

# **ANNUAL REVIEW**

**1 January 2022 – 31 December 2022**

**Jandra Quarry**

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## **APPENDICES**

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Appendix 3 – Biodiversity Monitoring Reports
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## SITE DETAILS

<b>Name of operation</b>	Jandra Quarry
<b>Name of operator</b>	Holcim (Australia) Pty Ltd
<b>Development consent / project approval #</b>	DA 213-10-99 (Modification 5)
<b>Name of holder of development consent / project approval</b>	Holcim (Australia) Pty Ltd
<b>Annual Review start date</b>	January 1, 2022
<b>Annual Review end date</b>	December 31, 2022
<p><b>I, David Saville, certify that this audit report is a true and accurate record of the compliance status of Jandra Quarry for the period of January 1, 2022 - December 31, 2022 and that I am authorised to make this statement on behalf of Holcim (Australia) Pty Ltd.</b></p> <p><i>Note.</i></p> <p>a) _ <i>The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p>b) _ <i>The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
<b>Name of authorised reporting officer</b>	David Saville
<b>Title of authorised reporting officer</b>	Quarry Manager
<b>Signature of authorised reporting officer</b>	
<b>Date</b>	31/03/2023

# 1 STATEMENT OF COMPLIANCE

See **Table 1** for statement of commitments for the 2022 reporting period for Jandra Quarry. **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?	
DA 213-10-99 (Mod 5)	No
EPL No. 2796	Yes

**Table 2: DPE Compliance Status Key**

Risk level	Colour code	Description
<b>High</b>	Non-compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
<b>Medium</b>	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> <li>• potential for serious environmental consequences, but is unlikely to occur; or</li> <li>• potential for moderate environmental consequences, but is likely to occur</li> </ul>
<b>Low</b>	Non-compliant	Non-compliance with: <ul style="list-style-type: none"> <li>• potential for moderate environmental consequences, but is unlikely to occur; or</li> <li>• potential for low environmental consequences, but is likely to occur</li> </ul>
<b>Admin NC</b>	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 2022**

Relevant Approval	Condition #	Condition description (summary)	Compliance status	Section addressed in Annual Review/Comment												
DA 213-10-99 (Mod 5)	Schedule 3 Condition 5	<p><b>Blasting Impact Assessment Criteria</b>                      The Applicant shall ensure that blasting on site does not cause any exceedance of the criteria in <b>Table 4</b>.</p> <p>Table 4: Blasting criteria</p> <table border="1"> <thead> <tr> <th>Location</th> <th>Airblast overpressure (dB(Lin Peak))</th> <th>Ground vibration (mm/s)</th> <th>Allowable exceedance</th> </tr> </thead> <tbody> <tr> <td>Any residence on privately owned land, or any public infrastructure</td> <td>120</td> <td>10</td> <td>0%</td> </tr> <tr> <td></td> <td>115</td> <td><math>\bar{p}</math></td> <td>5% of the total number of blasts over a period of 12 months</td> </tr> </tbody> </table> <p>However, these criteria do not apply if the Applicant has a written agreement with the relevant owner to exceed the limits in Table 4, and the Applicant has advised the Department in writing of the terms of this agreement.</p>	Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance	Any residence on privately owned land, or any public infrastructure	120	10	0%		115	$\bar{p}$	5% of the total number of blasts over a period of 12 months	<p><b>Low Risk Non-Compliant</b></p>	<p><b>Section 6.4 Blasting</b></p> <p>A blast on 27 January 2022 exceeded the overpressure limit of 115dB. The blast was recorded to be 4.1 dB over the criteria of 115db (there were a total of 4 blasts in the reporting period).</p>
Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance													
Any residence on privately owned land, or any public infrastructure	120	10	0%													
	115	$\bar{p}$	5% of the total number of blasts over a period of 12 months													



## 2 INTRODUCTION

Holcim (Australia) Pty Ltd (Holcim) operates Jandra Quarry, a hard rock quarry located on the Pacific Highway, Possum Brush in the Greater Taree Local Government Area. The site operates under Development Consent (DA -213-10-99 Modification 5) approved by the then New South Wales (NSW) Department of Planning and Environment (DPE) (now Department of Planning, Industry and Environment (DPE)) on 13 March 2015.

The site also operates in accordance with Environment Protection Licence (EPL) No. 2796 issued by the Environmental Protection Authority (EPA). A regional locality figure and aerial view of the site are outlined in **Figure 1** and **Figure 2** below.



Figure 1: Regional Locality (Umwelt, 2012 as in Element Environment, 2014, Environmental Assessment)



Figure 2: Jandra Quarry Operation – Source: Umwelt August 2012

In accordance with Schedule 5, Condition 4 of the modified Development Consent the site is required to undertake an Annual Review of the site. This Annual Review has been prepared in accordance with Schedule 5 Condition 4 (Annual Performance Monitoring) 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 Requirement**

Condition	Section in Annual Review
<p>4. Annual Review</p> <p>Annual Review by the end of March each year, the Applicant shall review the environmental performance of the development to the satisfaction of the Secretary. This review must:</p> <p>(a) describe the development (including 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;</p>	Section 4 and 6
<p>(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against:</p> <ul style="list-style-type: none"> <li>- the relevant statutory requirements, limits or performance measures/criteria;</li> <li>- the monitoring results of previous years, and</li> <li>- the relevant predictions in the documents listed in condition 2 of Schedule 2;</li> </ul>	Section 6 and 7
<p>(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;</p>	Section 1 and 11
<p>(d) identify any trends in the monitoring data over the life of the development;</p>	Section 6 and 7
<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>	Section 6
<p>(f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the development</p>	Section 12

## 2.1 Name and Contact Details

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### 3 APPROVALS

The site operates under the following approvals listed in **Table 5**.

**Table 5: Approvals for Jandra Operations**

Approval	Regulatory Authority
DA 213-10-99 (Modification No. 5)	NSW Department of Planning & Environment
EPL No. 2796	NSW Environmental Protection Authority

Holcim holds EPL 2796 which covers its activities at Jandra Quarry. **Table 6** outlines the EPL licensing limits.

**Table 6: EPL Fee-Based Activity at Jandra Quarry**

Scheduled Activity	Fee Based Activity	Scale
Crushing, grinding or separating	Crushing, grinding or separating	> 100,000 – 500,000 T processed
Extractive activities	Land-based extractive activity	>100,000 – 500,000 T extracted, processed or stored
Resource recovery	Recovery of general waste	Any waste recovered
Waste storage	Waste storage – other types of waste	Any other types of waste stored

Schedule 2 Condition 8 outlines the approved extraction limit is 490,000 tonnes of quarry products from the site in any calendar year. An outline of 2022 production is outlined in **Section 4.4**.

## 4 OPERATIONS SUMMARY

### 4.1 Exploration

No exploration activities were completed during the Annual Review period.

### 4.2 Land Preparation

1.9 Hectares of land clearing occurred during the 2022 reporting period.

### 4.3 Construction Activities

There was no construction undertaken during the Annual Review period.

### 4.4 Quarry Operations

Development activities undertaken at Jandra Quarry in 2022 included:

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

In addition to routine activities, Jandra Quarry undertook planning and preparation activities for planned upgrades to the wash plant during the 2022 reporting period.

Extraction and processing operations in 2022 were undertaken between 6am and 10pm, Monday to Friday and between 6am and 6pm on Saturdays.

**Table 7** includes a summary of the operations undertaken during the reporting period against the development consent conditions regarding product transported from Jandra Quarry.

**Table 7: Total Product Distributed (Jandra Quarry)**

Material	Approved Limit (Schedule 2, Condition 8 & 9)	Product Distributed (T)					
		2018	2019	2020	2021	2022	Next Reporting Period (2023)
Product Extracted Total	490 000 T	252,165	323,930	328,114	325,414	415, 433	432,644
Product Sales Total	475 000 T	257,016	403,317	310,759	465,466	475 000	426,654

Schedule 2 Condition 7 outlines the applicant shall not extract more than 16.5 million tonnes of quarry product per year under this consent. This consent was granted on 13 March 2015. From the start of 2015 to the end of 2022, the site has extracted approximately 2,112,561 tonnes which is well within the limits of the Development Consent. The cumulative production is shown in **Table 8**.

**Table 8: Cumulative Production for Development Consent**

<b>Year</b>	<b>Extraction Tonnage</b>
2015	232,028
2016	315,205
2017	335,705
2018	252,165
2019	323,930
2020	328,114
2021	325,414
2022	415, 433
<b>TOTAL</b>	<b>2,112,561</b>

## **4.5 Next Reporting Period**

Operational activities proposed to be carried out at Jandra Quarry in 2023, include:

- Upgrade of existing wash plant;
- Installation of new screen in secondary plant;
- Stripping of topsoil and overburden within the existing extraction limit boundary;
- Drill, blast, load and haul activities;
- Crushing, screening and stockpiling of product;
- Establishment of mobile conveyors in the stockpile area; and
- Progressive maintenance of rehabilitation.

## 5 ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEW

### 5.1 Actions from 2021 Annual Review – DPE Review

Jandra Quarry's 2021 Annual Review was submitted by 31 March 2022. Holcim has not received any feedback from DPE regarding the previous Annual Review since its submission.

### 5.2 Actions from 2021 Annual Review – Holcim Proposed Actions

**Table 9** outlines an update on the proposed Holcim actions from the previous Annual Review.

**Table 9: Proposed Actions from Holcim**

Improvement Measure	Activities	Works Undertaken
Progressive Rehabilitation	The site will continue to progressively rehabilitate available areas.	Rehabilitation preparation and maintenance was undertaken in 2022. Rehabilitation planning for RL 62, 74, and 86 occurred in 2022.  Refer to <b>Section 8</b> for more detail.
Desilting of the sites main process pond/sediment Basin	The site will continue to manage sediment control structures through inspections and desilting of ponds. Tailings dams will be cleaned on an appropriate schedule.	Janda Quarry undertook sediment control measures for the desilting ponds on site. Tailings dams were routinely monitored throughout the reporting period.  Refer to <b>Section 7</b> for more detail.
Biodiversity	Weed spraying will continue at the site during the next reporting period. A Weed Action Plan will likely be developed to be started in 2022-2023.  Inspection of nest boxes will be undertaken in the next reporting period.	Nest box monitoring was undertaken during the 2022 reporting period., as per the <i>Rehabilitation Management Plan</i> ;  Refer to <b>Section 8</b> for more detail.
Continuous Monitoring System	A new continuous environmental monitoring system will be installed at the site by the end of Quarter 2 2022. This monitor will collect data on air quality and meteorological conditions.	Janda Quarry installed the new continuous environmental monitoring system in July 2022. Future air quality and meteorological monitoring results will be obtained from this machine. Refer to <b>Section 6</b> for details



## 6 ENVIRONMENTAL PERFORMANCE

### 6.1 Meteorological Monitoring

Meteorological monitoring data was collected from the Bureau of Meteorology (BOM) station 060141 at Taree Airport. The data collected was used during daily operation of the project to inform daily operations and plan future activities. Weather conditions for 2022 are summarized in **Table 10**.

**Table 10: Meteorological Monitoring Results from 2022**

Month	Total Rainfall (mm)	Minimum Temperature (°C)	Maximum Temperature (°C)
January	82.6	19.0	27.8
February	289.2	17.8	26.8
March	508.2	17.8	25.2
April	99.2	14.8	24.3
May	112.4	11.6	20.9
June	6.4	5.4	18.6
July	424.4	8.1	17.8
August	24.3	7.6	19.9
September	137.5	10.3	20.9
October	174.8	12.8	22.7
November	43.4	12.3	24.7
December	68.0	14.4	25.2
<b>Annual TOTAL</b>	1970.4		

Total annual rainfall during the 2022 reporting period was 1970.4mm. This was an increase from 1687.4mm in 2021 and 1450.1mm in 2020.

## 6.2 Noise

### 6.2.1 EIS Predictions

The noise and blasting impact assessment in the Environmental Assessment (2014) considered the potential impacts of the proposed modification on nearby sensitive residential receivers.

Noise levels (without asphalt production) below the early morning shoulder project criteria, are predicted at all private residential receiver locations and for all stages of the quarry life, provided that operations are restricted during this time including:

- No works in the approved overburden emplacement area;
- No works above RL50; and
- No operation of the mobile processing plant.

Noise levels (without asphalt production) above the day / evening criteria are predicted at three private residential receivers and range from a marginal 2 dBA to 5 dBA above the criteria. Holcim is confident that these noise levels will not be perceived as a nuisance and has negotiated agreements with the potentially affected property owners.

Predicted noise levels from the Environmental Assessment (2014) from asphalt production were up to 7 dBA above the criteria at one private residential receiver R1 during all periods and all stages of the quarry development, as this receiver has a line of sight to the asphalt plant. Holcim has a negotiated agreement with the property holder of R1.

Jandra Quarry is currently only in Stage 1 of its development plan as described in the Noise and Blasting Impact Assessment detailed within the Environmental Assessment (2014). **Table 11** details the noise modelling for this stage. All results have been below that modelled within the Environmental Assessment (2014).

**Table 11: Stage 1 Assessment without asphalt plant operating (exceedances in bold)**

Receptor	Day / Evening (dBA L <sub>eq</sub> ) 7am to 10pm		Early morning shoulder (dBA L <sub>eq</sub> ) 6am to 7 am		
	Project Criteria	Predicted Level	Project Criteria	Predicted level	
		Neutral		Neutral	Worst Case
R1	41	41	40	41	46
R2	38	30	38	30	35
R3	51	<30	50	<30	30
R4	41	34	40	33	38
R5	41	40	40	38	43
R6	38	32	38	32	37
R7	38	<30	38	<30	<30
R8 (Holcim)	41	33	40	32	36
R9 (Holcim)	41	38	40	36	40
R10 (Holcim)	38	44	38	43	47

### 6.2.2 Approved Criteria

Criteria for each of the receivers R1 – R10, as outlined in the Conditions of Consent, for both quarry operation and combined quarry and asphalt production operations are provided in **Table 12**.

**Table 12: Noise Criteria**

Location	Quarry Operations		Quarry Operations and Asphalt Plant Production	
	6am – 10pm	6am – 10pm	10pm – 6am	10pm – 6am
	LAeq(15min)	LAeq(15min)	LAeq(15min)	LA1(1min)
<i>R1<sup>1,2</sup></i>	46	48	46	51
R2	36	40	35	48
<i>R3<sup>1,2</sup></i>	N/A	N/A	N/A	N/A
R4	36	40	39	51
R5	40	41	39	51
R6	36	40	35	48
R7	35	36	35	48
<i>R8<sup>1,2</sup></i>	N/A	N/A	N/A	N/A
<i>R9<sup>1,2</sup></i>	N/A	N/A	N/A	N/A
<i>R10<sup>1,2</sup></i>	N/A	N/A	N/A	N/A

Note 1: Noise criteria are not applicable to these receivers as per Section 4 of the NBMP.

Note 2: Either quarry owned or excluded from the assessment as per Section 4 of the NBMP.

The variation of EPL 2796 dated 27 August 2021 approved the change of noise monitoring frequency under Condition M8.1 at Jandra Quarry from quarterly to annually.

### 6.2.3 Key Environmental Performance

Attended annual noise monitoring was undertaken by Muller Acoustic Consulting on the following date:

- 30 March 2022

Jandra Quarry received a Notice of Variation for EPL 2796 from the EPA on 27 August 2021, which varied the required noise monitoring frequency. The noise monitoring frequency was changed from a quarterly basis to annual on the issue of this Notice of Variation. This variation was based on zero noise complaints being received by the project since 2016 and the compliant results of previous noise monitoring results.

Noise monitoring occurred at the locations R2, R4, R5, R6, and R7 in the report period. The results shown in **Table 13** include the noise monitoring results for the Morning Shoulder and Day periods and note the project does not operate during Evening or Night hours defined by the EPL.

**Table 13: Annual Noise Monitoring Results 2022**

Assessment Period	Receiver No.	EPA ID	Quarrying Noise Criteria	Annual Results
			LAeq(15min)	
Morning Shoulder	R2	EPA13	36	<36
	R4	EPA14	36	<36
	R5	EPA15	40	<40
	R6	EPA16	36	<36
	R7	EPA17	35	<35

Assessment Period	Receiver No.	EPA ID	Quarrying Noise Criteria	Annual Results
			LAeq(15min)	
Day	R2	EPA13	36	<36
	R4	EPA14	36	<36
	R5	EPA15	40	<40
	R6	EPA16	36	<36
	R7	EPA17	35	<35
Evening	R2	EPA13	36	Quarry Not Operating
	R4	EPA14	36	Quarry Not Operating
	R5	EPA15	40	Quarry Not Operating
	R6	EPA16	36	Quarry Not Operating
	R7	EPA17	35	Quarry Not Operating

The assessments identified that noise emissions generated by Jandra Quarry were generally compliant with relevant statutory noise criteria specified in EPL and Consent. Non-quarry or extraneous sources of noise included distant traffic, wind, and fauna such as birds and insects.

#### Long-term Trends:

2022 noise monitoring results were consistent with previous noise monitoring results. Noise results from 2017 to 2020 have been within criteria. All noise results in 2021 were compliant, with the exception of the R2 Morning Shoulder result in the Quarter 1. This result was impacted by uncommon overburden maintenance, with immediate and long-term corrective actions taken to address this.

There were no noise complaints received during 2022.

#### Comparison to EIS Predictions:

2022 noise results at Jandra Quarry generally remained consistent with EIS predictions.

The well-established vegetative buffer and distance between the operations and the sensitive receivers assists the Quarry in meeting these predictions.

### 6.2.4 Management Measures

Management measures relating to noise are outlined within the Jandra Quarry Noise and Blast Management Plan. These include:

- Defined operating hours as per Schedule 2 Condition 10 of the Development Consent;
- Work restrictions during the early morning shoulder period;
- Monitoring for noise and meteorological conditions;
- Broadband reversing beepers;
- Staff and contractors inductions; and
- Controlled blasting activities.

As a result of ongoing consultation with the EPA from 2020, noise monitoring frequency was changed in the EPL from quarterly to annually in 2021.

### 6.2.5 Proposed Improvements

Jandra will continue to implement and document corrective actions when exceedances or incidents are detected. There are no further improvements proposed.

## 6.3 Air Quality

An aerosol particle monitor (Dust Sentry Pro) has been installed April 2022 in accordance with Condition M2.2 of EPL 2796.

PM<sub>10</sub> will be continuously monitored, and results will be available immediately through the online system and will be analysed with consideration of the criteria. Continuous PM<sub>10</sub> data will be used as a real time management tool linked with the Contingency Plan to ensure appropriate air quality controls are being implemented to keep PM<sub>10</sub> levels within criteria. Real time PM<sub>10</sub> monitoring will be used as an additional management tool to the proactive management controls.

### 6.3.1 Environmental Assessment Predictions

Jandra Quarry is currently in Stage 1 of its development plan as described in the Air Quality Impact Assessment detailed within the Environmental Assessment (2014). **Table 15** and **Table 16** are the modelled dust contributions expected from Jandra Quarry. The air quality impact assessment concluded that with the implementation of existing and additional feasible management measures, all relevant air quality criteria could be met at all identified sensitive residential receivers for all stages of the quarry development.

**Table 15: Predicted Incremental & Cumulative Annual Average TSP Concentrations ( $\mu\text{g}/\text{m}^3$ )**

Receptor ID	Increment			Cumulative		
	Stage 1	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
<b>Privately Owned Receptors</b>						
R1	2.5	2.6	2.8	48.5	48.6	48.8
R2	0.3	0.3	0.4	46.3	46.3	46.4
R3	0.8	0.7	0.6	46.8	46.7	46.6
R4	0.9	0.8	0.7	46.9	46.8	46.7
R5	0.6	0.5	0.5	46.6	46.5	46.5
R6	0.4	0.4	0.5	46.4	46.4	46.5
R7	0.1	0.1	0.2	46.1	46.1	46.2
R11	0.4	0.4	0.3	46.4	46.4	46.3
R12	0.3	0.3	0.3	46.3	46.3	46.3
R13	0.3	0.3	0.3	46.3	46.3	46.3
R14	0.3	0.3	0.3	46.3	46.3	46.3
R15	0.2	0.2	0.2	46.2	46.2	46.2
R16	0.3	0.2	0.2	46.3	46.2	46.2
R17	<0.1	<0.1	0.1	<46.1	<46.1	46.1
R18	<0.1	<0.1	<0.1	<46.1	<46.1	<46.1
R19	0.4	0.4	0.5	46.4	46.4	46.5
<b>Quarry Owned Receptors</b>						
R8	1.3	1.1	1	47.3	47.1	47
R9	1.7	1.7	1.7	47.7	47.7	47.7
R10	1.5	1.5	4.6	47.5	47.5	50.6
<b>Criteria</b>					<b>90</b>	

### 6.3.2 Approved Criteria

Air Quality monitoring is required to be undertaken in accordance with the following criteria in Schedule 3 Condition 10 of the Development Consent represented in **Table 16** and **Table 17**.

**Table 16: Long-term impact assessment criteria for particulate matter**

Pollutant	Averaging Period	<sup>d</sup> Criterion
Total suspended particulate (TSP) matter	Annual	<sup>a</sup> 90 µg/m <sup>3</sup>
Particulate matter <10 µm (PM <sub>10</sub> )	Annual	<sup>a</sup> 30 µg/m <sup>3</sup>

<sup>a</sup> Total impact (ie incremental increase in concentrations due to the development plus background concentrations due to all other sources);

<sup>b</sup> Incremental impact (ie incremental increase in concentration due to the development on its own);

<sup>c</sup> Deposited dust is to be assessed as insoluble solids as defined by Standards Australia AS/NZS 3850:10.1.2003 – Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method

<sup>d</sup> Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.

**Table 17: Short-term impact assessment criteria for particulate matter**

Pollutant	Averaging Period	<sup>d</sup> Criterion
Particulate matter <10 µm (PM <sub>10</sub> )	24 hour	<sup>a</sup> 50 µg/m <sup>3</sup>

<sup>a</sup> Total impact (ie incremental increase in concentrations due to the development plus background concentrations due to all other sources);

<sup>b</sup> Incremental impact (ie incremental increase in concentration due to the development on its own);

<sup>c</sup> Deposited dust is to be assessed as insoluble solids as defined by Standards Australia AS/NZS 3850:10.1.2003 – Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method

<sup>d</sup> Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with EPA.

### 6.3.3 Key Environmental Performance

#### 6.3.3.1 PM<sub>10</sub> Monitoring

PM<sub>10</sub> monitoring is required to be undertaken in accordance with the criteria provided in **Table 16** and **Table 17**.

Monitoring for PM<sub>10</sub> first commenced in May 2017 and has continued since into the 2022 reporting period. Results are provided in **Table 18**. Throughout the 2022 reporting period, all samples were compliant against performance criteria this report period. There were no exceedances in the short-term criteria value of 50 µg/m<sup>3</sup>.

**Table 18: PM<sub>10</sub> Monitoring – 2022**

Sampling Date	PM <sub>10</sub> (µg/m <sup>3</sup> )	Compliance Status
4 January 2022	14.2	Within Criteria
10 January 2022	18.3	Within Criteria
16 January 2022	21	Within Criteria
22 January 2022	16.2	Within Criteria
28 January 2022	12.8	Within Criteria
3 February 2022	10.3	Within Criteria
9 February 2022	21	Within Criteria
15 February 2022	23.1	Within Criteria

<b>Sampling Date</b>	<b>PM<sub>10</sub> (µg/m<sup>3</sup>)</b>	<b>Compliance Status</b>
21 February 2022	26.4	Within Criteria
27 February 2022	11.2	Within Criteria
5 March 2022	25.8	Within Criteria
11 March 2022	7.9	Within Criteria
17 March 2022	21.63	Within Criteria
23 March 2022	16.92	Within Criteria
29 March 2022	15.92	Within Criteria
4 April 2022	15.09	Within Criteria
10 April 2022	12.14	Within Criteria
16 April 2022	10.46	Within Criteria
22 April 2022	9.96	Within Criteria
28 April 2022	10.62	Within Criteria
4 May 2022	10.46	Within Criteria
10 May 2022	11.28	Within Criteria
16 May 2022	8.56	Within Criteria
22 May 2022	6.19	Within Criteria
28 May 2022	3.31	Within Criteria
3 June 2022	20.15	Within Criteria
9 June 2022	12.99	Within Criteria
15 June 2022	7.35	Within Criteria
21 June 2022	6.69	Within Criteria
27 June 2022	15.95	Within Criteria
3 July 2022	4.16	Within Criteria
9 July 2022	3.27	Within Criteria
15 July 2022	5.8	Within Criteria
21 July 2022	14.7	Within Criteria
27 July 2022	4.78	Within Criteria
2 August 2022	10.43	Within Criteria
8 August 2022	5.1	Within Criteria
14 August 2022	6.73	Within Criteria
20 August 2022	7.82	Within Criteria
26 August 2022	6.46	Within Criteria
1 September 2022	9.61	Within Criteria
7 September 2022	5.72	Within Criteria
13 September 2022	7.24	Within Criteria
19 September 2022	10.78	Within Criteria
25 September 2022	13.26	Within Criteria
1 October 2022	9.61	Within Criteria
7 October 2022	10.35	Within Criteria
13 October 2022	13.97	Within Criteria
19 October 2022	12.33	Within Criteria
25 October 2022	19.18	Within Criteria
31 October 2022	11.01	Within Criteria



Sampling Date	PM <sub>10</sub> (µg/m <sup>3</sup> )	Compliance Status
6 November 2022	7.35	Within Criteria
12 November 2022	11.2	Within Criteria
18 November 2022	10.5	Within Criteria
24 November 2022	8.71	Within Criteria
30 November 2022	17.86	Within Criteria
6 December 2022	15.68	Within Criteria
12 December 2022	15.33	Within Criteria
18 December 2022	8.13	Within Criteria
24 December 2022	7.55	Within Criteria
30 December 2022	16.03	Within Criteria
<b>Annual Average</b>	<b>12.04</b>	<b>Within Annual Average Criteria</b>

From 2017 to 2022, annual averages were within the impact assessment criteria. **Table 19** compares PM<sub>10</sub> results for the years 2017 to 2021.

**Table 19: PM<sub>10</sub> Monitoring Trends**

Monitoring Summary for Annual Review Period	2022 Period (µg/m <sup>3</sup> )	2021 Period (µg/m <sup>3</sup> )	2020 Period (µg/m <sup>3</sup> )	2019 Period (µg/m <sup>3</sup> )	2018 Period (µg/m <sup>3</sup> )	May – December 2017 Period (µg/m <sup>3</sup> )
PM <sub>10</sub> Reporting Period Average	12.04	14.4	17.3	20	14.2	14.4
Max. PM <sub>10</sub>	26.4	39.3	102.0	94	42	40
Min. PM <sub>10</sub>	3.27	2.9	5.9	0.1	2	2

#### Long-term Trends:

The annual average particulate matter levels from 2017 to 2022 have been consistently below the target criteria. The values seen for 2022 are below those results from 2021 to 2017. The 2022 period had the lowest minimum and lowest maximum PM<sub>10</sub> since monitoring commenced.

#### Comparison to EIS Predictions:

The results for depositional dust and PM<sub>10</sub> were within the predicted limits of the EIS predictions.

#### 6.3.3.2 Total Suspended Particulate (TSP) Matter Results

In 2021 Jandra Quarry installed a Dust Sentry Pro air quality monitor which has the ability to measure TSP results. Previously TSP was calculated based on PM<sub>10</sub> results. This reporting year is the first full year of using the air quality monitor for TSP.

TSP levels against the criteria outlined in **Table 16**.

TSP results for 2022 are displayed in **Table 20**. The 2022 calculated average for TSP was 28.9 µg/m<sup>3</sup> which is less than the criteria value of 90 µg/m<sup>3</sup>. The 2022 TSP average is less than previous years.

**Table 20: Calculated TSP Results**

Sampling Date	PM10 ( $\mu\text{g}/\text{m}^3$ )	TSP ( $\mu\text{g}/\text{m}^3$ )
4 January 2022	14.2	34.08
10 January 2022	18.3	43.92
16 January 2022	21	50.40
22 January 2022	16.2	38.88
28 January 2022	12.8	30.72
3 February 2022	10.3	24.72
9 February 2022	21	50.40
15 February 2022	23.1	55.44
21 February 2022	26.4	63.36
27 February 2022	11.2	26.88
5 March 2022	25.8	61.92
11 March 2022	7.9	18.96
17 March 2022	21.63	51.91
23 March 2022	16.92	40.61
29 March 2022	15.92	38.21
4 April 2022	15.09	36.22
10 April 2022	12.14	29.14
16 April 2022	10.46	25.10
22 April 2022	9.96	23.90
28 April 2022	10.62	25.49
4 May 2022	10.46	25.10
10 May 2022	11.28	27.07
16 May 2022	8.56	20.54
22 May 2022	6.19	14.86
28 May 2022	3.31	7.94
3 June 2022	20.15	48.36
9 June 2022	12.99	31.18
15 June 2022	14.2	17.64
21 June 2022	18.3	16.06
27 June 2022	21	38.28
3 July 2022	16.2	9.98
9 July 2022	12.8	7.85
15 July 2022	5.8	13.92
21 July 2022	14.7	35.28
27 July 2022	4.78	11.47
2 August 2022	10.43	25.03
8 August 2022	5.1	12.24
14 August 2022	6.73	16.15
20 August 2022	7.82	18.77
26 August 2022	6.46	15.50
1 September 2022	9.61	23.06

Sampling Date	PM10 ( $\mu\text{g}/\text{m}^3$ )	TSP ( $\mu\text{g}/\text{m}^3$ )
7 September 2022	5.72	13.73
13 September 2022	7.24	17.38
19 September 2022	10.78	25.87
25 September 2022	13.26	31.82
1 October 2022	9.61	23.06
7 October 2022	10.35	24.84
13 October 2022	13.97	33.53
19 October 2022	12.33	29.59
25 October 2022	19.18	46.03
31 October 2022	11.01	26.42
6 November 2022	7.35	17.64
12 November 2022	11.2	26.88
18 November 2022	10.5	25.20
24 November 2022	8.71	20.90
30 November 2022	17.86	42.86
6 December 2022	15.68	37.63
12 December 2022	15.33	36.79
18 December 2022	8.13	19.51
24 December 2022	7.55	18.12
30 December 2022	16.03	38.47
<b>Minimum</b>		7.85
<b>Average</b>		28.90
<b>Maximum</b>		63.36
<b>Result (compared to 90 <math>\mu\text{g}/\text{m}^3</math>)</b>		<b>Compliant</b>

### 6.3.4 Management Measures

Dust minimisation and control measures implemented on site include:

- The use of a watercart that follows specified procedures to achieve the most optimal dust control measures;
- The use of installed sprinkler systems along primary haul road
- Sprays throughout the plant;
- Speed limits across the site;
- Dust covers in place across the screening building;
- Inspections;
- Defined operating hours;
- Monitoring for air quality and meteorological conditions; and
- Training of staff and contractors.

### 6.3.5 Proposed Improvements

The Jandra Quarry *Air Quality Management Plan* was progressively revised during 2020 to incorporate improvement actions from the 2019 IEA. *The Air Quality Management Plan* was submitted to DPE and approved on 25 March 2022.

## 6.4 Blasting

### 6.4.1 Environmental Assessment Predictions

The Noise and Blasting Impact Assessment (SLR, 2014) identified the Maximum Instantaneous Charge (MIC) allows the ANZEC Guidelines for human comfort to be met, at the closest private (non-Holcim owned) residences, during all stages of the quarry development.

The design of blasts will then be optimised to limit the possibility of EPA criteria exceedances, when blast locations are closer to residences and preferred blast designs can be used for blast locations with adequate distances to residences.

### 6.4.2 Approved Criteria

The site undertook blasts in 2022 in accordance with the criteria listed in **Table 21**. This criteria is taken from the blasting criteria in **Table 4** of Schedule 3 Condition 5 of the Development Consent.

**Table 21: Blasting Criteria for Jandra Quarry**

Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance
Any residence on privately owned land, or any public infrastructure	120	10	0%
	115	5	5% of the total number of blasts over a period of 12 months

### 6.4.3 Key Environmental Performance

Results of blasting undertaken in 2022 are shown in **Table 22**.

**Table 22: 2022 Blast Monitoring Results for Jandra Quarry**

Blast Number	Date	Result	
		Vibration (mm/s) (Criteria Limit 5 mm/s)	Overpressure (dBL) (Criteria Limit 115 dBL)
1	17/01/2022	0.1	103
2	27/01/2022	2.4	119
3	10/03/2022	0.8	103
4	29/03/2022	0.4	99
5	05/04/2022	1.4	93
6	31/05/2022	1.2	105
7	27/06/2022	1.4	104

Blast Number	Date	Result	
		Vibration (mm/s) (Criteria Limit 5 mm/s)	Overpressure (dBL) (Criteria Limit 115 dBL)
8	02/08/2022	1.3	101
9	24/08/2022	1.0	108
10	21/09/2022	0.6	100
11	05/10/2022	0.5	97
12	28/10/2022	0.8	101
13	08/11/2022	0.4	95
14	20/12/2022	0.3	103

DNT – Did not trigger

Jandra Quarry recorded 14 blasts during the reporting period. On January 27 2022 a blast recorded 119.1dBL resulting in a non-compliance.

