Holcim

Strength. Performance. Passion

ANNUAL REVIEW

20 November 2023 – 31 December 2023

Dubbo Quarry

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SITE DETAILS

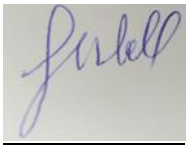
Name of operation	Dubbo Quarry
Name of operator	Holcim (Australia) Pty Ltd
Development consent / project approval #	SSD 10417
Name of holder of development consent / project approval	Holcim (Australia) Pty Ltd
Water licence #	WAL29524
Name of holder of water licence	Holcim (Australia) Pty Ltd
Water licence #	WAL34573
Name of holder of water licence	Holcim (Australia) Pty Ltd
Annual Review start date	November 20, 2023
Annual Review end date	December 31, 2023

I, Leeroy Wall, certify that this audit report is a true and accurate record of the compliance status of Dubbo Quarry for the period of November 20, 2023 - December 31, 2023, and that I am authorised to make this statement on behalf of Holcim (Australia) Pty Ltd.

Note.

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.*

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).*

Name of authorised reporting officer	Leeroy Wall
Title of authorised reporting officer	Quarry Manager
Signature of authorised reporting officer	
Date	20-09-2024

1 STATEMENT OF COMPLIANCE

See **Table 1** for statement of commitments for the reporting period (20 November 2023 to 31 December 2023) for Dubbo Quarry. **Table 2** displays the DPHI compliance status key. **Table 3** details the non-compliances identified within the reporting period.

Table 1: Statement of commitments

Were all conditions of the relevant approval(s) complied with?	
State Significant Development (SSD) No. 10417	No
Environment Protection License (EPL) No. 2212	Yes

Table 2: DPHI compliance status key

Risk level	**Colour code**	**Description**
High	Non-compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium	Non-compliant	Non-compliance with: • Potential for serious environmental consequences, but is unlikely to occur; or • Potential for moderate environmental consequences, but is likely to occur
Low	Non-compliant	Non-compliance with: • Potential for moderate environmental consequences, but is unlikely to occur; or • Potential for low environmental consequences, but is likely to occur
Administrative non-compliance	Non-compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

Table 3: Non-compliances for reporting period

<table>
<tr><th>Relevant Approval</th><th>Condition</th><th>Condition description</th><th>Compliance status</th><th>Section addressed in Annual Review / Comment</th></tr>
<tr><td>SSD 10417</td><td>Part B,
Condition 19</td><td>The Applicant must ensure that particulate matter emissions generated by the development do not cause exceedances of the criteria in Table 5 at any residence on privately-owned land.

Table 5: Air quality criteria
<table><tr><th>Pollutant</th><th>Averaging period</th><th>Criterion</th></tr><tr><td rowspan="2">Particulate matter <10 µm (PM_{10})</td><td>Annual</td><td>[a, c] 25 µg/m³</td></tr><tr><td>24 hour</td><td>[b] 50 µg/m³</td></tr><tr><td rowspan="2">Particulate matter <2.5 µm ($PM_{2.5}$)</td><td>Annual</td><td>[a, c] 8 µg/m³</td></tr><tr><td>24 hour</td><td>[b] 25 µg/m³</td></tr><tr><td>Total suspended particulate (TSP) matter</td><td>Annual</td><td>[a, c] 90 µg/m³</td></tr></table>Notes:
[a] Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).
[b] Incremental impact (i.e. incremental increase in concentrations due to the development on its own).
[c] Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.</td><td>Low Non-Compliance</td><td>Section 6.3.3 Air Quality
There was one exceedance of the air quality criteria and several ‘Invalidated sample’ and ‘No sample’ readings within the reporting period due to malfunctioning of the onsite HVAS monitors.
See Section 6.3.3 and Table 11 for further details.</td></tr>
<tr><td>SSD 10417</td><td>Part B,
Condition 21 c)</td><td>Carry out routine air quality monitoring or as directed by the Planning Secretary, to determine whether the development is complying with the relevant conditions in this consent. All monitoring must be in accordance with the Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales (EPA, 2022).</td><td>Low Non-Compliance</td><td>Section 6.3.3 Air Quality
As above, the onsite HVAS monitors were not operating correctly during the reporting period.</td></tr>
<tr><td>SSD 10417</td><td>Part D,</td><td>D9. By the end of March in each year after the commencement of development, or other timeframe agreed by the Planning Secretary, a report must be</td><td>Administrative Non-</td><td>This Annual Review report was not submitted to the</td></tr>
</table>

Relevant Approval	Condition	Condition description	Compliance status	Section addressed in Annual Review / Comment
	Condition 9	*submitted to the Department reviewing the environmental performance of the development, to the satisfaction of the Planning Secretary. This review must:* *(a) describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;* *(b) include a comprehensive review of the monitoring results and complaints records of the development over* *the previous calendar year, including a comparison of these results against the:* *(i) relevant statutory requirements, limits or performance measures/criteria;* *(ii) requirements of any plan or program required under this consent;* *(iii) monitoring results of previous years; and* *(iv) relevant predictions in the documents listed condition A2;* *(c) identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;* *(d) evaluate and report on:* *(i) the effectiveness of the noise and air quality management systems; and* *(ii) compliance with the performance measures, criteria and operating conditions in this consent;* *(e) identify any trends in the monitoring data over the life of the development;*	**Compliance**	Planning Secretary by the end of March 2024. See **Table 19** for more details.

Relevant Approval	Condition	Condition description	Compliance status	Section addressed in Annual Review / Comment
		(f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and *(g) describe what measures will be implemented over the current calendar year to improve the environmental performance of the development.*		

2 INTRODUCTION

2.1 Background

Holcim (Australia) Pty Ltd (Holcim) operates Dubbo Quarry (the 'Quarry'), a hard rock quarry located within the Dubbo Regional Council Local Government Area (LGA) on Sheraton Road approximately 1.9 kilometres west of the city of Dubbo. The site produces high quality basalt aggregates for use in concrete, asphalt, road base and other applications. The Quarry also produces many types of road base and precoated sealing aggregates.

The Quarry has been operating since 1980 under a development consent granted by the former Talbragar Shire Council, now Dubbo Regional Council. Accessible basalt resources within the existing quarry boundary are close to exhaustion and planning approval SSD 10417 (Development Consent) was granted under Part 4, Division 4.7 of the NSW Environmental Planning Assessment Act 1979 (EP&A Act) to allow the Quarry to continue operating as the Dubbo Quarry Continuation Project (henceforth referred to as 'the project'). The project involves continued operation in the existing quarry as well as the development of two new resource areas, the Western Extension Area (WEA) and Southern Extension Area (SEA).

The site also operates in accordance with EPL No. 2212 issued by the Environment Protection Authority (EPA). The site locality and Development Consent area are outlined in **Figure 1** and **Figure 2** below.

