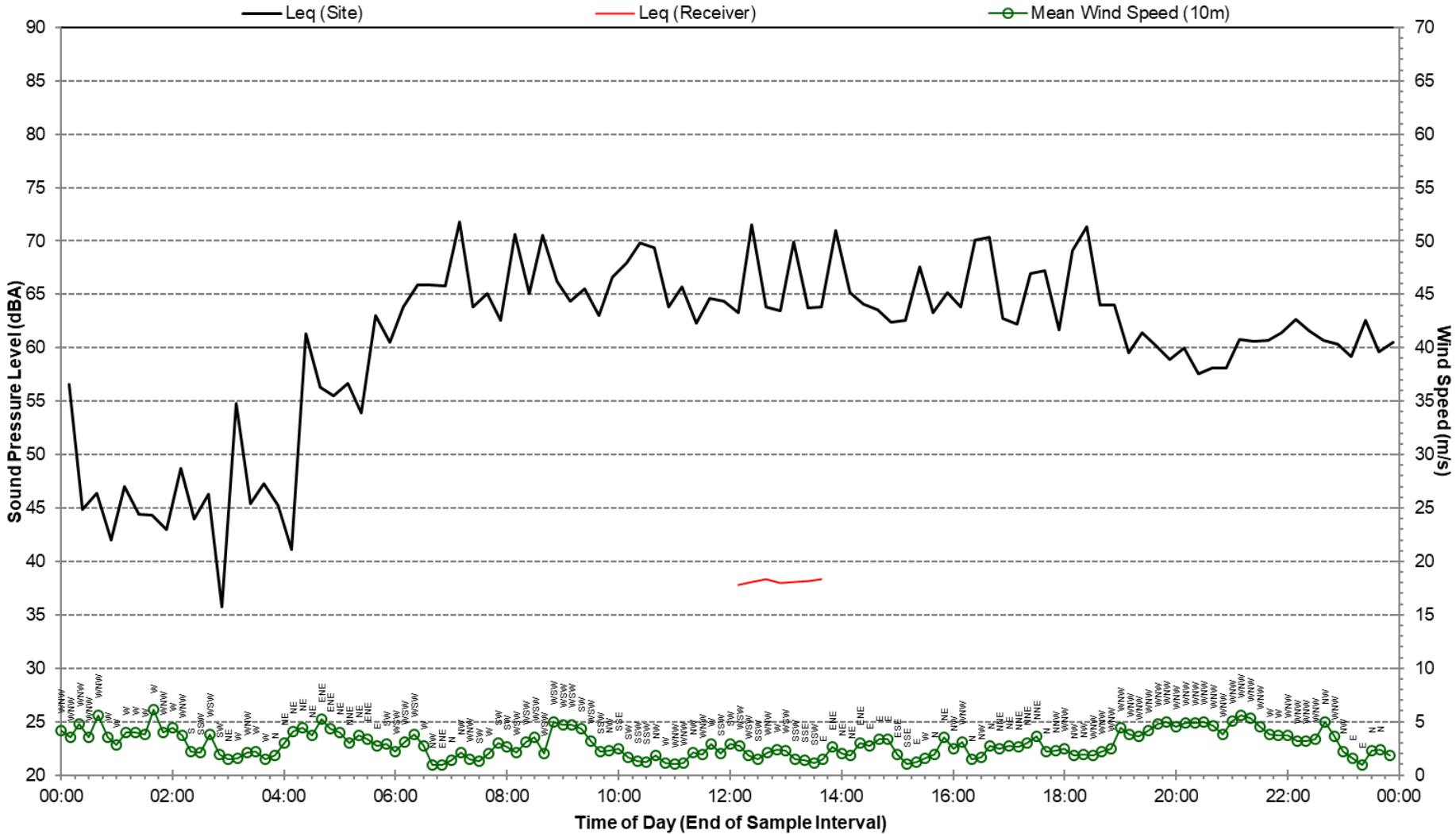
Statistical Ambient Noise Levels

Site Contribution - "The Cottage" Residence - Monday, 31 July 2023



Statistical Ambient Noise Levels

Site Contribution - Greenmeadows Residential Estate - Monday, 31 July 2023



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ANNEXURE E - NOISE SURVEY – JUNE 2024

9 July 2024

SLR Ref No.: 610.031293.00002 L0.1 20240708.docx

Cleary Bros (Bombo) Pty Ltd
39 Five Islands Road
Port Kembla NSW 2505

SLR Project No.: 610.031293.00002

**RE: Albion Park Quarry
June 2024 Noise Compliance Measurements**

1.0 Introduction

SLR Consulting Australia Pty Ltd (SLR) has been engaged by Cleary Bros (Bombo) Pty Ltd to conduct noise compliance monitoring of its Albion Park Quarry (APQ) operations.