Sensitive receivers near the quarry are notified prior to blasting as per the *Jandra Quarry Noise and Blast Management Plan*. This process is managed by the weighbridge staff who send a text message to the tenants the day before a blast is planned.

#### Long-term Trends:

From 2015 – 2022 the blasting levels have been within the Development Consent criteria.

**Table 23: Longterm Blasting Trends**

Year	Number of Blasts	Max. Overpressure (dBL)	Average Overpressure (dBL)	Max Vibration (mm/s)	Average Vibration (mm/s)
2015	10	114.9	109.8	2.48	1.58
2016	9	116	107.8	1.3	0.84
2017	16	113.2	105.7	3.1	1.02
2018	11	111.0	99.8	1.52	0.85
2019	10	109.9	86.2	4.3	1.3
2020	11	111.9	104.5	2.4	1.5
2021	13	109.1	105.7	1.4	0.7
2022	14	119.1	102.21	2.4	0.91

#### 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 the *Jandra Quarry Noise and Blast Management Plan*, which includes a Drill and Blast Procedure. This procedure outlines the key steps of the blasting process including design, drilling, loading and firing.

## 6.4.5 Proposed Improvement

The Jandra Quarry Noise and Blast Management Plan (NBMP ) is being updated which commenced in the 2022 reporting year.

## 6.5 Traffic Management

### 6.5.1 Environmental Assessment Predictions

Section 3.5.6 of the Environmental Assessment (2014) stated that at peak demand, the maximum number of heavy vehicles leaving the site to deliver product to customers would reach approximately 12 (24 truck movements) per hour. This has been calculated based on a minimum loading time of approximately 5 minutes per truck. It is unlikely that, on a typical day, these peaks in demand will occur for more than a few hours at a time. A detailed assessment of traffic and transport is outlined within Section 6.2 of the Environmental Assessment (2014).

### 6.5.2 Approved Criteria

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

<p><b>Pacific Highway Intersection</b></p> <p>31. The Applicant shall maintain the intersection of the Pacific Highway and the Jandra Quarry Access Road, for the duration of product transport from the site, to the satisfaction of the RMS.</p> <p>32. The Applicant shall install and subsequently maintain street lighting at the intersection of the Pacific Highway and the Jandra Quarry Access Road, to the satisfaction of the RMS, prior to transporting quarry products from the site outside of the hours 7 am to 6 pm. Any works affecting the Pacific Highway must not take place without the prior approval of the RMS.</p> <p><b>Monitoring of Product Transport</b></p> <p>33. The Applicant shall keep accurate records of:</p> <ul style="list-style-type: none"><li>(a) the amount of quarry products, including asphalt, transported from the site (calendar month and year);</li><li>(b) the number of laden vehicle movements to and from the site (day, calendar month and year); and</li><li>(c) publish these records on its website at the end of each calendar quarter.</li></ul>
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### 6.5.3 Key Environmental Performance

The site has maintained the intersection at the Pacific Highway and Quarry Access Road in accordance with the conditions in **Section 6.4.2**. No impacts to the intersection have been identified during the reporting period.

The site has not operated outside the hours of 7am and 6pm.

All truck movements and quarry product volumes are published on the Holcim (Jandra Quarry) webpage in accordance with Schedule 3, Condition 33 of the consent. A summary of transport data for 2022 is appended to this Annual Review as **Appendix 1**.

In summary:

- There were 15,647 truck movements; and
- There were 440,987 tonnes of material taken offsite as product.

Truck movements and materials taken offsite have slightly decreased in 2022 compared to 2021.

### Management Measures

Management measures relating to traffic include:

- Defined haulage times;

- Covered loads leaving site;
- Defined haulage limits; and
- Trained transport operators.

#### 6.5.4 Proposed Improvements

There are no proposed improvements relating to transport.

## 6.6 Biodiversity and Bushfires

### 6.6.1 Environmental Assessment Predictions

The Environmental Assessment (2014) assessed the biodiversity impacts associated with clearing an additional 1.284 hectares of native vegetation. The Flora and Fauna Assessment accompanying the EIS stated: *“With the implementation of flora and fauna management measures included in the Flora and Fauna Management Plan and this Environmental Assessment (2014), (depending on the outcome of the targeted surveys for the Eastern Underground Orchid) the proposed modification would not result in any significant impacts on biodiversity on site and in surrounding bushland”.*

### 6.6.2 Approved Criteria

There are no specific criteria relating to biodiversity within the Development Consent. Schedule 3 Condition 25 outlines the requirement to complete a *Biodiversity and Rehabilitation Management Plan* (BRMP).

### 6.6.3 Key Environmental Performance

Major bushfires occurred in the vicinity of Jandra Quarry during the 2019 report period. Areas of land within the buffer lands, rehabilitation areas on overburden emplacement and the pit, nest boxes located to the northwest and a Jandra Quarry shed were burnt during this event.

No bushfires occurred in the 2022 reporting period.

Weed spraying targeting Lantana (*Lantana* sp.) and Tobacco weed (*Solanum mauritianum*) were completed during the reporting period. Weed spraying was generally performed twice per month in this reporting period.

Feral animal sightings were noted during this reporting period, however the site had minimal issues in the past. Feral animal control programs are implemented on an as-needs basis due to the infrequent sightings and issues.

Biodiversity monitoring was conducted quarterly in 2022 to meet requirements of the approved BRMP (2018). Quarterly monitoring was undertaken on the following dates:

- 11 February 2022
- 10 May 2022
- 21 September 2022
- 19 November 2022

The biodiversity monitoring reports are attached to this Annual Review in **Appendix 3**. The main findings of monitoring include Weed species are the major concern at the Jandra Quarry, including Crofton Weed, Lantana and Wild Tobacco, are most common on the edges of native vegetation, around the active areas of the quarry. Erosion throughout the quarry area was generally well contained with only the observation at OB1 on the OSA of concern. The revegetation of the benches in the Active Pit Area requires further work, and Holcim management are aware of this and have made efforts to begin this process.

Nest box monitoring will be undertaken in 2023. Nest boxes were destroyed during the 2019/2020 bushfires, with replacements being installed in 2020 including in the Biodiversity Offset Area.

#### **6.6.4 Comparison to EIS Predictions**

There were limited impacts to biodiversity within the Annual Review period. This is consistent with the EIS predictions.

#### **6.6.5 Management Measures**

Management measures relating to biodiversity are outlined within the *Jandra Quarry Biodiversity Management Plan*. These include:

- Weed and feral animal management;
- Pre clearance surveys and tree felling procedures;
- Salvaging of habitat resources;
- Nest box installation;
- Bushfire management; and
- Rehabilitation and biodiversity offset area monitoring.

#### **6.6.6 Proposed Improvements**

Weed spraying will continue at the site during the next reporting period.

The biodiversity monitoring recommended the following actions:

- Weed control
- Sediment control
- Drone / aerial weed control prioritised for areas not accessible via foot
- Once remote weed spraying of the benches has been conducted, seeding of the benches, again using drones, should be investigated and if feasible, conducted.

Jandra will also investigate the implementation of a detailed Weed Action Plan that has been commissioned to assist in targeted and effective weed management. Jandra will continue to assess the feasibility of options for weed management in hard-to-access rehabilitation areas such as drone spraying.

### **6.7 Heritage**

#### **6.7.1 Environmental Assessment Predictions**

An extensive AHIMS search was conducted on 5 February 2014 for the purposes of an Aboriginal Heritage Due Diligence Assessment for the Environmental Assessment (2014). The search covered an area of approximately 10 square kilometers, which encompassed the disturbance area of the new heavy vehicle access road and expansion of the existing finished product stockpile area. Seven recorded sites are within the Jandra Quarry Development Consent boundary. All seven of these sites were determined to be of low or medium significance. No Aboriginal archaeological sites registered on AHIMS are located within the disturbance area of the new heavy vehicle access road and expansion of the existing finished product stockpile area. There are no predicted detrimental impacts to Aboriginal and cultural heritage.

#### **6.7.2 Approved Criteria**

There are no specific criteria relating to Aboriginal and Cultural Heritage within the Development Consent. Schedule 3 Condition 29 outlines the requirement to prepare an Aboriginal Cultural Heritage Management Plan.

#### **6.7.3 Key Environmental Performance**

There were no issues relating to Aboriginal and Cultural Heritage in 2022.



## 6.7.4 Management Measures

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

- Consultation with Aboriginal stakeholders during the preparation of the Jandra 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

No further improvements are proposed for 2023.

## 6.8 Waste Minimisation

### 6.8.1 Key Environmental Performance

Waste management at Jandra continued in 2022 with this including recycling and general waste. A summary of the waste generated by Jandra is shown in **Table 24**.

**Table 24: Waste Summary**

Waste Source	Volume (Kg)
Scrap Steel	11,402
General Waste - Rubbish	12,471
General Waste - Cardboard	9,977
Industrial Waste	3,200
Waste Oil	8,000

### 6.8.2 Management Measures

Wherever possible, Jandra Quarry implements initiatives to minimise the waste generated from our operations. General waste is minimised and all oil, cardboard, paper and steel is sorted on site and sent to recycling facilities in the region. This is significantly reducing the amount of waste going to landfill.

Tyres from machines are used for traffic management, garden edging and signage stabilisers. This reduces the use of raw materials as well as diverting rubber from landfill.

General waste and recycling is stored in separated into different streams and stored in a separate 3m<sup>3</sup> bin. These bins are collected fortnightly.

### 6.8.3 Proposed Improvements

There are no proposed improvements to waste management 2022, however Jandra will continue to look for opportunities to reduce waste where possible.

## 7 WATER MANAGEMENT

### 7.1 EIS Predictions

The predictive modelling within the Environmental Assessment (July 2014) pertains to the water balance for Jandra Quarry (**Table 26**). During the reporting period, the water available on site was all that was required for operations providing Holcim with the confidence in the water balance figures. There are no other predictive figures for surface water management.

The Environmental Assessment (2014) stated “with the implementation of surface water management measures included in the Soil and Water Management Plan, the EPL and this EA, the proposed modification would not result in any significant impacts on the downstream environments.”

### 7.2 Approved Criteria

The site is required to monitor and record discharge events from the Main Dam offsite in accordance with the requirements listed in **Table 27** taken from the EPL.

**Table 27: EPL Discharge Monitoring Requirements**

**POINT 1**

Pollutant	Units of Measure	50 percentile concentration limit	90 percentile concentration limit	3DGM concentration limit	100 percentile concentration limit
pH	pH				6.5-8.5
Total suspended solids	milligrams per litre				50

*Water and land*

EPA Identification no:	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Discharge quality monitoring	Discharge quality monitoring	Discharge from final sediment dam as shown in the CSR Readymix Site Photo - Jandra Quarry Water Monitoring Location Figure 1 provided to the EPA 13 May 2002

### 7.3 Surface Water Results

The *Surface Water Management Plan* outlines the EPL 2796 requirement to complete monitoring of discharge events at the final sediment dam. Monthly water monitoring was discontinued in July 2018 and will only be completed if there is a discharge event. As no discharges occurred on site during the 2022 reporting period, no surface water monitoring data is presented in this Annual Review.

**Long-term Trends:**

The results from 2015 to 2018 were reviewed for surface water in the 2018 Annual Review. Results were similar over a long period with slightly alkaline pH and a large variability in TSS results. No discharge events have occurred on site since 2019. Jandra Quarry has a system in place at the site where samples are obtained prior to a discharge event, with the goal of containing water onsite if the water quality parameters are not within the EPL requirements. No data is provided in the 2022 Annual Review, as no discharges occurred.

### **Comparison to EIS Predictions:**

The Environmental Assessment (2014) stated the increase in scale of the operations would not result in any significant impacts on the downstream environments. With there being no discharge events that triggered the monitoring requirements during the Annual Review period and the site operating as per the SWMP, Holcim consider this prediction has been met.

## **7.4 Groundwater Results**

Jandra Quarry is unlikely to experience groundwater inflow and highly unlikely to impact groundwater (*Soil and Water Management Plan*, 2015). No groundwater monitoring program was implemented at Jandra during the Annual Review period. Some sampling was done in February 2020 as precautionary monitoring, however no impacts were recorded.

### **7.4.1 Water Take**

There is no groundwater extraction licenses at Jandra Quarry, therefore there has been no water take.

## **7.5 Water Use and Storage**

Effective control of erosion and sediment movement at the site is currently achieved via the following measures:

- Sedimentation basins;
- Wash off water collection and primary treatment systems;
- Minimisation of disturbed areas;
- Diversion of clean water from undisturbed areas around working areas;
- Temporary erosion and sediment controls prior to commencement of topsoil and overburden removal;
- Sequential clearing and rehabilitation of the quarry as extraction of material proceeds; and
- Twice yearly maintenance of erosion and sediment control structures to ensure their efficiency.

## 8 REHABILITATION AND LANDSCAPE MANAGEMENT

### 8.1 Rehabilitation Performance during the Reporting Period

Holcim performed management measures outlined in the Biodiversity and Rehabilitation Management Plan in this report period in order to fully comply with DA 213-10-99 (Mod 5) Schedule 3 Condition 27.

The Rehabilitation and Conservation Bond value was established in consultation with external advisors and DPE as per the requirements of Schedule 3 Condition 27. Instruments regarding the security of the Biodiversity Offset Area was closed out in discussion with authorities and established in 2020.

A summary of rehabilitation at Jandra Quarry is outlined in **Table 28**.

**Table 28: Rehabilitation Performance**

Guideline Requirement	Site Comment
Extent of the operations and rehabilitation at completion of the reporting period	Rehabilitation of benches continued during the Annual Review period as per the <i>Biodiversity and Rehabilitation Management Plan</i> .  Quarry benches are landscaped and vegetated using native tree and understory species, to minimise the visual impact of the quarry.
Agreed post-rehabilitation land use	The Biodiversity and Rehabilitation Management Plan outlines the proposed rehabilitation at the site. The proposed final land use is native woodland.
Key rehabilitation performance indicators	Key performance indicators are outlined within the Biodiversity and Rehabilitation Management Plan. Rehabilitation inspections are completed by Holcim. Results of biodiversity monitoring and inspections by contractors enhance data collection on performance indicators.
Renovation or removal of buildings	There was no renovation or removal of buildings in 2022
Any other Rehabilitation including: <ul style="list-style-type: none"> <li>• Exploration activities;</li> <li>• Infrastructure;</li> <li>• Dams; and</li> <li>• The installation or maintenance of fences, bunds and any other works.</li> </ul>	No additional new rehabilitation of exploration, infrastructure or dams undertaken during the Annual Review period.
Any rehabilitation areas which have received formal sign off from the Resources Regulator	None.
Variations to activities undertaken to those proposed (including why there were variations and whether Resource Regulator was notified).	Rehabilitation was completed as per the <i>Biodiversity and Rehabilitation Management Plan</i> . No rehabilitation was completed in 2022.
Outcomes of trials, research projects and other initiatives	No trials.
Key issues that may affect successful rehabilitation	There are several potential issues including availability of material, seed stock, climatic events and rehabilitation methodology.  As mentioned in <b>Section 6.5.3</b> a major bushfire event occurred in 2019 which resulted in all rehabilitation areas being burnt. Assessment of the recovery of these areas has been undertaken through inspection by drone footage and foot. Furthermore, quarterly rehabilitation monitoring is performed as per the BRMP 0. The findings of these

Guideline Requirement	Site Comment
	inspections and subsequent reports, and results of other environmental monitoring are informing the progressive rehabilitation of Jandra Quarry.

In the 2022 reporting, a total of 1035 trees have been planted out along the bund wall. Grass seeding has also occurred on top of the bund as shown in **Photo 1**.



**Photo 1: Grass seeding, and trees planted on the bund wall.**

## 8.2 Summary of Current Rehabilitation and Disturbance

A summary of the rehabilitation and disturbance status is outlined in **Table 29**.

**Table 29: Rehabilitation and Disturbance Status**

Quarry Area Type	2018 Annual Review Period (ha)	2019 Annual Review Period (ha)	2020 Annual Review Period (ha)*	2021 Annual Review Period (ha)*	2022 Annual Review Period (ha)*	2023 Annual Review (Predicted)
A. Total Quarry Footprint <sup>1</sup>	21	25.7	25.1	25.1	25.1	25.1
B. Total Active Disturbance <sup>2</sup>	19.1	22.9	19.2	17.7	19.4	19.4
C. Land Being Prepared for Rehabilitation <sup>3</sup>	0	0	0	0	0	0
D. Land Under Active Rehabilitation <sup>4</sup>	1.9	2.8	5.9	(Additional 1.5) Total 7.4	7.4	7.4
E. Completed Rehabilitations <sup>5</sup>	0	0	0	0	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 that is 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.

During 2020 an inactive bench on the south western corner of the site was prepared as a rehabilitation area with the application of overburden and topsoil over 0.15 ha.

In 2021 rehabilitation continued on 1.5 ha of inactive bench, RL50. This brought the total rehabilitation area to be 7.4 ha at the end of 2021.

Rehabilitation and nest box monitoring are required under the Development Consent and the BRMP. Rehabilitation monitoring was undertaken in 2022 in the form of inspections and reporting done by contractors on a quarterly basis. Biodiversity Offset Area monitoring continued in 2022.

The nest boxes at Jandra were destroyed or significantly destroyed as a result of the 2019 bushfire. Consequently, new nest boxes were installed during the 2020 reporting period. During the 2022 reporting period, a further 8 nest boxes were installed within the Biodiversity Offset Area. Monitoring of nest boxes continue into 2023.

## 8.3 Actions for the Next Reporting Period

The DPE 2015 Annual Review Guidelines require the Annual Review to outline the rehabilitation actions proposed during the next reporting period. These actions are detailed in **Table 30**.

**Table 30: Rehabilitation and Closure Actions for the Next Reporting Period**

Requirement	Site Comment
Describe the steps to be undertaken to progress agreement during next reporting period, where final rehabilitation outcomes have not yet been agreed between stakeholders	Rehabilitation to continue as per the Biodiversity and Rehabilitation Management Plan.
Outline proposed rehabilitation trials, research projects and other initiatives to be undertaken during next reporting period	No proposed rehabilitation trials. It should be noted Holcim is investigating the use of drone on short benches which are difficult to access.
Summary of rehabilitation activities proposed for next report period	Maintenance of rehabilitation on bench RL50 will continue. Rehabilitation preparation will continue on the eastern side of this area in 2022 ( <b>Figure 3</b> ).

The rehabilitation and disturbance areas at Jandra Quarry are outlined in **Figure 3**.



Figure 3: Jandra Quarry Rehabilitation and Disturbance (2021 and 2022)



## 9. SUMMARY OF ENVIRONMENTAL PERFORMANCE

A summary of the performance of environmental management measures and sampling results are detailed in **Table 25**.

**Table 1: Summary of Performance**

Aspect	Approval Criteria/EIS Prediction	Performance During the Reporting Period	Trend/Key Management Implications	Implemented/Proposed Management Actions
<b>Noise</b>	EIS predictions are all below Development Consent criteria.	Quarterly monitoring has met the Development Consent Criteria. Annual monitoring begun as per the varied EPL.	Noise results continue to remain within approved criteria and EIS predictions.	None required.
<b>Air Quality</b>	EIS predictions are all below development consent criteria.	PM10, and TSP results are within criteria of EPL and Development Consent.	PM10 and TSP results are consistent with previous Annual Review results.	None required.
<b>Blasting</b>	EIS predictions are all below development consent criteria.	Blast in 2022 were generally within the Development Consent criteria. One blast exceedance occurred 27 January 2022.	Blast results generally continue to remain within approved criteria and EIS predictions except for the one exceedance in 2022.	Continue to implement manages measure outlined within the noise and blast management plan.
<b>Water Management</b>	EIS predictions are all below development consent criteria.	No discharges in 2022 triggered surface water monitoring.	No monitored discharges occurred in 2022, 2021, and 2019.	None required.
<b>Biodiversity</b>	2014 EA Mod – The proposed modification would not result in any significant impacts on biodiversity on site and in surrounding bushland.	Biodiversity and rehabilitation monitoring was undertaken in 2022. No clearing was undertaken in 2022.	Biodiversity and rehabilitation monitoring was undertaken in 2022. Jandra Quarry continues to improve biodiversity monitoring and rehabilitation methods.	Continue to monitor as per the BRMP.
<b>Heritage</b>	No predictions.	No impacts.	Continued to be no impacts.	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 Schedule 5, Condition 7 and 10 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**

During 2022 a contribution of 162.5 Tonne of material was provided to the Wingham Campdraft Association

### **10.3 Complaints**

A review of the Holcim Safety, Health & Environment (SHE) reporting database ( iCare) did not identify any complaints from external stakeholders during the 2022 reporting period. This was also the case in 2019, 2020 and 2021. The quarterly reports for the complaints register are available to the public on the Jandra Quarry webpage.

Information to contact the site or to make a complaint is also available on this webpage. The link to this webpage is:

<http://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw.html>

# 11 INDEPENDENT AUDIT

In July 2022, Jandra Quarry undertook an Independent Environmental Audit (IEA) by NGH.

The findings of this IEA are

- 179 conditions were complaint
- 75 conditions were not triggered
- 40 conditions were non-complaint.
- A large portion of these non-compliances are related to administrative matters

Key Strengths of Jandra Quarry are

- The environmental controls on site, particularly the stormwater and sediment management system, are in good condition and well maintained;
- Innovative use of technology is evident on site, particularly the upcoming use of drone technology for weed management on pit benches and the use of chemical additive in crushing activities to mitigate dust;
- Site staff are knowledgeable of statutory and best practice requirements in implementing environmental management techniques on site,; and
- Reuse of concrete waste and dirty site water, minimising resource consumption and emissions.

The site has previously undertaken IEA in 2016 and 2019 which occurred within the three-year timeframe outlined in the Development Consent All actions raised in the 2019 IEA have been undertaken.

A copy of the 2022 IEA is attached as **Appendix 4**

Jandra Quarry's IEA response and action plan is attached as **Appendix 5**.

The next IEA is due in 2025.

## 12 INCIDENTS AND NON-COMPLIANCE

**Table 31** summarises the incidents and non-compliances at Jandra in 2022.

**Table 31: Summary of Incidents and Non-Compliances**

Date	Incident/Non-Compliance	Action/Comment
January 2022	Non-compliance	<b>Schedule 3 Condition 5 – Blasting</b> A blast on 27 January 2022 exceeded the overpressure limit of 115dB. The blast was recorded to be 4.1 dB over the criteria of 115db (there were a total of 4 blasts in the reporting period).

## 13 ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

Holcim staff will undertake the following works and improvement measures and projects in 2023 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 32: Proposed Improvement Measures - 2022**

Improvement Measure	Activities
Progressive Rehabilitation	The site will continue to progressively rehabilitate available areas.
Desilting of the sites main process pond/sediment Basin	The site will continue to manage sediment control structures through inspections and desilting of ponds. Tailings dams will be cleaned on an appropriate schedule.
Biodiversity	Weed spraying will continue at the site during the next reporting period. A Weed Action Plan will continue to be developed in 2023.  Inspection of nest boxes will be undertaken in the next reporting period.

# **APPENDIX 1**

## **TRANSPORT SUMMARY 2022**



**APPENDIX 2**  
**QUARTER 1 & 2 NOISE MONITORING**  
**REPORT**



### Noise Monitoring Results

**Note**

EPL Section L4 sets out noise limits but no testing frequency.  
 The EPL (section L4.2) states that we must ensure limits are met so an annual testing frequency has been applied.

Location	Frequency	Source	Lower Limit	Upper Limit	Unit	Description	Year Sample Date	Q1 2022	Q2 2022	Q3 2022	Q4 2022
								2022-03-30			
EPA Point 13 Monitoring Location R2	Annual	Section L4.2	-	46	dB	L <sub>Aeq</sub> (15 min)Day	Result	<36			
			Pass / Fail	Pass							
			Result	<36							
			Pass / Fail	Pass							
EPA Point 14 Monitoring Location R4	Annual	Section L4.2	-	52	dB	L <sub>Aeq</sub> (15 min)Day	Result	<36			
			Pass / Fail	Pass							
			Result	<36							
			Pass / Fail	Pass							
EPA Point 15 Monitoring Location R5	Annual	Section L4.2	-	50	dB	L <sub>Aeq</sub> (15 min)Morning Shoulder	Result	<36			
			Pass / Fail	Pass							
			Result	<36							
			Pass / Fail	Pass							
EPA Point 16 Monitoring Location R6	Annual	Section L4.2	-	51	dB	LA1 (1 min)Morning Shoulder	Result	<40			
			Pass / Fail	Pass							
			Result	<40							
			Pass / Fail	Pass							
EPA Point 17 Monitoring Location R7	Annual	Section L4.2	-	51	dB	L <sub>Aeq</sub> (15 min)Day	Result	<36			
			Pass / Fail	Pass							
			Result	<36							
			Pass / Fail	Pass							
EPA Point 18 Monitoring Location R8	Annual	Section L4.2	-	43	dB	L <sub>Aeq</sub> (15 min)Morning Shoulder	Result	<36			
			Pass / Fail	Pass							
			Result	<36							
			Pass / Fail	Pass							
EPA Point 19 Monitoring Location R9	Annual	Section L4.2	-	48	dB	L <sub>Aeq</sub> (15 min)Day	Result	<36			
			Pass / Fail	Pass							
			Result	<36							
			Pass / Fail	Pass							
EPA Point 20 Monitoring Location R10	Annual	Section L4.2	-	48	dB	LA1 (1 min)Morning Shoulder	Result	<35			
			Pass / Fail	Pass							
			Result	<35							
			Pass / Fail	Pass							
EPA Point 21 Monitoring Location R11	Annual	Section L4.2	-	50	dB	L <sub>Aeq</sub> (15 min)Day	Result	<35			
			Pass / Fail	Pass							
			Result	<35							
			Pass / Fail	Pass							
EPA Point 22 Monitoring Location R12	Annual	Section L4.2	-	46	dB	L <sub>Aeq</sub> (15 min)Morning Shoulder	Result	<35			
			Pass / Fail	Pass							
			Result	<35							
			Pass / Fail	Pass							
EPA Point 23 Monitoring Location R13	Annual	Section L4.2	-	48	dB	LA1 (1 min)Morning Shoulder	Result	<35			
			Pass / Fail	Pass							
			Result	<35							
			Pass / Fail	Pass							

Comments: Add any comments regarding the noise monitoring outcomes in the fields below	
Comment 1:	
Comment 2:	
Comment 3:	
Comment 4:	
Comment 5:	
Comment 6:	
Comment 7:	
Comment 8:	

**APPENDIX 3**  
**BIODIVERSITY MONITORING**  
**REPORTS**

Friday, 20 May 2022

Holcim Pty Ltd  
Jandra Quarry  
15284 Pacific Highway  
Possum Brush NSW 2430

**Attention: Shilpa Shashi and Matt Neil**

Sent by email to: Matt.Neil@holcim.com.au

**SUBJECT: Jandra Quarry Quarterly Monitoring Report**

## 1. Introduction

Holcim (Australia) operates the Jandra Quarry, a hard quarry located approximately 18 kilometres south of Taree, New South Wales. The original development proposal for the quarry was granted on March 30, 2000 (DA231-1-99). A modification to the consent (MOD) was granted on March 13, 2015 (DA231-101-99 Mod 5) allowing for an increase in production and transportation of quarry products to maximum limit of 475,000 tonnes per annum.

Kleinfelder have been engaged to conduct biodiversity monitoring of the Jandra Quarry rehabilitation areas on a quarterly basis, as stipulated in Section 6.1.1 of the Biodiversity Rehabilitation and Management Plan (BRMP) (Umwelt, 2018). Monitoring has previously been undertaken by Umwelt, until 2021. The outcomes of the quarterly monitoring will be included as part of the annual biodiversity monitoring report (Kleinfelder) for Jandra Quarry.

### 1.1 Scope

On 10 May 2022 a Kleinfelder ecologist, Mark Dean, attended Jandra Quarry to conduct a site-based inspection. Survey methodology was conducted in accordance with the BRMP and included an inspection of the rehabilitated areas to assess the following parameters:

- Stability and condition of the soil.
- Drainage and sediment control structures.
- Runoff water quality.
- Germination rates.
- Plant health.
- Natural regeneration, and;
- Weed infestations.

Each rehabilitated area, where accessible, was inspected on foot and observational data collected by a hand-held GPS device. Two (2) photo monitoring points, one at the corner of Blackbutts Road and the Pacific Highway and one along Winmurra Drive, were established in 2021. Photos are taken at each

location during each monitoring round as a means of visually comparing the aesthetics of the quarry over time (**Plate 1** and **Plate 2**).

Due to operational restrictions of the open-pit, the east, south and west benches could not be inspected on foot. Monitoring of these areas was recommended to be conducted via a remote flyover using a drone and camera. Footage can then be analysed to best determine their condition based on the abovementioned parameters.

## 2. Results

Rehabilitated areas adjacent to the Overburden Stockpiling Area (OSA), the Active Pit (AP) and the Settlement Dam near the site office were inspected.

### 2.1 Overburden Stockpile Area

Since the previous round of monitoring (February 2022), minor works (depositing overburden material and re-grading the top of the OSA) and the stockpile of some materials have occurred. An increase in the cover of exotic species, namely annual and short-lived perennials, such as *Setaria sphacelata* (Pigeon Grass), *Melinis repens* (Red Natal Grass), *Bidens Pilosa* (Cobblers Peg) and *Tagetes minuta* (Stinking Roger), are evident along the upper rehabilitated benches of the OSA (**Plate 3**). Other exotic species with a high cover include *Lantana camara* (Lantana), *Solanum mauritianum* (Tobacco Bush), *Ageratina adenophora* (Crofton Weed) and *Onopordum* spp. (Thistle Species). A variety of other exotic species were also observed throughout this area and as such, native species cover still appears to be limited, including evidence of previous native tubestock planting. Native species such as *Acacia longifolia* (Coastal Wattle), *Acacia maidenii* (Maiden's Wattle) and some *Eucalyptus* spp. are evident in low abundances, but appear to be in a healthy condition, except for some *Acacia* spp. Evidence of smothering (dieback) to some *Acacia* spp. from vines, such as *Kennedia rubicunda* (Dusky Coral Pea) were evident along the northern OSA. Some native species recruitment, typically by *Hardenbergia violacea* (Purple Coral Pea) along the southern bund of the OSA is evident. Some small seedlings of *Eucalyptus* spp. are also evident within vegetation bordering the southern OSA.

The channels manually installed as a means of water drainage from the active overburden area are now partially vegetated, with the main cover being exotic species (**Plate 4**). Apart from the constructed channel, only some minor rill erosion is evident along the upper rehabilitation benches. No significant areas of erosion are apparent along the lower rehabilitation benches. No sediment control structures exist along the boundary of the active OSA and the rehabilitation benches.

### 2.2 Active Pit Area

An inspection of the benches via drone was not conducted during this round of monitoring. Bench condition was interpreted as best as possible from a visual inspection at a safe distance, and via photos (**Plate 5** and **Plate 6**). Areas of minor rill erosion identified in the previous monitoring round are still evident. A small amount of erosion was apparent along the north-eastern AP area (ROM) with excavated material falling into a Settlement Dam (**Plate 7**). Furthermore, this area contains a high cover of *Lantana camara* (Lantana) (**Plate 8**).

Along the eastern rehabilitated benches, the upper benches show the highest cover of native species (namely *Eucalyptus* spp.) which are evidence of previous tubestock planting. The lower benches have been allowed to naturally regenerate. These areas typically contain a greater cover of exotic species, such as *Lantana camara* (Lantana), *Tagetes minuta* (Stinking Roger) and *Melinis repens* (Red Natal Grass).

### 2.3 SETTLEMENT DAM

A walkover of the edge of the Settlement Dam revealed good vegetation coverage along the dam walls and no areas of erosion or unintended water leakage were apparent. Some exotic species, such as *L. camara* (Lantana), *S. mauritianum* (Tobacco Bush), *Paspalum* spp., *M. repens* (Red Natal Grass), *A. adenophora* (Crofton Weed) and *Andropogon virginicus* (Whisky Grass) have established themselves along the dam walls. Despite this, there is still good native species coverage, with species such as *Acacia longifolia*, *Acacia maidenii* and *Eucalyptus* spp. being the most common (**Plate 9**). To the North East of the settlement dam there is a small amount of rill erosion along an existing track that leads to the OSA (**Plate 10**).

Water quality within the dam did not appear to be poor, with little signs of eutrophication (algal blooms). Furthermore, native emergent vegetation such as *Typha* sp. and *Bolboschoenus* sp. are evident along the margins of the dam and appear to be in good health.

### 2.4 PHOTO MONITORING

No apparent visual change is discernible compared to previous rounds of monitoring.

## 3. Conclusion

Native species coverage (tubestock plantings) appears to be limited in most areas where active rehabilitation has taken place. Although, on the older benches, established individuals of *Eucalyptus* spp. and *Acacia* spp. are present. Much of the ground and shrub stratum, however, is occupied by well-established exotic species like Lantana and Tobacco Bush, with the remaining areas usually densely occupied by Pigeon Grass and Red Natal with other short-lived perennial exotics. While much of the rehabilitated areas are dominated by exotic species, soil stability appears to be quite good, with minimal areas of rill erosion. This is likely attributed to the high cover of vegetation on most areas.

Areas of tubestock plantings (older benches) around the AP appear to be more successful than areas of the benches allowed to naturally regenerate. This is apparent through the higher cover of exotic species (mainly Lantana) along areas of 'natural regeneration'.