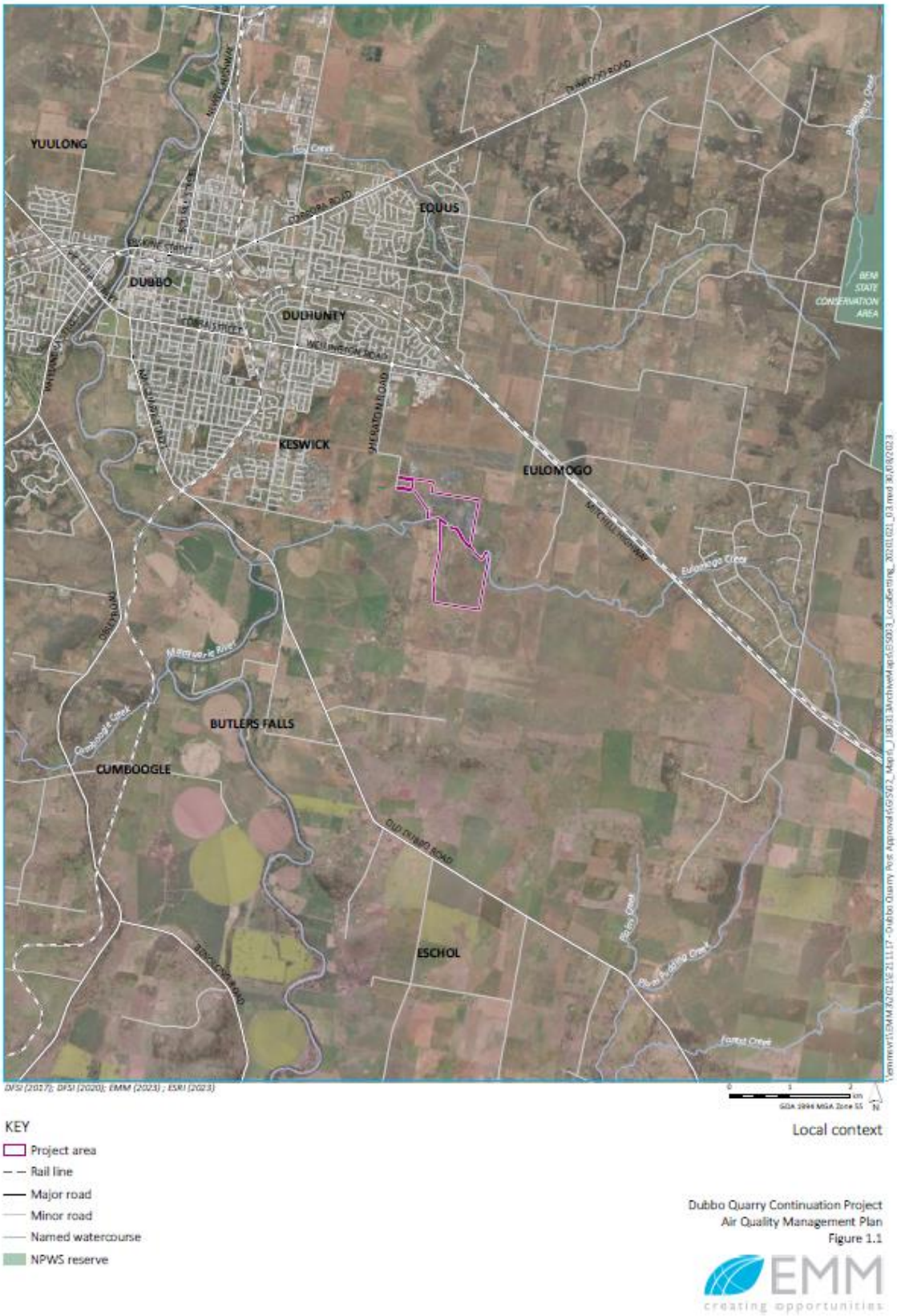


Figure 1: Regional locality (source: Air Quality Management Plan 2023)

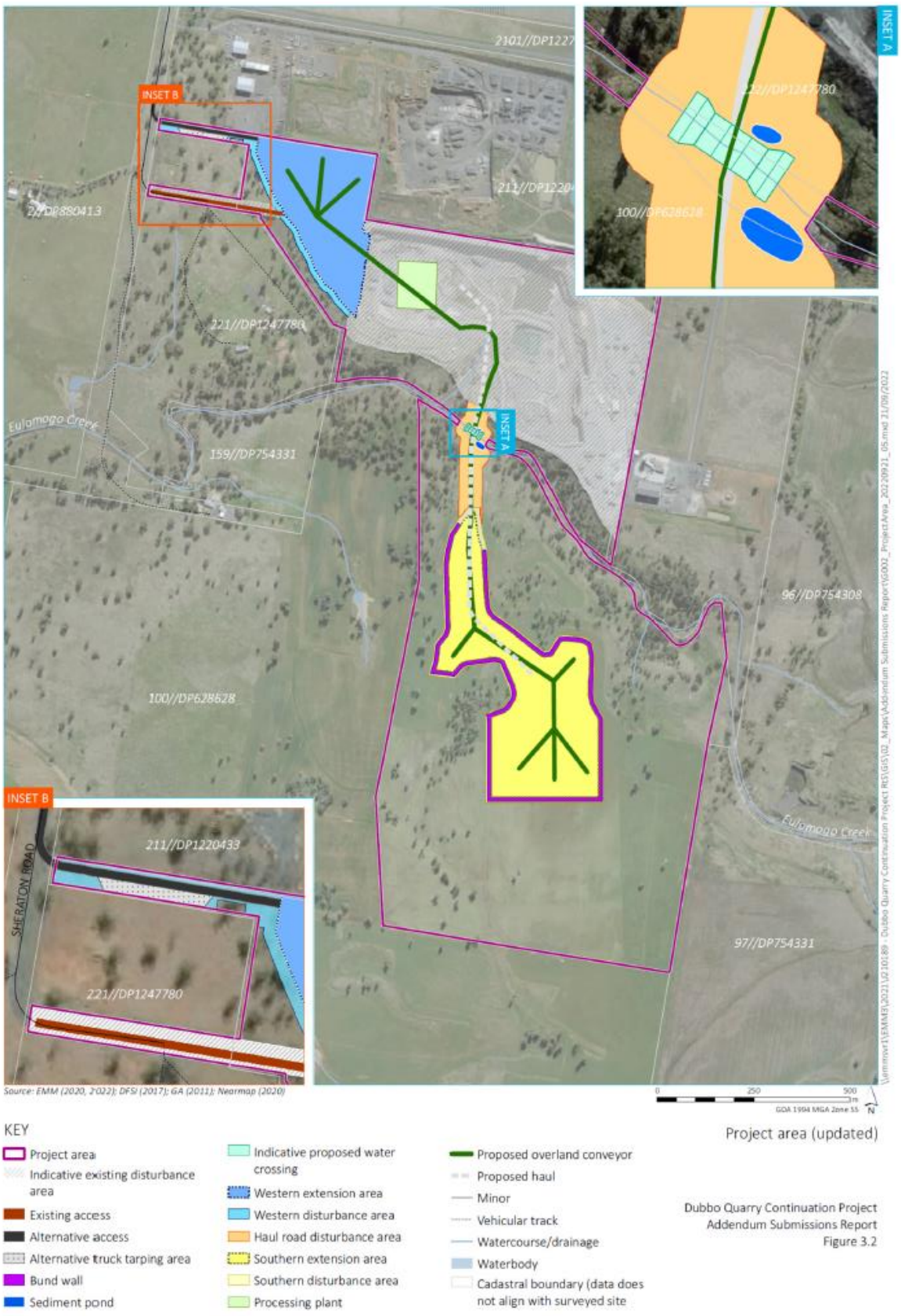


Figure 2: Dubbo Quarry project approval area (source: SSD 10417)

2.2 Annual Review Requirements

This Annual Review has been prepared in accordance with Condition D9 (Annual Review) of the Development Consent and in accordance with the *Annual Review Guideline: Post Approvals Requirements for State Significance Mining Developments* (October 2015). The Annual Review requirements and the section where they have been addressed in this document have been provided in **Table 4.**

Table 4: Annual Review requirements and structure of this Annual Review

Condition	Section in Annual Review
REPORTING AND AUDITING **Annual Review** D9. By the end of March in each year after the commencement of development, 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: a) describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;	**Section 4 and Table 19**
b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the: (i) relevant statutory requirements, limits, or performance measures/criteria; (ii) requirements of any plan or program required under this consent; (iii) monitoring results of previous years; and (iv) relevant predictions in the documents listed condition A2;	**Sections 6, 7, and 10.3**
c) identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;	**Table 3 and Section 12**
d) evaluate and report on: (i) the effectiveness of the noise and air quality management systems; and (ii) compliance with the performance measures, criteria, and operating conditions in this consent;	**Section 6.2 and 6.3** **Sections 9 and 12**
e) identify any trends in the monitoring data over the life of the development;	**Section 6**
f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	**Section 6**
g) describe what measures will be implemented over the current calendar year to improve the environmental performance of the development.	**Section 13**

2.3 Key Personnel

Table 5 details the names and contact details of key Dubbo Quarry personnel for the environmental management of the operation.