The APQ Environment Management Strategy (Cleary Bros 2024) summarises the project approval (Development Consent SSD10369) noise conditions and sets out the Noise Monitoring Program for operation of the quarry. This letter details the biannual independent noise compliance measurements undertaken by SLR on 13 June 2024 which are required as part of the Noise Monitoring Program, reproduced below:

Operator-attended noise compliance monitoring will be conducted twice each financial year, once during the winter months, and once at another time of the year and to include the “short-term activities” if they are undertaken during the year.

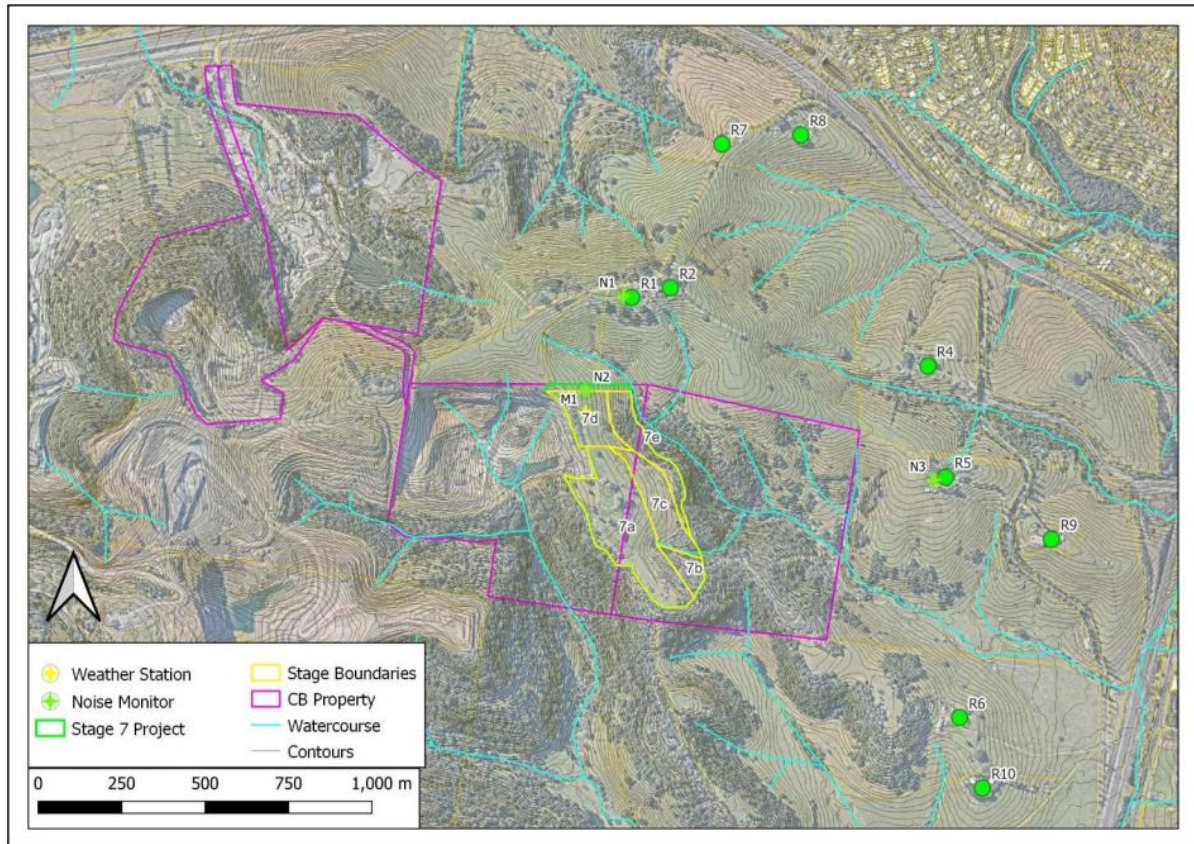
Independent operator-attended noise monitoring locations and criteria are reproduced from the Noise Monitoring Program and shown in **Table 1**.