Bushfires in late 2019 and early 2020 heavily effected the quarry and surrounding areas. Post-fire regeneration of native shrubs and groundcover species was mostly evident along the top of the AP area.

No areas of poor water quality, or dieback of vegetation from surface water runoff, were observed. The Settlement Dam had a no coverage of algae and was vegetated with native aquatic vegetation along its margins.

## 4. RECOMMENDATIONS

Recommendations have been developed based on the outcome of the site-based quarterly inspection of the OSA, AP and Settlement Pond areas. The following suggestions are made;

- Intensive weed control along areas of high woody weed cover, i.e., north-eastern AP area (the 'ROM') where there is high cover of Lantana, Lower rehab benches along the eastern side of the AP area and upper benches of the OSA.
- Weed control should be structured so that methods are appropriate:
  - Backpack spraying and hand removal of weeds should be prioritised in areas accessible on foot and which contain a mix of native and exotic species.
  - Quick spray areas of dense woody weed infestations with little native species mix, i.e., the 'ROM'
  - Drone / aerial weed control prioritised for areas not accessible via foot, i.e., lower benches of the AP area. A fly-over of the intended areas of control should be conducted first to gain a more accurate idea of species composition so as to reduce the risk of non-target damaged.
- Weed control should be conducted systematically to avoid large-scale initial removal of weeds, resulting in open areas of bare soil, leading to erosion.
- High-threat woody weeds should be prioritised for control before non-woody and annual weeds. Weeds such as Lantana and Tobacco Bush are a high priority.
- Intensive weed control targeting exotic grasses is not recommended, as exotic grasses are currently helping stabilise the benches. This approach should be staged over time and should be supported by additional native species plantings.
- Mature tree and shrub planting along the benches of the OSA. The outer benches of the OSA would benefit from additional planting as the current shrub and tree cover is limited. Furthermore, planting mature trees and shrubs would contribute to shading out some of the exotic grasses.

For any further questions, please do not hesitate to call me.

Sincerely,

**Mark Dean**

Ecologist

M: 0455 381 346

[mdean@wedgetail.com.au](mailto:mdean@wedgetail.com.au)

## APPENDIX A: SITE PHOTOS

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**Plate 1** Photo Monitoring Point at the corner of Blackbutts Road and the Pacific Highway



**Plate 2** Photo Monitoring Point from Winmurra Drive.



**Plate 3 Dominance of weeds within the OSA**



**Plate 4 Exotic species growing within a constructed drainage channel.**





**Plate 5** Rehabilitated benches along the eastern side of the AP area.



**Plate 6** Rehabilitated benches along the eastern side of the AP area.



**Plate 7** Rehabilitated benches along both sides of the AP benches and material falling into AP dam.



**Plate 8** Dense covering of Lantana along an area of the ROM (north-eastern side of the AP area).



**Plate 9** Native species growth (*Acacia longifolia* and *Eucalyptus spp.*) with exotic grasses dominating the ground layer.



**Plate 10** Minor rill erosion north-east of settlement dam.

Friday, 7 October 2022

Holcim Pty Ltd  
Jandra Quarry  
15284 Pacific Highway  
Possum Brush NSW 2430

**Attention: Matt Neil**

Sent by email to: Matt.Neil@holcim.com.au

**SUBJECT: Jandra Quarry Quarterly Monitoring Report – September 2022**

## 1. Introduction

Holcim (Australia) operates the Jandra Quarry, a hard quarry located approximately 18 kilometres south of Taree, New South Wales. The original development proposal for the quarry was granted on March 30, 2000 (DA231-1-99). A modification to the consent (MOD) was granted on March 13, 2015 (DA231-101-99 Mod 5) allowing for an increase in production and transportation of quarry products to maximum limit of 475,000 tonnes per annum.

Wedgetail Project Consulting have been engaged to conduct monitoring of the Jandra Quarry rehabilitation areas on a quarterly basis, as stipulated in Section 6.1.1 of the Biodiversity Rehabilitation and Management Plan (BRMP) (Umwelt, 2018). Monitoring has previously been undertaken by Umwelt and Kleinfelder, until February 2022. The outcomes of the quarterly monitoring will be included as part of the annual biodiversity monitoring report for Jandra Quarry.

### 1.1 Scope

On 21st September 2022 a Kleinfelder ecologist, Nigel Fisher, attended Jandra Quarry to conduct a site-based inspection. Survey methodology was conducted in accordance with the BRMP and included an inspection of the rehabilitated areas to assess the following parameters:

- Stability and condition of the soil.
- Drainage and sediment control structures.
- Runoff water quality.
- Germination rates.
- Plant health.
- Natural regeneration, and;
- Weed infestations.

Each rehabilitated area, where accessible, was inspected on foot and observational data collected by a hand-held GPS device. Two (2) photo monitoring points, one at the corner of Blackbutts Road and the Pacific Highway and one along Winmurra Drive, were established in 2021. Photos are taken at each

location during each monitoring round as a means of visually comparing the aesthetics of the quarry over time.

Due to operational restrictions of the open-pit, the east, south and west benches could not be inspected on foot. Monitoring of these areas was recommended to be conducted via a remote flyover using a drone and camera. Footage can then be analysed to best determine their condition based on the abovementioned parameters.

## 2. Results

Rehabilitated areas adjacent to the Overburden Stockpiling Area (OSA), the Active Pit (AP) and the Settlement Dam near the site office were inspected. In addition, vegetation adjacent to the access road, tank laydown area, and the powerline easement was also inspected (**Figure 1**).

### 2.1 Photo Monitoring

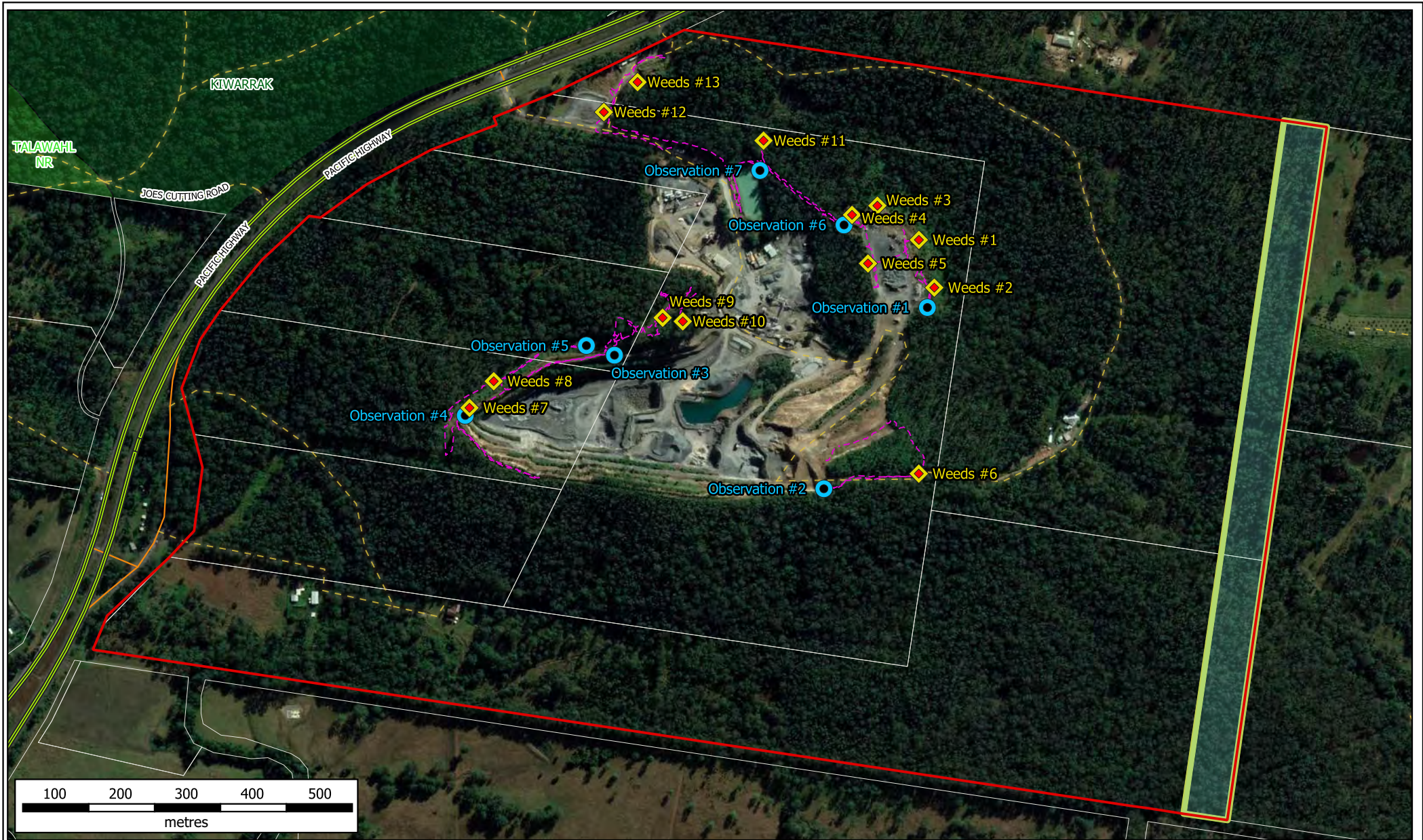
No discernible changes were observed from the photo monitoring points (**Plate 1** and **Plate 2**). The Eucalyptus trees that suffered dieback from the fires are still clearly visible along the ridgeline.

### 2.2 Overburden Stockpile Area (OSA)

The previous rounds of monitoring (February and May 2022) identified some weed issues around the OSA. Issues identified this survey are mainly focused in the areas immediately surrounding the OSA. Weed species such as *Lantana camara* (Lantana), *Solanum mauritianum* (Tobacco Bush), *Ageratina adenophora* (Crofton Weed) are proliferating on the edges of the OSA where bare soil, run off and light provide ideal growth conditions for these plants (W2 **Plate 3**). Indeed, Lantana in particular forms a dense thicket, with scattered individuals of Wild Tobacco (W3 **Plate 4**). Exotic groundcovers and grasses including *Setaria sphacelata* (Pigeon Grass), *Melinis repens* (Red Natal Grass), *Bidens Pilosa* (Cobblers Peg) and *Tagetes minuta* (Stinking Roger) have become well established above the Lantana thickets and below the active work areas of the OSA (W1 **Plate 5**).

Native species observed included *Acacia longifolia* (Coastal Wattle), *Acacia maidenii* (Maiden's Wattle) a small number of *Eucalyptus* spp., with the climber/twining species *Kennedia rubicunda* (Dusky Coral Pea) and *Hardenbergia violacea* (Purple Coral Pea) and *Pultenaea villosa* (Hairy Bush-Pea) were also observed. The vegetation "island" between the OSA and the infrastructure area has scattered Wild Tobacco (W5 **Plate 6**).

A single point of erosion was observed (OB1 **Plate 7** and **Plate 8**), where unconsolidated material is eroding into a channel and then downslope, presumably into a drainage channel below the OSA. While a constructed bund exists along the edges of the OSA, no other sediment control structures were observed.



Created by: KBlundell  
 Date: 06/10/2022  
 Version: 2210061.1



**Legend**

- Site boundary
- Biodiversity Offset Area
- General Observation
- Weed Location
- Survey Tracks
- State Forest
- NPWS Reserve
- Cadastre
- Primary Road
- Local Road
- Track-Vehicular

**Quarterly Monitoring**

Jandra Quarry  
 Holcim (Australia)

Figure: **1**



### 2.3 Active Pit Area Benches

The Active Pit Area benches can not be physically inspected due to the narrowness of the benches and the instability of the rock face above the benches (OB 4 **Plate 9**).

Visual inspection of the benches shows that the upper benches have been successfully vegetated with Eucalypts and Acacia shrubs, although Lantana, Wild Tobacco and exotic grasses and forbs such *Tagetes minuta* (Stinking Roger) and *Melinis repens* (Red Natal Grass). have become established as well (OB 2**Plate 10**). The lower benches have been allowed to regenerate naturally and have become dominated by exotic grasses with little if any native species visible (OB3 **Plate 11**).

### 2.4 Settlement Dam

A walkover of the edge of the Settlement Dam revealed good vegetation coverage along the dam walls and no areas of erosion or unintended water leakage were apparent. Some exotic species, such as *L. camara* (Lantana), *S. mauritanum* (Tobacco Bush), *Paspalum spp.*, *M. repens* (Red Natal Grass), *A. adenophora* (Crofton Weed) and *Andropogon virginicus* (Whisky Grass) have established themselves along the dam walls. Despite this, there is still good native species coverage, with species such as *Acacia longifolia*, *Acacia maidenii* and *Eucalyptus spp.* being the most common (OB7 **Plate 12**). To the North of the settlement dam there is a small amount of rill erosion along an existing track that leads up to the OSA from the settlement dam. This rill was noted in previous reports but is not considered to be an issue due to draining into the settlement dam itself (OB6). This track has considerable cover of weed species including Lantana and Crofton Weed (OB6 **Plate 13**). A small, cleared area to the north of the settlement dam has considerable Lantana around the edges (W11 **Plate 14**).

Water quality within the dam did not appear to be poor, despite the unusual colouring due to the nature of the quarried material. There are no signs of eutrophication (algal blooms). Furthermore, native emergent vegetation such as *Typha spp.*, *Bolboschoenus spp.* and *Juncus spp.* are evident along the margins of the dam and appear to be in good health.

### 2.5 Whiteside Track and Powerline Easement

The Whiteside Track and powerline easement areas have a high density of Crofton Weed, Lantana and Wild Tobacco (W7 **Plate 15** and W8 **Plate 16**). While the powerline easement is not Holcim's responsibility, the area adjacent to the easement that is on Holcim lease requires treatment. In addition, the native vegetation area below the track has many Wild Tobacco shrubs/trees scattered throughout that also require treatment.

### 2.6 Truck Parking Pad and Tank Lay Down Area

These two areas at the entrance to the quarry have relatively minor weed issues. The truck parking pad has a single garden escape plant, *Agave attenuata* that requires treatment before it becomes a larger issue and removal of the dumped rubbish (W12 **Plate 17**). Adjacent to the tank lay down area is a soil stockpile that has become infested with Wild Tobacco, treatment is ongoing (

## 3. Discussion

Weed species of concern at the Jandra Quarry, Crofton Weed, Lantana and Wild Tobacco are most common on the edges of native vegetation, around the active areas of the quarry. Ongoing treatment of these weeds

is recommended mainly to ensure that infestations do not become unmanageable in the future, or act as sources for future re-infestations. However, around the Overburden Stockpile Area, these infestations are serving to stabilise soil and slow runoff, trapping sediment. Therefore, before any weed treatment of these areas is undertaken, sediment control structures would be required to be installed and planning for installation of native species to replace the weeds. Native vegetation areas adjacent to the active work areas would also benefit from weed control efforts, again mainly to slow the reintroduction of these weeds, for instance in the vegetation to the west of the OSA and to the north-west of the Whiteside Track area. The Jandra Quarry currently employs weed contractors to conduct control works on a basis

Erosion throughout the quarry area was generally well contained with only the observation at OB1 on the OSA of concern. The unconsolidated material requires sediment control barriers erected to prevent further material moving downslope into the adjacent vegetation. The rilling observed on the access track between the Settlement Dam and the OSA is not serious at this stage, but requires continued monitoring to identify any remedial works that may need to be undertaken.

The revegetation of the benches in the Active Pit Area requires further work, and Holcim management are aware of this and have made efforts to begin this process. The upper benches have been revegetated with tubestock and *Eucalyptus spp.* are now several metres in height and may begun to produce seed. Each bench does have areas that have been colonised by exotic grasses, and in some instances Lantana and Wild Tobacco. The lower benches have been left to revegetate naturally due to safety issues and these have higher densities of exotic vegetation. With the inability to plant tubestock on these lower benches, seeding by drone would appear to be the method to introduce native species. However, a degree of natural revegetation may occur due to seed rain from the vegetation on the upper benches, but this cannot be relied upon to complete the revegetation but rather will be opportunistic.

No areas of poor water quality, or dieback of vegetation from surface water runoff, were observed. The Settlement Dam had a no coverage of algae and was vegetated with native aquatic vegetation along its margins.

## 4. Recommendations

Recommendations have been developed based on the outcome of the site-based quarterly inspection of the OSA, AP, Settlement Pond, Whiteside Track and other areas. The following suggestions are made;

- Intensive weed control along areas of high woody weed cover, i.e., Whiteside Track and powerline easement, area north of settlement dam and access track to the OSA.
- Weed control efforts should be made along the eastern and northern OSA until sediment structures and native plantings are planned and ready to be implemented.
- Sediment control structures should be erected on the OSA to prevent unconsolidated material washing downslope.
- Weed control should be structured so that methods are appropriate:
  - Backpack spraying and hand removal of weeds should be prioritised in areas accessible on foot and which contain a mix of native and exotic species.



- Quick spray areas of dense woody weed infestations with little native species mix, i.e., the 'ROM'
- Drone / aerial weed control prioritised for areas not accessible via foot, i.e., lower benches of the AP area. A fly-over of the intended areas of control should be conducted first to gain a more accurate idea of species composition to reduce the risk of non-target damage. An approach to Troy Fardell of RPAS has been made to ascertain costs to conduct this work.
- Weed control should be conducted systematically to avoid large-scale initial removal of weeds, resulting in open areas of bare soil, leading to erosion.
- High-threat woody weeds should be prioritised for control before non-woody and annual weeds. Weeds such as Lantana and Tobacco Bush are a high priority.
- Native vegetation areas adjacent to quarry operations should have weed control works conducted to slow the spread of these weeds into the quarry.
  - These works should be conducted by "cut and paint" methodology to eliminate any possible overspray onto native vegetation.
- Intensive weed control targeting exotic grasses is not recommended, as exotic grasses are currently helping stabilise the benches. This approach should be staged over time and should be supported by additional native species plantings.
- Once remote weed spraying of the benches has been conducted, seeding of the benches, again using drones, should be investigated and if feasible, conducted.

For any further questions, please do not hesitate to call me.

Sincerely,

**Nigel Fisher**  
Senior Ecologist



M: 0407 6564 583  
[nfisher@wedgetail.com.au](mailto:nfisher@wedgetail.com.au)

## APPENDIX A: SITE PHOTOS

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**Plate 1: Photo Monitoring Point at the corner of Blackbutts Road and the Pacific Highway**



**Plate 2: Photo Monitoring Point from Winmurra Drive.**



**Plate 3: W2 on the Overburden Stockpile Area showing dense thicket of Lantana**



**Plate 4: W3 showing range of weed species on edge of the Overburden Stockpile Area**



Plate 5: W<sub>1</sub> on the Overburden Stockpile Area showing establishment of exotic grasses and woody weeds



Plate 6: W<sub>5</sub> Scattered Wild Tobacco in the vegetation island to the west of the Overburden Stockpile Area



**Plate 7: OB1 showing erosion of unconsolidated material on the Overburden Stockpile Area**



**Plate 8: OB1 showing erosion and drainage of material into vegetation adjacent to the Overburden Stockpile Area**



**Plate 9: OB4 showing the eastern Active Pit Area Benches. Note the unstable rock face at the right**



**Plate 10: OB2 showing the revegetation of the southern benches in the Active Pit Area**



**Plate 11: OB3 showing the revegetation of the southern benches in the Active Pit area**



**Plate 12: OB7 - view of Settlement Dam**



**Plate 13: OB6 showing the access road to the OBA from the Settlement Dam. Minor rilling is visible bottom right, note the proliferation of weeds**



**Plate 14: W11 showing wood weeds around the open area near the Settlement Dam**





**Plate 15: W7 showing extent of Lantana and Wild Tobacco along Whiteside track**



**Plate 16: W8 - dense Lantana and Wild Tobacco infestation along Whiteside Track and the powerline easement**



Plate 17: W12 - *Agave attenuata* plant and rubbish on the truck parking pad



Plate 18: W13 - Wild Tobacco infestation on soil stockpile adjacent to the tank laydown area

Monday, 6 February 2023

Holcim Pty Ltd  
Jandra Quarry  
15284 Pacific Highway  
Possum Brush NSW 2430

**Attention: Peter Wilson**

Sent by email to: Peter.Wilson@holcim.com.au

**SUBJECT: Jandra Quarry Quarterly Monitoring Report – November 2022**

## 1. Introduction

Holcim (Australia) operates the Jandra Quarry, a hard rock quarry located approximately 18 kilometres south of Taree, New South Wales. The original development proposal for the quarry was granted on March 30, 2000 (DA231-1-99). A modification to the consent (MOD) was granted on March 13, 2015 (DA231-101-99 Mod 5) allowing for an increase in production and transportation of quarry products to maximum limit of 475,000 tonnes per annum.

Wedgetail Project Consulting (WPC) have been engaged to conduct monitoring of the Jandra Quarry rehabilitation areas on a quarterly basis, as stipulated in Section 6.1.1 of the Biodiversity Rehabilitation and Management Plan (BRMP) (Umwelt, 2018). Monitoring has previously been undertaken by Umwelt and Kleinfelder, until February 2022. The outcomes of the quarterly monitoring will be included as part of the annual biodiversity monitoring report for Jandra Quarry.

### 1.1 Scope

On the 19th November 2022 a WPC ecologist, Nigel Fisher, attended Jandra Quarry to conduct a site-based inspection. Survey methodology was conducted in accordance with the BRMP and included an inspection of the rehabilitated areas to assess the following parameters:

- Stability and condition of the soil.
- Drainage and sediment control structures.
- Runoff water quality.
- Germination rates.
- Plant health.
- Natural regeneration, and;
- Weed infestations.

Each rehabilitated area, where accessible, was inspected on foot and observational data collected by a hand-held GPS device. Two (2) photo monitoring points, one at the corner of Blackbutts Road and the Pacific Highway and one along Winmurra Drive, were established in 2021. Photos are taken at each

location during each monitoring round as a means of visually comparing the aesthetics of the quarry over time.

Due to operational restrictions of the Active Pit (AP) and safety issues with access due to the possibility of rock fall the east, south and west benches could not be inspected on foot. A degree of monitoring of these areas can be achieved through observation from safe vantage points.

## Results

Rehabilitated areas adjacent to the Overburden Stockpiling Area (OSA), the Active Pit (AP) and the Settlement Dam near the site office were inspected. In addition, vegetation adjacent to the access road, tank laydown area, and the powerline easement was also inspected (**Figure 1**).

### 1.2 Photo Monitoring

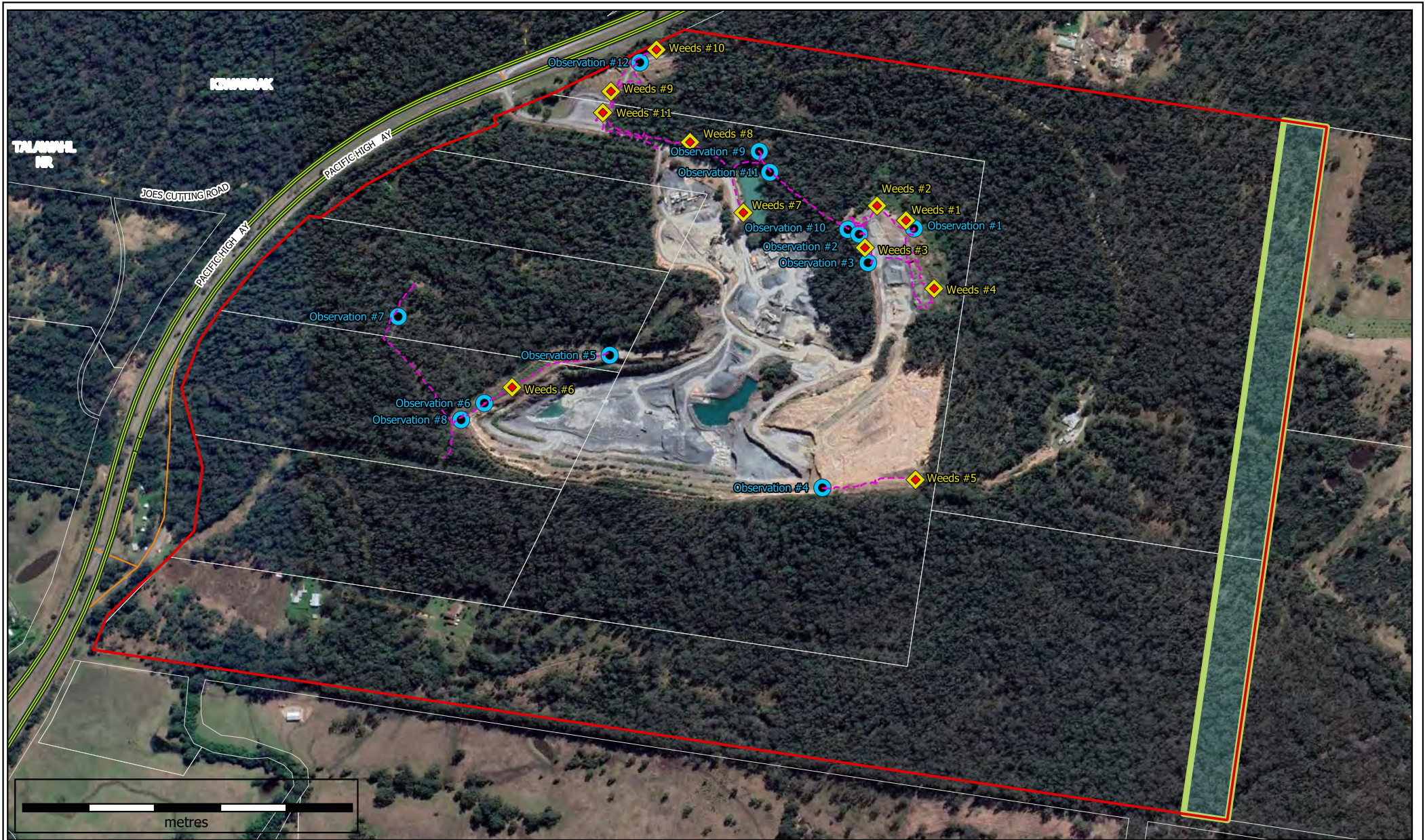
No discernible changes were observed from the photo monitoring points (**Plate 1** and **Plate 2**). The Eucalyptus trees that suffered dieback from the fires are still clearly visible along the ridgeline.

### 1.3 Overburden Stockpile Area (OSA)

The previous rounds of monitoring this year (May and September 2022) identified weed issues around the OSA. Issues identified this survey are mainly focused in the areas immediately surrounding the OSA. Weed species such as *Lantana camara* (Lantana), *Solanum mauritianum* (Tobacco Bush), *Ageratina adenophora* (Crofton Weed) are proliferating on the edges of the OSA where bare soil, run off and light provide ideal growth conditions for these plants (OB1 **Plate 3** and **Plate 4**). Indeed, Lantana in particular forms a dense thicket, with scattered individuals of Wild Tobacco. Exotic groundcovers and grasses including *Setaria sphacelata* (Pigeon Grass), *Melinis repens* (Red Natal Grass), *Bidens Pilosa* (Cobblers Peg) and *Tagetes minuta* (Stinking Roger) have become well established above the Lantana thickets and below the active work areas of the OSA (W1 **Plate 5**).

Native species observed included *Acacia longifolia* (Coastal Wattle), *Acacia maidenii* (Maiden's Wattle) a small number of *Eucalyptus* spp., with the climber/twining species *Kennedia rubicunda* (Dusky Coral Pea) and *Hardenbergia violacea* (Purple Coral Pea) and *Pultenaea villosa* (Hairy Bush-Pea) were also observed. The vegetation "island" between the OSA and the infrastructure area has previously been reported to have scattered Wild Tobacco, but with increased rainfall and growth since the last survey, density has appeared to increase (W3 **Plate 6**).

No active of erosion was observed. The September survey noted a small area of unconsolidated material and a drainage channel (W4 **Plate 7** and **Plate 8**). This appears to have stabilised, and the drainage feature is not active at the time of this survey. Another drainage feature was observed at OB3 taking water off the OSA into the central "vegetation island". This has been temporarily bunded and is presumably used only during extreme rainfall events (**Plate 9**).



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Date: 31.01.2023



**Legend**

- Site boundary
- Biodiversity Offset Area
- General Observation
- Weed Location
- Survey Tracks
- State Forest
- National Park
- Cadastre
- Primary Road
- Local Road
- Track-Vehicular

**Quarterly Monitoring  
November 2022**

Figure: **1**

Jandra Quarry  
Holcim (Australia)



#### 1.4 Active Pit Area Benches

The Active Pit Area benches cannot be physically inspected due to the narrowness of the benches and the instability of the rock face above the benches (OB<sub>4</sub> **Plate 10**).

Visual inspection of the benches shows that the upper benches have been successfully vegetated with Eucalypts and Acacia shrubs, although Lantana, Wild Tobacco and exotic grasses and forbs such *Tagetes minuta* (Stinking Roger) and *Melinis repens* (Red Natal Grass) have become established as well (OB<sub>5</sub> **Plate 11**). The lower benches have been allowed to regenerate naturally and have become dominated by exotic grasses and woody weeds such as Wild Tobacco, with woody native species limited to Acacias (OB<sub>6</sub> **Plate 12**).

#### 1.5 Settlement Dam

A walkover of the edge of the Settlement Dam revealed good vegetation coverage along the dam walls and no areas of erosion or unintended water leakage were apparent. Some exotic species, such as *L. camara* (Lantana), *S. mauritianum* (Tobacco Bush), *Paspalum* spp., *M. repens* (Red Natal Grass), *A. adenophora* (Crofton Weed) and *Andropogon virginicus* (Whisky Grass) have established themselves along the dam walls. Despite this, there is still good native species coverage, with species such as *Acacia longifolia*, *Acacia maidenii* and *Eucalyptus* spp. being the most common (OB<sub>7</sub> no photo). To the North of the settlement dam there is a small amount of rill erosion along an existing track that leads up to the OSA from the settlement dam. This rill was noted in previous reports but is not considered to be an issue due to draining into the settlement dam itself (OB<sub>11</sub> **Plate 13**). This track has considerable cover of weed species including Lantana and Crofton Weed (OB<sub>10</sub> **Plate 14**). A small, cleared area to the north of the settlement dam has considerable Lantana around the edges (O<sub>9</sub> **Plate 15**).

Water quality within the dam did not appear to be poor, despite the unusual colouring due to the nature of the quarried material. There are no signs of eutrophication (algal blooms). Furthermore, native emergent vegetation such as *Typha* spp., *Bolboschoenus* spp. and *Juncus* spp. are evident along the margins of the dam and appear to be in good health.

#### 1.6 Whiteside Track and Powerline Easement

The Whiteside Track and powerline easement areas have a high density of Crofton Weed, Lantana and Wild Tobacco (W<sub>6</sub> – no photo). While the powerline easement is not Holcim's responsibility, the area adjacent to the easement that is on Holcim lease requires treatment. In addition, the native vegetation area below the track has many Wild Tobacco shrubs/trees scattered throughout that also require treatment as they will act as a source for future infestation.

#### 1.7 Access Tracks

While not extensively surveyed, several access tracks adjacent to the quarry area were walked to determine condition. Tracks were generally overgrown with vegetation starting to crowd the tracks (O<sub>7</sub> - **Plate 16**).

#### 1.8 Truck Parking Pad and Tank Lay Down Area

These two areas at the entrance to the quarry have relatively minor weed issues. The truck parking pad has a single garden escape plant, *Agave attenuata* that requires treatment before it becomes a larger issue and

removal of the dumped rubbish (W11 **Plate 18**). Adjacent to the tank lay down area is a soil stockpile that has become infested with Wild Tobacco (O12 **Plate 18**), treatment is ongoing but it is recommended to eradicate this infestation to prevent it acting as a source. At the base of this stockpile a sediment control fence has been installed, but this fence is now in disrepair and requires repair and/or replacement (**Plate 19**). The grassy paddock in this area is also becoming colonised by woody weeds (W9 - **Plate 20**), including bananas (W10 - **Plate 21**) and would benefit from weed control efforts, again to treat these weeds before they become infestations.

## 2. Discussion

Weed species are the major concern at the Jandra Quarry, including Crofton Weed, Lantana and Wild Tobacco, are most common on the edges of native vegetation, around the active areas of the quarry. Ongoing treatment of these weeds is recommended mainly to ensure that infestations do not become unmanageable in the future, or act as sources for future re-infestations. However, around the Overburden Stockpile Area, these infestations are serving to stabilise soil and slow runoff, trapping sediment. Therefore, before any weed treatment of these areas is undertaken, sediment control structures would be required to be installed and planning for installation of native species to replace the weeds. Native vegetation areas adjacent to the active work areas would also benefit from weed control efforts, again mainly to slow the reintroduction of these weeds, for instance in the vegetation to the west of the OSA and to the north-west of the Whiteside Track area. The Jandra Quarry currently employs weed contractors to conduct control works on a regular basis and their operations could be extended to include these recommendations.

Erosion throughout the quarry area was generally well contained with only the observation at W4 on the OSA of concern. The unconsolidated material requires sediment control barriers erected to prevent further material moving downslope into the adjacent vegetation, although at the time of survey appeared to be stable. The rilling observed on the access track between the Settlement Dam and the OSA is not serious at this stage but requires continued monitoring to identify any remedial works that may need to be undertaken. The sediment fence at the base of the topsoil stockpile below the truck parking pad is both unsightly and ineffective and should be repaired and/or replaced.