Table 5: Contact details for Dubbo Quarry key personnel

Staff Member and Position	Contact Details
Quarry Manager Leeroy Wall	Mob: 0447 523 471 Email: leeroy.wall@holcim.com
Area Manager Aggregates – NSW North Chris Hamilton	Work: 02 6656 8620 Mob: 0429 790 213 Email: chris.s.hamilton@holcim.com
Environment Manager - NSW Dozie Egeonu	Mob: 0429 557 493 Email: dozie.egeonu@holcim.com

3 APPROVALS

The site operates under the following approvals listed in **Table 6.**

Table 6: Approvals for Dubbo Quarry operations

Approval	Regulatory Authority
SSD 10417	Department of Planning, Housing and Infrastructure (DPHI)
EPL No. 2212	NSW Environmental Protection Authority (EPA)
Water Access Licence (WAL) No. 29524	WaterNSW
WAL No. 34573	WaterNSW
WAL No. 43440	WaterNSW

4 OPERATIONS SUMMARY

4.1 Exploration

No exploration activities were completed during the reporting period.

4.2 Land Preparation

36.12 hectares (ha) of vegetation and topsoil were stripped within the approved extraction areas during the reporting period in preparation for extraction.

4.3 Construction Activities

There was no construction undertaken at the Quarry during the reporting period.

4.4 Quarry Operations

Table 7 includes a summary of the operations undertaken during the reporting period against the Development Consent conditions regarding product transported from the Quarry.

Table 7: Total product distributed

Material	Approved Limit (SSD 10417) (Tonnes (T))	Product Distributed (T)		
		Previous reporting period	This reporting period	Next reporting period (forecast)
Transportation Limit Condition A9	500,000	N/A	0	320,000
Receival of Fly Ash Condition A10	3000	N/A	0	3000
Receival of Concrete Washout Materials Condition A11	3000	N/A	0	1000

4.5 Next Reporting Period

Development activities proposed to be carried out at the Quarry in the next reporting period (January to December 2024), include:

- Stripping of topsoil and overburden within the existing extraction limit boundary;
- Drill, blast, load and haul activities; and
- Crushing, screening and stockpiling of product.

5 ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

5.1 Actions from Previous Annual Review – DPHI Review

There are no actions to be carried out from the previous Annual Review as this is the first Annual Review report for the Quarry.

5.2 Actions from Previous Annual Review – Holcim Proposed Actions

This is the first Annual Review for the Quarry, so there are no previously proposed actions for this Annual Review to report on.

6 ENVIRONMENTAL PERFORMANCE

The following sections provide a summary of environmental monitoring and management undertaken during the reporting period. In accordance with the Development Consent, the Quarry has prepared several management plans in consultation with relevant stakeholders.

6.1 Meteorological Monitoring

A summary of monthly temperature readings was retrieved from the onsite meteorological station on the south-western boundary of the existing pit. Rainfall data was recorded from the Bureau of Meteorological (BoM) Station 065070 Dubbo Airport, which is approximately 14 kilometres from site. The site uses this meteorological monitoring data to inform daily operations as per the Development Consent. A summary of meteorological results for the reporting period is outlined in **Table 8** below.

Table 8: Meteorological monitoring results

Month	Total Rainfall (mm)	Minimum Temperature (°C)	Maximum Temperature (°C)
November (20 to 30 November)	36.8	12.9	34.4
December	67.0	11.2	42.5
Annual TOTAL	103.8		

Total rainfall during the reporting period was 103.8 mm. The minimum recorded temperature during the reporting period was 11.2°C, with the maximum being 42.5°C.

6.2 Noise

6.2.1 EIS Predictions

A noise and vibration impact assessment (NIVA) in the Environmental Impact Statement (EIS) (2021) considered the potential operational noise, construction noise, and road traffic noise impacts of the proposed extension on nearby sensitive receiver locations.

The EIS (2021) stated the project will generate noise during construction of the Eulomogo Creek crossing and the proposed access road. Construction noise management levels (NMLs) will be exceeded at two of the closest noise sensitive receivers. However, noise generating construction work will be relatively short in nature (up to eight weeks) and during standard hours (day) only.

During operation of the project, NMLs will be exceeded at several assessment locations. Significant noise generating operational work will occur during stripping activities which will last up to four weeks per stripping event. Outside of stripping events, during general quarry operations, noise levels will decrease significantly.

6.2.2 Approved Criteria

Criteria for each of the receivers R1 – R23 for quarry operations are provided in **Table 9** as per Condition B1 of the Development Consent. The noise monitoring locations are shown in **Figure 3.**

Table 9: Operational noise criteria dB(A)

Noise Assessment Location	Daytime - Stripping ($LA_{eq(15min)}$)	Daytime - all other quarrying operation ($LA_{eq(15min)}$)	Night ($LA_{eq(15min)}$)	Night LA_{max}
R1[2]	49	49	40	52
R2	46	44	35	52
R3	43	43	37	52
R4	41	41	35	52
R5	40	41	35	52
R23[3]	42	42	37	52
All other non-project related privately owned residences	40	40	35	52

Notes:

1. Day period is 7 am to 6 pm Monday to Saturday; night period is 10:00 pm to 7:00 am Monday to Saturday.
2. Holcim currently has a negotiated agreement in place with the landowner of this residential property.
3. No residence currently exists at this location (i.e., vacant land).