Table 1: Noise Monitoring Locations and Criteria

Location ID	Monitoring Location	Stage 7a criteria (LAeq (15minute)) dB
N1	R1 – “The Cottage” nearest residence to the north of stage 7 extraction area	48
N2	Real time noise monitoring location, at the northern boundary of stage 7 extraction area	To be determined ¹
N3	R5 – “Deer Farm”, 42 James Road Croom, nearest residence to the east of the stage 7 extraction area	40
Note: 1 Noise criteria at N2 are based on the relative difference between N2 and N1 at the time of monitoring		

The noise measurement locations in **Figure 1** are reproduced from the Noise Monitoring Program.

Figure 1 Extraction area and monitoring locations



Note: Locations of monitoring equipment are approximate only.

2.0 Measurement Methodology

Noise measurements were undertaken with a Brüel & Kjær 2250 Precision Sound Level Meter (serial # 3004636) with the instrument calibration checked with a G.R.A.S 42 AG acoustic calibration instrument. The instrumentation used during the monitoring programme was designed to comply with the requirements of AS IEC 61672.1-2004 “Electroacoustics - Sound Level Meters” and carried current NATA or manufacturer calibration certificates.

Attended noise measurements were undertaken in the free field with consideration to AS1055:2018 Acoustics – Description and measurement of environmental noise. The sound level meter was programmed to record statistical noise level indices in 15-minute intervals, including the L_{Amax}, L_{A1}, L_{A10}, L_{A90} and L_{Aeq} descriptors. During attended measurements observations were made of contributing noise sources from APQ and any extraneous noise sources influencing the measurements.

3.0 Results

Results of noise monitoring are presented in **Table 2**.



Table 2: Measured Noise Levels, 15 minute dBA

Loc	Time	Weather	Leq	L10	L90	Criteria	APQ contribution	Observations
N1	11:52	Light SW breeze ¹ gusts to 2m/s. AWS ² 3m/s 206deg	51	53	48	48	48-50	APQ 7a, + pit crushing + Holcim ³ mobile plant noise levels combined 50 - 51 with noise enhancing wind. Holcim estimated at 43-46 (visible D11 dozer). APQ + Holcim 47-48 lull in wind (pit crushing not audible). Aircraft noise 55-62 (1minute) Birds 52-54
N2	13:00	Light SW breeze ¹ . AWS ² 3m/s 213deg	55	58	49	-	55	Quarrying noise 49-53, typically 49-51 Dozer in 7a pushing overburden line of sight 58-60.
N3	11:16	SW breeze ¹ 2-3m/s, gusts to 4m/s. AWS ² 3m/s 220deg	49	49	43	40	<34	APQ 7a faintly audible (Articulated dump truck) reversing alarm) in background for 60 seconds. Distant traffic 41-43 Aircraft 51-65.
Notes: 1. Observed wind at microphone level. 2. Measured at automatic weather station (AWS) 10m above ground level. 3. The Holcim quarry is located to the south west and directly adjacent to APQ								

Weather conditions during noise monitoring included southwesterly winds of 2 – 3m/s. These wind conditions caused noise levels to increase at downwind locations N1 and N2 with noise levels increasing by approximately 3 dB with wind gusts at location N1.

4.0 Assessment of Measured Noise Levels

Location N1

Quarry noise at location N1 was estimated at 48 - 50dB LAeq 15minute during 2-3m/s south westerly noise enhancing wind conditions. This was estimated excluding contribution from a D11 dozer and Excavator working in line of sight at the Holcim Quarry adjacent APQ.

The Environment Management Strategy references the project conditions of approval with regard to noise enhancing conditions as follows.

The noise enhancing meteorological conditions determined by monitoring at the meteorological station required under condition B30 and as defined in Part D of the NSW Noise Policy for Industry (EPA, 2017) apply to the Noise Criteria in Table 2.

Part D of Noise Policy for Industry (NPfI) states that under noise enhancing meteorological conditions:



a limit is set based on the limit derived under standard or noise-enhancing conditions (whichever is adopted in the assessment) plus 5 dB.