The revegetation of the benches in the Active Pit Area requires further work, and Holcim management are aware of this and have made efforts to begin this process. The upper benches have been revegetated with tubestock and *Eucalyptus spp.* are now several metres in height and may begin to produce seed. Each bench does have areas that have been colonised by exotic grasses, and in some instances Lantana and Wild Tobacco. The lower benches have been left to revegetate naturally due to safety issues and these have higher densities of exotic vegetation. With the inability to plant tubestock on these lower benches, seeding by drone would appear to be the method to introduce native species. However, a degree of natural revegetation may occur due to seed rain from the vegetation on the upper benches, but this cannot be relied upon to complete the revegetation but rather will be opportunistic.

No areas of poor water quality, or dieback of vegetation from surface water runoff, were observed. The Settlement Dam had a no coverage of algae and was vegetated with native aquatic vegetation along its margins but did have weeds in places.

A further recommendation is made to reduce the frequency of this monitoring from quarterly to biannual. Quarterly monitoring appears excessive given the lack of actual change between monitoring event this year.

Weeds do proliferate, but with active management biannual monitoring would be sufficient to monitor the outcomes and identify any actions required.

### 3. Recommendations

Recommendations have been developed based on the outcome of the site-based quarterly inspection of the OSA, AP, Settlement Pond, Whiteside Track and other areas. The following suggestions are made:

- Intensive weed control along areas of high woody weed cover, i.e., Whiteside Track and powerline easement, area north of settlement dam and access track to the OSA should be implemented.
- Weed control efforts should not be made along the eastern and northern OSA until sediment structures and native plantings are planned and ready to be implemented. Currently these weeds are acting to stabilise the OSA slopes and removal before coordinated planting and sediment control may result in increased erosion.
- Smaller sediment control structures should be erected on the OSA to prevent unconsolidated material washing downslope during heavy rain events – presently appears stable.
- The sediment fence at Observation 12 should be repaired/replaced to be effective. This is also a highly visible structure that be repaired for aesthetics.
- Weed control should be structured so that methods are appropriate:
  - Backpack spraying and hand removal of weeds should be prioritised in areas accessible on foot and which contain a mix of native and exotic species – such as the “veg island” where Wild Tobacco is increasing in density.
  - Quick spray areas of dense woody weed infestations with little native species mix, i.e., the ‘ROM’.
- High-threat woody weeds should be prioritised for control before non-woody and annual weeds. Weeds such as Lantana and Tobacco Bush are a high priority.
- Native vegetation areas adjacent to quarry operations should have weed control works conducted to slow the spread of these weeds into the quarry. These areas include the buffer zone and the veg island. It is suggested that these works should be conducted by “cut and paint” methodology to eliminate any possible overspray onto native vegetation.
- Intensive weed control targeting exotic grasses on the AP benches is not recommended, as exotic grasses are currently helping stabilise the benches. This approach should be staged over time and should be supported by additional native species plantings if possible. It is recognised that access and safety issues render any efforts at weed control and replanting on the benches very difficult.
- If remote weed spraying of the benches is deemed feasible, seeding of the benches using drones should be investigated and if feasible, conducted.
- Access tracks located in the buffer areas surrounding the quarry should be maintained to act as fire breaks and provide ready access for firefighting.



- Reduce monitoring to biannually – suggest autumn and early spring.

For any further questions, please do not hesitate to call me.

Sincerely,

**Nigel Fisher**  
Senior Ecologist



M: 0407 6564 583

[nfisher@wedgetail.com.au](mailto:nfisher@wedgetail.com.au)

## APPENDIX A: SITE PHOTOS

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**Plate 1: Photo Monitoring Point at the corner of Blackbutts Road and the Pacific Highway**



**Plate 2: Photo Monitoring Point from Winmurra Drive.**



Plate 3: OB1 on the Overburden Stockpile Area showing proliferation of weed species



Plate 4: OB1 showing range of weed species on edge of the Overburden Stockpile Area and into the gully below – note the *Jacaranda mimosifolia* flowering below Eucalypts centre left.



Plate 5: W1 on the Overburden Stockpile Area showing establishment of exotic grasses and woody weed species



Plate 6: W3 Scattered Wild Tobacco in the vegetation island to the west of the Overburden Stockpile Area



**Plate 7: W4 showing erosion of unconsolidated material on the Overburden Stockpile Area – photo from September survey**



**Plate 8: W4 showing erosion and drainage of material into vegetation adjacent to the Overburden Stockpile Area – photo from September survey**



Plate 9: Drainage feature at OB3 -note the temporary bund



Plate 10: OB4 showing the eastern Active Pit Area Benches. Note the unstable rock face at the left and the narrow benches



**Plate 11: OB5 showing the revegetation of the southern benches in the Active Pit Area. Note the decrease in native woody vegetation from the upper benches to the lower benches**



**Plate 12: OB6 showing the revegetation of the southern benches in the Active Pit area. Note the lack of taller Eucalyptus species, proliferation of Acacias and exotic grasses**



Plate 13: OB11 – rill erosion on access track (not active) in background and self-regenerating *Allocasuarina spp.* in foreground



Plate 14: OB10 showing the access road to the OSA from the Settlement Dam. Minor rilling is visible bottom left, note the proliferation of weeds





**Plate 15: OB9 showing woody herbaceous weeds around the open area near the Settlement Dam**



**Plate 16: Access track at O7 showing native vegetation starting to close the track and reducing its utility as a fire break and access for firefighting**



Plate 17: W12 - *Agave attenuata* plant and rubbish on the truck parking pad



Plate 18: OB12 - Wild Tobacco infestation on soil stockpile adjacent to the tank laydown area



Plate 19: OB12 - Sediment fence in disrepair below topsoil stockpile



**Plate 20: W9 - Grassy paddock below truck parking pad is beginning to be colonised by woody weeds**



**Plate 21: W10 - Feral bananas requiring control to prevent becoming an infestation**

## APPENDIX B: ATTRIBUTION TABLES FOR OBSERVATIONS

Table 1: Weed Observations for Figure 1

Legend	Species	Patch Size	Notes
Weeds #1	Lantana, Gompho, WT, Verb bon,	Huge	Should be treated however does prevent erosion
Weeds #2	Lantana	Huge	Dense clump below lip of dump
Weeds #3	WT	large	Mature plants in veg island acts as source
Weeds #4	WT, lantana, thistles, Crofton	Huge - all along slope of dump	Difficult to treat due to steep slope and difficulty of replanting
Weeds #5	Lantana WT Solanum nig, mixed others	Large	All along cleared edge – is this limit of clearing?
Weeds #6	WT and lantana	Large	Both sides of the Whiteside track
Weeds #7	Lantana	5	Treat if possible as highly visible
Weeds #8	Garden escapee?	1	No - is native <i>Cordyline stricta</i>
Weeds #9	WT, grasses	5	Waste area below pad
Weeds #10	Bananas	5	Eradicate?
Weeds #11	Succulent	1	Baby seat and other rubbish nearby

Table 2: Observations for Figure 1

Legend	Observation
Observation #1	Dense Lantana but good native Regen above. Jacaranda flowering in gully
Observation #2	Track from overburden dump to dam. Very weedy, no apparent active erosion off the dump
Observation #3	Drainage channel off dump into veg island
Observation #4	Photos of AP looking West. Benches are mixed veg - weeds incl lantana, phytolacca, WT, grasses
Observation #5	View of AP benches looking south. Benches below have dense WT and good regrowth
Observation #6	View of lower AP. Showing regrowth and weeds
Observation #7	Access tracks to be maintained for fire break and fire fighting

Legend	Observation
Observation #8	View of AP Northern benches below Whiteside track
Observation #9	Clear area near dam - needs weed work
Observation #10	Access road from dam to OB dump - erosion and weeds
Observation #11	Erosion bottom of OB access road
Observation #12	Topsoil dump- WT on top, very dense. Sed fence in disrepair – requires replacement



**WEDGETAIL**  
PROJECT CONSULTING

Wednesday, 11 May 2022

Holcim Pty Ltd  
Jandra Quarry  
15284 Pacific Highway  
Possum Brush NSW 2430

**Attention: Shilpa Shashi and Matt Neil**

Sent by email to: Matt.Neil@holcim.com.au

**SUBJECT: Eastern Ridge Pre-clearance Survey**

Dear Matt,

This letter provides a summary of work undertaken on May 9, 2022. Wedgetail Project Consulting Ecologist Mark Dean conducted the pre-clearance survey for the area referred to as the Eastern Ridge as per Section 5.4.1 of the Jandra Quarry Biodiversity and Rehabilitation Management Plan (BRMP) (Umwelt, 2018). The survey determined what if any habitat features are located within the area. As per the BRMP, these features may include habitat trees with hollows, cracks or fissures and spouts, active nests, dreys, salvageable timber, hollow logs and rock piles.

### **PRECLEARANCE SURVEY MAY 9, 2022**

A pre-clearance survey was undertaken within the proposed clearing area (1.71ha) targeting native fauna and investigating the presence of hollows within the area. The area was assessed for any hollow-bearing trees, hollow logs, dead stag trees containing hollows and stick nests. All trees identified as containing possible hollows were marked with paint, to be re-checked during clearing (**Figure 1**). During the preclearance spotlighting surveys a Sugar Glider (*Petaurus breviceps*) was found to be calling within the proposed clearing area.

**Table 1** details the trees identified onsite, that appeared to have suitable hollows for fauna. This table includes tree type (dead stag or species (genus) of tree), number of hollows (small – up to 8 cm; medium 8-20cm and large – > 20cm) and any obvious signs of the tree being in current use – this includes scratch marks, scats, feathers, nesting material, animal presence or any other evidence.

It is therefore recommended that a suitably qualified and experienced ecologist supervise the felling of these seven trees and stags. Felling of these features will follow the procedures as outlined in the BRMP.

**Table 1: Hollow bearing trees identified within the proposed clearing area.**

ID no.	Collector	Species	Hollows			Signs of Use
			Small	Medium	Large	
1	Mark Dean	<i>Eucalyptus siderophloia</i>	1	0	0	None
2	Mark Dean	<i>Dead Stag</i>	1	2	0	None
3	Mark Dean	<i>Dead Stag</i>	0	1	0	None
4	Mark Dean	<i>Dead Stag</i>	2	0	0	None
5	Mark Dean	<i>Eucalyptus carnea</i>	2	0	0	None
6	Mark Dean	<i>Corymbia maculata</i>	1	0	0	None
7	Mark Dean	<i>Eucalyptus carnea</i>	2	0	0	Worn hollow entrance

For any further questions, please do not hesitate to call me.

Sincerely,

**Mark Dean**  
 Ecologist

M: 0455 381 346  
[mdean@wedgetail.com.au](mailto:mdean@wedgetail.com.au)



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6454000.000

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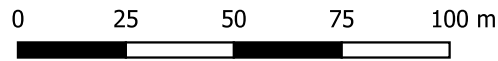
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-  Clearing Inspection Area - May 2022
-  Hollow-bearing Tree recorded
-  Stag-watching location
-  Petaurus breviceps (sugar glider) heard calling
-  Spot-lighting transect



Created by: J.Berry  
 Date: 10/05/2022  
 Version: B



1:1,750 at A4



## May 2022 Clearing Inspection

Jandra Quarry  
 Holcim (Australia)

Figure:

1



Monday, 6 June 2022

Holcim Pty Ltd  
Jandra Quarry  
15284 Pacific Highway  
Possum Brush NSW 2430

**Attention: Shilpa Shashi and Matt Neil**

Sent by email to: Matt.Neil@holcim.com.au

**SUBJECT: Eastern Ridge Habitat Tree Removal Supervision May 2022.**

Dear Matt,

This letter provides a summary of work undertaken on May 26, 2022. Wedgetail Project Consulting Ecologist Mark Dean conducted the supervision of the felling of Habitat Trees for the area referred to as the Eastern Ridge as per Section 5.4.2 of the Jandra Quarry Biodiversity and Rehabilitation Management Plan (BRMP) (Umwelt, 2018).

### **HABITAT TREE FELLING SUPERVISION MAY 2022**

On the 26 May 2022 Wedgetail ecologist, Mark Dean, supervised the felling of habitat trees within the Jandra Quarry Eastern Ridge disturbance area. The habitat trees had been previously identified by Wedgetail ecologist during a pre-clearance survey conducted on the 9 May 2022.

In accordance with the vegetation clearing protocols, the trees were soft-felled and once the trees had been felled, they were inspected for fauna and the number/size of hollows were recorded (**Table 1**). No fauna species were found during the clearing of the Habitat Trees. Although it was noted that during under scrubbing of the disturbance area there were two (2) Carpet Pythons (*Morelia spilota*) noted to self-relocate into adjacent bushland unharmed.

A total of 7 habitat trees (hollow-bearing trees and dead stags) were felled within in the Eastern Ridge of the approved disturbance area. A total of two (2) small and two (2) medium hollows were confirmed within the trees after they had been felled. As per the BRMP hollows are to be compensated with the installation of nest boxes at a ratio of 2:1 for every hollow removed and maintained for five years post-clearance. A total of four (4) hollows were confirmed therefore eight (8) nest boxes will need to be installed within the Biodiversity Offset Area.

**Table 1: Details of habitat trees felled and confirmed hollows within each tree.**

ID no.	Collector	Species	Hollows			Signs of Use
			Small	Medium	Large	
1	Mark Dean	<i>Eucalyptus siderophloia</i>	1	0	0	None
2	Mark Dean	<i>Dead Stag</i>	0	1	0	None
3	Mark Dean	<i>Dead Stag</i>	0	0	0	None
4	Mark Dean	<i>Dead Stag</i>	0	0	0	None
5	Mark Dean	<i>Eucalyptus carnea</i>	0	0	0	None
6	Mark Dean	<i>Corymbia maculata</i>	0	0	0	None
7	Mark Dean	<i>Eucalyptus carnea</i>	1	1	0	Worn hollow entrance

For any further questions, please do not hesitate to call me.

Sincerely,

**Mark Dean**

Ecologist

M: 0455 381 346

[mdean@wedgetail.com.au](mailto:mdean@wedgetail.com.au)



Plate 1 Clearing Operations



Plate 2 Confirmed Hollow within *Eucalyptus carnea* (Tree ID 7).



Thursday, 25 August 2022

Holcim Pty Ltd  
Jandra Quarry  
15284 Pacific Highway  
Possum Brush NSW 2430

**Attention: Matt Neil**

Sent by email to: Matt.Neil@holcim.com.au

**SUBJECT: Nest Box Installation August 2022**

Dear Matt,

This letter provides a summary of work undertaken on August 19, 2022. Wedgetail Project Consulting Ecologist Mark Dean and Nathan Ottley installed eight (8) nest boxes within the Biodiversity Offset Area as per Section 5.6 of the Jandra Quarry Biodiversity and Rehabilitation Management Plan (BRMP) (Umwelt, 2018).

### NEST BOX INSTALLATION

On the 19 August 2022 Wedgetail ecologist, Mark Dean and Nathan Ottley, installed eight (8) nest boxes within the Biodiversity Offset Area at least 3m or above. Please see below **Figure 1** of nest box locations and **Table 1** for the details of installation (height, direction, tree species and the type of next box).

**Table 1:** Details of installed nest boxes

ID no.	Species	Box Type	Height	Direction Facing	Easting	Northing
1	<i>Eucalyptus microcorys</i>	Glider	3.5m	SW	449438.043	6454084.396
2	<i>Eucalyptus umbra</i>	Feathertail	4m	W	449432.897	6454043.356
3	<i>Eucalyptus propinqua</i>	Glider	4m	SW	449426.761	6454011.549
4	<i>Corymbia maculata</i>	Glider	5m	SE	449434.684	6453968.543
5	<i>Eucalyptus siderophloia</i>	Glider	4m	SE	449442.815	6454105.665
6	<i>Corymbia maculata</i>	Feathertail	3.5m	SW	449445.933	6454143.369
7	<i>Eucalyptus siderophloia</i>	Feathertail	4.5m	SE	449458.102	6454164.306
8	<i>Corymbia maculata</i>	Feathertail	4m	W	449474.66	6454220.551

For any further questions, please do not hesitate to call me.

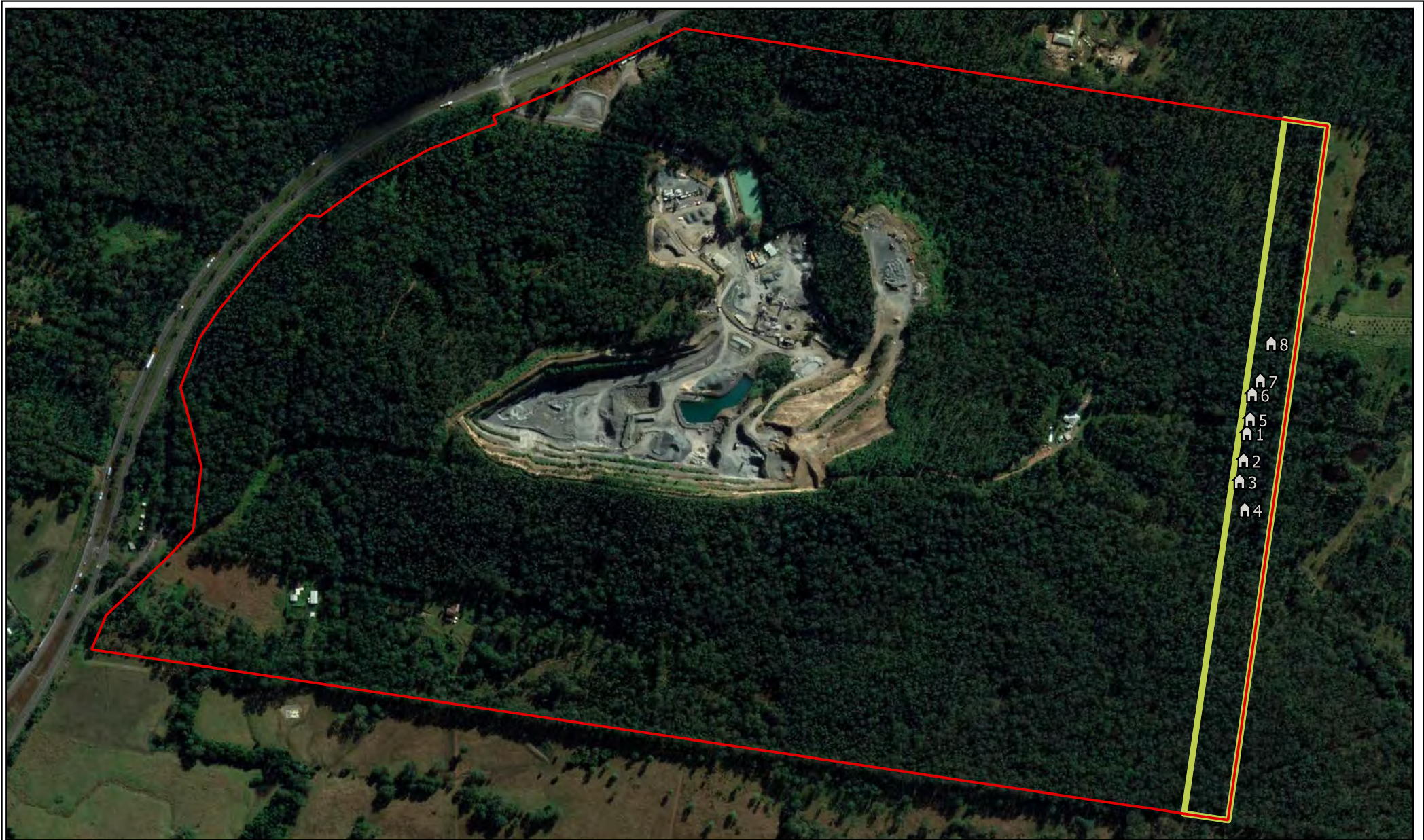
Sincerely,

**Mark Dean**

Ecologist

M: 0455 381 346

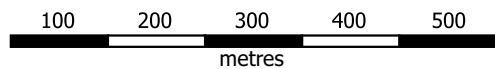
[mdean@wedgetail.com.au](mailto:mdean@wedgetail.com.au)



Created by: KBlundell  
 Date: 24/08/2022  
 Version 1



**Legend**  Site boundary 🏠 Nestbox locations  
 Biodiversity Offset Area



### Nest Box Installation

Figure: **1**

Jandra Quarry  
 Holcim (Australia)



**Plate 1 Nest Box 1 Glider Box**





Plate 2 Nest Box 8 Feathertail Glider Box

**Appendix 4**  
**INDEPENDENT ENVIRONMENTAL**  
**AUDIT**



**NGH**



**Holcim**

# Independent Environmental Audit Report 2022

## Jandra Quarry

March 2023

Project Number: 22-206



## Document verification

Project Title:	Jandra Quarry
Project Number:	22-206
Project File Name:	22-206 Jandra Quarry Independent Environmental Audit Report_Final v1.0

Revision	Date	Prepared by	Reviewed by	Approved by
Draft v1.0	14/12/2022	W. Heiniger	M. Sutherland	M. Sutherland
Final v1.0	2/03/2023	W. Heiniger	N. Arens	N. Arens

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ABN 31 124 444 622 ACN 124 444 622

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## Acronyms and abbreviations

ACHMP	Aboriginal and Cultural Heritage Management Plan
AQMP	Air Quality Management Plan
AWS	Automatic weather station
BC Act	<i>Biodiversity Conservation Act 2016 (NSW)</i>
BRMP	Biodiversity and Rehabilitation Management Plan
BoM	Australian Bureau of Meteorology
Cth	Commonwealth
DCCEEW	Department of Climate Change, Energy, the Environment and Water (formerly DAWE)
DPE	Department of Planning and Environment (NSW) (formerly DPIE)
DPIE	(Former) Department of Planning, Industry and Environment (now DPE)
EIS	Environmental impact statement
EMS	Environmental Management Strategy
EPA	Environment Protection Authority (NSW)
EP&A Act	<i>Environmental Planning and Assessment Act 1979 (NSW)</i>
ha	hectares
IEA	Independent Environmental Audits
km	kilometres
m	metres
NBMP	Noise and Blast Management Plan
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
SWMP	Soil and Water Management Plan
TfNSW	Transport for New South Wales

# 1. Introduction

## 1.1 Background

NGH were engaged by Holcim Australia Pty Ltd (Holcim) to carry out the Independent Environmental Audit (IEA) 2022 for Jandra Quarry, Possum Brush New South Wales (NSW). The audit is required in accordance with Condition 8 of Schedule 5 of Development Approval DA-213-10-99 for Holcim's operations at Jandra Quarry.

It is noted that during the reporting period, the site was significantly impacted by the bushfires of the 2019/2020 bushfire season. The site lost materials and some equipment and the rehabilitated areas of site, as well as the designated offset area, were badly impacted.

## 1.2 Audit team

A team of environmental auditing professionals from NGH was approved for the audit by the Department of Planning and Environment (Appendix B). Natascha Arens was approved as Lead Auditor. Natascha has around 30 years' experience as an environmental professional and auditor and oversaw the audit process.

The site audit was completed by Michial Sutherland and Whitney Heiniger. Michial has around 35 years' experience as an environmental professional and 25 years of auditing experience. Whitney Heiniger supported Michial during the audit. Whitney has 4 years of experience as an environmental professional, including internal and external auditing, and has completed training as a Lead Auditor in Environmental Management Systems ISO 14001:2015 and ISO 19011:2018.

## 1.3 Objectives

The objectives of the audit were to conduct an independent review of compliance with the Development Consent for DA 213-10-99 as modified, issued by the delegate for the Minister for Planning, Environment Protection Licence (EPL) 2796 issued by the NSW Environment Protection Authority (EPA) and in accordance with the requirements of the Independent Audit Post Approval Requirements, May 2020 (DPE 2020).

## 1.4 Audit scope

As required under Development Approval DA 213-10-99 Schedule 5, Condition 8, the audit covered the following areas of the Holcim, Jandra Quarry operations:

- Assessment of compliance with the conditions of both the DA and the site EPL
- All aspects of monitoring and environmental performance, both operational and organisational relating to Holcim's Jandra site
- Compliance with reporting requirements imposed on the site.

Statutory compliance of Jandra Quarry was assessed with reference to the requirements of the following approvals and licences:

- Development Approval DA 213-10-99 as modified.

Monitoring and environmental performance, along with compliance and reporting requirements, were evaluated against:

- EPL 2796




- Observations made during audit activities on site.

The audit was conducted with reference to the Department of Planning and Environment (DPE) guidelines, *Independent Audit Post Approval Requirements May 2020*.

## **1.5 Audit period**

The reporting period for the audit is from the date of the last IEA, 17<sup>th</sup> September 2019, up until the date of the site audit, 13<sup>th</sup> July 2022.

## 2. Independent audit declaration

Project Name	Jandra Quarry
Consent No.	DA 213-10-99 as modified
Description of Project	Material extraction
Project Address	15284 Pacific Highway, Possum Brush NSW
Proponent	Holcim Australia Pty Ltd
Operator Address	15284 Pacific Highway, Possum Brush NSW
Title of Audit	Independent Audit
Date	July 2022
<p>I declare that I have undertaken the Independent Audit and prepared the contents of the attached Independent Audit Report and to the best of my knowledge:</p> <ul style="list-style-type: none"> <li>the audit has been undertaken in accordance with relevant condition(s) of consent and the <i>Independent Audit Post Approval Requirements (Department 2020)</i>;</li> <li>the findings of the audit are reported truthfully, accurately and completely;</li> <li>I have exercised due diligence and professional judgement in conducting the audit;</li> <li>I have acted professionally, objectively and in an unbiased manner;</li> <li>I am not related to any proponent, owner or operator of the project neither as an employer, business partner, employee, or by sharing a common employer, having a contractual arrangement outside the audit, or by relationship as spouse, partner, sibling, parent, or child;</li> <li>I do not have any pecuniary interest in the audited project, including where there is a reasonable likelihood or expectation of financial gain or loss to me or spouse, partner, sibling, parent, or child;</li> <li>neither I nor my employer have provided consultancy services for the audited project that were subject to this audit except as otherwise declared to the Department prior to the audit; and</li> <li>I have not accepted, nor intend to accept any inducement, commission, gift or any other benefit (apart from payment for auditing services) from any proponent, owner or operator of the project, their employees or any interested party. I have not knowingly allowed, nor intend to allow my colleagues to do so.</li> </ul> <p>Notes:</p> <p>a) Under section 10.6 of the <i>Environmental Planning and Assessment Act 1979</i> a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000; and</p> <p>b) The <i>Crimes Act 1900</i> contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years imprisonment or 200 penalty units, or both)</p>	
Name of Auditor	Natascha Arens
Signature	 28/02/2023
Qualification	BAppSc MBEM, Exemplar Global lead auditor
Email Address	natascha.a@nghconsulting.com.au
Company	NGH Pty Ltd
Company Address	Level 1, 31-33 Beaumont St, Hamilton NSW 2303

## **3. Audit methodology**

### **3.1 Auditor approval**

The Department agreed to the nominated audit team with of Natascha Arens as Lead Auditor for the Project on 27/06/2022 (Appendix B), supported by Michial Sutherland and Whitney Heiniger.

### **3.2 Audit process**

A document review was completed prior to the audit on site. The document review included a review of the Conditions of Approval and all management plans, monitoring reports Jandra Quarry Web site and site registers using evidence submitted.

The audit program was submitted to the auditee on 8<sup>th</sup> July 2022 indicating the dates of the site audit, scope, criteria, audit details and required site representatives.

An opening meeting was held on 13<sup>th</sup> July 2022 at 08:30am on site. Present at the opening meeting were:

- Matt Neil, Holcim – Quarry Manager
- Michial Sutherland, NGH – Auditor
- Whitney Heiniger, NGH – Auditor.

A closing meeting was held on 13<sup>th</sup> July 2022 at 3:00pm at the site office with the staff noted above present at the closing meeting.

Offsite document review was undertaken between July and December 2022 to clarify some of the audit findings. On 17<sup>th</sup> August 2022 the NSW Environmental and Planning Coordinator for Holcim left the organisation, followed by the Jandra Quarry Manager on 1<sup>st</sup> November 2022. An interim environmental role for Holcim was filled in November 2022 however access to information during this transition was limited, hence the significant delay in obtaining information and releasing this report.

### **3.3 Audit interviews**

Interviews were held with Matt Neil throughout the duration of the audit. No interview requests were denied.

### **3.4 Site inspection**

A site inspection was with Matt Neil was conducted on 13<sup>th</sup> July 2022 (9:45am – 11:30am) following the audit opening meeting. The purpose of site visit was to inspect the works on site, view the site and access arrangements, and gain an understanding of the current scope of activities occurring on site, including the following areas:

- Site entry/exit points
- Downer asphalt production yard
- Main pit and active benches
- Current expansion area to east of main pit
- Crushing, sieving and washing plant
- Mobile plant items

- Storage and stockpiling area to northeast of main pit
- Chemical storage areas
- Water storage pit and discharge locations.

No restrictions to access occurred during the site visit.

During the site inspection, conditions were clear, cool and sunny. The Bureau of Meteorology (BoM) weather station at Taree Airport (station 060141), approximately 20km north of the site, recorded a maximum temperature of 16°C, minimum temperature of 8°C and 0.8mm of rainfall. Total rainfall for July 2022 at the Taree Airport weather station was 424.4mm, with 304.4mm falling in one 24hr period on 7<sup>th</sup> July.

### **3.5 Consultation**

Email consultation with the following agencies as part of the audit process occurred prior to the site inspection:

- Department of Planning and Environment
- MidCoast Council
- Transport for NSW (TfNSW)
- NSW EPA.

Responses were received from DPE and NSW EPA (Appendix C) and agency requests were assessed as part of the audit criteria (Appendix A).

### **3.6 Compliance status descriptors**

The compliance descriptors used in this report are:

- **Compliant** Requirement has been met
- **Non-Compliant** Requirement has not been met
- **Not Triggered** Requirement not triggered

## 4. Audit findings

### 4.1 Document list

Documents were requested during the audit and were provided by Holcim. Management Plans and Records were viewed electronically and in hard copy format. Records (photographs, notes, digital files) were made of the documents examined. Notes were made about the documents against and regarding the CoA and license requirements. Documents viewed included:

- Holcim Annual Review 1 January 2019 – 31 December 2019 – Jandra Quarry
- Holcim Annual Review 1 January 2020 – 31 December 2020 – Jandra Quarry
- Holcim Annual Review 1 January 2021 – 31 December 2021 – Jandra Quarry
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 July 2019 – 31 December 2019
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 January 2020 – 31 March 2020
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 April 2020 – 30 June 2020
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 July 2020 – 30 September 2020
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 October 2020 – 31 December 2020
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 January 2021 – 31 March 2021
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 April 2021 – 30 June 2021
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 July 2021 – 30 September 2021
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 October 2021 – 31 December 2021
- Holcim Australia and New Zealand Jandra Quarry Complaints Register – 01 January 2022 – 31 March 2022
- Jandra Quarry Pollution Incident Response Management Plan Rev 9 (September 2021)
- Jandra Quarry Environmental Management Strategy (undated)
- Jandra Quarry Noise and Blast Management Plan Rev D (20/08/2018)
- Jandra Quarry Soil and Water Management Plan Rev B (31/08/2015)
- Jandra Quarry Biodiversity and Rehabilitation Management Plan Final (Umwelt, August 2018)
- Jandra Quarry Air Quality Management Plan (November 2021)
- Jandra Quarry Aboriginal Cultural Heritage Management Plan Rev B (31/08/2015)
- Jandra Quarry Vehicle Movement Control Plan (undated)
- Jandra Quarry Transport and Truck Movement Summary 2019
- Jandra Quarry Transport and Truck Movement Summary 2020

- Jandra Quarry Plant maintenance records spreadsheet
- Jandra Quarry Crusher Monthly Checklist v1.3.1
- Jandra Quarry Driver Induction
- Jandra Quarry Independent Environmental Compliance Report (GHD) – June 2016
- Jandra Quarry Independent Environmental Compliance Audit (GHD) – December 2019
- Land Registry Services ePlan Lodgement Details – Lodgement ID 354534
- Holcim Jandra Quarry Weather & Waste Data Spreadsheet – 2019 – 2022
- Noise Monitoring Assessment Q3 2019 – Muller Acoustic Consulting
- Noise Monitoring Assessment Q4 2019 – Muller Acoustic Consulting
- Noise Monitoring Assessment Q1 2020 – Muller Acoustic Consulting
- Noise Monitoring Assessment Q2 2020 – Muller Acoustic Consulting
- Noise Monitoring Assessment Q3 2020 – Muller Acoustic Consulting
- Noise Monitoring Assessment Q4 2020 – Muller Acoustic Consulting
- Noise Monitoring Assessment March 2021 – Muller Acoustic Consulting
- Noise Monitoring Assessment May 2022 – Muller Acoustic Consulting
- Blast Reports 162 – 169 – Maxam, 2019
- Blast Reports 170 – 180 – Maxam, 2020
- Blast Reports 181 – 195 – Maxam, 2021
- Blast Reports 196, 197 – Maxam, 2022
- Post Blast Report JH-035-199 – 10/03/2022, Fullbore Quarry Services
- Post Blast Report JH-050-201 – 5/04/2022, Fullbore Quarry Services
- Post Blast Report JH-071-198 – 29/03/2022, Fullbore Quarry Services
- Post Blast Report JH-074-200 – 29/03/2022, Fullbore Quarry Services
- Post Blast Report JH-086-202 – 31/05/2022, Fullbore Quarry Services
- Holcim internal spreadsheet – Data PM10 1 January 2022 – Current
- Holcim internal spreadsheet – Annual Return 2021\_Appendices (Data 2020 – onwards)
- Jandra Quarry Annual Biodiversity and Rehabilitation Monitoring Report – May 2021, Kleinfelder
- Jandra Quarry Quarterly Biodiversity Monitoring Report – June 2021, Kleinfelder
- Jandra Quarry Quarterly Biodiversity Monitoring Report – September 2021, Kleinfelder
- Jandra Quarry Quarterly Biodiversity Monitoring Report – 20/05/2022, Wedgetail Project Consulting
- Weed Management Procedure – Jandra Quarry NSW Aggs – Holcim (February 2019)
- DPIE Approval Letter – Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020)
- DPIE Rehabilitation Inspection Letter (29/07/21)
- Penalty Notice issued to Holcim (Australia) Pty Ltd (DA231-10-99 as modified, Mid Coast Council LGA) – 21 May 2021, DPE
- Official Caution issued to Holcim (Australia) Pty Ltd (DA231-10-99 as modified, Mid Coast Council LGA) – 30 March 2020, DPE

## 4.2 Summary of compliance

Between the Project Development Approval, EPL and consultation requirements, a total of 294 individual clauses or requirements were examined as part of the audit. Of those approval and consent requirements it was found that:

- 40 were not compliant
- 75 were not triggered
- 179 were compliant.