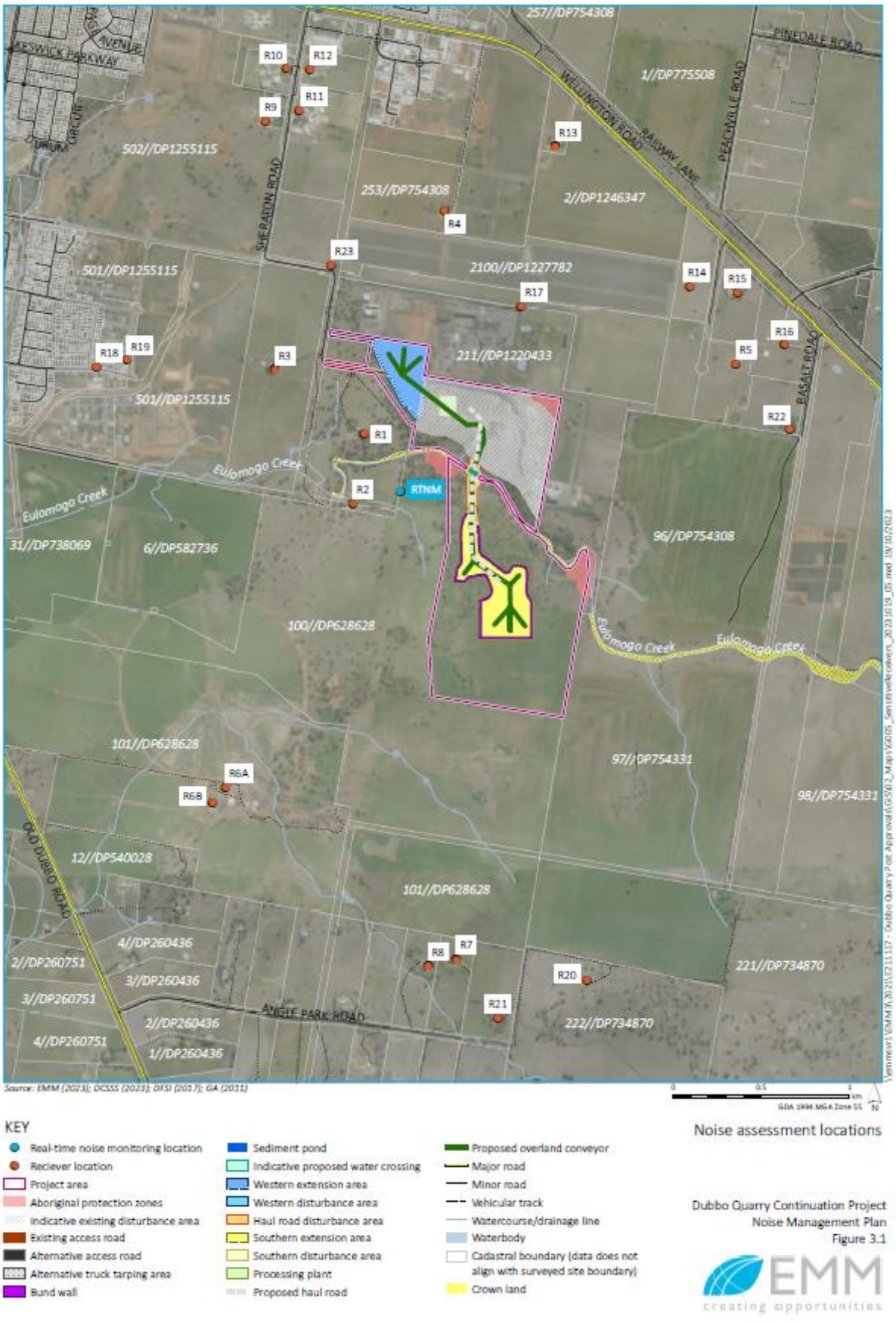


Figure 3: Noise monitoring locations (source: Noise Management Plan 2023)

6.2.3 Key Environmental Performance

There was no noise monitoring data to be reported on as all monitoring was conducted outside of the reporting period.

Long-term Trends:

There were no long-term trends related to noise monitoring to report on as site only commenced operations on 20 November 2023.

Comparison to EIS Predictions:

There was no comparison to be made to the EIS predictions as no noise monitoring was carried out within the reporting period. Holcim did not receive any complaints relating to noise during the reporting period.

6.2.4 Management Measures

Management measures relating to noise are outlined within Section 4 of the Dubbo Quarry *Noise Management Plan* and the *Dubbo Quarry Continuation Project Environmental Impact Statement* (EIS). These include:

- Defined operating hours as per Condition A12 of the Development Consent;
- Monitoring for noise and meteorological conditions;
- Staff and contractor inductions and regular reinforcement (such as at toolbox talks);
- Minimising the use of portable radios, public address systems or other noisy methods of site communication when operating close to nearby residents;
- Utilise appropriate travel routes for the delivery of materials and parking of vehicles;
- Minimise use of equipment that generates impulsive noise;
- Notify potentially affected residents prior to the commencement of works;
- Operate plant and equipment in the quietest and most efficient manner possible; and
- Regular inspections and maintenance of plant and equipment.

The *Noise Management Plan* was approved by DPHI on 25 October 2023.

6.2.5 Proposed Improvements

There are no proposed improvements related to noise management for the next reporting period.

6.3 Air Quality

6.3.1 EIS Predictions

An air quality impact assessment (AQIA) was prepared by EMM as part of the EIS, documenting the existing air quality and meteorological environment, applicable impact assessment criteria, air pollutant emission calculations, dispersion modelling of calculated emissions and assessment of predicted impacts relative to criteria (including cumulative impacts).

Emissions generated by the project will principally consist of particulate matter emissions from loading and unloading materials (topsoil, subsoil and rock), conveying and transfer of rock, rock sizing, hauling materials and wind erosion of exposed areas.

Three emission scenarios (existing and two future scenarios) were considered to quantify particulate matter impacts from the project and to understand the significance of the proposed operations compared to current operations.

The results of the dispersion modelling show that the predicted concentrations and deposition rates for incremental particulate matter (TSP, PM_{10}, $PM_{2.5}$ and dust deposition) are below the applicable impact assessment criteria at all assessment locations for both the existing and proposed scenarios.

Cumulative impacts were assessed by combining modelled impacts with recorded ambient background levels. The cumulative results showed that compliance with applicable impact assessment criteria is predicted at all assessment locations for all pollutants and averaging periods.

6.3.2 Approved Criteria

Air quality monitoring is required to be undertaken in accordance with the following criteria in **Table 10** in accordance with Condition B19 of the Development Consent. The air quality monitoring locations are shown in **Figure 4.**

Table 10: Air quality criteria

Pollutant	Averaging period	Criterion
Particulate matter <10 µm (PM_{10})	Annual	[a, c] 25 µg/m^3
	24-hour	[b] 50 µg/m^3
Particulate matter <2.5 µm ($PM_{2.5}$)	Annual	[a, c] 8 µg/m^3
	24-hour	[b] 25 µg/m^3
Total suspended particulate (TSP) matter	Annual	[a, c] 90 µg/m^3

Notes:

a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.

Figure 4: Air quality monitoring locations (source: Air Quality Management Plan 2023)

6.3.3 Key Environmental Performance

PM_{10} / $PM_{2.5}$

PM_{10} and $PM_{2.5}$ monitoring was undertaken via HVAS units ER1019009 (north-eastern boundary) and ER1021003 (south-western boundary) during the reporting period (see **Figure 4**).

Table 11 below displays the PM_{10} and $PM_{2.5}$ monitoring results at ER1019009 and ER1021003, respectfully.

Table 11: HVAS 2023 PM10 / PM2.5 monitoring results (24-hour average)

Sampling Date	ER1019009 (north-eastern boundary)		ER1021003 (south-western boundary)	
	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
	Criterion: 50 µg/m³	Criterion: 25 µg/m³	Criterion: 50 µg/m³	Criterion: 25 µg/m³
20/11/23	6.97	2.66	5.11	3.61
21/11/23	7.77	2.07	4.25	2.45
22/11/23	24.62	5.82	6.83	4.76
23/11/23	19.55	4.44	No sample	No sample
24/11/23	6.20	2.74	10.18	8.62
25/11/23	4.07	1.84	0.32	0.20
26/11/23	4.30	1.45	3.61	2.77
27/11/23	6.40	1.95	13.98	4.84
28/11/23	18.33	7.85	11.64	9.85
29/11/23	4.40	1.60	17.05	4.84
30/11/23	2.46	1.06	21.12	5.17
01/12/23	No sample	No sample	31.98	2.91
02/12/23	No sample	No sample	15.95	14.73
03/12/23	No sample	No sample	15.40	13.55
04/12/23	No sample	No sample	Invalid sample	Invalid sample
05/12/23	No sample	No sample	Invalid sample	Invalid sample
06/12/23	No sample	No sample	Invalid sample	Invalid sample
07/12/23	No sample	No sample	Invalid sample	Invalid sample
08/12/23	No sample	No sample	Invalid sample	Invalid sample
09/12/23	No sample	No sample	Invalid sample	Invalid sample
10/12/23	No sample	No sample	Invalid sample	Invalid sample
11/12/23	No sample	No sample	Invalid sample	Invalid sample
12/12/23	36.19	31.16	Invalid sample	Invalid sample
13/12/23	25.13	12.23	Invalid sample	Invalid sample
14/12/23	33.84	9.61	Invalid sample	Invalid sample
15/12/23	17.65	4.03	Invalid sample	Invalid sample
16/12/23	9.12	2.26	Invalid sample	Invalid sample
17/12/23	3.33	2.01	Invalid sample	Invalid sample
18/12/23	28.04	14.59	Invalid sample	Invalid sample
19/12/23	16.22	3.93	Invalid sample	Invalid sample
20/12/23	25.93	20.57	Invalid sample	Invalid sample
21/12/23	1.18	0.71	Invalid sample	Invalid sample
22/12/23	4.21	1.86	Invalid sample	Invalid sample
23/12/23	4.43	2.12	Invalid sample	Invalid sample
24/12/23	1.33	1.06	Invalid sample	Invalid sample