Based on the meteorological conditions adopted in the *Albion Park Quarry Extraction Area Stage 7 Extension Noise and Blasting Assessment* (SLR 2022) and the NPfI Part D, the noise limits for location N1 under noise enhancing weather conditions would equal $48+5=53$ dB LAeq 15minute. The estimated APQ noise levels comply with the NPfI Part D noise enhancing weather conditions adjusted criteria level.

Location N2

Based on the noise levels measured at Location N2 time synchronised with the Site Hive real time noise monitor, it is recommended that the Site Hive monitor is adjusted by +2 dB.

During down wind southerly to south westerly conditions the difference between N2 and N1 was estimated as 2 dB, which indicates that the noise trigger level at N2 can be set 2 dB above the N1 limit. During standard weather conditions, a higher limit at N2 may be applicable. Future noise monitoring would confirm the N2 noise limit under differing meteorological conditions.

Location N3

At Location N3 quarry operations were typically inaudible. An articulated dump truck engine revving and reversing alarm were faintly audible working in Area 7a for 1 minute. APQ site contribution was estimated at less than 34 dB LAeq 15minute which is below the 40 dB LAeq 15minute noise criterion at this location.



ADDENDUM 1 – 2020-8871 COMPLIANCE REPORT SUPPLEMENT

This addendum to the 2023-2024 Annual Review has been prepared to address the specific requirements of the annual Compliance Report required to be prepared under approval 2020-8871 for the period 28 November 2023 (date of issue of approval) to 30th June 2024, where these requirements have not previously been addressed in the body of the Annual Review. The addendum was published on 30 January 2025, in response to feedback on version 2 of the Annual Report (published 30 September 2024) from the Commonwealth Department of Climate Change, Environment, Energy and Water. Addendum 1 includes the EPBC Approval Conditions Compliance Table, a summary of non-compliances and proposed corrective actions, and a declaration of accuracy. All other requirements of the Guidelines have been addressed in the body of the Annual Review.

EPBC Approval Conditions Compliance Table

Condition Number/ reference	Condition	Is the Project compliant with this condition?	Evidence/ Comments
1)	To limit impacts to protected matters as a result of the Action, the approval holder must not clear:	N/A	
a)	outside the Action area	Compliant	Refer Figure 2 – no clearing undertaken outside of the Action area.
b)	more than 3.18 hectares of Illawarra-Shoalhaven Subtropical Rainforest of the Sydney Basin Bioregion	Compliant	A total of 0.24ha of Illawarra-Shoalhaven Subtropical Rainforest of the Sydney Basin Bioregion cleared up to 30 June 2024.
c)	more than 1.33 hectares of habitat for Illawarra Zieria	Compliant	Nil clearing of Illawarra Zieria habitat to 30 June 2024.
2)	The approval holder must notify the department in writing of the presence of any protected matter or the habitat of any protected matter, not previously reported to the department, within 10 business days of detecting the presence of any protected matter or the habitat of any protected matter not previously reported to the department. The approval holder must not clear any protected matter or the habitat of any protected matter other than those identified in condition 1.	N/A	No previously unidentified protected matters identified during the reporting period.
3)	To avoid and mitigate impacts on protected matters as a result of the Action, the approval holder must comply with conditions B64 to B67 (inclusive) of the State Development Consent, to the extent that they relate to protected matters.	Compliant	Biodiversity Management Plan (BMP) prepared in accordance with conditions B64 (refer www.clearybros.com.au/albion-park for current version). BMP was approved 14/3/2024 (prior to commencing quarry operations in the Stage 7 area) (B65, B66). Section 3.9 describes implementation of BMP (B67).