## 4.3 Summary of non-compliance

Table 4-1 Non-compliances within this reporting period

ID	CoA/EPL ID	Details
22/1	Schedule 2, Condition 18	Evidence of submission of annual quarry production data to DRE using the standard form was not able to be supplied during the audit process.
22/2	Schedule 3, Condition 1	One non-compliance was recorded during noise monitoring within the reporting period. An exceedance of 3dB was recorded due to a bulldozer conducting overburden maintenance during the morning shoulder period. The bulldozer was immediately relocated to a lower level within the pit and a long-term management measure was implemented to ensure that overburden maintenance is not conducted within the morning shoulder period.
22/3	Schedule 3, Condition 5	One blast on 27/01/2022 exceeded the allowable airblast overpressure dB limit of 115. The blast was measured at 119.1 dB at monitoring point R2 (112 Spicers Road). No agreement exists with this receiver and as such this remains a non-compliance.
22/4	Schedule 3, Condition 19(b)	As outlined in the 2019 IEA, the SWMP does not provide a response procedure for exceedance events nor does it provide a reporting procedure for exceedance events. The plan has not been updated since the 2019 IEA and as such remains non-compliant.
22/5	Schedule 3, Condition 23(a)	The BRMP was generally implemented throughout the reporting period with the exception of one penalty notice issued by DPE on 21 May 2021. Holcim failed to undertake a pre-clearance survey prior to clearing vegetation in 2019 and failed to appropriately monitor and assess rehabilitated areas during 2019.
22/6	Schedule 3, Condition 27	Payment of the Rehabilitation and Conservation Bond was due in August 2019 however was not paid until 1/06/2020. The 2019 IEA identified this as a non-compliance and after discussions with DPE, the bond payment was made by Holcim.
22/7	Schedule 3, Condition 28(a)	As the initial payment of the RC Bond was not made until June 2020, this is outside of the 3 month timeframe following the Independent Audit undertaken in September 2019 during which the sum must be reviewed and revised (if required). A review was not able to be undertaken within the timeframe as initial submission had not yet been completed.
22/8	Schedule 3,	As per 28(a).

ID	CoA/EPL ID	Details
	Condition 28(b)	
22/9	Schedule 3, Condition 28(c)	As per 28(a).
22/10	Schedule 3, Condition 29(a)	A review of the ACHMP shows that recommendations from the 2016 and 2019 IEAs have not been adopted, as no updates to the consultation section of the ACHMP have been made and no evidence available to indicate that Holcim have tried to close out this lack of consultation in the ACHMP. Forster LALC and Purfleet-Taree LALC have both been attempted to be contacted as per the ACHMP Rev B. Additionally, no approval of the ACHMP is evident within the document, however the requirement for Department approval is noted in Section 1.4
22/11	Schedule 3, Condition 33(c)	At time of the audit, no truck movement data has been posted on the site website since 2020. Records are required to be posted to the website at the end of each calendar quarter.
22/12	Schedule 4, Condition 1	One over pressure exceedance from a discreet blasting event in Feb 2022 occurred. A discussion was held with an affected sensitive receiver who was not disaffected. Subsequent blasts have not resulted in overpressure exceedances due to a change in blasting subcontractors. Exceedance was minor and would have been negated if annual blast numbers had exceeded 20. EPA did not take action against Holcim and incident reported to the EPA.
22/13	Schedule 5, Condition 2	Non-compliances under conditions in Schedule 3 were recorded during the reporting period. One penalty notice was issued during the reporting period for failing to comply with the BRMP (21 May 2021).
22/14	Schedule 5, Condition 3(e)	The updated AQMP (2021), BRMP and ACHMP provide plan-specific Contingency Plans or similar, however the SWMP and NBMP do not provide a Contingency Plan or similar method for addressing unpredicted impacts.
22/15	Schedule 5, Condition 3(g)	The ACHMP and SWMP do not include protocols for incident response in relation to complaints or exceedances and the ACHMP does not include measures to be taken in the event of unexpected impact on known Aboriginal cultural heritage items. These items were identified in the 2019 IEA but have not been rectified during the reporting period as these plans have not been revised in this time.
22/16	Schedule 5, Condition 5(a)	With the exception of the AQMP, management plans have not been updated during the reporting period despite audit recommendations, some changes in site operations and changes in legislation.
22/17	Schedule 5, Condition 5(c)	The 2019 IEA completed by GHD provided a number of recommendations across management plans that have not been revised during the reporting period.
22/18	Schedule 5, Condition 9	Due to unforeseen environmental and site staffing challenges within Holcim during the audit period, this audit report will not be finalised within 3 months of the site audit.



ID	CoA/EPL ID	Details
22/19	Schedule 5, Condition 10(a)	No evidence is available on the website that plans are approved and 2021 Annual Review is not available on the website. Previous audit responses and recommendations are also not available.
22/20	Schedule 5, Condition 10(a)	As per 10(a).
22/21	Appendix 3, Condition 3	On 27 August 2021, an EPL variation was issued to EPL 2796 allowing noise monitoring to be undertaken on an annual basis instead of quarterly, based on no noise complaints being received since 2016 and ongoing compliance of noise monitoring results. Noise monitoring was carried out quarterly until 2021. This condition under the Modified Consent still directs noise monitoring to be undertaken quarterly; no evidence of approval of this change in monitoring frequency by the Secretary has been sighted.
22/22	EPL P1.4	Noise and weather monitoring are being carried out at the specified locations. Airblast overpressure and ground vibration have only been undertaken at Receptor R2 (EPA ID 3) during blasting operations. During an interview with M Neil, it was discussed that the wording from L5.2 ad L5.3 "...at either monitoring point 2 or 3 of this licence" had been interpreted as only one of these monitoring points needing to be monitored during blasting activities. Subsequently, only R2 (112 Spicers Rd) has had airblast overpressure and vibration monitoring carried out during the reporting period.
22/23	EPL L3.2	Imported concrete washout waste tonnages are approximated as per correspondence with P Wilson. By tonnage approximations, concrete waste imported onto the site totalled 3600T in 2020, 1770T in 2021 and 2862.9T in 2022 up until the date of the audit. 2020 tonnages exceeds the annual limit of 3000T p.a. It is noted that tonnages recorded within the spreadsheet are seemingly non approximated as of April 2022.
22/24	EPL L4.1	As per L4.2.
22/25	EPL L4.2	Noise at the site was generally compliant across all locations during the reporting period. One exceedance was recorded at R2 (EPA13) in March 2021, with <39 dB recorded at a location with a limit of 36dB. This exceedance was due to a bulldozer conducting overburden maintenance as required every two years; the bulldozer was immediately relocated to a lower level within the pit and Holcim implemented a long-term management measure to ensure overburden maintenance is not conducted within the morning shoulder period, when the exceedance was recorded.
22/26	EPL M1.1	Results not recorded and retained as per M1.3.
22/27	EPL M1.3(b)	Raw monitoring data available included PM10 monitoring data, which included a column for time of sampling that was largely incomplete. Other monitoring data available did not include sample times.
22/28	EPL M1.3(d)	Raw monitoring data available did not include the name of person collecting the sample.

ID	CoA/EPL ID	Details
22/29	EPL R1.1	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.
22/30	EPL R1.5	Annual Return for 2019 - 2020 received by EPA 8th July 2020 - outside of 60 day timeframe Annual Return for 2020 - 2021 received by EPA 5th July 2021 - outside of 60 day timeframe
22/31	EPL R1.6	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their retention periods were not able to be verified.
22/32	EPL R1.7(a)	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.
22/33	EPL R1.7(b)	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.
22/34	EPL R4.1(a) – (c)	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.
22/35	EPL R4.2(a) – (c)	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.
22/36	Consultation NSW DPE	Changes to reporting and notification processes have not been updated following a failure to notify DPE of non-compliances in 2019, 2020 and 2021.

## 4.4 Previous audits

Table 4-2 Non-compliances detailed in the 2019 IEA (GHD)

ID	Details	Comment	2022 Status
Schedule 2, Condition 2	Holcim was considered to not be generally carrying out operations in accordance with approval documents due to the number of non-compliances recorded during the 2019 IEA.	The 2022 audit found that Jandra Quarry is operating generally in accordance with approvals, with recorded non-compliances primarily resulting from unavailable documentation or isolated incidents.	Closed
Schedule 2, Condition 4	During the preparation of the 2016 IEA, OPIE indicated they would like the EMS to be resubmitted following the completion of the 2016 IEA.	No evidence was supplied during the 2022 IEA to suggest that the EMS has been updated since this recommendation.	Open
Schedule 3, Condition 5	Review of monitoring data for the 2016 Annual Review indicates nine (9) blasts were undertaken during the reporting period, with the blast overpressure on 22/03/2016 exceeding 115 dB. This constitutes approximately 11 % of blasts during the 2016 reporting period and is therefore a non-compliance with this condition.	This relates to the 2019 reporting period only and is considered closed. Although a non-compliance was noted within this condition during the reporting period, it is not an ongoing noncompliance.	Closed
Schedule 3, Condition 7	Review of the 2017 Annual Review indicates a number of non-compliances with the requirements of this condition: <ul style="list-style-type: none"> <li>• Three (3) blasts completed during June on 6/06, 21/06, and 27/06</li> <li>• Three (3) blasts completed during July on 10/07, 24/07, and 31/07</li> </ul>	This relates to the 2019 reporting period only and is considered closed. Blasts were compliant with this condition during the 2022 IEA reporting period.	Closed
Schedule 3, Condition 10	The 2016 IEA found a non-compliance due to particulate matter monitoring not being undertaken in accordance with the requirements of this condition. Holcim have not complied with this condition during the period covered by this audit, as particulate matter monitoring did not commence until May 2017.  Furthermore two events of non-compliance occurred during the audit period, with the PM10 unit not taking measurements on 16 and 22	Air quality monitoring has been undertaken during the 2022 IEA reporting period as required.	Closed

ID	Details	Comment	2022 Status
	September 2019.		
Schedule 3, Condition 12	As with the 2016 IEA, air quality monitoring data was initially limited to depositional dust monitoring; with particulate matter monitoring not commencing until May 2017. Furthermore, two events of non-compliance occurred during the audit period, with the PM10 unit not taking measurements on 16 and 22 September 2019.	Air quality monitoring has been undertaken during the 2022 IEA reporting period as required.	Closed
Schedule 3, Condition 18	During the site visit, adverse rain conditions resulted in the generation of surface water runoff on-site. Dirty water was observed to be draining along the Site Access Road (along the western base of the Main Dam), past the LOP and without being captured to allow sediment to settle and water quality testing to be completed prior to re-use or discharge via the LOP. Based on review of mapped watercourses, this water is likely leaving site in the northern extent of the Project area via a culvert under the Pacific Highway, approximately 250 metres from the LOP.	No offsite discharges were observed or reported during this reporting period and as such this is considered closed.	Closed
Schedule 3, Condition 19	<p>Updates to the SWMP may be required following completion of construction of the dish drain and sump along the Main Access Road (at the western base of the Main Dam) (see Condition 18 of Schedule 3 for discussion in Table 3-2).</p> <p>Review of available documentation indicates that recommendations from the 2016 IEA relating to the SWMP have not been actioned. Therefore, non-compliance has been found and these recommendations remain relevant</p>	This finding remains non-compliant as no updates have been made to the SWMP as required.	Open
Schedule 3, Condition 27	During the conduct of the audit no documentation or other verification was sighted to indicate that this condition has been met, with payment of the Rehabilitation and Conservation Bond required in August 2019 (i.e. within 12 months of the approval of the BRMP).	This bond payment has been made during the reporting period.	Closed
Schedule 3,	Review of the ACHMP indicates that recommendations from the 2016 IEA have not been adopted, with the 2016 IEA observing that 'detail of	Recommended updates to the ACHMP have not been	Open

ID	Details	Comment	2022 Status
Condition 29	monitoring of all new surface disturbances in Section 7.0 of the ACHMP is only in relation to known archaeological sites and does not mention monitoring for unidentified Aboriginal objects.' Therefore, the associated recommendation is still applicable to the 2019 IEA.	made and as such this non compliance remains open.	
Schedule 3, Condition 33	Truck movement data for 2016 and 2017 is available on the Holcim Jandra Quarry website. However, data for 2018 and Quarters 1 and 2 of 2019 are not available in accordance with Condition 33(c).	This non-compliance remains open as no truck movement data has been posted on the Holcim website since 2020.	Open
Schedule 3, Condition 34	During the conduct of the audit there was no documentation available to verify compliance with the Australian Standard, or the satisfaction of the Secretary of OPIE in relation to on-site lighting. However, it is noted that no agencies consulted during the preparation of the 2019 IEA identified lighting and visual impacts as a relevant concern.	No lighting complaints have been received during the reporting period. Site observations indicate the lighting is standard facility lighting for access and movement, generally shielded and proprietary in nature and as such this condition is considered closed.	Closed
Schedule 4, Condition 1	Of the monitoring data recorded there was one exceedance of the relevant blasting criteria (see Condition 5 of Schedule 3); however, this exceedance was based on more than 5% of blasts exceeding the criteria detailed in Condition 5 of Schedule 3.	Although one exceedance was noted during the 2022 IEA reporting period, this non-compliance is considered as addressed due to a change in blasting subcontractors by Holcim to address the ongoing issue. This blast would have been negated if annual blast numbers had exceeded 20.	Closed
Schedule 5, Condition 2	A finding of non-compliance (low risk) has been made in relation to a lack of PM10 monitoring until mid-2017 (as discussed in Condition 10 of Schedule 3).	Air quality monitoring has been undertaken during the 2022 IEA reporting period as required.	Closed
Schedule 5, Condition 3	Review of the management plans associated with the operation of the Jandra Quarry (i.e. the BRMP, ACHMP, AQMP, NBMP and SWMP) indicate general compliance with the requirements of this condition; however, review of the SWMP and ACHMP indicate recommendations from the 2016 IEA have not been addressed.	SWMP and ACHMP have not been updated during the reporting period and as such this non-compliance is considered open.	Open
Schedule 5,	As discussed in Conditions 19 and 29 of Schedule 3, a number of	Plans have not been updated during the reporting	Open

ID	Details	Comment	2022 Status
Condition 5	recommendations from the 2016 IEA have not been addressed, while as discussed in Condition 4 of Schedule 2, the EMS was not revised and resubmitted to OPIE following completion of the 2016 IEA (as requested by OPIE during the conduct of the 2016 IEA).	period and as such this non-compliance is considered open.	
Schedule 5, Condition 8	This audit represents the first audit since the 2016 IEA, with the 2016 audit team approved by OPIE on 30 March 2016. It is noted that commissioning for this audit did not occur until late June 2019, which is more than three (3) years since the 2016 audit.	The auditor is unable to audit their own work however the previous audit completed by GHD generally satisfies this condition, despite commissioning non-compliance.	Closed
Schedule 5, Condition 10	<p>The following information was not available on the Holcim web-site:</p> <ul style="list-style-type: none"> <li>• The 2018 Annual Review</li> <li>• The most current versions of DPIE approved environmental management plans</li> </ul>	This remains an open non-compliance as the Holcim website does not contain all required documentation.	Open
EPL P1.1	Refer to discussion for Condition 10 of Schedule 3 of DA 231-10-99.	Air quality monitoring has been undertaken during the 2022 IEA reporting period as required.	Closed
EPL P1.3	Refer to discussion for Condition 18 of Schedule 3 of DA 231-10-99.	No off-site water discharges have occurred during the reporting period.	Closed
EPL L4.6	Review of quarterly noise monitoring indicates that 'prevailing meteorological conditions for the monitoring period were sourced from Taree airport's meteorological station'. With the installation of the meteorological station on-site, use of the Taree airport's meteorological station should be reconsidered in consultation with OPIE and the EPA.	Section 6.1 of the NBMP specifies that the data from the Quarry weather station will be used for noise monitoring purposes. It is recommended that MAC specify the source of their meteorological data in their monitoring reports.	Closed
EPL L5.2	Refer to discussion for Condition 5 of Schedule 3 of DA 231-10-99.	The only blasting exceedance recorded during the audit reporting period (119.1 dBL) was at R7, not included in this condition.	Closed
EPL M2.2	Refer to discussion for Condition 10 of Schedule 3.	Air quality monitoring has been undertaken during the	Closed

ID	Details	Comment	2022 Status
		2022 IEA reporting period as required.	
EPL R1.6	An Annual Return for 2018 was sighted and identified as having been submitted by the due date; however, Annual Returns for 2016 and 2017 have not been sighted for the audit and were unavailable for review.	Annual Returns were not available for review during the 2022 IEA.	Open
EPL R4.1	An Annual Return for 2018 was sighted; however, Annual Returns for 2016 and 2017 have not been sighted for the audit. Review of the 2018 Annual Return indicated a Noise Compliance Assessment Report and Blast Monitoring Report were not submitted with the 2018 Annual Return.	Annual Returns were not available for review during the 2022 IEA.	Open
EPL R4.2	See discussion for Condition R4.1.	Annual Returns were not available for review during the 2022 IEA.	Open

## 4.5 Notices, orders or prosecutions

During the reporting period, one Penalty Notice and one Official Caution were issued to Holcim's Jandra Quarry by DPE. The details of these notices are described in Table 4-3.

Table 4-3 Notices issued during the reporting period

Notice type	Issuing body	Date issued	Details
Official Caution	DPE	30 March 2020	On 30 March 2020, the Department issued an Official Caution to Holcim (Australia) Pty Ltd for failing to lodge the Jandra Quarry Rehabilitation and Conservation Bond with the Department, within 12 months of the Department's approval of the Jandra Quarry Biodiversity and Rehabilitation Management Plan (BRMP) as required by the consent.
Penalty Notice	DPE	21 May 2021	On 21 May 2021, the Department issued a \$15,000 Penalty Notice to Holcim (Australia) Pty Ltd (Holcim) for failure to comply with the approved Biodiversity and Rehabilitation Management Plan during 2019, at their Jandra Quarry. Holcim did not conduct a pre-clearance survey prior to clearing vegetation within the quarry's disturbance footprint in February 2019 and nor monitor and assess rehabilitated areas of the quarry during the 2019 calendar year.

Both the Official Caution and the Penalty Notice were addressed by Holcim during the reporting period. Details of both of these notices can be found within Appendix A.

## 4.6 Development consent approval

### Administrative conditions

Generally, Holcim were compliant with administrative conditions outlined within the DA, with production quantities within annual and lifetime limits for the site. Hours of operation are abided by on site and truck movements are occurring within approved hours. Many requirements were not triggered during the reporting period, as no damage to infrastructure has occurred and no new buildings or structures were constructed in this time. Evidence of submission of annual quarry production data to the Department was not able to be supplied on the prescribed form, however it is evident that production data is being tracked by Holcim and reported in the Annual Review.

### Environmental performance conditions

Two exceedances were recorded during the reporting period; one noise exceedance during operations and one airblast overpressure exceedance during blasting operations. All required management plans are implemented on site however some plans require updates to ensure ongoing applicability and their compliance with this DA. Some ongoing correspondence between



Holcim and DPE was noted during settlement of the site's Rehabilitation and Conservation Bond and, despite being paid after the required date, this has now been paid. Recommendations for the SWMP, ACHMP, NBMP and EMS from the 2016 and 2019 IEAs have not been adopted by Holcim during the reporting period.

Waste is appropriately managed on site, with clear waste segregation evident and materials recycled where possible. Material reuse, including the acceptance of concrete washout waste from local suppliers for use and incorporation into the site's products where possible, is prioritised and in line with the Waste Classification Guidelines (EPA 2014). Chemical storage areas on site are appropriately bunded and site staff have access to Safety Data Sheets (SDS) through ChemAlert.

## **Environmental management conditions**

Holcim is carrying out appropriate environmental data collection and compilation in accordance with the DA. All Annual Reviews for the reporting period were made available upon request and contained all required information. Some information that is required to be posted to the Jandra Quarry website was not available on the website at the time of the audit, including the 2021 Annual Review and previous IEA reports and responses. As outlined previously, various Environmental Management Plans for the site require updates to ensure currency and compliance.

## **4.7 Environment Protection Licence**

### **Administrative conditions**

All production within and transport from Jandra Quarry was within limits specified by the EPL and all activities are being carried out within the approved site boundary.

### **Discharges to air, water and land**

Discharge monitoring is generally compliant with conditions specified in P1.1 – P1.4 however one non-compliance relating to blast monitoring was evident due to the interpretation of EPL conditions and the number of blasts.

### **Limit conditions**

Holcim are considered to be operating generally in compliance with the *Protection of the Environment Operations Act 1997* (POEO Act). Some exceedances were noted during the reporting period, including noise and concrete washout imports, however all other limits were found to be generally compliant. Site observations found chemical storage, equipment maintenance and general housekeeping to be of a high standard.

### **Operating conditions**

All activities observed during the site audit were found to be in accordance with the EPL operating conditions. Plant and equipment is evidently well-maintained and activities are being carried out competently and with consideration to environmental protection.

### **Monitoring and recording conditions**

Data is being collected and collated by Holcim and by external specialists and is being reviewed regularly by relevant site staff. No external complaints were made during the reporting period and

communication with sensitive receivers is ongoing and effective. Some samples collected during the reporting period did not have the required accompanying information however issues identified with air quality monitoring (PM<sub>10</sub>) requirements in the 2019 IEA have been rectified.

### **Reporting conditions**

Due to staffing changes and restricted access to the Holcim EPA Portal, EPL Annual Returns were not available for review during the reporting period however all Annual Returns were submitted to the EPA. No incidents causing or threatening material harm occurred during the reporting period.

### **General conditions**

A hardcopy of the EPL was available for review on site and no requests to produce the EPL were made by the EPA during the reporting period.

## **4.8 Complaints**

No complaints from external parties were received during the reporting period. One incident was recorded within the site Complaints Register however this occurrence did not involve an external party and is considered an incident rather than a complaint.

## **4.9 Incidents**

Two exceedances that are not considered to be incidents were recorded during the reporting period. One noise exceedance was recorded in March 2021 during the morning shoulder period due to bulldozer usage in the main pit, and one airblast overpressure exceedance was recorded during blasting activities in February 2022. Both exceedances were minor and appropriately addressed by Holcim through immediate management measures and long-term management measures.

It is noted that the vegetation clearing specified in the DPE Penalty Notice outlined in Section 4.5 occurred outside of this reporting period.

## **4.10 Key strengths**

The auditor notes the following key strengths regarding environmental performance as observed during the audit:

- The environmental controls on site, particularly the stormwater and sediment management system, are in good condition and well maintained
- Ongoing improvements on site are evident, including plant and equipment upgrades and appropriate noise mitigation measure installation around noisy plant
- Innovative use of technology is evident on site, particularly the upcoming use of drone technology for weed management on pit benches and the use of chemical additive in crushing activities to mitigate dust
- Site staff are knowledgeable of statutory and best practice requirements in implementing environmental management techniques on site
- Housekeeping and site cleanliness was of a very high standard
- Reuse of concrete waste and dirty site water, minimising resource consumption and emissions.

## 5. Recommendations

The IEA identified 40 non-compliances during the reporting period. A large portion of these non-compliances relate to administrative matters, including document access limitations, management plan updates and availability of information on the Holcim website.

With respect to the non-compliances listed above and in Appendix A, consideration should be given to the following:

- Environmental Management Plans should be updated as soon as practicable to incorporate recommendations from the 2016 IEA, 2019 IEA and 2022 IEA. The EMS, SWMP, NBMP and ACHMP require attention to address outstanding recommendations and remaining plans should be reviewed for currency in accordance with DA 213-10-99 Schedule 5, Condition 5 (c).
- For ease of public access, Management Plans uploaded to the Holcim website for public display should have DPE approval addressed within the document or attached as an appendix.
- The Holcim – Jandra Quarry website should be regularly updated with required plans and data, including truck movement data, IEA reports and responses and required annual reporting.
- Noise monitoring frequency requirements should be aligned between the EPL (annually) and DA (quarterly) to ensure noise monitoring is being carried out in compliance with the Conditions of Approval.
- Completed EPA Annual Returns should be saved (as .pdf files or similar) in a location accessible to site staff to ensure access to these documents is not restricted by EPA Portal access.
- During future blasting operations, airblast overpressure and vibration monitoring should be undertaken at all monitoring points specified in EPL P1.4.
- Tonnages of concrete washout being brought to site for reuse should be more accurately estimated, or accurately weighed, to ensure limits are not being exceeded.

## 6. Conclusions

In general, Holcim were able to demonstrate some compliance with the site Approval and EPL. A number of non-compliances exist. Of the approval and EPL requirements it was found that:

- 40 were not compliant
- 75 were not triggered
- 179 were compliant.

It is the auditors' understanding that many of the non-compliances recorded during this audit process have resulted from unforeseen staffing changes within Holcim, resulting in document access and continuity issues. Many of the remaining non-compliances relate to ongoing recommendations from the 2016 and 2019 IEAs regarding document updates and should be addressed as soon as practicable. Exceedance-related non-compliances during the reporting period were well addressed, with Holcim demonstrating immediate response measures, long-term management measures and self-reporting.

## **Appendix A Audit table**

Modified Consent and EPL Compliance Status - July 2022

Reference	Approval or licence requirement	Evidence collected 2022	Audit Finding	Compliance status	Action Reference	Holcim Comment
<b>Development Consent (DA 213-10-99)</b>						
<b>Schedule 2 - Administrative Conditions</b>						
1	In addition to meeting the specific criteria in this consent, the Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the development.		Noted	Not triggered		
2	The Applicant shall carry out the development generally in accordance with the a) previous approvals; b)EA (Mod 5); and c) conditions of this consent.	Observations at time of audit	The development was observed to be generally in accordance with specified approvals and conditions at the time of the audit.	Compliant		
3	If there is any inconsistency between the documents identified in condition 2, the more recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail over all other documents to the extent of any inconsistency.		Noted	Not triggered		
4	The Applicant shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of: a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent; b) any reviews, reports or audits, commissioned by the Department regarding compliance with this consent; and c) the implementation of any actions or measures contained in these documents.	Interview M Neil	No requirements or requests made by the Department during the reporting period.	Not triggered		
5	The Applicant may carry out quarrying operations on the site until 31 March 2045. Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this consent will continue to apply in all other respects other than the right to conduct quarrying operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.	Noted	Not applicable to this reporting period.	Not triggered		
6	The Applicant shall not carry out quarrying operations below a level of RL 20 m AHD.	Licensed Survey analysed by "Propeller", Measure Australia. Latest Propellor survey report from 18 May 2022 sighted	Deepest part of pit is above RL 20 AHD and the majority of the pit floor is at RL35.	Compliant		
7	The Applicant shall not extract more than 16.5 million tonnes of quarry products from the site under this consent.	Annual Review 2021	Total tonnes extracted from the quarry total 2,112,561 tonnes at the end of 2021, well within the approved limit.	Compliant		
8	The Applicant shall not extract more than 490,000 tonnes of quarry products from the site in any calendar year.	Annual Reviews 2019, 2020, 2021	All quantities reported within Holcim Annual Reviews. 2019: 323, 930 T 2020: 328, 114 T 2021: 325,414T extracted. All within approved limit.	Compliant		
9	The Applicant shall not transport more than 475,000 tonnes of quarry products from the site in any calendar year.	Annual Reviews 2019, 2020, 2021	Product sales reported within Holcim Annual Reviews: 2019: 403,317 T 2020: 310,759 T 2021:465,466 T. All within approved limit.	Compliant		
10	The Applicant shall comply with the operating hours in Table 1. The following activities may be carried out on the site outside the hours specified in Table 1.	Site observations Annual Reviews 2019, 2020, 2021 Interview M Neil	All activities are being conducted within approved hours.	Compliant		
	a) return of trucks to the site prior to 12 midnight Monday to Saturday;	Site observations Annual Reviews 2019, 2020, 2021 Interview M Neil	All activities are generally conducted within business operating hours and no after-hours access generally required. No traffic movements are occurring after midnight.	Compliant		
	b) delivery or dispatch of materials as requested by Police, Fire Brigade or other similar authorities; and c) emergency work to avoid the loss of lives, property and/or to prevent environmental harm.	Interview M Neil	No requests during the reporting period.	Not triggered		
		Interview M Neil	No emergency work required during the reporting period.	Not triggered		

Day	Extraction and processing operations	Transportation operations	Asphalt Plant and associated transport (on a campaign basis)
Monday – Friday	6 am to 10 pm	6 am to 10 pm	24 hours a day
Saturday	6 am to 6 pm	6 am to 10 pm	24 hours a day
Sundays and Public Holidays	None	None	24 hours a day

	In circumstances outlined in (b) and (c), the Applicant shall notify the Secretary and affected residents prior to undertaking the activities, or as soon as is practical thereafter.	Interview M Neil	No maintenance activities required outside of normal operating hours during reporting period.	Not triggered																																						
11	The Applicant shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.	Site observations and personal communications with M. Neil	No new buildings or structures commenced or completed during the reporting period.	Not triggered																																						
12	The Applicant shall ensure that all demolition work is carried out in accordance with Australian Standard AS 2601-2001: The Demolition of Structures, or its latest version	Site observations and personal communications with M. Neil	No new buildings or structures commenced or completed during the reporting period.	Not triggered																																						
13	The Applicant shall: (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and	Site observations and personal communications with M. Neil	No damage to public infrastructure caused by the development during the reporting period. It is noted that Holcim repair the naturestrip access on the Pacific Highway.	Not triggered																																						
	(b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development. Note: This condition does not apply to damage to roads caused as a result of general road usage.	Site observations and personal communications with M. Neil	No relocation of public infrastructure required during the reporting period.	Not triggered																																						
14	The Applicant shall ensure that all the plant and equipment used at the site is maintained and operated in a proper and efficient manner.	Jandra Plant Maintenance Folder - specifically crusher and loader (Cat 980H).	Plant have scheduled maintenance regime and daily prestart plant checklist. All maintenance is recorded electronically. Routine maintenance occurs on site, major rebuilds of mobile plant occur off site. Plant observed to be in good working order during site inspection, minimal noise and smoke emissions.	Compliant																																						
15	With the approval of the Secretary, the Applicant may: (a) submit any strategy, plan or program required by this consent on a progressive basis; and	Interview M Neil	No strategies, plans or programs submitted or re-submitted during the reporting period.	Not triggered																																						
	(b) combine any strategy, plan or program required by this consent with any similar strategy, plan or program required for the development.	Interview M Neil	No plans required to be combined to date.	Not triggered																																						
	To ensure these strategies, plans or programs are updated on a regular basis, the Applicant may at any time submit revised strategies, plans or programs to the Secretary for approval.	Noted	Noted	Not triggered																																						
16	Prior to 31 August 2015, the Applicant shall: (a) engage a registered surveyor to mark out the boundaries of the approved area of extraction and the boundaries of the approved infrastructure area; and	IEA Report 2016	The 2016 IEA Report (GHD) notes that the required survey plan was completed by registered surveyors McGlashan and Crisp in 2010. This report was submitted to DPIE (now DPE) as part of the 2015 Annual Review and is considered as compliant due to being previously addressed.	Compliant																																						
	(b) submit a survey plan of these boundaries to the Secretary.	IEA Report 2016	As above.	Compliant																																						
17	The Applicant shall ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify the location of these boundaries and that quarrying operations are contained within the approved areas.	Pre clearing site land survey May 2022. Site biodiversity preclearing survey May 2022 (Wedgetail). Site observations.	Site defined by land survey. Drill rod and white PVC pipe with pink flagging tape mark the boundaries of the site as observed during the audit.	Compliant																																						
18	The Applicant shall provide annual quarry production data to DRE using the standard form for that purpose; and report these data in the Annual Review (see condition 4 of Schedule 5).	Interview M Neil	Evidence of this submission to DRE was unable to be supplied during the audit process. Production data is available in the Annual Reviews.	Not-compliant																																						
<b>Schedule 3 - Environmental Performance Conditions</b>																																										
<b>NOISE</b>																																										
1	The Applicant shall ensure that the noise generated by the development does not exceed the criteria in Table 2 or Table 3 at any residence on privately-owned land.  Table 2: Noise criteria – quarrying operations only dB(A) <table border="1"> <thead> <tr> <th>Location</th> <th>6 am – 10 pm (L<sub>night</sub> min)</th> </tr> </thead> <tbody> <tr> <td>R1</td> <td>46</td> </tr> <tr> <td>R5</td> <td>40</td> </tr> <tr> <td>R2, R4, R8</td> <td>36</td> </tr> <tr> <td>R7</td> <td>35</td> </tr> </tbody> </table> Table 3: Noise criteria – quarrying operations & asphalt plant production combined dB(A) <table border="1"> <thead> <tr> <th rowspan="2">Location</th> <th rowspan="2">6 am – 10 pm (L<sub>night</sub> min)</th> <th colspan="2">10 pm – 6 am</th> </tr> <tr> <th>(L<sub>night</sub> min)</th> <th>(L<sub>night</sub> min)</th> </tr> </thead> <tbody> <tr> <td>R1</td> <td>48</td> <td>46</td> <td>51</td> </tr> <tr> <td>R5</td> <td>41</td> <td>39</td> <td>51</td> </tr> <tr> <td>R4</td> <td>40</td> <td>39</td> <td>51</td> </tr> <tr> <td>R2, R6</td> <td>40</td> <td>35</td> <td>48</td> </tr> <tr> <td>R7</td> <td>36</td> <td>35</td> <td>48</td> </tr> </tbody> </table>	Location	6 am – 10 pm (L <sub>night</sub> min)	R1	46	R5	40	R2, R4, R8	36	R7	35	Location	6 am – 10 pm (L <sub>night</sub> min)	10 pm – 6 am		(L <sub>night</sub> min)	(L <sub>night</sub> min)	R1	48	46	51	R5	41	39	51	R4	40	39	51	R2, R6	40	35	48	R7	36	35	48	Annual Reviews 2019, 2020, 2021	Noise at the site was generally compliant across all locations during the reporting period. One exceedance was recorded at R2 in March 2021, with <39 dB recorded at a location with a limit of 36dB. This exceedance was due to a bulldozer conducting overburden maintenance as required every two years; the bulldozer was immediately relocated to a lower level within the pit and Holcim implemented a long-term management measure to ensure overburden maintenance is not conducted within the morning shoulder period, when the exceedance was recorded.	Not-compliant		
	Location	6 am – 10 pm (L <sub>night</sub> min)																																								
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	Notes: Receiver locations are shown on the figure in Appendix 2. Condition 10 of Schedule 2 prohibits quarrying operations during the hours 10 pm - 6 am.	Annual Reviews 2019, 2020, 2021	All quarrying operations are being carried out within approved hours.	Compliant																																						