Sampling Date	ER1019009 (north-eastern boundary)		ER1021003 (south-western boundary)	
	PM_{10}	$PM_{2.5}$	PM_{10}	$PM_{2.5}$
	Criterion: 50 µg/m^3	Criterion: 25 µg/m^3	Criterion: 50 µg/m^3	Criterion: 25 µg/m^3
25/12/23	No sample	No sample	Invalid sample	Invalid sample
26/12/23	No sample	No sample	Invalid sample	Invalid sample
27/12/23	No sample	No sample	Invalid sample	Invalid sample
28/12/23	No sample	No sample	Invalid sample	Invalid sample
29/12/23	No sample	No sample	Invalid sample	Invalid sample
30/12/23	No sample	No sample	Invalid sample	Invalid sample
31/12/23	No sample	No sample	Invalid sample	Invalid sample

***No sample** – indicates where there was no value for the result in the monitoring spreadsheet (blank cell).

***Invalidated sample** – indicates where a sample was collected however the monitor was malfunctioning at the time the sample was collected. Therefore, it is invalid.

During the reporting period, one exceedance, 56 'Invalid sample' readings, and 38 'No sample' readings were recorded at the Quarry.

The exceedance of 31.16 µg/m3 at HVAS unit ER1019009 on 12 December 2023 is believed to be partially due to the predominant easterly winds at the time.

The 'Invalid sample' readings are believed to have been caused by the drifting of the SW monitor, which appeared to have started around early December 2023.

The 'No sample' readings are believed to have been caused by issues with the solar arrays, the supplier's LiveSense portal being down and/or the micro-SD card being corrupted in the NE monitor.

Holcim's engaged consultancy completed a maintenance visit in December 2023, but solar array issues persisted. Holcim responded to the ongoing issue by replacing the two Air-Met rental monitors (model Air MetER DX) with long-term Holcim-owned monitors once two Aeroqual particle monitors were acquired. Holcim-owned air quality monitors were later installed during the first quarter of 2024 at the same approved locations specified in the AQMP 2024.

During the installation of the rented HVAS monitors, the supplier put in incorrect trigger levels (a higher factor of 1000). This resulted in no exceedance alerts being generated, therefore Holcim was never notified of the 12 December 2023 exceedance. Additionally, due to the supplier's LiveSense portal malfunctioning, Holcim didn't become aware of any of the 'Invalid samples' or 'No samples' until the supplier manually logged in to the portal at a later date.

Long-term Trends:

There were no long-term trends related to air quality monitoring to report on as site only commenced operations on 20 November 2023.

Comparison to EIS Predictions:

Valid air quality monitoring results were within the predicted limits of the EIS predictions with the exception of the 12 December 2023 exceedance.

6.3.4 Management Measures

Management measures relating to air quality are outlined within Section 4 of the Dubbo Quarry *Air Quality Management Plan*. These include:

- Discussion of the weather conditions and dust considerations at daily pre-shift meetings;
- Modifying or suspending the planned activities, as appropriate, to minimise dust impacts;
- Quarry design, including progressive rehabilitation, use of gravel roads and paving the access road; and

- Water sprays on stockpiles and exposed areas.

The *Air Quality Management Plan* was approved by DPHI on 26 September 2023.

6.3.5 Proposed Improvements

The Quarry will continue to implement their *Air Quality Management Plan* to meet the requirements outlined in the Development Consent.

6.4 Blasting

6.4.1 EIS Predictions

A NIVA in the Environmental Impact Statement (EIS) (2021) considered the potential blasting (vibration) impacts of the proposed extension on nearby sensitive receiver locations.

The EIS (2021) stated 'no exceedance of the relevant sleep disturbance screening criteria is predicted due to site operations. Potential impacts of blasting were also assessed in the NVIA, with permissible maximum instantaneous charges (MICs) recommended for each project area to ensure compliance with the relevant air blast overpressure and ground vibration criteria. Road traffic noise levels under a worst-case maximum production scenario are predicted to satisfy the relevant criteria'.

6.4.2 Approved Criteria

The blasting criteria for the Quarry is shown in **Table 12.** This criterion is taken from the blasting criteria in Table 4 of Condition B8 of the Development Consent.

Table 12: Blasting criteria for the Quarry

Location	Airblast overpressure (dB (Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Any residence on privately-owned land	120	10	0%
	115	5	5% of the total number of blasts over a calendar year

6.4.3 Key Environmental Performance

Results of blast monitoring undertaken within the reporting period are shown in **Table 13** below.

Table 13: Blast monitoring results for the Quarry

Blast Number	Date	Result	
		Ground Vibration (mm/s)	Overpressure (dBL)
1	08/12/2023	2.058	105.4

Long-term Trends:

There were no long-term trends related to blast monitoring to report on as site only commenced operations on 20 November 2023.

Comparison to EIS Predictions:

The results for blasting were within the predicted limits of the EIS predictions.

6.4.4 Management Measures

Management measures relating to blasting are outlined within Section 4 of the Dubbo Quarry *Air Quality Management Plan*. These include:

- Carrying out blasting within the operating hours outlined in Condition A12 of the Development Consent;
- Conducting blasts in accordance with Condition B17 of the Development Consent;
- Delaying blast shots during unfavourable weather (where practical); and
- Designing blast areas to minimise the number of blasts needed per year.

6.4.5 Proposed Improvements

There are no proposed improvements for the next reporting period.

6.5 Traffic Management

6.5.1 EIS Predictions

A Traffic Impact Assessment (TIA) was completed for the EIS (2021), which describes the existing local and regional traffic network surrounding the existing site and assesses the impacts of the project on that network.

The EIS (2021) stated 'project-related heavy vehicles during the project will have no significant impact to the capacity of the local or regional road network and will not significantly impact the performance of the intersection of Sheraton Road and Mitchell Highway. The Mitchell Highway and Sheraton Road in proximity to the Quarry are considered to have good local traffic safety conditions currently given the low number of reported crashes (one crash per year), which is expected to continue through project operation. However, a road safety audit was prepared for the project as requested by the SEARs. The audit identified several potential safety items, most of are the result of school bus and light vehicle traffic movements on Sheraton Road'.

6.5.2 Approved Criteria

The site is required to operate traffic and manage transport through compliance with the requirements of the conditions from the Development Consent listed below:

Extraction, Importation and Transportation Limits

A11. The Applicant must limit heavy vehicles leaving the site to:

(a) 20 laden trucks per hour; and

(b) 121 laden trucks per day.

Note: *Heavy vehicle movements to and from the site are also controlled by the operating hours specified in condition A12 and provisions in condition B44.*

TRANSPORT

Monitoring of Product Transport

B42. The Applicant must keep accurate records of all laden heavy vehicle movements from the site (including hourly heavy vehicle movements) and provide a summary of these records to the Department on request.

Road Upgrades

B43. The Applicant is required to enter into a Works Authorisation Deed (WAD) with Council before finalising the design or undertaking any construction work within or connecting to the road reserve of Sheraton Road.