Condition Number/ reference	Condition	Is the Project compliant with this condition?	Evidence/ Comments
4)	The approval holder must implement the Biodiversity Management Plan required by condition B64 of the State Development Consent, as and from when approved by the Planning Secretary, until the expiry of the approval.	Compliant	Section 3.9 describes implementation of BMP.
5)	The approval holder must submit the Biodiversity Management Plan required by condition B64 of the State Development Consent, as approved by the Planning Secretary, electronically to the department within 2 business days of its approval by the Planning Secretary	Compliant	Email to Natasha Herron, Assessment Officer with DCCEEW, dated 15/3/2024, following approval of BMP by Planning Secretary on 14/3/2024.
6)	<p>If the approval holder proposes to implement a revised version of the Biodiversity Management Plan required by condition B64 of the State Development Consent and approved by the Planning Secretary, the approval holder must notify the department in writing of the proposed revision to the Biodiversity Management Plan within:</p> <p>a) 2 business days of formally proposing a revision, or</p> <p>b) 5 business days of becoming aware of any proposed revision,</p> <p>accompanied by details of the proposed changes from the approved version (for example, by attaching a copy with tracked changes).</p> <p>If the Planning Secretary approves a revised version of the Biodiversity Management Plan, the approval holder must submit the approved revised version of the Biodiversity Management Plan electronically to the department within 2 business days of its approval by the Planning Secretary, accompanied by evidence of the Planning Secretary's approval.</p>	N/A	Not triggered – BMP has not required a revision since approval on 14/3/2024.
7)	To compensate for impacts to protected matters as a result of the Action, the approval holder must comply with conditions B58 and B59 of the State Development Consent, to the extent that it relates to protected matters.	Compliant	Stage 1 biodiversity credits retired on 3/5/2024, prior to any impacts to protected matters (which

Condition Number/ reference	Condition	Is the Project compliant with this condition?	Evidence/ Comments
			commenced 14/5/2024) in line with conditions B58 and B59 of SSD10369.
8)	Within 20 business days of retiring the biodiversity credits as required by condition 7, the approval holder must submit evidence to the department demonstrating that the biodiversity credits have been retired in accordance with the State Development Consent.	Compliant	Email to Natasha Herron, Assessment Officer with DCCEEW, dated 3/5/2024, following retirement of Stage 1 biodiversity credit, which included credit retirement reports issued by the NSW Government.
9)	The approval holder must submit all plans required by these conditions electronically to the department.	Compliant	DCCEEW emailed copy of approved BMP on 15/3/2024.
10)	Unless otherwise agreed to in writing by the Minister, the approval holder must publish each plan on the website within 15 business days of the date: a) the plan is approved by the Planning Secretary as provided for in the State Development Consent.	Compliant	BMP uploaded to Cleary Bros website (www.clearybros.com.au/albion-park)
11)	The approval holder must keep all published plans required by these conditions on the website until the expiry date of this approval.	Compliant	BMP currently on website.
12)	The approval holder is required to exclude or redact sensitive ecological data from plans published on the website or otherwise provided to a member of the public.	N/A	No sensitive data associated with approval.
13)	If sensitive ecological data is excluded or redacted from a plan in accordance with condition 11, the approval holder must notify the department in writing what exclusions and redactions have been made in the version published on the website.	N/A	No sensitive data associated with approval.
14)	The approval holder must notify the department electronically of the date of commencement of the Action, within 5 business days of commencement of the Action.	Non-compliant	Record of notification of retirement of biodiversity credits (on 3/5/2024), however could not locate a

Condition Number/ reference	Condition	Is the Project compliant with this condition?	Evidence/ Comments
			record of notification of the Department after commencement of the action (on 14/5/2024).
15)	The approval holder must not commence the Action later than 5 years after the date of this approval.	N/A	
16)	The approval holder must maintain accurate and complete compliance records.	Compliant	All records referred to in this table of compliance are available in the Cleary Bros file server.
17)	If the department makes a request in writing, the approval holder must provide electronic copies of compliance records to the department within the timeframe specified in the request.	N/A	No requests for records received during the reporting period.
18)	The approval holder must prepare a compliance report following the date of this approval for each financial year (1 July to 30 June) until this approval expires, or as otherwise agreed to in writing by the Minister.	Compliant	Compliance Report prepared for period 1 July 2023 to 30 June 2024 (noting approval date of 28 November 2023).
19)	Each compliance report must be consistent with the Annual Compliance Report Guidelines, Commonwealth of Australia 2014.	Non-compliant	As advised by DCCEEW on 24 January 2025, the 2023-2024 compliance report does not address all requirements of Guidelines.
20)	Each compliance report must include:	Non-compliant	As advised by DCCEEW on 24 January 2025, the 2023-2024 compliance report does not provide accurate and complete details of compliance and any non-compliance with the conditions.
a)	a) Accurate and complete details of compliance and any non-compliance with the conditions and the plans, and any incidents.		
b)	One or more shapefile showing all clearing of any protected matters, and/or their habitat, undertaken within the 12-month period at the end of which that compliance report is prepared.	Compliant	Shapefiles were attached as part of the email to DCCEEW sent 30/9/2024.
c)	A schedule of all plans in existence in relation to these conditions and accurate and complete details of how each plan is being implemented.	Compliant	The 2023-2024 Annual Review included a listing of plans related to the project, and detailed how the BMP was implemented during the reporting period.