	Noise generated by the development is to be measured in accordance with the relevant requirements of the NSW Industrial Noise Policy (as may be updated from time-to-time). Appendix 3 details the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	As outlined in MAC assessment reports, NSW Industrial Noise Policy is now the NSW 'Noise Policy for Industry (2017)' and this reference has been adjusted in M8.2 of the EPL. Assessments have been conducted in accordance with this updated policy, noting meteorological conditions outlined in Appendix 3.	Compliant		
	However, these criteria do not apply if the Applicant has a negotiated agreement with the owner/s of the relevant residence or land to generate higher noise levels, and the Applicant has advised the Department in writing of the terms of this agreement.	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	Holcim have a negotiated agreement with the property owner of R1, excluding this receptor from the approved noise criteria. Receivers R8, R9 and R10 are Holcim-owned, also excluded from approved criteria. Evidence of advising DPE was provided in the 2019 IEA.	Compliant		
2	Upon receiving a written request from the owner of any residence on property R1 the Applicant shall implement additional noise mitigation measures (such as double glazing, insulation, or air conditioning) at the residence in consultation with the owner. These measures must be reasonable and feasible and directed towards reducing the noise impacts of the project on the residence.	Personal communication with M. Neil	No written request received.	Not triggered		
	If within 3 months of receiving this request from the owner, the Applicant and the owner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.	Personal communication with M. Neil	No written request received.	Not triggered		
	However, the obligation to implement noise mitigation measures does not apply if the Applicant has a negotiated agreement with the owners of the relevant residence or land that sets aside noise mitigation measures under the terms of this consent, and the Applicant has advised the Department in writing of the terms of this agreement.	Personal communication with M. Neil	No written request received.	Not triggered		
3	The Applicant shall: (a) implement best practice management to minimise the construction, operational and transportation noise of the development;	Site inspection. Annual Reviews 2019, 2020, 2021 MAC 2019 (Q1-4), 2021-2022 (annual) Noise reports	Plant well maintained. Road access sealed and maintained. Noise monitoring completed. Plant and activities (apart from Asphalt Batch plant) located with in quarry void. Noise reports reviewed and reported. Quarry Noise is inaudible	Compliant		
	(b) minimise the noise impacts of the development during meteorological conditions when the noise limits in this consent do not apply (see Appendix 3);	Quarterly reports 2019 - 2022 (Muller Acoustic Consulting)	No meteorological conditions have impacted noise monitoring to date.	Not triggered		
	(c) carry out regular monitoring to determine whether the development is complying with the relevant conditions of this consent;	Quarterly reports 2019 - 2022 (Muller Acoustic Consulting)	Regular (quarterly) noise monitoring being undertaken by Muller Acoustic Consulting	Compliant		
	(d) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent, to the satisfaction of the Secretary.	Annual Reviews 2019, 2020, 2021	Evidenced during Holcim's response to noise exceedance recorded at R2 in March 2021. Corrective action was immediately implemented and management actions rectified for long-term compliance assurance.	Compliant		
4	The Applicant shall prepare and implement a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be submitted to the Secretary for approval by 31 August 2015;	Noise and Blast Management Plan Rev D (August 2018)	Noise and Blast Management Plan Rev A approved for issue 26/08/2015 as per Document Control table of NBMP.	Compliant		
	(b) describe the measures that would be implemented to ensure: - compliance with the noise criteria in this consent; - best management noise minimisation practice is employed on site; - noise emissions from trucks on the site after 10 pm do not annoy neighbouring residents; and - the noise impacts of the development are minimised during any meteorological conditions when the noise limits in this consent do not apply; and	Noise and Blast Management Plan Rev D (August 2018) - Section 2.3	The NBMP addresses compliance, best management, emissions and noise impacts. Section 2.3 outlines where each requirement of this condition is addressed within the plan.	Compliant		
	(c) detail a monitoring program that will be put in place to measure noise from the development against the noise criteria in Table 2 and 3, and which: - includes quarterly attended monitoring for the first two years of each of the three Stages of the development, as shown in the three figures in Appendix 1 (this monitoring must take place within a 24 hour asphalt campaign, if any such campaign is conducted during the quarter), and thereafter annually unless the Secretary agrees otherwise; and - evaluates and reports on the effectiveness of the noise management system on site .	Noise and Blast Management Plan Rev D (August 2018) - Section 6.2  Noise and Blast Management Plan Rev D (August 2018) - Section 7.0	The NBMP includes a monitoring program for noise and blast monitoring, noted as being undertaken by MAC during the reporting period.	Compliant		



5	<p>The Applicant shall ensure that blasting on site does not cause any exceedance of the criteria in Table 4.</p> <table border="1"> <caption>Table 4: Blasting criteria</caption> <thead> <tr> <th>Location</th> <th>Airblast overpressure (dB(Lin Peak))</th> <th>Ground vibration (mm/s)</th> <th>Allowable exceedance</th> </tr> </thead> <tbody> <tr> <td>Any residence on privately owned land, or any public infrastructure</td> <td>120</td> <td>10</td> <td>0%</td> </tr> <tr> <td></td> <td>115</td> <td>5</td> <td>5% of the total number of blasts over a period of 12 months</td> </tr> </tbody> </table> <p>However, these criteria do not apply if the Applicant has a written agreement with the relevant owner to exceed the limits in Table 4, and the Applicant has advised the Department in writing of the terms of this agreement.</p>	Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance	Any residence on privately owned land, or any public infrastructure	120	10	0%		115	5	5% of the total number of blasts over a period of 12 months	<p>Complaints Register Q1 2022 Blast Plan 197 Holcim Jandra (Maxam 13 January 2022) Interview M Neil Noise and Blast Management Plan (August 2018)</p>	<p>One blast on 27/01/2022 exceeded the allowable airblast overpressure dB limit of 115. The blast was measured at 119.1 dB at monitoring point R2 (112 Spicers Road). No agreement exists with this receiver and as such this remains a non-compliance.</p>	Not-compliant													
Location	Airblast overpressure (dB(Lin Peak))	Ground vibration (mm/s)	Allowable exceedance																										
Any residence on privately owned land, or any public infrastructure	120	10	0%																										
	115	5	5% of the total number of blasts over a period of 12 months																										
6	<p>The Applicant shall only carry out blasting on site between 9 am and 5 pm Monday to Friday and 9 am to 3 pm Saturday. No blasting is allowed on Sundays or public holidays, or at any other time without the written approval of the Secretary.</p>	<p>Annual Reviews 2019, 2020, 2021</p>	<p>All blasting is being undertaken within approved hours.</p>	Compliant																									
7	<p>The Applicant may carry out a maximum of 2 blasts per month on site. This condition does not apply to blasts required to ensure the safety of the quarry or workers on site. Note: For the purposes of this condition a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the quarry.</p>	<p>Annual Reviews 2019, 2020, 2021</p>	<p>No more than 2 blasts were carried out in any month during the reporting period.</p>	Compliant																									
8	<p>The Applicant shall: (a) implement best management practice to: - protect the safety of people and livestock in the areas surrounding blasting operations, protect public or private infrastructure/property in the surrounding area from damage from blasting operations; - protect the Pacific Highway from flyrock from blasting operations; and - minimise the dust and fume emissions of any blasting;</p>	<p>Blast Reports: Maxam 2019 - January 2022 Fullbore Quarry Services March 2022 - present</p>	<p>Blast planning based on geology, bore tracking and blast loading is used to minimise face blowouts and flyrock generation. Blast are monitored for noise and vibration, and videoed by fixed cameras and drones to record blast performance. Recorded data is analysed and reported for each blast by "FullBore" the blast contractor.</p>	Compliant																									
	<p>(b) operate a suitable system to enable the public to get up-to-date information on the proposed blasting schedule on site; and</p>	<p>Interview M Neil</p>	<p>Proactive communication is occurring between the Quarry Manager and affected residents via text message 24hours prior to blasting.</p>	Compliant																									
	<p>(c) carry out regular monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.</p>	<p>Blast Reports: Maxam 2019 - January 2022 Fullbore Quarry Services March 2022 - present</p>	<p>Vibration and overblast airpressure monitoring is undertaken during blast activities, in addition to visual dust monitoring captured on video and analysed following each blast.</p>	Compliant																									
9	<p>The Applicant shall prepare and implement a Blast Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be submitted to the Secretary for approval by 31 August 2015;</p>	<p>Noise and Blast Management Plan Rev D (August 2018)</p>	<p>Noise and Blast Management Plan Rev A approved for issue 26/08/2015 as per Document Control table of NBMP.</p>	Compliant																									
	<p>(b) describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions of this consent;</p>	<p>Noise and Blast Management Plan Rev D (August 2018) - Section 5.2</p>	<p>The NBMP includes mitigation measures to ensure compliance throughout blasting activities, including detailed blast designs, exclusion zones and blast monitoring</p>	Compliant																									
	<p>(c) include a monitoring program for evaluating and reporting on compliance with the blasting criteria in this consent;</p>	<p>Noise and Blast Management Plan Rev D (August 2018) - Section 6.3</p>	<p>The NBMP includes a monitoring program for noise and blast monitoring, noted as being undertaken by MAC during the reporting period.</p>	Compliant																									
	<p>(d) include a blast fume management protocol to demonstrate how emissions will be minimised including risk management strategies if blast fumes are generated;</p>	<p>Noise and Blast Management Plan Rev D (August 2018) - Section 5.2.1, 6.3.1</p>	<p>Blast fume management is considered during detailed blast design, as well as addressed in the NBMP in mitigation measures and incident response measures.</p>	Compliant																									
	<p>(e) include public notification procedures on the blasting schedule; and</p>	<p>Noise and Blast Management Plan Rev D (August 2018) - Section 5.2</p>	<p>NBMP details the public notification process, involving weighbridge staff or delegates sending text messages to sensitive receivers te day prior to a planned blast.</p>	Compliant																									
	<p>(f) include a protocol for investigating and responding to complaints.</p>	<p>Noise and Blast Management Plan Rev D (August 2018) - Section 7.2</p>	<p>A procedure for complaint response is included in the NBMP, including the recording of complaints in a register.</p>	Compliant																									
10	<p>The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria listed in Tables 5, 6 and 7 at any residence on privately-owned land.</p> <table border="1"> <caption>Table 5: Long-term impact assessment criteria for particulate matter</caption> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th><sup>a</sup> Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td><sup>a</sup> 90 µg/m<sup>3</sup></td> </tr> <tr> <td>Particulate matter &lt; 10 µm (PM<sub>10</sub>)</td> <td>Annual</td> <td><sup>a</sup> 30 µg/m<sup>3</sup></td> </tr> </tbody> </table> <table border="1"> <caption>Table 6: Short-term impact assessment criteria for particulate matter</caption> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th><sup>a</sup> Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter &lt; 10 µm (PM<sub>10</sub>)</td> <td>24 hour</td> <td><sup>a</sup> 50 µg/m<sup>3</sup></td> </tr> </tbody> </table> <table border="1"> <caption>Table 7: Long-term impact assessment criteria for deposited dust</caption> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Maximum increase in deposited dust level</th> <th>Maximum total deposited dust level</th> </tr> </thead> <tbody> <tr> <td><sup>c</sup> Deposited dust</td> <td>Annual</td> <td><sup>b</sup> 2 g/m<sup>2</sup>/month</td> <td><sup>a</sup> 4 g/m<sup>2</sup>/month</td> </tr> </tbody> </table>	Pollutant	Averaging Period	<sup>a</sup> Criterion	Total suspended particulate (TSP) matter	Annual	<sup>a</sup> 90 µg/m <sup>3</sup>	Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	<sup>a</sup> 30 µg/m <sup>3</sup>	Pollutant	Averaging Period	<sup>a</sup> Criterion	Particulate matter < 10 µm (PM <sub>10</sub> )	24 hour	<sup>a</sup> 50 µg/m <sup>3</sup>	Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level	<sup>c</sup> Deposited dust	Annual	<sup>b</sup> 2 g/m <sup>2</sup> /month	<sup>a</sup> 4 g/m <sup>2</sup> /month	<p>Site observations Annual Reviews 2019, 2020, 2021 Video of blasts</p>	<p>Haul roads water by water cart and access roads water by fixed position sprinklers to suppress dusts. Materials processed through washed screens. Dust extraction silos (3) used for cone crushers, barmac crusher and the dust conveyor on the crusher dust line. Sealed haul roads kept free of dirt. TINSW sweep highway access on request. Blast aimed to create coarse fragments and not reduce material to fine fragments. (This consent condition has been modified to use PM10 as the analysis for ambient/generated dust levels through the AQMP). It is noted that depositional dust in 2021 was averaged over a period of 11 months instead of 12 due to DDG damage in Dec 2021.</p>	Compliant		
Pollutant	Averaging Period	<sup>a</sup> Criterion																											
Total suspended particulate (TSP) matter	Annual	<sup>a</sup> 90 µg/m <sup>3</sup>																											
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<sup>c</sup> Deposited dust	Annual	<sup>b</sup> 2 g/m <sup>2</sup> /month	<sup>a</sup> 4 g/m <sup>2</sup> /month																										

	Notes for Tables 5 to 7: 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. Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, ASINZS 3580 1 O 1 :2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method; and d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog fire incidents, illegal activities or any other activity agreed to by the Secretary in consultation with the EPA	Noted	Noted	Not triggered		
11	The Applicant shall not cause or permit the emission of offensive odour beyond the boundaries of the site.	Site observations Annual Reviews 2019, 2020, 2021 Source Emissions Monitoring - Flagstaff Asphalt Batchplant	No odours observed on site during the audit. No odour complaints over the last three years. Current Downer batch plant reports air quality testing to Holcim during operation of batchplant.	Compliant		
12	The Applicant shall: (a) implement best practice management to minimise the odour and dust emissions of the development;	Site observations AQMP for Jandra Quarry 2021 Annual Reviews 2019, 2020, 2021 Source Emissions Monitoring - Flagstaff Asphalt Batchplant Downer, EMP for Asphalt Batchplant	Dust was observed to be appropriately managed through the use of water carts on haul roads, surfactant products applied during crushing operations and physical covers over crushing and sorting plant. No dust observed leaving the premises and no complaints. No odour complaints have been received during the reporting period and no odour was noted during site inspections.	Compliant		
	(b) carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions of this consent;	Annual Reviews 2019, 2020, 2021	Regular air quality monitoring is being undertaken, with both PM10 and depositional dust being monitored.	Compliant		
	(c) regularly assess air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this consent;	Annual Reviews 2019, 2020, 2021 Interview M Neil	Air quality monitoring data is reviewed by the Quarry Manager and on-site air quality (incl. visible dust) is monitored by the Quarry Manager and general site personnel. Activities are adjusted as required and water trucks are used as required to prevent visible dust from operations. No dust complaints have been received during the reporting period.	Compliant		
	(d) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see notes under Table 7); and	Interview M Neil	The 2019/2020 bushfires significantly impacted the site, burning vegetation, equipment and materials and causing a site evacuation for a number of days. The site was secured as far as practicable and any dust from the site is considered negligible compared to the scale of bushfire impact.	Compliant		
	(e) minimise the area of surface disturbance and maximise progressive rehabilitation of the site,	Site observations	Progressive rehabilitation is evident on site. Pit benches rehabilitated, upper perimeter rehabilitated, spoil stockpile lower levels rehabilitated, with ongoing weed treatment being undertaken by appropriately qualified persons. Operations areas and access tracks are sheeted in some areas and sealed from the main entrance to the operations area.	Compliant		
13	The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria in Tables 5, 6, and 7 at any occupied residence on quarry-owned land unless: (a) the tenant has been notified of any health risks associated with such exceedances in accordance with the notification requirements under Schedule 4 of this consent;	Interview M Neil	The only remaining tenant on quarry-owned land is the Quarry Manager (M Neil) who is aware of associated risks. It is noted that minimal PM10 exceedances noted during the reporting period, with some attributed to bushfire impacts.	Compliant		
	(b) the tenant of any land owned by the Applicant can terminate their tenancy agreement without penalty at any time, subject to giving reasonable notice;	Interview M Neil	No tenants of Holcim-owned land terminated their tenancy during the reporting period.	Not triggered		
	(c) air quality monitoring is regularly undertaken to inform the tenant of the actual particulate emissions at the residence; and	Interview M Neil	PM10 monitoring has been regularly conducted and the tenant (M Neil) is aware of all results.	Compliant		
	(d) data from this monitoring is presented to the tenant in an appropriate format for a medical practitioner to assist the tenant in making informed decisions on health risks associated with occupying the property, to the satisfaction of the Secretary.	Interview M Neil	M Neil is the only tenant and has not required this presentation of information during the reporting period.	Not triggered		
14	The Applicant shall prepare and implement an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be submitted to the Secretary for approval by 31 August 2015;	Air Quality Management Plan Jandra Quarry (Nov 2021) DPE Approval of AQMP 1/03/2022	The AQMP has been revised during the reporting period and was approved by DPE on 1/03/2022.	Compliant		
	b) describe the measures that would be implemented to ensure: - compliance with the relevant conditions of this consent; - best practice management is employed; and - the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;	Air Quality Management Plan Jandra Quarry (Nov 2021)	The AQMP describes air quality mitigation measures to meet consent and best practice requirements as well as adverse weather air quality management as far as practicable.	Compliant		
	(c) describe the proposed air quality management system; and	Air Quality Management Plan Jandra Quarry (Nov 2021)	Section 7 of the AQMP details management controls for air quality as well as a general management system including legislation, training and reporting.	Compliant		

	(d) include an air quality monitoring program that: - is capable of evaluating the performance of the development; - includes a protocol for determining any exceedances of the relevant conditions of consent; - effectively supports the air quality management system; and - evaluates and reports on the adequacy of the air quality management system.	Air Quality Management Plan Jandra Quarry (Nov 2021)	Sections 8 and 9 of the AQMP detail an air quality monitoring program that evaluates the site's AQ performance, includes protocol for determining exceedances and evaluates the adequacy of mitigation measures.	Compliant													
15	For the life of the development, the Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the Approved Methods for Sampling of Air Pollutants in New South Wales guideline.	Site observations Annual Review 2021	Met station installed on the site office building to the site office adjacent to the workshop. It is noted that the met station was not functioning correctly between July - September 2021 and complete monitoring results were not able to be collected in this time.	Compliant													
16	The Applicant shall implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site.	Interview M Neil	A new, more efficient crusher has been installed in 2021. All waste products on site are reused as saleable products from general fill to quarried rock. Routine maintenance and overhaul of machinery is carried out as required.	Compliant													
17	The Applicant shall ensure it has sufficient water for all stages of the development, and if necessary, adjust the scale of quarrying operations to match the available water supply.	Interview M Neil	Water supply is sourced from rainfall in the quarry area of operations. 40ML of storage is available on site.	Compliant													
18	The Applicant shall ensure that all surface water discharges from the site comply with the discharge limits in any EPL which regulates water discharges from the site, or with section 120 of the POEO Act.	Interview M Neil	No off-site surface water discharges have occurred during the reporting period.	Not triggered													
19	The Applicant shall prepare and implement a Soil and Water Management Plan for the development to the satisfaction of the Secretary. This plan must be prepared in consultation with the Council and NOW, by suitably qualified and experience person/s whose appointment has been approved by the Secretary, and be submitted to the Secretary for approval by 31 August 2015.	Soil and Water Management Plan Jandra Quarry (2015)	Publicly-available plans supplied for use during the audit do not contain evidence of document or author approval however this was provided during the previous IEA.	Compliant	Attach DPE approval as an appendix to the plan or update Section 1.4 to include plan and authorship approval date.												
	In addition to the standard requirements for management plans (see condition 3 of Schedule 5) this plan must include a: (a) Site Water Balance that: - includes details of: - sources and security of water supply including contingency planning to ensure demand will be met under all climatic conditions. - the site water storage capacity and licensing requirements for all stages of the development, - water use and management on site;	Soil and Water Management Plan Jandra Quarry (2015)	Section 6 of the SWMP includes a detailed review of water supply sources, site water usage, storage capacity, water use and management and environmental losses.	Compliant													
	(b) Surface Water Management Plan that includes: - a detailed description of the surface water management system for the development, including the: - clean water diversion system; - erosion and sediment controls; and - the water storages required for each stage of the development; - identification of all reasonable and feasible measures to improve the quality of surface water on the site, particularly those measures required to improve the water quality in the main dam, and a timeframe for the implementation of any identified improvements; - the measures that would be implemented to minimise water use on site; - surface water impact assessment criteria, - a program to monitor surface water quality, and - a plan to respond to any exceedances of the performance criteria, and mitigate any adverse surface water impacts of the development; and - reporting procedures .	Soil and Water Management Plan Jandra Quarry (2015)	The SWMP addresses site surface water management, including diversions, ESC measures and water storage. It also identifies a number of measures to improve water quality, reduce water use and minimum discharge criteria and monitoring frequency. However, as outlined in the 2019 IEA, the SWMP does not provide a response procedure for exceedance events nor does it provide a reporting procedure for exceedance events. The plan has not been updated since the 2019 IEA and as such remains non-compliant.	Not-compliant													
20	The Applicant shall manage on-site sewage to the satisfaction of Council and the EPA.	Site observations	Two septic tanks on site, one at the main office and one at the weigh bridge. No correspondence has been received from Council during the reporting period.	Compliant													
21	The Applicant shall implement a biodiversity offset strategy and rehabilitate the site to the satisfaction of the Secretary, in accordance with the rehabilitation strategy in the documents listed in condition 2 of Schedule 2 and the objectives in Table 8.  <table border="1"> <caption>Table 8: Biodiversity and Rehabilitation objectives</caption> <thead> <tr> <th>Feature</th> <th>Objective</th> </tr> </thead> <tbody> <tr> <td>Site (as a whole)</td> <td> <ul style="list-style-type: none"> <li>Safe, stable and non-polluting.</li> <li>Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and has minimal visual impact when viewed from surrounding land.</li> </ul> </td> </tr> <tr> <td>Land identified in the biodiversity offset strategy and other vegetated land</td> <td> <ul style="list-style-type: none"> <li>Conserved and enhanced with native, endemic vegetation.</li> <li>Containing self-sustaining ecosystems.</li> </ul> </td> </tr> <tr> <td>Surface Infrastructure</td> <td>Decommissioned and removed, unless the Secretary agrees otherwise.</td> </tr> <tr> <td>Quarry Benches</td> <td>Landscaped and vegetated using native tree and understorey species, to minimise the visual impact of the quarry.</td> </tr> <tr> <td>Quarry Pit Floor</td> <td>Landscaped and revegetated using native tree and understorey species.</td> </tr> </tbody> </table>	Feature	Objective	Site (as a whole)	<ul style="list-style-type: none"> <li>Safe, stable and non-polluting.</li> <li>Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and has minimal visual impact when viewed from surrounding land.</li> </ul>	Land identified in the biodiversity offset strategy and other vegetated land	<ul style="list-style-type: none"> <li>Conserved and enhanced with native, endemic vegetation.</li> <li>Containing self-sustaining ecosystems.</li> </ul>	Surface Infrastructure	Decommissioned and removed, unless the Secretary agrees otherwise.	Quarry Benches	Landscaped and vegetated using native tree and understorey species, to minimise the visual impact of the quarry.	Quarry Pit Floor	Landscaped and revegetated using native tree and understorey species.	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018) Jandra Quarry Quarterly Biodiversity Monitoring Report (20/05/2022, Wedgetail Project Consulting) Site observations	The BRMP includes the specified objectives as objectives of rehabilitation works on site (Table 4.1). Site observations and monitoring undertaken in May 2022 indicate that rehabilitation is occurring generally in accordance with these objectives, with consideration given to bushfire impacts to the site from 2019/2020 bushfires.	Compliant	
Feature	Objective																
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22	The Applicant shall rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation. Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to disturbance in the future.	Site observations Interview M Neil	Progressive rehabilitation is evident on site. Pit benches rehabilitated, upper perimeter rehabilitated, spoil stockpile lower levels rehabilitated, with ongoing weed treatment being undertaken by appropriately qualified persons.	Compliant	
23	By 31 March 2016, the Applicant shall implement a strategy to offset the impacts of clearing 1.28 ha of Small-fruited Grey Gum - Tallowood shrubby open forest on coastal foothills of the southern North Coast vegetation community by either: (a) entering into a Biobanking agreement under the Threatened Species Conservation Act 1995 to retire at least the number of Ecosystem Credits assessed using the Biobanking Credit Calculator; or	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	As per 23 (b).	Not triggered	
	(b) implementing a strategy to provide a Biodiversity Offset Area of at least 7 ha of Small-fruited Grey Gum - Tallowood shrubby open forest on coastal foothills of the southern North Coast vegetation community; in consultation with OEH and to the satisfaction of the Secretary.	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018) IEA Report 2016 IEA Report 2019	As reported in the 2016 and 2019 IEAs, correspondence between Holcim and DPIE (now DPE) confirming DPIE's acceptance of a section 88b Covenant being implemented has been previously sighted. As specified in Section 8.1 of the 2021 AR, instruments for protection of the Offset Area were secured in 2020. Holcim have elected to offset impacts through the selection of 23 (b).	Compliant	
24	By 30 September 2016, the Applicant shall make suitable arrangements to protect in perpetuity any Biodiversity Offset Area established under condition 23 above to the satisfaction of the Secretary.	Annual Review 2021	As specified in Section 8.1 of the 2021 AR, instruments for protection of the Offset Area were secured in 2020.	Compliant	
25	The Applicant shall prepare and implement a Biodiversity and Rehabilitation Management Plan for the site to the satisfaction of the Secretary. This plan must: (a) be prepared by suitably qualified person(s) whose appointment has been approved by the Secretary;	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	BRMP provides evidence of Department approval of plan author on 1 July 2015 (Appendix 1). The plan was generally implemented throughout the reporting period with the exception of one penalty notice issued by DPE on 21 May 2021. Holcim failed to undertake a pre-clearance survey prior to clearing vegetation in 2019 and failed to appropriately monitor and assess rehabilitated areas during 2019.	Not-compliant	No further action required
	(b) be prepared in consultation with OEH and Council, and submitted to the Secretary for approval by 31 August 2015;	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	BRMP Section 2.3 describes consultation undertaken with NSW OEH and Greater Taree City Council (Appendix 2). No consultation had been received from either stakeholders at most recent revision.	Compliant	
	(c) describe the short, medium and long-term measures that would be implemented to: - manage the native vegetation and fauna habitat on the site; - implement the biodiversity offset strategy; and - ensure compliance with the biodiversity and rehabilitation objectives in Table 8, and progressive rehabilitation obligations in this consent;	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	BRMP describes all specified measures to be implemented on site.	Compliant	
	(d) include detailed performance and completion criteria for evaluating the performance biodiversity offset strategy and the rehabilitation of the site, including triggers for any necessary remedial action;	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	The BRMP includes detailed performance criteria as required, as well as a detailed monitoring program for ensuring that progress against criteria is tracked.	Compliant	
	(e) include a detailed description of the measures that would be implemented to: - minimise impacts on threatened species, populations and habitats as a result of the quarrying activities on the site; - enhance the quality of native vegetation and fauna habitat across the site and in the biodiversity offset area; - landscape the site to minimise visual and lighting impacts; - minimise the impact of clearing on native fauna; - maximise the salvage of environmental resources from any area approved to be deared including tree hollows, vegetative and soil resources - for beneficial reuse; - provide two nest boxes for each tree-hollow destroyed by vegetation dearing; - control weeds and feral pests; - control erosion; - control access, and - bushfire management;	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	The BRMP thoroughly addresses measures to be implemented in response to all specified occurrences.	Compliant	
	(f) include a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	The BRMP contains a comprehensive monitoring program to monitor efficacy of all measures outlined in 25(e).	Compliant	
	(g) identify the potential risks to rehabilitation of the site and the implementation of the biodiversity offset strategy, and include a description of the contingency measures that would be implemented to mitigate these risks; and	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	The BRMP contains clear triggers for remedial action, appropriate corrective actions and anticipated risks during the rehabilitation process.	Compliant	