Transport Operating Conditions

B44. The Applicant must:

(a) adhere to the approved haulage route shown in Appendix 4, unless otherwise agreed by the Planning Secretary in consultation with Council;

(b) ensure that all laden heavy vehicles entering or exiting the site have their loads covered;

(c) ensure that no heavy vehicles arrive at the site prior to 4:00 am;

(d) take all reasonable steps to minimise traffic safety issues and disruption to local road users; and

(e) take all reasonable steps to ensure that appropriate signage is displayed on all heavy vehicles used to transport quarry products from the development so they can be easily identified

by other road users.

6.5.3 Key Environmental Performance

There was no transport of product during the reporting period under the Development Consent.

6.5.4 Management Measures

Management measures relating to traffic are outlined within Section 4 of the Dubbo Quarry *Traffic Management Plan*. These include:

- Following procedures outlined in the Driver's Code of Conduct (Appendix A of the *Traffic Management Plan*);
- Adhere to the relevant conditions in the Development Consent;
- Use appropriate site access;
- Vehicle parking in designated parking areas;
- Following all signposted speed limits within and outside of the site; and
- Initial induction and regular staff training thereafter including toolbox talks and staff meetings.

The *Traffic Management Plan* was approved by DPHI on 22 September 2023.

6.5.5 Proposed Improvements

There are no proposed improvements related to traffic management for the next reporting period.

6.6 Biodiversity

6.6.1 EIS Predictions

A Biodiversity Development Assessment Report (BDAR) was prepared as part of the EIS (2021).

The EIS (2021) stated 'the project has been designed to avoid significant clearing and to minimise the impacts to biodiversity values. Efforts were made to avoid those woodland areas with larger patch size and greater connectivity to other areas of habitat outside of the disturbance area.

Most vegetation within the project area is highly degraded and of low quality. The project will require clearance of 5.82 ha of native vegetation that will be cleared for the project. This will require an offset to be provided to retire 132 ecosystem credits. The disturbance area has low importance for threatened flora or fauna species. Targeted surveys did not detect any threatened species, and no species credits are required. Additionally, there will be no significant impacts to Matters of National Environmental Significance (MNES)'.

6.6.2 Approved Criteria

There are no specific criteria relating to biodiversity within the Development Consent. Condition B48 outlines the requirement to complete a *Biodiversity Offset Strategy* and Condition B49 outlines the requirement to complete a *Biodiversity Management Plan.*

6.6.3 Key Environmental Performance

There was no biodiversity monitoring conducted during the reporting period.

Long-term Trends:

There were no long-term trends related to biodiversity monitoring to report on as site only commenced operations on 20 November 2023.

Comparison to EIS Predictions:

There was no comparison to be made to the EIS predictions as no biodiversity monitoring was carried out within the reporting period.

6.6.4 Management Measures

Management measures relating to biodiversity are outlined within Section 3 of the Dubbo Quarry *Biodiversity Management Plan*. These include:

- Weed and pest management;
- Salvaging of habitat trees and other resources;
- Marking disturbance boundaries through fencing or flagging;
- Bushfire management;
- Rehabilitation and biodiversity offset area monitoring;
- Erosion and sedimentation control; and
- Retainment and/or establishment of vegetation screening surrounding the Project area.

6.6.5 Proposed Improvements

There are no proposed improvements related to biodiversity management for the next reporting period.

6.7 Aboriginal Heritage

6.7.1 EIS Predictions

A preliminary Aboriginal cultural heritage assessment (ACHA) was conducted as part of the EIS (2021) which assessed the potential Aboriginal cultural heritage impacts associated with the project.

The EIS (2021) stated 'a search of the Aboriginal Heritage Information Services (AHIMS) database identified 78 sites within a 10 km x 10 km search area centred on the project area. There are no AHIMS sites recorded within the project area. During a site visit, four Aboriginal sites were identified within the project area. No modified trees, ceremonial sites, Aboriginal stone arrangements, rock art or burials were identified within the project area.

The project will require the removal of one identified Aboriginal site, DQ-IF1, which consists of an isolated artefact and is assessed as a site of low archaeological significance. The design of the current project avoids impact to all remaining identified Aboriginal sites. Relocation by a qualified archaeologist is proposed for Aboriginal site DQ-IF1. All other identified sites within the project area will be conserved under the project'.

6.7.2 Approved Criteria

The site is required to manage heritage through compliance with the requirements of the conditions from the Development Consent listed below:

HERITAGE

Protection of Aboriginal Heritage

B52. The Applicant must ensure that the development does not cause any direct or indirect impact on any identified Aboriginal object located outside the approved disturbance areas, beyond those predicted in the document/s listed in condition A2(c).

B53. If any previously unknown Aboriginal object or Aboriginal place is discovered on the site, or suspected to be on the site:

a) all work in the immediate vicinity of the object or place must cease immediately;

b) a 10-metre buffer area around the object or place must be cordoned off; and

c) Heritage NSW and the Department must be contacted immediately.

B54. Work in the immediate vicinity of any newly discovered Aboriginal object or place may only recommence if:

a) the potential Aboriginal object or place is confirmed by Heritage NSW in consultation with the Registered Aboriginal Parties, not to be an Aboriginal object or Aboriginal place; or

b) the Planning Secretary is satisfied as to the measures to be implemented in respect of the Aboriginal object or place and makes a written direction in that regard.

B55. The Applicant must ensure:

a) salvage of known Aboriginal objects within the disturbance footprint occurs in accordance with the procedures and commitments detailed in the document/s listed in condition A2(c);

b) that all known Aboriginal objects or Aboriginal places on the site are properly recorded, those records are kept up to date and are reported to the Aboriginal Heritage Information Management System;

c) all workers receive suitable Aboriginal cultural heritage training/inductions prior to

carrying out any activities which may cause impacts to Aboriginal objects or places, and that suitable records are kept of these inductions;

d) *that the Applicant facilitates ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site; and*

e) *the appropriate care, control and storage of Aboriginal objects salvaged on the site, both during the life of the development and in the long-term occurs in consultation with Registered Aboriginal Parties.*

6.7.3 Key Environmental Performance

There were no issues relating to Aboriginal Heritage during the reporting period.

6.7.4 Management Measures

Management measures relating to Aboriginal heritage are outlined within the Dubbo Quarry *Aboriginal Cultural Heritage Management Plan 2023*. These include:

- Consultation with Aboriginal stakeholders during the preparation of the Dubbo Quarry *Aboriginal Cultural Heritage Management Plan*;
- Records of known sites of Aboriginal heritage significance;
- The Quarry Manager or delegate will undertake monthly inspections of the known Aboriginal and cultural heritage sites;
- Training of staff and contractors; and
- Procedure for impacts of unexpected finds.

6.7.5 Proposed Improvements

There are no proposed improvements related to heritage management for the next reporting period.

6.8 Waste Minimisation

6.8.1 Approved Criteria

The site is required to manage waste minimisation through compliance with the requirements of the conditions from the Development Consent listed below:

> ***WASTE***
>
> *B66. The Applicant must:*
>
> *a) manage onsite sewage treatment and disposal in accordance with the requirements of an applicable EPL and/or Council approval;*
>
> *b) classify all waste in accordance with the Waste Classification Guidelines (EPA, 2014);*
>
> *c) minimise the waste generated by the development;*
>
> *d) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and*
>
> *e) monitor and report on waste minimisation and management in the Annual Review referred to in condition D9.*

6.8.2 Key Environmental Performance

A summary of the waste generated by the Quarry is shown in **Table 14**.

Table 14: Waste summary

Waste Source	2023 (approximate volumes)
Scrap Steel	24m^3
General Waste - Rubbish	45m^3
General Waste - Cardboard	10.5m^3
Industrial Waste	Nil
Waste Oil	16,000L
Septic	Nil
Oily Water	Nil

6.8.3 Management Measures

Wastes generated at the Quarry include general waste and recyclable products produced at the administration building. These wastes are put into wheelie bins which are collected by a licensed contractor and taken to landfill or recycling station.