Condition Number/ reference	Condition	Is the Project compliant with this condition?	Evidence/ Comments
21)	The approval holder must:	Non-compliant	Annual Review including Compliance Report published to Cleary Bros website
a)	Publish each compliance report on the website within 60 business days following the end of the 12-month period for which that compliance report is required.		(www.clearybros.com.au/albion-park) on 30/9/2024, in line with the requirements of SSD10369, however 66 business days after the end of the reporting period.
b)	Notify the department electronically, within 5 business days of the date of publication that a compliance report has been published on the website.	Compliant	Email to DCCEEW Post Approval address on 30/9/2024 with a copy of the report and link to the location of the report on Cleary Bros' website.
c)	Provide the weblink for the compliance report in the notification to the department.	Compliant	Email to DCCEEW Post Approval address on 30/9/2024 with a copy of the report and link to the location of the report on Cleary Bros' website.
d)	Keep all published compliance reports required by these conditions on the website until the expiry date of this approval.	Compliant	BMP currently on website.
e)	Exclude or redact sensitive ecological data from compliance reports published on the website or otherwise provided to a member of the public.	N/A	No sensitive data associated with approval.
f)	If sensitive ecological data is excluded or redacted from the published version, submit the full compliance report to the department within 5 business days of its publication on the website and notify the department in writing what exclusions and redactions have been made in the version published on the website.	N/A	No sensitive data associated with approval.
22)	The approval holder must notify the department electronically, within 2 business days of becoming aware of any incident and/or potential non-compliance and/or actual non-compliance with the conditions or commitments made in a plan.	N/A	This requirement was not triggered during the reporting period, noting non-compliances have been identified during the preparation of this addendum. Compliance with this condition for these

Condition Number/ reference	Condition	Is the Project compliant with this condition?	Evidence/ Comments
			instances will be reviewed as part of the 2024-2025 compliance report.
23)	<p>The approval holder must specify in the notification:</p> <p>a) Any condition or commitment made in a plan which has been or may have been breached.</p> <p>b) A short description of the incident and/or potential non-compliance and/or actual non-compliance.</p> <p>c) The location (including co-ordinates), date, and time of the incident and/or potential non-compliance and/or actual non-compliance.</p>	N/A	Not triggered
24)	<p>The approval holder must provide to the department in writing, within 12 business days of becoming aware of any incident and/or potential non-compliance and/or actual non-compliance, the details of that incident and/or potential non-compliance and/or actual non-compliance with the conditions or commitments made in a plan. The approval holder must specify:</p> <p>a) Any corrective action or investigation which the approval holder has already taken.</p> <p>b) The potential impacts of the incident and/or non-compliance.</p> <p>c) The method and timing of any corrective action that will be undertaken by the approval holder.</p>	N/A	Not triggered
25)	<p>The approval holder must ensure that an independent audit of compliance with the conditions is conducted for every three-year period following the commencement of the Action until this approval expires, unless otherwise specified in writing by the Minister.</p>	N/A	Not yet triggered.