	(h) include details of who would be responsible for monitoring, reviewing, and implementing the plan.	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	The BRMP contains a clear roles and responsibilities table (Table 10.1) which describes Holcim staff roles and their responsibilities in implementing the BRMP.	Compliant	
26	The Applicant shall ensure that the Biodiversity Offset Area provides suitable habitat for all threatened fauna species that have potential habitat within the 1.28 ha of land proposed to be cleared under EA (Mod 5).	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018) 2019 IEA Aerial Photography	Nominated Biodiversity Offset area described in the BRMP and covered by the Sect 88B Covenant has not been subject to grazing or clearing. Bush fire appears to have impacted the northern 2/3 of the area in 2019 but recovery appears well progressed.	Compliant	
27	Within 12 months of the approval of the Biodiversity and Rehabilitation Management Plan, the Applicant shall lodge a Rehabilitation and Conservation Bond with the Department to ensure that the biodiversity offset strategy and the rehabilitation of the site is implemented in accordance with the performance and completion Criteria set out in the Biodiversity and Rehabilitation Management Plan. The sum of the bond shall be determined by: (a) calculating the cost of implementing the biodiversity offset strategy and rehabilitating the site, and (b) employing a suitably qualified quantity surveyor or other expert to verify the calculated costs, to the satisfaction of the Secretary.	DPIE Approval Letter - Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020) Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	Payment of the Rehabilitation and Conservation Bond was due in August 2019 however was not paid until 1/06/2020. The 2019 IEA identified this as a non-compliance and after discussions with DPE, the bond payment was made by Holcim. The DPE approval letter includes approval of suitably qualified experts to undertake the cost calculation. This will remain as a non-compliance as it relates to initial timing of bond payment.	Not-compliant	
28	Within 3 months of each independent Environmental Audit (see condition 8 of Schedule 5), the Applicant shall review, and if necessary revise, the sum of the Rehabilitation and Conservation Bond to the satisfaction of the Secretary. This review must consider the: (a) effects of inflation;	DPIE Approval Letter - Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020)	As the initial payment was not made until June 2020, this is outside of the 3 month timeframe following the Independent Audit undertaken in September 2019. A review was not able to be undertaken within the timeframe as initial submission had not yet been completed.	Not-compliant	
	(b) likely cost of rehabilitating the site (taking into account the likely surface disturbance over the next 3 years of the development and implementing the biodiversity offset strategy; and	DPIE Approval Letter - Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020)	As above.	Not-compliant	
	(c) performance of the implementation of the rehabilitation of the site performance to date	DPIE Approval Letter - Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020)	As above.	Not-compliant	
29	The Applicant shall prepare and implement an Aboriginal Cultural Heritage Management Plan for the Project to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with Aboriginal stakeholders;	Jandra Quarry Aboriginal Cultural Heritage Management Plan Rev B (31/08/2015)	A review of the ACHMP shows that recommendations from the 2016 and 2019 IEAs have not been adopted, as no updates to the consultation section of the ACHMP have been made and no evidence available to indicate that Holcim have tried to close out this lack of consultation in the ACHMP. Forster LALC and Purfleet-Taree LALC have both been attempted to be contacted as per the ACHMP Rev B. Additionally, no approval of the ACHMP is evident within the document, however the requirement for Department approval is noted in Section 1.4	Not-compliant	
	(b) be submitted to the Secretary for approval by 31 August 2015;	Jandra Quarry Aboriginal Cultural Heritage Management Plan Rev B (31/08/2015)	No evidence was able to be provided that submission for approval occurred before the specified date however this was sighted during the previous audit and is considered compliant.	Compliant	Recommended that this approval be attached to the ACHMP or approval date specified within the plan.
	(c) describe the measures that would be implemented to: - manage known Aboriginal objects and sites; - monitor all new surface disturbance on site for unidentified Aboriginal objects; - manage the discovery of any human remains or previously unidentified Aboriginal objects on site; and	Jandra Quarry Aboriginal Cultural Heritage Management Plan Rev B (31/08/2015)	A number of mitigation measures to ensure sites are managed, impacts are minimised are included in Section 7 however these measures do not necessarily reflect current scope of works and should be updated.	Compliant	Recommended that these be updated to accommodate any new works.
	(d) ensure ongoing consultation with Aboriginal stakeholders in the management of any Aboriginal cultural heritage values on site.	Jandra Quarry Aboriginal Cultural Heritage Management Plan Rev B (31/08/2015)	Mitigation measures detailing requirement to offer LALCs opportunity for monitoring included in plan.	Compliant	
30	The Applicant shall ensure that: (a) all vehicles entering or leaving the site carrying material that is capable of generating wind-borne dust have their loads covered or suitably contained within the truck; and	Site observations Driver induction	Cameras in weigh bridge used to check loads are centered and covered. Driver induction requires drivers to tarp loads prior to leaving site. Pull over facility available to tarp loads.	Compliant	
	(b) all laden vehicles leaving the site are cleaned of materials that may fall on the road, before leaving the site	Site observations Driver induction	Drivers observed during site inspection to be cleaning trucks, crossbars etc., prior to leaving site. Minimal material observed on the site access roads at the Pacific Highway.	Compliant	
31	The Applicant shall maintain the intersection of the Pacific Highway and the Jandra Quarry Access Road, for the duration of product transport from the site, to the satisfaction of the RMS.	Site observations Interview M Neil	Intersection sweeping by TfNSW completed on request. No other maintenance has been requested.	Compliant	
32	The Applicant shall install and subsequently maintain street lighting at the intersection of the Pacific Highway and the Jandra Quarry Access Road, to the satisfaction of the RMS, prior to transporting quarry products from the site outside of the hours 7 am to 6 pm. Any works affecting the Pacific Highway must not take place without the prior approval of the RMS.	Site observations	Street lighting observed at the Pacific Highway intersection.	Compliant	
	The Applicant shall keep accurate records of: (a) the amount of quarry products, including asphalt, transported from the site (calendar month and Year);	Truck Movement Data records Transport load sheets 2019, 2020, 2021 Daily sales data sheets	All materials and movements are tracked as specified.	Compliant	

33	(b) the number of laden vehicle movements to and from the site (day, calendar month and year); and	Truck Movement Data records Transport load sheets 2019, 2020, 2021 Daily sales data sheets	Data is tracked and compiled in a site register and includes movements per day, month and year.	Compliant		
	(c) publish these records on its website at the end of each calendar quarter.	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	At time of the audit, no truck movement data has been posted on the site website since 2020. Data from 2016 - 2020 is available.	Not-compliant	Ensure data is posted as per specified timing.	
34	The Applicant shall: (a) implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development;	Site observations Interview M Neil	No complaints have been received regarding lighting during the reporting period. All lighting appears appropriately covered and angled.	Compliant		
	(b) ensure that all external lighting associated with the development complies with Australian Standard AS4282 (INT) 1997 - Control of Obtrusive Effects of Outdoor Lighting, or its latest version; and	Interview M Neil Site observations	No documentation is available to certify originally-installed lighting as this was not developed by Holcim and prior to Holcim's possession of site. No lighting complaints have been received during the reporting period. Site observations indicate the lighting is standard facility lighting for access and movement, generally shielded and proprietary in nature and as such this condition is considered compliant.	Compliant		
	(c) take all practical measures to shield views of quarrying operations from users of public roads and privately-owned residences, to the satisfaction of the Secretary	Interview M Neil Complaints Registers 2019 - 2022	No complaints have been received regarding lighting during the reporting period.	Compliant		
35	The Applicant shall: (a) implement all reasonable and feasible measures to minimise the waste generated by the development;	Site observations Interview M Neil Annual Reviews 2019, 2020, 2021	JR Richards collect landfill, recycling on fortnightly basis and provide volumetric reports at the end of each month. Waste minimisation efforts addressed in Annual Review document. Trackable waste collected by Australian Waste Oils. Waste reuse is occurring where possible, utilising tyres for barriers, garden beds on site. Section 6.8 of the Annual Reviews addresses waste minimisation efforts.	Compliant		
	(b) ensure that the waste generated by the development is appropriately stored, handled and disposed of; and	Site observations Interview M Neil Annual Reviews 2019, 2020, 2021	Waste is being appropriately segregated, handled and stored on site and is removed by licenced contractors.	Compliant		
	(c) monitor and report on effectiveness of the waste minimisation and management measures each calendar year, to the satisfaction of the Secretary.	Site observations Interview M Neil Annual Reviews 2019, 2020, 2021	Waste minimisation and management is reported on within each Annual Review from the reporting period.	Compliant		
36	Except as expressly permitted in an EPL, the Applicant must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.	Concrete Waste Truck Hire to Jandra Quarry (spreadsheet) - 2019, 2020, 2021	Jandra receives concrete washout material from Gloucester, Taree, Forster, Port Macquarie Holcim sites in accordance with EPL condition. Material is used in product produced at Jandra. No other waste is received on site.	Compliant		
37	The Applicant shall ensure that all liquid storage facilities are protected by appropriate bunding, which must exceed 110% of the stored volume of the liquid.	Site observation	Bunding area capacity 190% of largest container (10,000L).	Compliant		
38	The Applicant shall ensure that the storage, handling, and transport of dangerous goods is done in Accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the Dangerous Goods Code.	Site observations, ChemAlert	Compressed gasses, fuels and paints stored and labelled in locked positions. Diesel and aggregate precoat stored in banded position. Fire fighting equipment located near by and appropriately labelled. Spill kits available on site. Emergency response plan available and located on site.	Compliant		
39	The Applicant shall: (a) ensure that the development is suitably equipped to respond to any fires on site; and	Site observations - water truck	Fire fighting equipment located near by and appropriately labelled.	Compliant		
	(b) assist the Rural Fire Service, emergency services and National Parks and Wildlife Service as much as possible if there is a fire in the surrounding area.	Interview M Neil	Site significantly impacted by 2019-2020 summer bushfires. Equipment utilised as appropriate however only to the extent that it was safe and practicable to do so with consideration to bushfire impacts on site itself.	Compliant		
<b>Schedule 4 - Additional Procedures</b>						
1	As soon as practicable after obtaining monitoring results showing an exceedance of any relevant criteria in Schedule 3, the Applicant shall notify affected landowners in writing of the exceedance, except where a negotiated agreement has been entered into in relation to that impact, and provide regular monitoring results to each affected landowner until the development is complying with the relevant criteria.	Interview M Neil	One over pressure exceedance from a discreet blasting event in Feb 2022 occurred. A discussion was held with an affected sensitive receiver who was not unaffected. Subsequent blasts have not resulted in overpressure exceedances due to a change in blasting subcontractors. Exceedance was minor and would have been negated if annual blast numbers had exceeded 20. EPA did not take action against Holcim and incident reported to the EPA.	Not-compliant	No further action required	
2	If an owner of privately-owned land considers the development to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.	Noted	None required during reporting period.	Not triggered		

3	If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision the Applicant shall: (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to: - consult with the landowner to determine his/her concerns; - determine whether the development is complying with the relevant criteria in Schedule 3; and - if the development is not complying with these criteria then identify measures that could be implemented to ensure compliance with the relevant criteria; and	Noted		Not triggered	
	(b) give the Secretary and landowner a copy of the independent review.	Noted		Not triggered	
4	If the independent review determines that the development is complying with the relevant criteria in Schedule 3, then the Applicant may discontinue the independent review with the approval of the Secretary.	Noted		Not triggered	
5	If the independent review determines that the development is not complying with the relevant criteria in Schedule 3, then the Applicant shall: (a) implement all reasonable and feasible mitigation measures, in consultation with the landowner and appointed independent expert, and conduct further monitoring to determine whether these measures ensure compliance; or	Noted		Not triggered	
	(b) secure a written agreement with the landowner to allow exceedances of the relevant criteria, to the satisfaction of the Secretary.	Noted		Not triggered	
<b>Schedule 5 - Environmental Management Conditions</b>					
1	The Applicant shall prepare and implement an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must: (a) be submitted to the Secretary for approval by 31 August 2015;	Jandra Quarry Environmental Management Strategy (undated) 2019 IEA Report	The plans provided and available for download on the Jandra Quarry website do not include evidence of approval by the Secretary. Section 1.4 of the EMS highlights this requirement. This approval has been previously sighted however it is recommended that plans are updated to reflect approval for future audits and public access.	Compliant	Include approval and evidence of submission in EMS as Appendix or make available on website.
	(b) provide the strategic framework for the environmental management of the development;	Jandra Quarry Environmental Management Strategy (undated)	The EMS provides an appropriate framework for environmental management on site.	Compliant	
	(c) identify the statutory approvals that apply to the development;	Jandra Quarry Environmental Management Strategy (undated)	Appendix A1 contains legislation relevant to the site however some of this is out of date. Table 1 identifies specific CoA requirements for the site.	Compliant	It is recommended that Appendix A1 is updated as it contains repealed legislation.
	(d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Jandra Quarry Environmental Management Strategy (undated)	Section 5.2 identifies and describes environmental roles and responsibilities on site.	Compliant	
	(e) describe the procedures that would be implemented to: - keep the local community and relevant agencies informed about the operation and environmental performance of the development; - receive, handle, respond to, and record complaints; - resolve any disputes that may arise during the course of the development; - respond to any non-compliance; and - respond to emergencies; and	Jandra Quarry Environmental Management Strategy (undated)	Sections 7 and 8 of the EMS address community, complaint and emergency responses and requirements.	Compliant	Update contact details for the site in s7.3.2.
	(f) include: - copies of any strategies, plans and programs approved under the conditions of this development consent; and - a clear plan depicting all the monitoring required to be carried out under the conditions of this consent	Jandra Quarry Environmental Management Strategy (undated)	All other site environmental plans are referenced in Table 5 and a monitoring plan is included in Table 6.	Compliant	
2	The Applicant shall assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.	<a href="https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20Licence&amp;prp=no&amp;status=Issued">https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20Licence&amp;prp=no&amp;status=Issued</a>	Non-compliances under conditions in Schedule 3 were recorded during the reporting period. One penalty notice was issued during the reporting period for failing to comply with the BRMP (21 May 2021).	Not-compliant	
	Where any exceedance of these criteria and/or performance measures has occurred, the Applicant shall, at the earliest opportunity: (a) take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur,	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC): Q1 2021 Annual Review 2021	One noise exceedance was recorded at R2 (EPA13) in March 2021, with <39 dB recorded at a location with a limit of 36dB. This exceedance was due to a bulldozer conducting overburden maintenance as required every two years;	Compliant	
	(b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC): Q1 2021 Annual Review 2021	The annual review notes that, the bulldozer was immediately relocated to a lower level within the pit and Holcim implemented a long-term management measure to ensure overburden maintenance is not conducted within the morning shoulder period, when the exceedance was recorded	Compliant	
	(c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.		Noted	Not triggered	

3	The Applicant shall ensure that the Management Plans required under this consent are prepared in accordance with any relevant guidelines, and include (a) detailed baseline data;		Baseline data is available in relevant plans, particularly the NBMP, AQMP and BRMP.	Compliant		
	(b) a description of: - the relevant statutory requirements (including any relevant approval, licence or lease conditions); - any relevant limits or performance measures/criteria; and - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	Jandra Quarry Environmental Management Strategy (undated)	All plans contain relevant statutory requirements and performance measures.	Compliant		
	(c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	Jandra Quarry Noise and Blast Management Plan Rev D (20/08/2018)	All plans contain appropriate mitigation measures to address environmental impacts and ensure compliance with CoA and the EPL.	Compliant		
	(d) a program to monitor and report on the: - impacts and environmental performance of the development; and - effectiveness of any management measures (see (c) above);	Jandra Quarry Soil and Water Management Plan Rev B (31/08/2015)	All plans address inspection and monitoring requirements specific to each aspect. The EMS also contains a summary of environmental monitoring requirements outlined in each plan (Table 6).	Compliant		
	(e) a contingency plan to manage any unpredicted impacts and their consequences;	Jandra Quarry Biodiversity and Rehabilitation Management Plan Final (Umwelt, August 2018)  Jandra Quarry Air Quality Management Plan (November 2021)	The updated AQMP (2021), BRMP and ACHMP address this condition through the provision of a plan-specific Contingency Plan or similar, however the SWMP and NBMP do not provide a Contingency Plan or similar method for addressing unpredicted impacts.	Not-compliant	Update plans to address specific requirements of Condition 3	
	(f) a program to investigate and implement ways to improve the environmental performance of the development over time;	Jandra Quarry Aboriginal Cultural Heritage Management Plan Rev B (31/08/2015)	All plans contain a Review and Improvement section addressing the review and improvement of measures specific to each plan in the improvement of the site's overall environmental performance.	Compliant		
	(g) a protocol for managing and reporting any: - incidents; - complaints; - non-compliances with statutory requirements; and - exceedances of the impact assessment criteria and/or performance criteria; and		The ACHMP and SWMP do not include protocols for incident response in relation to complaints or exceedances and the ACHMP does not include measures to be taken in the event of unexpected impact on known Aboriginal cultural heritage items. These items were identified in the 2019 IEA but have not been rectified during the reporting period as these plans have not been revised in this time.	Not-compliant	Update plans to address specific requirements of Condition 3	
	(h) a protocol for periodic review of the plan.		All plans contain reference to either a specific review process or they refer back to Sections 9 and 10 of the EMS which provides commentary around the management plan review process.	Compliant		
4	By the end of March each year, the Applicant shall review the environmental performance of the development to the satisfaction of the Secretary. This review must: (a) describe the development (including 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;	Annual Reviews 2019, 2020, 2021	Annual reviews within the reporting period were all prepared within the specified timeframe and contain details of previous and proposed development.	Compliant		
	(b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against: - the relevant statutory requirements, limits or performance measures/criteria; - the monitoring results of previous years, and - the relevant predictions in the documents listed in condition 2 of Schedule 2	Annual Reviews 2019, 2020, 2021	Annual reviews within the reporting period contain comprehensive reviews of monitoring results and complaints where applicable.	Compliant		
	(c) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;	Annual Reviews 2019, 2020, 2021	Annual reviews within the reporting period address non compliances and actions taken to rectify them.	Compliant		
	(d) identify any trends in the monitoring data over the life of the development;	Annual Reviews 2019, 2020, 2021	Annual reviews within the reporting period identify monitoring trends where available, including dust/PM10 monitoring and ongoing water management.	Compliant		
	(e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and	Annual Reviews 2019, 2020, 2021	Annual reviews within the reporting period identify discrepancies between predicted and annual environmental impacts across all relevant aspects.	Compliant		
	(f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the development	Annual Reviews 2019, 2020, 2021	Annual reviews within the reporting period identify measures to be implemented to improve environmental performance.	Compliant		
Within 3 months of the submission of an: (a) annual review under condition 4 above;	Annual Reviews 2019, 2020, 2021	With the exception of the AQMP, management plans have not been updated during the reporting period despite audit recommendations, some changes in site operations and changes in legislation.	Not-compliant	A review of all management plans is recommended to adopt audit recommendations, updates in legislation and any changes to site operations.		
(b) incident report under condition 6 below;	Annual Reviews 2019, 2020, 2021	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered			



5	(c) audit report under condition 8 below; and	2019 IEA Report	The 2019 IEA completed by GHD provided a number of recommendations across management plans that have not been revised during the reporting period.	Not-compliant	A review of all management plans is recommended to adopt audit recommendations, updates in legislation and any changes to site operations.
	(d) any modifications to this consent, the Applicant shall review, and if necessary revise, the strategies, plans, and programs required under this consent to the satisfaction of the Secretary.	DA 213-10-99 as modified (13/3/2015)	No modifications to the consent have been made during the reporting period.	Not triggered	
6	The Applicant shall notify, at the earliest opportunity, the Secretary and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment. For any other incident associated with the development, the Applicant shall notify the Secretary and any other relevant agencies as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of the incident, the Applicant shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.	Interview M Neil Annual Reviews 2019, 2020, 2021	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
7	The Applicant shall provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	Reporting of environmental performance is completed through Holcim Annual Reviews - at time of audit the 2021 Annual Review is not available on the site website however it was supplied during the audit process and reports are available with general regularity.	Compliant	
8	By 31 March 2016, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an independent Environmental Audit of the development. This audit must: (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;	Jandra Quarry Independent Environmental Audit (GHD, 2019)	The auditor is unable to audit their own work however the previous (2019) audit completed by GHD satisfies this condition.	Compliant	
	(b) include consultation with the relevant agencies;	Jandra Quarry Independent Environmental Audit (GHD, 2019)	The auditor is unable to audit their own work however the previous (2019) audit completed by GHD satisfies this condition.	Compliant	
	(c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL and/or Water License (including any assessment, plan or program required under these approvals);	Jandra Quarry Independent Environmental Audit (GHD, 2019)	The auditor is unable to audit their own work however the previous (2019) audit completed by GHD satisfies this condition.	Compliant	
	(d) review the adequacy of any approved strategy, plan or program required under these approvals; and	Jandra Quarry Independent Environmental Audit (GHD, 2019)	The auditor is unable to audit their own work however the previous (2019) audit completed by GHD satisfies this condition.	Compliant	
	(e) recommend measures or actions to improve the environmental performance of the development, and/or any assessment, plan or program required under these approvals.	Jandra Quarry Independent Environmental Audit (GHD, 2019)	The auditor is unable to audit their own work however the previous (2019) audit completed by GHD satisfies this condition.	Compliant	
9	Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.		Due to unforeseen environmental and site staffing challenges within Holcim during the audit period, this audit report will not satisfy this condition.	Not-compliant	
10	By 31 August 2015, the Applicant shall: (a) make the following information publicly available on its website: - the documents listed in condition 2 of Schedule 2; - current statutory approvals for the development; - approved strategies, plans or programs; - a summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; - a complaints register, which is to be updated on a quarterly basis; - the annual reviews (over the last 5 years); - any independent environmental audit, and the Applicant's response to the recommendations in any audit; and - any other matter required by the Secretary; and	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	No evidence is available on the website that plans are approved and 2021 Annual Review is not available on the website. Previous audit responses and recommendations are also not available.	Not-compliant	Update information available on the site website in accordance with this condition.
	(b) keep this information up-to-date, to the satisfaction of the Secretary.	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	As above.	Not-compliant	
<b>Appendix 3 - Noise Compliance Assessment</b>					
1	The noise criteria in Table 2 and 3 apply under all meteorological conditions except the following: (a) wind speeds greater than 3 m/s at 10 m above ground level; or		Noted	Not triggered	
	(b) stability category F temperature inversion conditions and wind speeds greater than 2 m/s at 10 m above ground level; or		Noted	Not triggered	
	(c) stability category G temperature inversion conditions.		Noted	Not triggered	

2	Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological station required under condition 15 of Schedule 3.	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Noise and Blast Management Plan Rev D (August 2018) Annual Reviews 2019, 2020, 2021	Section 6.1 of the NBMP specifies that the data from the Quarry weather station will be used for noise monitoring purposes.	Compliant	Suggest MAC specify the source of their meteorological data in their monitoring reports.															
3	Unless otherwise directed by the Secretary, attended quarterly monitoring is to be used to evaluate compliance with the relevant conditions of this consent.	Annual Review 2021 Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) EPL 2796	On 27 August 2021, an EPL variation was issued to EPL 2796 allowing noise monitoring to be undertaken on an annual basis instead of quarterly, based on no noise complaints being received since 2016 and ongoing compliance of noise monitoring results. Noise monitoring was carried out quarterly until 2021. This condition under the Modified Consent still directs noise monitoring to be undertaken quarterly; no evidence of approval of this change in monitoring frequency by the Secretary has been sighted.	Not-compliant	Confirm that EPL monitoring requirements are approved by the Secretary to align with Modified Consent.															
4	Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the NSW Industrial Noise Policy (as amended from time to time), in particular the requirements relating to: (a) monitoring locations for the collection of representative noise data;	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Annual Reviews 2019, 2020, 2021	All noise monitoring is carried out in accordance with the Noise Policy for Industry (2017) and at specified locations.	Compliant																
	(b) meteorological conditions during which collection of noise data is not appropriate;	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Annual Reviews 2019, 2020, 2021	Meteorological conditions generally did not impact upon noise monitoring during the reporting period.	Not triggered																
	(c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Annual Reviews 2019, 2020, 2021	Equipment is utilised and calibrated in accordance with AS.	Compliant																
	(d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Annual Reviews 2019, 2020, 2021	No data has been excluded during noise monitoring period and extraneous noise has been appropriately noted in noise reports.	Compliant																
<b>Environment Protection Licence - EPL 2796</b>																				
<b>Administrative Conditions</b>																				
A1.1	This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation. Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.  Note: Waste conditions L3.1, L3.2 and L3.3 of this licence restrict the types of waste that may be received at the Premises.  <table border="1"> <thead> <tr> <th>Scheduled Activity</th> <th>Fee Based Activity</th> <th>Scale</th> </tr> </thead> <tbody> <tr> <td>Crushing, grinding or separating</td> <td>Crushing, grinding or separating</td> <td>&gt; 100000 - 500000 T annual processing capacity</td> </tr> <tr> <td>Extractive activities</td> <td>Extractive activities</td> <td>&gt; 100000 - 500000 T annually extracted or processed</td> </tr> <tr> <td>Resource recovery</td> <td>Recovery of general waste</td> <td>Any general waste recovered</td> </tr> <tr> <td>Waste storage</td> <td>Waste storage - other types of waste</td> <td>Any other types of waste stored</td> </tr> </tbody> </table>	Scheduled Activity	Fee Based Activity	Scale	Crushing, grinding or separating	Crushing, grinding or separating	> 100000 - 500000 T annual processing capacity	Extractive activities	Extractive activities	> 100000 - 500000 T annually extracted or processed	Resource recovery	Recovery of general waste	Any general waste recovered	Waste storage	Waste storage - other types of waste	Any other types of waste stored	Site observations Annual Reviews 2019, 2020, 2021	Activities observed on site and reported in Annual Reviews relevant to the reporting period align with specified scheduled activities. All quantities reported within Holcim Annual Reviews. 2019: 323, 930 T 2020: 328, 114 T 2021: 325,414T extracted.	Compliant	
Scheduled Activity	Fee Based Activity	Scale																		
Crushing, grinding or separating	Crushing, grinding or separating	> 100000 - 500000 T annual processing capacity																		
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Waste storage	Waste storage - other types of waste	Any other types of waste stored																		
A1.2	Notwithstanding the fee scales noted above, the licensee must not: (a) extract more than 490,000 tonnes of quarry products from the premises per calendar year; and	Annual Reviews 2019, 2020, 2021	All quantities reported within Holcim Annual Reviews. 2019: 323, 930 T 2020: 328, 114 T 2021: 325,414T extracted.	Compliant																
	(b) transport more than 475,000 tonnes of quarry products from the premises per calendar year Note: This condition has been added to be consistent with development consent DA231-10-99 MOD 5.	Annual Reviews 2019, 2020, 2021	Product sales reported within Holcim Annual Reviews: 2019: 403,317 T 2020: 310,759 T 2021:465,466 T. All within approved limit.	Compliant																
A2.1	The licence applies to the following premises:  <table border="1"> <thead> <tr> <th>Premises Details</th> </tr> </thead> <tbody> <tr> <td>JANDRA QUARRY</td> </tr> <tr> <td>15312 PACIFIC HIGHWAY</td> </tr> <tr> <td>POSSUM BRUSH</td> </tr> <tr> <td>NSW 2430</td> </tr> <tr> <td>LOT 2 DP 255621, LOT 11 DP 790056, LOT 12 DP 790056, LOT 13 DP 790056, LOT 14 DP 790056, LOT 15 DP 790056</td> </tr> </tbody> </table>	Premises Details	JANDRA QUARRY	15312 PACIFIC HIGHWAY	POSSUM BRUSH	NSW 2430	LOT 2 DP 255621, LOT 11 DP 790056, LOT 12 DP 790056, LOT 13 DP 790056, LOT 14 DP 790056, LOT 15 DP 790056	Site observations Aerial imagery (MetroMap, Google Earth) Propellor Survey Program	All site activities observed to be contained within specified premises.	Compliant										
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A3.1	Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence. In this condition the reference to "the licence application" includes a reference to: a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and	Site observations Annual Reviews 2019, 2020, 2021	Although the original EPL proposal was not sighted during the audit process, works are generally being undertaken in accordance with activities described in the EIS, the DA and the EPL.	Compliant																

	b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.		Noted	Not triggered																																		
P1.1	<p>The following points referred to in the table below are identified in this licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point</p> <table border="1"> <thead> <tr> <th colspan="4">Air</th> </tr> <tr> <th>EPA Identification no.</th> <th>Type of Monitoring Point</th> <th>Type of Discharge Point</th> <th>Location Description</th> </tr> </thead> <tbody> <tr> <td>11</td> <td>Ambient PM10 monitoring</td> <td></td> <td>Receptor location R1 identified on map titled "Jandra Environmental Monitoring Locations" within the Holston Environmental Management Strategy - Jandra Quarry (See EPA document DOC16087951 - EPL130896).</td> </tr> </tbody> </table>	Air				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	11	Ambient PM10 monitoring		Receptor location R1 identified on map titled "Jandra Environmental Monitoring Locations" within the Holston Environmental Management Strategy - Jandra Quarry (See EPA document DOC16087951 - EPL130896).	Air Quality Management Plan Jandra Quarry (Nov 2021) Annual Reviews 2019, 2020, 2021	PM10 monitoring has been conducted at the specified location throughout the reporting period.	Compliant																						
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P1.2	The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.	Noted	Noted	Not triggered																																		
P1.3	<p>The following points referred to in the table are identified in this licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.</p> <table border="1"> <thead> <tr> <th colspan="4">Water and land</th> </tr> <tr> <th>EPA Identification no.</th> <th>Type of Monitoring Point</th> <th>Type of Discharge Point</th> <th>Location Description</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Discharge quality monitoring</td> <td>Discharge quality monitoring</td> <td>Discharge from final sediment dam as shown in the CSR Readymix Site Photo - Jandra Quarry Water Monitoring Location Figure 1 provided to the EPA 13 May 2002</td> </tr> </tbody> </table>	Water and land				EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description	1	Discharge quality monitoring	Discharge quality monitoring	Discharge from final sediment dam as shown in the CSR Readymix Site Photo - Jandra Quarry Water Monitoring Location Figure 1 provided to the EPA 13 May 2002	Interview M Neil	No off-site water discharges have occurred during the reporting period.	Not triggered																						
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P1.4	<p>The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.</p> <table border="1"> <thead> <tr> <th colspan="2">Noise/Weather</th> <th>Location Description</th> </tr> </thead> <tbody> <tr> <td>2</td> <td>All blast overpressure &amp; ground vibration point for noise monitoring</td> <td>Receptor location R2 as identified on the development consent (21-10-06-0001) and identified on Figure 3 (Monitoring locations) within the Holston Environmental Management Strategy - Jandra Quarry (See EPA document DOC16087951 - EPL130896).</td> </tr> <tr> <td>3</td> <td>All blast overpressure &amp; ground vibration point for noise monitoring</td> <td>Receptor location R3 as identified on the development consent (21-10-06-0001) and identified on Figure 3 (Monitoring locations) within the Holston Environmental Management Strategy - Jandra Quarry (See EPA document DOC16087951 - 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Interview M Neil Annual Reviews 2019, 2020, 2021 Blast Reports 2019 - 2022	Noise and weather monitoring are being carried out at the specified locations. Airblast overpressure and ground vibration have only been undertaken at Receptor R2 (EPA ID 3) during blasting operations. During an interview with M Neil, it was discussed that the wording from L5.2 ad L5.3 "...at either monitoring point 2 or 3 of this licence" had been interpreted as only one of these monitoring points needing to be monitored during blasting activities. Subsequently, only R2 (112 Spicers Rd) has had airblast overpressure and vibration monitoring carried out during the reporting period.	Not-compliant	Ensure both R2 and R4 are monitored as specified during blasting activities.
Noise/Weather		Location Description																																				
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L1.1	Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.	Site observations	Operations observed to be in compliance with s120 of POEO Act.	Compliant																																		
L2.1	For each monitoring/dischage point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.		No discharges or monitoring relating to limits specified in L2.4 have occurred during the reporting period.	Not triggered																																		
L2.2	Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.		No discharges or monitoring relating to limits specified in L2.4 have occurred during the reporting period.	Not triggered																																		
L2.3	To avoid any doubt, this condition does not authorise the pollution of waters by any pollutant other than those specified in the table/s.		Noted	Not triggered																																		
L2.4	Water and/or Land Concentration Limits		Noted	Not triggered																																		
	<table border="1"> <thead> <tr> <th rowspan="2">Pollutant</th> <th rowspan="2">Units of Measure</th> <th colspan="3">95 percentile concentration limit</th> <th rowspan="2">95 percentile concentration limit</th> </tr> <tr> <th>95 percentile concentration limit</th> <th>95 percentile concentration limit</th> <th>95 percentile concentration limit</th> </tr> </thead> <tbody> <tr> <td>pH</td> <td>pH</td> <td></td> <td></td> <td></td> <td>6.5-8.5</td> </tr> <tr> <td>Total suspended solids</td> <td>milligrams per litre</td> <td></td> <td></td> <td></td> <td>50</td> </tr> </tbody> </table>	Pollutant	Units of Measure	95 percentile concentration limit			95 percentile concentration limit	95 percentile concentration limit	95 percentile concentration limit	95 percentile concentration limit	pH	pH				6.5-8.5	Total suspended solids	milligrams per litre				50																
Pollutant	Units of Measure			95 percentile concentration limit				95 percentile concentration limit																														
		95 percentile concentration limit	95 percentile concentration limit	95 percentile concentration limit																																		
pH	pH				6.5-8.5																																	
Total suspended solids	milligrams per litre				50																																	
L3.1	The licensee must not cause, permit or allow any waste to be received at the premises, except concrete "wash-out" waste from concrete batch plants. All other wastes are not permitted on the premises, except as expressly permitted by this licence.	Site observations Annual Reviews 2019, 2020, 2021	No additional waste, apart from concrete washout waste, observed during site inspection or recorded in Annual Reviews.	Compliant																																		