6.8.4 Proposed Improvements

There are no proposed improvements to waste management for 2024, however the Quarry will continue to look for opportunities to reduce waste where possible.

7 WATER MANAGEMENT

7.1 EIS Predictions

The Environmental Assessment (2021) states 'the water balance modelling completed for the proposed water management system predicts that the project will effectively reduce discharges to Eulomogo Creek. This will beneficially impact the natural water quality and flow Eulomogo Creek. This is consistent with objectives for uncontrolled streams and major regulated rivers stipulated in NSW Water Quality and River Flow Objectives (DECCW 2006).

The key outcomes of the proposed water management system include:

- groundwater inflows into new and existing quarry pits will be minimised (from approximately 191 ML/year to 27 ML/year in a dry year scenario); and
- the frequency and magnitude of discharges from the East Pit and sedimentation dams will be substantially reduced (with minor discharges predicted only from sediment basin overflows during dry years and median years, and discharge volumes during wet years decreasing from 411 ML/year to 169 ML/year)'.

7.2 Approved Criteria

The Quarry is required to monitor water quality with the default guideline values (DGVs) outlined in **Table 15** below. The water monitoring locations are shown in **Figure 5**.

Table 15: Water quality monitoring guideline values (WMP 2024)

Indicator	DGV	Source
Turbidity	The annual median value should be < 20 NTU	Macquarie-Castlereagh water quality management plan (NSW DoI 2018) – water quality targets for water dependant ecosystems
Total phosphorus	The annual median value should be < 35 ug P/L	
Total nitrogen	The annual median value should be < 600 ug N/L	
Dissolved oxygen	The annual median value should be >8 mg/L or within the 90-110% range	
pH	The annual median value should be within the 7.0-8.0 range.	
Temperature	Between the 20th and 80th percentile of the natural monthly water temperature range	
Salinity	Median value 504 µS/cm 80th percentile 744 µS/cm	
Toxicants	Values for slightly-to-moderately disturbed freshwater ecosystems described in the ANZG 2018 guidelines.	Macquarie-Castlereagh water quality management plan (NSW DoI 2018) and ANZG 2018.

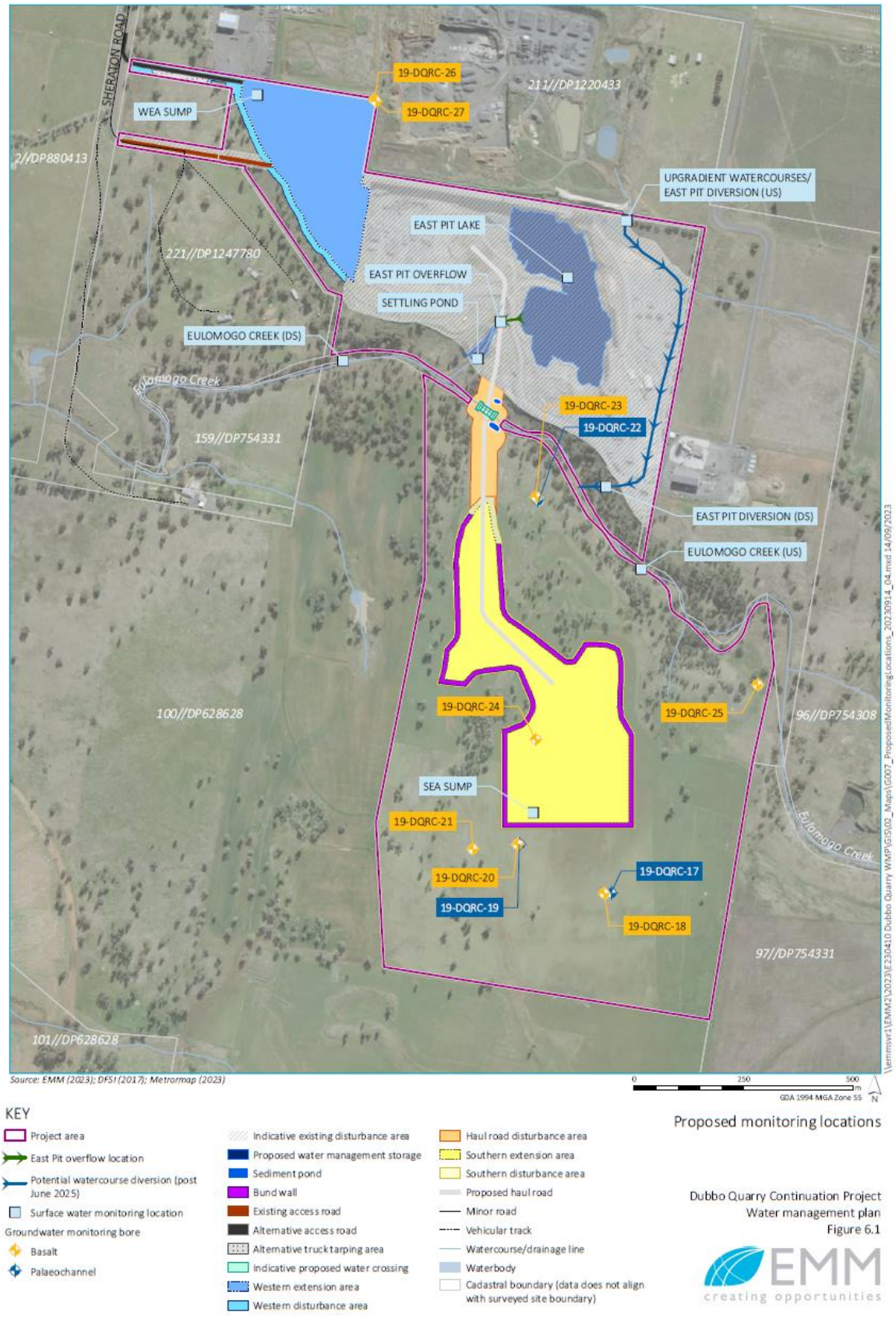


Figure 5: Water monitoring locations (source: Water Management Plan 2024)

7.3 Surface Water Results

No surface water monitoring was conducted within the reporting period.

Long-term Trends:

There were no long-term trends related to surface water monitoring to report on as site only commenced operations on 20 November 2023.

Comparison to EIS Predictions:

There are no comparisons to the EIS predictions to be included in this Annual Review as no surface water monitoring was carried out within the reporting period. Holcim did not receive any complaints relating to surface water during the reporting period.

7.4 Groundwater Results

No groundwater monitoring was conducted within the reporting period.

Long-term Trends:

There were no long-term trends related to groundwater monitoring to report on as site only commenced operations on 20 November 2023.

Comparison to EIS Predictions:

There are no comparisons to the EIS predictions to be included in this Annual Review as no groundwater monitoring was carried out within the reporting period. Holcim did not receive any complaints relating to groundwater during the reporting period.

7.4.1 Water Take

The water entitlements at Dubbo Quarry are summarised in **Table 16** below. Holcim took a combined 57 Kilolitres (KL) during November and December 2023. Therefore, Holcim are compliant with their combined entitlements under the WALs.

Table 16: Water licences and entitlements

Water Licence	Water Sharing Plan, Source and Management Zone (as applicable)	Entitlement
WAL29524	MDB Porous Rock Groundwater 2020: Gunnedah-Oxley Water Source	5 units (ML)
WAL34573	MDB Porous Rock Groundwater 2020: Gunnedah-Oxley Water Source	90 units (ML)

7.5 Water Use and Storage

Effective control of erosion and sediment movement at the site is carried out in accordance with Section 4.2 of the Dubbo Quarry *Water Management Plan*. All management measures were developed in accordance with *Managing Urban Stormwater: Volume 1* (Landcom 2004) and *Volume 2E* (DECC 2008). These measures include:

- Sedimentation basins;
- Minimisation of disturbed areas;

- Drainage works to divert runoff from disturbed areas to a pit sump;
- Diversion of clean water from undisturbed areas around working areas; and
- Effective general management of surface water during operations.