Condition Number/ reference	Condition	Is the Project compliant with this condition?	Evidence/ Comments
26)	<p>For each independent audit, the approval holder must:</p> <p>a) Provide the name and qualifications of the nominated independent auditor, the draft audit criteria, and proposed timeframe for submitting the audit report to the department prior to commencing the independent audit.</p> <p>b) Only commence the independent audit once the nominated independent auditor, audit criteria and timeframe for submitting the audit report have been approved in writing by the department.</p> <p>c) Submit the audit report to the department for approval within the timeframe specified and approved in writing by the department</p> <p>d) Publish each audit report on the website within 15 business days of the date of the department's approval of the audit report.</p> <p>e) Keep every audit report published on the website until this approval expires.</p>	N/A	Not yet triggered.
27)	Each audit report must report for the five-year period preceding that audit report.	N/A	Not yet triggered.
28)	Each audit report must be completed to the satisfaction of the Minister and be consistent with the Environment Protection and Biodiversity Conservation Act 1999 Independent Audit and Audit Report Guidelines, Commonwealth of Australia 2019.	N/A	Not yet triggered.
29)	The approval holder must notify the department electronically 60 business days prior to the expiry date of this approval, that the approval is due to expire.	N/A	Not yet triggered.
30)	Within 20 business days after the completion of the Action, and, in any event, before this approval expires, the approval holder must notify the	N/A	Not yet triggered.

Condition Number/ reference	Condition	Is the Project compliant with this condition?	Evidence/ Comments
	department electronically of the date of completion of the Action and provide completion data. The approval holder must submit any spatial data that comprises completion data as a shapefile.		
31)	The approval holder must notify the department in writing if there is a proposal to vary the State Development Consent that would change conditions that relate to protected matters within 2 business days of formally proposing such a change and within 5 business days of becoming aware of any such proposed change.	N/A	Not triggered.
32)	The approval holder must notify the department in writing within 10 business days if the State Development Consent is superseded by a newer version of a Development Consent for Albion Park Quarry – Stage 7 Extension granted by the New South Wales Minister for Planning and Public Spaces under the Environmental Planning and Assessment Act 1979 (NSW).	N/A	Not triggered.

Non-Compliances

Condition	Identified by	Date identified	DCCEEW notified	Description of NCR and cause	Proposed corrective measures
14	M Hammond	30/1/2025	30/1/2025 via EPBC Business Portal	Review of records indicate that DCCEEW were notified of retirement of required credits, but not explicitly of the commencement of the action, which directly followed the retirement of the credits. This was an administrative oversight on the part of Cleary Bros.	Mark Hammond of Cleary Bros completed the Action Commencement Notification form on the EPBC Business Portal (Ref 2020/8871-PC-001002) on 30/1/2025. There are no further requirements associated with this condition, and as such no actions are proposed to prevent a recurrence.

Condition	Identified by	Date identified	DCCEEW notified	Description of NCR and cause	Proposed corrective measures
19 20(a)	DCCEEW	21/1/2025	N/A (DCCEEW notified CB)	As advised by DCCEEW on 21 January 2025, the 2023-2024 compliance report published 30 September 2024 does not address all requirements of Guidelines, specifically section 3.6 and the table in Appendix A. The non-compliance was an administrative oversight due to a lack of familiarity with the requirements of a compliance report prepared under an EPBC approval.	<p>Mark Hammond of Cleary Bros will prepare an addendum to the 2023-2024 Annual Review (this addendum) to ensure all content not previously described in the Annual Review and which is required by the Guideline is included. This addendum will be finalised on 30/1/2025 and published to Cleary Bros website.</p> <p>To prevent a recurrence, Mark Hammond will update the Cleary Bros Albion Park Quarry Annual Review template document by 31/1/2025 to include all requirements of the Guideline. The background of this non-compliance will also be shared with the Albion Park Quarry leadership team.</p>
21(a)	M Hammond	30/1/2025	30/1/2025 via EPBC Business Portal	Annual Review including Compliance Report published to Cleary Bros website (www.clearybros.com.au/albion-park) on 30/9/2024, in line with the requirements of Development Consent for the project (SSD10369), however 66 business days after the end of the reporting period. This administrative oversight was due to a misunderstanding of the different timings required for report submission under the various approvals associated with the project.	<p>As the report was submitted prior to the identification of the non-compliance, no corrective actions are proposed in this instance.</p> <p>To prevent a recurrence, Mark Hammond of Cleary Bros updated the internal Environmental Compliance Tracking register (which is used to track all scheduled compliance activities) on 30/1/2025, to specify the due date of this report as 20th September each year (previously listed as 30th September) which will ensure compliance with all reporting deadlines.</p>

Declaration of accuracy

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Mark Hammond

Head of Sustainability

Cleary Bros (Bombo) Pty Ltd ABN: 28 000 157 808

30/1/2025