8 REHABILITATION MANAGEMENT

8.1 Rehabilitation Performance during the Reporting Period

There was no rehabilitation completed during the reporting period.

8.2 Summary of Current Rehabilitation and Disturbance

A summary of the rehabilitation and disturbance status is outlined in **Table 17.**

Table 17: Rehabilitation and disturbance status

Quarry Area Type	2023 (ha)	2024 (Predicted) (ha)
A. Total Quarry Footprint[1]	36.12	38.07
B. Total Active Disturbance[2]	36.12	38.07
C. Land Being Prepared for Rehabilitation[3]	0	0
D. Land Under Active Rehabilitation[4]	0	0
E. Completed Rehabilitation[5]	0	0

Note: *areas updated based on a review of GIS.

1 Total disturbance and rehabilitation.

2 Total disturbance within the Development Consent boundary

3 Rehabilitation being shaped in a phase of decommissioning, landform establishment and growth medium development.

4 Rehabilitation under a phase of ecosystem and land use establishment or ecosystem and land use sustainability

5 This refers to rehabilitation that has been signed off from the Resources Regulator.

8.3 Actions for the Next Reporting Period

The DPHI 2015 Annual Review Guidelines require the Annual Review to outline the rehabilitation actions proposed during the next reporting period. Due to the stage of the project, there are currently limited opportunities for rehabilitation actions.

A *Rehabilitation Management Plan* will be submitted to DPHI for approval by 20 November 2024.

9 SUMMARY OF ENVIRONMENTAL PERFORMANCE

A summary of the performance of environmental management measures and sampling results are detailed in **Table 18.**

Table 18: Environmental performance summary

Aspect	Approval Criteria/EIS Prediction	Performance During the Reporting Period	Trend/Key Management Implications	Implemented/Proposed Management Actions
Noise	EIS predictions showed that construction NMLs would be exceeded at two of the closest noise sensitive receivers. EIS predictions showed that operational NMLs would be exceeded at several assessment locations during stripping events, but these will decrease significantly during general quarry operations.	No monitoring was completed during the reporting period.	There are no trends to report on as quarry operations only commenced in November 2023.	None required.
Air Quality	EIS predictions are all below Development Consent criteria.	There were a couple of non-compliances related to air quality regarding an exceedance of Development Consent criteria and/or 'Invalid sample' or 'No sample' readings during the reporting period	There are no trends to report on as quarry operations only commenced in November 2023.	The Quarry will continue to implement their *Air Quality Management Plan* to meet the requirements outlined in the Development Consent.
Blasting	EIS predictions are all below Development Consent criteria.	Blasts were within the Development Consent criteria.	There are no trends to report on as quarry operations only commenced in November 2023.	None required.

Aspect	Approval Criteria/EIS Prediction	Performance During the Reporting Period	Trend/Key Management Implications	Implemented/Proposed Management Actions
Water Management	EIS predictions are all below Development Consent criteria.	No monitoring was completed during the reporting period.	There are no trends to report on as quarry operations only commenced in November 2023.	None required.
Rehabilitation	EIS predictions outline that the project aims to reinstate the previous land use as much as possible whilst enhancing biodiversity values diminished due to past agricultural land uses.	No monitoring was completed during the reporting period.	There are no trends to report on as quarry operations only commenced in November 2023.	None required.
Biodiversity	EIS predictions showed that construction NMLs would be exceeded at two of the closest noise sensitive receivers. EIS predictions showed that operational NMLs would be exceeded at several assessment locations during stripping events, but these will decrease significantly during general quarry operations.	No monitoring was completed during the reporting period.	There are no trends to report on as quarry operations only commenced in November 2023.	None required.
Heritage	EIS predictions are all below Development Consent criteria.	No monitoring was completed during the reporting period.	There are no trends to report on as quarry operations only commenced in November 2023.	None required.

10 COMMUNITY

10.1 Community Engagement Activities

Holcim has maintained community engagement measures during the reporting period by undertaking the following activities in accordance with Condition D15 of the Development Consent:

- Maintenance of a website (containing publicly available documents);
- A telephone number, email and postal address (on the website) for community complaints and feedback;
- A copy of the Complaints Register is maintained on the company website; and
- All documents and items displayed on the website are regularly updated by Holcim staff.

10.2 Community Contributions

There were no Community Contributions during the reporting period.

10.3 Complaints

A review of the Holcim Complaints Register did not identify any complaints from external stakeholders during the reporting period. The monthly reports for the complaints register are available to the public on the Holcim website.

Information to contact the site or to make a complaint is available on the Quarry site webpage (https://www.holcim.com.au/dubbo-quarry).

11 INDEPENDENT ENVIRONMENTAL AUDIT

Holcim has not carried out an Independent Environmental Audit (IEA) for the Quarry yet as operations only commenced on 20 November 2023.

Holcim will need to undertake an IEA within 12 months of the date of commencement of operations in accordance with Condition D11 of the Development Consent.

An IEA is being scheduled for completion in November 2024.

12 INCIDENT AND NON-COMPLIANCES

Table 19 summarises the incidents and non-compliances at the Quarry in the reporting period.

Table 19: Summary of incidents and non-compliances

Date	Incident/Non-Compliance	Description
Annual Air Quality Monitoring	Non-Compliance	**SSD 10417 – Part B, Condition 19 – Air Quality Criteria** There was one exceedance of the air quality criteria on 12 December 2023. Holcim were not notified of this exceedance due to the incorrect trigger levels (a higher factor of 1000) being entered into on installation of the monitor by supplier. This resulted in no exceedance alerts being generated. Holcim resolved this issue in Q1 2024 and continue to monitor air quality as per the AQMP.
Annual Air Quality Monitoring	Non-Compliance	**SSD 10417 – Part B, Condition 21 c) – Air Quality Operating Conditions** The onsite HVAS monitors were not operating correctly during the reporting period. Several invalid samples and 'No sample' readings occurred in the reporting period due to malfunctioning of the onsite HVAS monitors. These readings were taken by rented HVAS monitors, which were replaced by Holcim owned air quality monitors in Q1 2024. Therefore, Holcim considers this issue resolved.
By the end of March 2024	Non-Compliance	**SSD 10417 – Part D, Condition 9 – Annual Review** This Annual Report was not submitted to the Planning Secretary by the end of March 2024. This was due to Holcim misinterpreting the Condition as to whether the Annual Review was to be for the full 12 months from the date of commencement (i.e., from 20 November 2023 to 20 November 2024, resulting in the report being due in March 2025) or for the two remaining months of the same calendar year in which operations commenced (i.e., from 20 November to 31 December 2023, resulting in the report being due by March 2024). Holcim notified the Department of this misinterpretation on 12 July 2024.

13 ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

Holcim staff will undertake the following works and improvement measures and projects in 2024 to ensure compliance with the consent and to ensure that effective environmental management controls are operating in accordance with the requirements of the Consent. **Table 20** outlines the activities planned for the 2024 calendar year, the next reporting period.

Table 20: Planned activities or improvement measures for 2024

Topic	Description of Activities or Improvement Measures
Council Consent	Surrender the Council Consent as required under Conditions A15 of the Development Consent.
Surface Water Diversions	Install a clean water diversion (East Pit surface water diversion) as per Condition B33.
IEA	Engagement of the initial IEA for the project as per Condition D11.
Environmental Management Plans	Update of the *Water Management Plan* to reflect installation of the East Pit surface water diversion.