L3.2	The licensee must not: <ul style="list-style-type: none"> <li>Process more than 3000 tonnes of concrete "wash-out" per annum;</li> <li>Store more than 1000 tonnes of concrete "wash-out" on the premises at any one time.</li> </ul>	Site observations Interview M Neil Email correspondence P Wilson Wash Out Waste Data Register 2019 - 2022	Imported concrete washout waste tonnages are approximated as per correspondence with P Wilson. By tonnage approximations, concrete waste imported onto the site totalled 3600T in 2020, 1770T in 2021 and 2862.9T in 2022 up until the date of the audit. 2020 tonnages exceeds the annual limit of 3000T p.a. It is noted that tonnages recorded within the spreadsheet are seemingly non approximated as of April 2022.	Not-compliant																					
L3.3	Concrete 'wash-out' must be stockpiled on site in banded areas and can be processed and blended with quarry raw product to produce quarry product(s).	Site observations Interview M Neil	Concrete waste product observed stockpiled on site for the purposes of blending in quarry products.	Compliant																					
L4.1	Noise generated at the premises must not exceed the noise limits in the tables below. The locations referred to in the tables below are indicated in the document titled: "Jandra Quarry Intensification of Production Environmental Assessment (DA 231-10-99 MOD 5)" Dated July 2014		As below.	Not-compliant																					
L4.2	Noise from the premises during quarrying operations only must not exceed the limits specified in the following table:  <table border="1"> <thead> <tr> <th>EPA identification no.</th> <th>Limit dB(A) LAeq(15 min) Shoulder, Day &amp; Evening</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>40</td> </tr> <tr> <td>13, 14, 16</td> <td>36</td> </tr> <tr> <td>17</td> <td>35</td> </tr> </tbody> </table>	EPA identification no.	Limit dB(A) LAeq(15 min) Shoulder, Day & Evening	15	40	13, 14, 16	36	17	35	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC): Q3 2019 Q4 2019 Q1 - Q4 2020 Q1 2021 Q1 2022 Annual Reviews 2019, 2020, 2021	Noise at the site was generally compliant across all locations during the reporting period. One exceedance was recorded at R2 (EPA13) in March 2021, with <39 dB recorded at a location with a limit of 36dB. This exceedance was due to a bulldozer conducting overburden maintenance as required every two years; the bulldozer was immediately relocated to a lower level within the pit and Holcim implemented a long-term management measure to ensure overburden maintenance is not conducted within the morning shoulder period, when the exceedance was recorded.	Not-compliant													
EPA identification no.	Limit dB(A) LAeq(15 min) Shoulder, Day & Evening																								
15	40																								
13, 14, 16	36																								
17	35																								
L4.3	Noise from the premises during operations including asphalt plant must not exceed the limits specified in the following table:  <table border="1"> <thead> <tr> <th>EPA identification no.</th> <th>Limit dB(A) LAeq(15 min) Shoulder, Day &amp; Evening</th> <th>Limit dB(A) LAeq(15 min) Night</th> <th>Limit dB(A) LA(1) minute Night</th> </tr> </thead> <tbody> <tr> <td>15</td> <td>41</td> <td>39</td> <td>51</td> </tr> <tr> <td>14</td> <td>40</td> <td>38</td> <td>51</td> </tr> <tr> <td>13, 16</td> <td>40</td> <td>35</td> <td>46</td> </tr> <tr> <td>17</td> <td>36</td> <td>35</td> <td>46</td> </tr> </tbody> </table> Note: 1. Condition 10 of Schedule 2 of development consent DA 213 -10-99 MOD 5 prohibits quarrying operations during the hours of 10 pm-6 am; 2. Receiver locations are shown on the figure in Appendix 2 of development consent DA 213-10-99 a copy of which has been filed as EPA document DOC15/85830; 3. Noise limits are in accordance with development consent DA 231-10-99 MOD 5; 4. A negotiated agreement is in place for Residence R1 as referred to in development consent DA 231-10-99 MOD 5 & any noise issues from this premises will be addressed by the Department of Planning and Environment.	EPA identification no.	Limit dB(A) LAeq(15 min) Shoulder, Day & Evening	Limit dB(A) LAeq(15 min) Night	Limit dB(A) LA(1) minute Night	15	41	39	51	14	40	38	51	13, 16	40	35	46	17	36	35	46	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC): Q3 2019 Q4 2019 Q1 - Q4 2020 Q1 2021 Q1 2022 Annual Reviews 2019, 2020, 2021	No exceedances noted within the reporting period at specified locations due to higher noise limits specified for times including asphalt production.	Compliant	
EPA identification no.	Limit dB(A) LAeq(15 min) Shoulder, Day & Evening	Limit dB(A) LAeq(15 min) Night	Limit dB(A) LA(1) minute Night																						
15	41	39	51																						
14	40	38	51																						
13, 16	40	35	46																						
17	36	35	46																						
L4.4	For the purpose of the conditions above: <ul style="list-style-type: none"> <li>Shoulder, Day and Evening is defined as the period from 6am - 10pm</li> <li>Night is defined as the period from 10pm - 6am</li> </ul>	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	Definitions within noise monitoring assessments as specified.	Compliant																					
L4.5	Noise enhancing meteorological conditions a) The noise limits set out in condition L4.1, L4.2 and L4.3 apply under the following meteorological conditions specified in the table below. b) For those meteorological conditions not referred to in condition L4.5 a), the noise limits that apply are the noise limits in condition L4.1, L4.2 and L4.3 plus 5dB.  <table border="1"> <thead> <tr> <th>Assessment Period</th> <th>Meteorological Conditions</th> </tr> </thead> <tbody> <tr> <td>Day</td> <td>Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level.</td> </tr> <tr> <td>Evening</td> <td>Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level.</td> </tr> <tr> <td>Night</td> <td>Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level, or stability category E and F with wind speeds up to and including 2m/s at 10m above ground level.</td> </tr> </tbody> </table>	Assessment Period	Meteorological Conditions	Day	Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level.	Evening	Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level.	Night	Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level, or stability category E and F with wind speeds up to and including 2m/s at 10m above ground level.	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	Noted. Meteorological condition concessions not triggered during assessments.	Not triggered													
Assessment Period	Meteorological Conditions																								
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Night	Stability Categories A, B, C and D with wind speeds up to and including 3m/s at 10m above ground level, or stability category E and F with wind speeds up to and including 2m/s at 10m above ground level.																								
L4.6	For the purposes of condition L4.5: a) The meteorological conditions are to be determined from meteorological data obtained from the meteorological weather station identified as EPA monitoring point 4 (Condition P1.4). b) Stability category shall be determined using the following method from Fact Sheet D of the Noise Policy for Industry (NSW EPA, 2017); i. Direct measurement of temperature lapse rate (section D1.2); or ii. Use of sigma-theta data (section D1.4).	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Noise and Blast Management Plan Rev D (August 2018)	Section 6.1 of the NBMP specifies that the data from the Quarry weather station will be used for noise monitoring purposes.	Compliant	Suggest MAC specify the source of their meteorological data in their monitoring reports.																				
		Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	Assessments conducted in accordance with NPI (EPA, 2017)	Compliant																					

L4.7	To assess compliance: a) with the LAeq(15 minute) or the LA1(1 minute) noise limits in condition L4.1, L4.2, L4.3 and L4.5, the noise measurement equipment must be located: (i) approximately on the property boundary, where any residence is situated 30 metres or less from the property boundary closest to the premises; or where applicable, (ii) in an area within 30 metres of a residence façade, but not closer than 3 metres where any residence on the property is situated more than 30 metres from the property boundary closest to the premises, or, where applicable, (iii) in an area within 50 metres of the boundary of a National Park or Nature Reserve, (iv) at any other location identified in condition L4. b) with the LAeq(15 minute) or the LA1 (1 minute) noise limits in condition L4.1, L4.2, L4.3 and L4.5, the noise measurement equipment must be located: (i) at the reasonably most affected point at a location where there is no residence at the location; or, (ii) at the reasonably most affected point within an area at a location prescribed by condition L4.7(a).	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Noise and Blast Management Plan Rev D (August 2018)	The NBMP notes noise monitoring positioning requirements (Section 6.2) and noise assessments are being undertaken generally in accordance with specified requirements.	Compliant																	
L4.8	A non-compliance of conditions L4.1, L4.2, L4.3 and L4.5 will still occur where noise generated from the premises is measured in excess of the noise limit at a point other than the reasonably most affected point at the locations referred to in condition L4.7(a) or L4.7(b). Note: to L4.7 and L4.8: The reasonably most affected point is a point at a location or within an area at a location experiencing or expected to experience the highest sound pressure level from the premises.	Noted	Noted	Not triggered																	
L4.9	For the purpose of determining the noise generated from the premises, the modifying factor corrections in Table C1 on Fact Sheet C of the Noise Policy for Industry (NSW EPA, 2017) may be applied, if appropriate, to the noise measurements by the noise monitoring equipment.	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	No corrections in accordance with the relevant NPI factsheet noted in Noise Monitoring Assessments.	Not triggered																	
L4.10	Noise measurements must not be undertaken where rain or wind speed at microphone level will affect the acquisition of valid measurements.	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	Noise monitoring assessments are not being undertaken where rain or wind will affect monitoring data.	Compliant																	
L5.1	Blasting in or on the premises must only be carried out between 9am and 5pm, Monday to Friday and 9am and 3pm, Saturday. Blasting in or on the premises must not take place on Sundays or Public Holidays without the prior approval of the EPA.	Annual Reviews 2019, 2020, 2021 Blast Reports: Maxam 2019 - January 2022 Fullbore Quarry Services March 2022 - present	All blasting is being undertaken within approved hours.	Compliant																	
L5.2	The airblast overpressure level from blasting operations in or on the premises must not exceed: 115 dB (Lin Peak) for more than 5% of the total number of blasts during each reporting period; at either monitoring point 2 or 3 of this licence.	Annual Reviews 2019, 2020, 2021 Blast Reports: Maxam 2019 - January 2022 Fullbore Quarry Services March 2022 - present Complaints Register Q1 2022	The only blasting exceedance recorded during the audit reporting period (119.1 dB) was at R7, not included in this condition.	Compliant																	
L5.3	The airblast overpressure level from blasting operations in or on the premises must not exceed: 120 dB (Lin Peak) at any time; at either monitoring point 2 or 3 of this licence.	Annual Reviews 2019, 2020, 2021 Blast Reports: Maxam 2019 - January 2022 Fullbore Quarry Services March 2022 - present	No airblast overpressure levels exceeded 120dB during the audit reporting period.	Compliant																	
L5.4	The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: 5 mm/second for more than 5% of the total number of blasts during each reporting period; at either monitoring point 2 or 3 of this licence.	Annual Reviews 2019, 2020, 2021 Blast Reports: Maxam 2019 - January 2022 Fullbore Quarry Services March 2022 - present	All vibration levels recorded during blasting activities within the audit reporting period were below 5mm/second.	Compliant																	
L5.5	The ground vibration peak particle velocity from blasting operations carried out in or on the premises must not exceed: 10 mm/second at any time; at either monitoring point 2 or 3 of this licence.	Annual Reviews 2019, 2020, 2021 Blast Reports: Maxam 2019 - January 2022 Fullbore Quarry Services March 2022 - present	All vibration levels recorded during blasting activities within the audit reporting period were below 10mm/second.	Compliant																	
L5.6	Error margins associated with any monitoring equipment used to measure blasts must not be taken into account when determining whether or not the limit has been exceeded.	Noted	Noted	Not triggered																	
L5.7	Offensive blast fume must not be emitted from the premises.	Site observations Interview M Neil Complaints Registers 2019 - 2022	No offensive blast fumes reported in complaints registers and no indication of offensive fumes observed during site inspection.	Compliant																	
L6.1	In accordance with development consent DA 231-10-99 MOD 5, hours of operation for the premises are specified in the table below: <table border="1"> <thead> <tr> <th>Day</th> <th>Extraction and processing operations</th> <th>Transportation operations</th> <th>Asphalt Plant &amp; associated transport (campaigns)</th> </tr> </thead> <tbody> <tr> <td>Monday - Friday</td> <td>6am to 10pm</td> <td>6am to 10pm</td> <td>24 hours a day</td> </tr> <tr> <td>Saturday</td> <td>6am to 6pm</td> <td>6am to 10 pm</td> <td>24 hours a day</td> </tr> <tr> <td>Sunday and Public Holidays</td> <td>None</td> <td>None</td> <td>24 hours a day</td> </tr> </tbody> </table>	Day	Extraction and processing operations	Transportation operations	Asphalt Plant & associated transport (campaigns)	Monday - Friday	6am to 10pm	6am to 10pm	24 hours a day	Saturday	6am to 6pm	6am to 10 pm	24 hours a day	Sunday and Public Holidays	None	None	24 hours a day	Site observations Interview M Neil Annual Reviews 2019, 2020, 2021	All activities are being conducted within approved hours.	Compliant	
Day	Extraction and processing operations	Transportation operations	Asphalt Plant & associated transport (campaigns)																		
Monday - Friday	6am to 10pm	6am to 10pm	24 hours a day																		
Saturday	6am to 6pm	6am to 10 pm	24 hours a day																		
Sunday and Public Holidays	None	None	24 hours a day																		
	In accordance with development consent DA 231-10-99 MOD 5, the following activities may be conducted at the premises outside the hours specified in the table above: (a) return of trucks to the premises prior to midnight Monday to Saturday;	Interview M Neil	All truck movements occurring within site operation hours.	Compliant																	

L6.2	(b) delivery or dispatch of materials as requested by Police, Fire Brigade or other similar authorities;	Interview M Neil	No requests during the reporting period.	Not triggered	
	(c) emergency work to avoid the loss of lives, property and/or prevent environmental harm; and	Interview M Neil	No emergency work required during the reporting period.	Not triggered	
	(d) maintenance activities provided it is inaudible at residential premises. In circumstances outlines in (b) and (c), the Licensee shall notify affected residents prior to undertaking the activities, or as soon as practical thereafter	Interview M Neil	No maintenance activities required outside of normal operating hours during reporting period.	Not triggered	
L7.1	The licensee must not cause or permit the emission of offensive odour beyond the boundary of the premises.	Site observations Complaints Registers 2019 - 2022	No odour observed during site inspections and no odour complaints received during the reporting period.	Compliant	
O1.1	Licensed activities must be carried out in a competent manner. This includes: a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and	Site observations Annual Reviews 2019, 2020, 2021	All activities observed during the site inspection were conducted in a competent manner. No environmental incidents relating to these activities recorded during the reporting period.	Compliant	
	b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.	Site observations Annual Reviews 2019, 2020, 2021	All activities observed during the site inspection were conducted in a competent manner. No environmental incidents relating to these activities recorded during the reporting period.	Compliant	
O2.1	All plant and equipment installed at the premises or used in connection with the licensed activity: a) must be maintained in a proper and efficient condition; and	Site observations Jandra Quarry Plant maintenance records spreadsheet Jandra Quarry Crusher Monthly Checklist v1.3.1	Plant have scheduled maintenance regime and daily prestart plant checklist. All maintenance is recorded electronically. Routine maintenance occurs on site, major rebuilds of mobile plant occur off site. Plant observed to be in good working order during site inspection, minimal noise and smoke emissions.	Compliant	
	b) must be operated in a proper and efficient manner.	Site observations	All plant observed to be operated in a proper and efficient manner during site inspection.	Compliant	
O3.1	The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.	Site observations Complaints Registers 2019 - 2022	Dust was observed to be appropriately managed through the use of water carts on haul roads, surfactant products applied during crushing operations and physical covers over crushing and sorting plant. No dust observed leaving the premises and no complaints received regarding dust during the reporting period.	Compliant	
O4	Emergency response Note: The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The PIRMP must be developed in accordance with the requirements in Part 5.7A of the POEO Act and Regulations. The licensee must keep the PIRMP on the premises at all times. The PIRMP must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with the activities that occur at the premises and which are likely to cause harm to the environment. The PIRMP must be tested at least annually or following a pollution incident.	Jandra Quarry Pollution Incident Response Management Plan (Rev 9, September 2021)	PIRMP has been developed in accordance with Part 5.7A of the POEO Act and documents a wide range of potential incidents appropriate to works on site. The PIRMP is reviewed annually and latest revision is noted as September 2021. PIRMP observed as available in hardcopy on site.	Compliant	
O5.1	The licensee must take all reasonable measures to prevent the tracking of mud and debris onto the Pacific Highway including, but not limited to, ensuring all vehicles leaving the premises pass through the vehicular wheel wash.	Site observations Jandra Quarry Vehicle Movement Control Plan (undated)	No mud or debris observed on Pacific Highway or adjacent Holcim access during site inspection. All vehicles must pass through the site wheel wash when leaving the premises, as observed during site inspection.	Compliant	
O6.1	The licensee must comply with the conditions as specified in this licence or where no specific conditions outlined in this licence, this licensee must comply with the Protection of the Environment Operations (Waste) Regulation 2014.	Site observations Interview M Neil	Activities were generally observed to be carried out in accordance with the POEO (Waste) Regulation 2014, with clear material and waste segregation evident on site, good waste management practice evident and general housekeeping standards high.	Compliant	
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	This audit.	See findings below.	Not-compliant	
M1.2	All records required to be kept by this licence must be: a) in a legible form, or in a form that can readily be reduced to a legible form;	Complaints Registers 2019 - 2022 Jandra Quarry Plant maintenance records spreadsheet Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Blast Reports	All records produced either digital or in legible written form.	Compliant	
	b) kept for at least 4 years after the monitoring or event to which they relate took place; and	Interview M Neil Complaints Registers 2019 - 2022 Jandra Quarry Plant maintenance records spreadsheet Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) Blast Reports	All records available for the reporting period, with most records compiled in ongoing digital registers.	Compliant	
	c) produced in a legible form to any authorised officer of the EPA who asks to see them.	Interview M Neil	No requests made during the reporting period.	Not triggered	
	The following records must be kept in respect of any samples required to be collected for the purposes of this licence: a) the date(s) on which the sample was taken;	2022 PM10 Data Spreadsheet - Holcim Jandra Quarry Weather & Waste Data Spreadsheet – 2019 – 2022 - Holcim Annual Return 2021_Appendices (Data 2020 – onwards) - Holcim	Raw monitoring data available included date of sampling.	Compliant	

M1.3	b) the time(s) at which the sample was collected;	2022 PM10 Data Spreadsheet - Holcim Jandra Quarry Weather & Waste Data Spreadsheet – 2019 – 2022 - Holcim Annual Return 2021_Appendices (Data 2020 – onwards) - Holcim	Raw monitoring data available included PM10 monitoring data, which included a column for time of sampling that was largely incomplete. Other monitoring data available did not include sample times.	Not-compliant	
	c) the point at which the sample was taken; and	2022 PM10 Data Spreadsheet - Holcim Jandra Quarry Weather & Waste Data Spreadsheet – 2019 – 2022 - Holcim Annual Return 2021_Appendices (Data 2020 – onwards) - Holcim	Raw monitoring data available generally included location of sampling.	Compliant	
	d) the name of the person who collected the sample.	2022 PM10 Data Spreadsheet - Holcim Jandra Quarry Weather & Waste Data Spreadsheet – 2019 – 2022 - Holcim Annual Return 2021_Appendices (Data 2020 – onwards) - Holcim	Raw monitoring data available did not include the name of person collecting the sample.	Not-compliant	
M2.1	For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:	Annual Reviews 2019, 2020, 2021	Monitoring is being undertaken as required by M2.2 and M2.3.	Compliant	
M2.2	Air Monitoring Requirements Note: Special Method 1 means sampling and analysis using the aeroqual Dust Sentry Pro particle monitor. POINT 11	Jandra Quarry Air Quality Management Plan (November 2021) Annual Reviews 2019, 2020, 2021	The AQMP specifies a Dust Sentry Pro will be installed to monitor PM10. PM10 data provided within Annual Reviews indicates continuous monitoring and general compliance with criteria outside of bushfire events.	Compliant	
M2.3	Water and/or Land Monitoring Requirements POINT 1	Interview M Neil Annual Reviews 2019, 2020, 2021	During the site inspection, it was confirmed by M Neil that no off-site discharges had occurred during the reporting period as water is used on site and multiple water storage areas are available. Within each Annual Review, the term 'discharge' is used to describe discharges from water storage areas to other on-site areas. It is recommended that Annual Reviews use clearer language to prevent confusion over monitoring requirements.	Compliant	Clarify language within Annual Reviews to ensure it does not appear that off-site discharges are occurring with no monitoring.
M3.1	Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:	Jandra Quarry Air Quality Management Plan (November 2021)	Air quality monitoring is being undertaken in compliance with the POEO Act, regulations and approved methods.	Compliant	
	a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or		Noted	Not triggered	
	b) if no such requirement is imposed by or under the Act, any methodology which a condition of this licence requires to be used for that testing; or		Noted	Not triggered	
M3.2	Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.	Jandra Quarry Soil and Water Management Plan Rev B (31/08/2015)	The Approved Methods Publication is referenced for use within the site SWMP.	Compliant	
M4.1	At the point(s) identified below, the licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1 of the table below, using the corresponding sampling method, units of measure, averaging period and sampling frequency, specified opposite in the Columns 2, 3, 4 and 5 respectively. POINT 4	Site observations Holcim Jandra Quarry Weather & Waste Data spreadsheet	All monitoring is being undertaken by the automatic weather monitoring station as per specified requirements.	Compliant	
M4.2	Rainfall at the premises must be measured and recorded in millimetres per 24 hour period, at the same time each day.	Site observations Holcim Jandra Quarry Weather & Waste Data spreadsheet	Weather is monitored constantly via the onsite weather monitoring station, with measurements of temperature, atmospheric pressure, rainfall, etc. captured every 15 minutes.	Compliant	
M5.1	The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.	Complaints Registers 2019 - 2022	Complaints registers are digital and legible.	Compliant	
	The record must include details of the following:	Complaints Registers 2019 - 2022	Complaints register includes this detail within the written description.	Compliant	
	a) the date and time of the complaint;	Complaints Registers 2019 - 2022	No complaints included in the complaints register during the reporting period were made by an external party.	Compliant	
	b) the method by which the complaint was made;	Complaints Registers 2019 - 2022		Compliant	

M5.2	c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;	Complaints Registers 2019 - 2022	No complaints included in the complaints register during the reporting period were made by an external party.	Compliant												
	d) the nature of the complaint;	Complaints Registers 2019 - 2022	The 'Detailed Description' column of the register provides this detail.	Compliant												
	e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and	Complaints Registers 2019 - 2022	No complaints included in the complaints register during the reporting period were made by an external party.	Compliant												
	f) if no action was taken by the licensee, the reasons why no action was taken.	Complaints Registers 2019 - 2022	No complaints included in the complaints register during the reporting period were made by an external party.	Compliant												
M5.3	The record of a complaint must be kept for at least 4 years after the complaint was made.	Complaints Registers 2019 - 2022	One complaint made during the reporting period and is readily available.	Compliant												
M5.4	The record must be produced to any authorised officer of the EPA who asks to see them.	Interview M Neil	No requests during the reporting period.	Compliant												
M6.1	The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	A phone number is publicly available on the site website for Environment or Community Enquiries.	Compliant												
M6.2	The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	A phone number is publicly available on the site website for 'Environment or Community Enquiries'.	Compliant												
M6.3	The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.	Noted	Noted	Not triggered												
M7.1	To determine compliance with the blasting limits of this licence: a) Airblast overpressure and ground vibration levels must be measured and electronically recorded for monitoring points 2 and 3 for the parameters specified in Column 1 of the table below; and	Blast Reports: Maxam 2019 - January 2022 Fullbore Quarry Services March 2022 - present	All airblast overpressure and ground vibration levels are being recorded as per specified parameters.	Compliant												
	<table border="1"> <thead> <tr> <th>Parameters</th> <th>Units of Measure</th> <th>Frequency</th> <th>Sampling Method</th> </tr> </thead> <tbody> <tr> <td>Airblast Overpressure</td> <td>Decibels (Linear Peak)</td> <td>All blasts</td> <td>Australian Standard AS 2187.2:2006</td> </tr> <tr> <td>Ground Vibration Peak Particle Velocity</td> <td>millimetres/second</td> <td>All blasts</td> <td>Australian Standard AS 2187.2:2006</td> </tr> </tbody> </table>	Parameters	Units of Measure	Frequency	Sampling Method	Airblast Overpressure	Decibels (Linear Peak)	All blasts	Australian Standard AS 2187.2:2006	Ground Vibration Peak Particle Velocity	millimetres/second	All blasts	Australian Standard AS 2187.2:2006		All airblast overpressure and ground vibration levels are being monitored as per specified UoM, frequency and sampling method.	Compliant
Parameters	Units of Measure	Frequency	Sampling Method													
Airblast Overpressure	Decibels (Linear Peak)	All blasts	Australian Standard AS 2187.2:2006													
Ground Vibration Peak Particle Velocity	millimetres/second	All blasts	Australian Standard AS 2187.2:2006													
M8.1	b) The licensee must use the units of measure, sampling method, and sample at the frequency specified opposite in the other columns.			Compliant												
	To assess compliance with the noise limits of this licence, attend noise monitoring must be undertaken in accordance with the conditions of this licence and: a) during a period of normal quarry operations;	Annual Reviews 2019, 2020, 2021 Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	All noise monitoring is being undertaken during normal quarry operations.	Compliant												
	b) at each one of the noise monitoring locations listed in the noise limits table of this licence;	Annual Reviews 2019, 2020, 2021 Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	All noise monitoring is being undertaken at specified locations.	Compliant												
	c) occur once annually in the reporting period; and	Annual Reviews 2019, 2020, 2021 Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	Noise monitoring was undertaken quarterly until 2021 and is now being undertaken annually as per EPL variation.	Compliant												
d) occur during the night period as defined in the NSW Noise Policy for Industry, and in conjunction with an asphalt campaign if any such campaign occurs within the quarterly monitoring period.	Annual Reviews 2019, 2020, 2021 Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	Noise monitoring was undertaken in accordance with relevant guidelines. Asphalt noise was considered only when temporary asphalt operations were being undertaken.	Compliant													
M8.2	Noise monitoring must be carried out in accordance with Australian Standard AS 2659.1 - 1998: Guide to the use of sound measuring equipment - Portable sound level metres and in accordance with any relevant factors provided in the NSW Noise Policy for Industry.	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC)	Noise monitoring is being undertaken with relevant noise monitoring standards, including AS 1055:2018, however AS 2659.1:1998 is not specified in MAC reports.	Compliant	Consider asking MAC to include this specific standard or have the EPL updated to reflect current standards in use.											
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: 1. a Statement of Compliance, 2. a Monitoring and Complaints Summary, 3. a Statement of Compliance - Licence Conditions, 4. a Statement of Compliance - Load based Fee, 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and 7. a Statement of Compliance - Environmental Management Systems and Practices. At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.	Interview M Neil Pers com A van der Horst (NSW EPA) 2nd Nov 2022	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified. Confirmed with NSW EPA representative 2 November 2022 via phone call that all Annual Returns within the reporting period had been submitted.	Not-compliant	Ensure Annual Returns are saved as .pdf files on accessible servers (instead of only saving within the EPA portal) so all relevant staff have access.											
R1.2	An Annual Return must be prepared in respect of each reporting period, except as provided below.	EPL 2796 Licence Summary on EPA Website: <a href="https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp-no&amp;status=issued">https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp-no&amp;status=issued</a>	Annual returns have been completed for each year within the reporting period.	Compliant												



R1.3	Where this licence is transferred from the licensee to a new licensee: a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and		No licence transfers occurred during the reporting period.	Not triggered	
	b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.		No licence transfers occurred during the reporting period.	Not triggered	
R1.4	Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on: a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or		License not surrendered or revoked during the reporting period.	Not triggered	
	b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.		License not surrendered or revoked during the reporting period.	Not triggered	
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	EPL 2796 Licence Summary on EPA Website: <a href="https://apps.epa.nsw.gov.au/prpoeapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp-no&amp;status=Issued">https://apps.epa.nsw.gov.au/prpoeapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp-no&amp;status=Issued</a>	Annual Return for 2019 - 2020 received by EPA 8th July 2020 - outside of 60 day timeframe Annual Return for 2020 - 2021 received by EPA 5th July 2021 - outside of 60 day timeframe Annual Return for 2021 - 2022 received by EPA 29th June 2022 - within 60 day timeframe	Not-compliant	
R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their retention periods were not able to be verified.	Not-compliant	
R1.7	Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant	
	b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant	
R2	The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
R2.1	Notifications must be made by telephoning the Environment Line service on 131 555.	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
R2.2	The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
R3.1	Where an authorised officer of the EPA suspects on reasonable grounds that: a) where this licence applies to premises, an event has occurred at the premises; or b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
R3.2	The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
R3.3	The request may require a report which includes any or all of the following information: a) the cause, time and duration of the event;	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
	b) the type, volume and concentration of every pollutant discharged as a result of the event;	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
	c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
	d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
	e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
	f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered	
g) any other relevant matters.	Annual Reviews 2019, 2020, 2021 Interview M Neil	No incidents causing or threatening material harm occurred during the reporting period.	Not triggered		
R3.4	The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.	Noted	No requests made by the EPA during the reporting period.	Not triggered	
	A noise compliance assessment report(s) must be submitted to the EPA with each Annual Return. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include: a) an assessment of compliance with noise limits detailed in the limit conditions of this licence;	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant	

R4.1	b) details of all quarrying activities that were occurring during each of the periods of monitoring, and	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant						
	c) an outline of any management actions taken within the monitoring period to address any exceedences of the limits detailed in the limit conditions of this licence.	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant						
R4.2	The licensee must supply, with each Annual Return, a Blast Monitoring Report which must include the following information relating to each blast carried out within the premises during the reporting period covered by the Annual Return: a) the date and time of the blast;	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant						
	b) the location of the blast on the premises;	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant						
	c) the blast monitoring results at each blast monitoring station; and d) an explanation for any missing blast monitoring results.	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant						
R4.3	The licensee must report any exceedence of the licence blasting limits to the EPA's Environment Line as soon as practicable after the exceedence becomes known to the licensee or to one of the licensee's employees or agents.	Annual Reviews 2019, 2020, 2021	No exceedences recorded during the reporting period. The exceedance noted at R7 was not reported at monitoring point 2 or 3 and is not considered an exceedance under this licence.	Compliant						
G1.1	A copy of this licence must be kept at the premises to which the licence applies.	Site observations	Licensee sighted on site during site audit.	Compliant						
G1.2	The licence must be produced to any authorised officer of the EPA who asks to see it.	Noted	No requests made by the EPA during the reporting period.	Not triggered						
G1.3	The licence must be available for inspection by any employee or agent of the licensee working at the premises.	Site observations	Licensee sighted on site in common area during site audit.	Compliant						
G2.1	Completed Programs	Noted		Not triggered						
	<table border="1"> <thead> <tr> <th>Program</th> <th>Description</th> <th>Completed Date</th> </tr> </thead> <tbody> <tr> <td>PRP 1: Installation and Use of a Wheel Wash at the Premises</td> <td>Construction and Utilisation of a vehicular wheel wash for all vehicles exiting the premises.</td> <td>28-October-2011</td> </tr> </tbody> </table>	Program	Description	Completed Date	PRP 1: Installation and Use of a Wheel Wash at the Premises	Construction and Utilisation of a vehicular wheel wash for all vehicles exiting the premises.	28-October-2011			
Program	Description	Completed Date								
PRP 1: Installation and Use of a Wheel Wash at the Premises	Construction and Utilisation of a vehicular wheel wash for all vehicles exiting the premises.	28-October-2011								
<b>Consultation</b>										
<b>NSW EPA</b>										
1	Ensure waste asphalt is not being brought to the site for storage purposes.	Site observations Interview M Neil	Through site observations and communications with the Quarry Manager, it is evident that no waste asphalt is being brought to site or being stored on site. Some minor stockpiles were present within the Downer asphalt batch plant, however these have resulted from asphalt production and are re-used in production or for patchwork repairs within the Downer site as required.	Compliant						
<b>NSW DPE</b>										
1	Follow up on improvements identified by DPE. The department carried out an inspection of the Jandra Quarry on 4 May 2021 as part of a rehabilitation review of select quarries across NSW. The inspection identified improvements were required for site access, record keeping, erosion and sediment control and weed management, as outlined in the attached letter.	Site observations Interview M Neil Document review Rehabilitation Inspection Letter DPIE (29/07/21) Biodiversity Monitoring Reports (Kleinfelder) Biodiversity Monitoring Reports (Wedgetail)	Site access appeared clear and stabilised during the site inspection. Stabilised materials have been installed at the truck tarping area and minimal material was visible on sealed surfaces leading onto the Pacific Highway. Records produced during the audit were kept in logical and legible formats. ESC on site was generally well managed, with some improvements to be made within the cleared area to the east of the main pit. Weed management is being regularly undertaken by appropriately qualified people, with innovative solutions such as drone usage being considered for weed management on pit benches.	Compliant						
2	Follow up on penalty notice issued on 13/06/2021. The department issued a penalty notice to Holcim on 13 May 2021 for non-compliance with Schedule 3 Condition 25 for failure to implement the Biodiversity and Rehabilitation Management Plan by not undertaking monitoring during 2019 and for clearing 3.3 ha of vegetation between 14 and 21 February 2019 without a pre-clearance survey by an ecologist. While the vegetation clearing was reported in the relevant Annual Review, the failure to conduct a pre-clearance survey was not reported, nor was the Secretary notified in accordance with the incident reporting requirements.	DPE Penalty Notice 21 May 2021 Biodiversity Monitoring Reports (Kleinfelder) Biodiversity Monitoring Reports (Wedgetail)	Holcim have been undertaking regular monitoring and maintenance of rehabilitation works, with consideration given to the impact of bushfires on the site in the 2019/2020 bushfire season. Personal communication with M Neil during the site audit confirmed that an ecologist was present during the most recent clearing on the eastern side of the main pit however a formal report was not provided during the audit process.	Compliant						
3	In the 2019, 2020 and 2021 Annual Reviews, Holcim reported instances of non-compliance with the consent which were not reported at the time to the Secretary in accordance with the consent. As such, the department considers that the IEA should include a focus on the adequacy of the plans, programs and strategies for the development to address all notification and reporting requirements of the development consent.	Interview M Neil	Holcim's reporting and notification systems are detailed in both the EMS and relevant subplans, however these have not been updated within the reporting period in response to reporting failures. Reporting and notification relies primarily upon site staff communicating non-compliances with corporate environmental staff however no tangible changes appear to have been made following lack of reporting in this instance.	Not-compliant	Update the EMS as required, communicate the reporting process to all site staff and ensure all subplans are updated to include usable reporting procedures.					

## **Appendix B DPE auditor approval**

Department of Planning and Environment

Ms Shilpa Shashi  
Planning and Environment Coordinator NSW / ACT  
Holcim (Australia) Pty Ltd  
Gamaragal Country  
Level 8 Tower B - 799 Pacific Highway  
CHATSWOOD NSW 2067

Sent by email only: [shilpa.shashi@holcim.com](mailto:shilpa.shashi@holcim.com)

27/06/2022

Dear Ms Shashi

**Jandra Quarry (DA231-10-99) - Independent Environment Audit proposal**

I refer to your request (DA231-10-99-PA-7) for the Secretary's approval of suitably qualified persons to prepare the 2022 Independent Environment Audit for Jandra Quarry.

The Department of Planning and Environment (the department) has reviewed the nominations and information you have provided and is satisfied that these experts are suitably qualified and experienced.

In accordance with Schedule 5 Condition 8 of DA231-10-99 as modified (the consent), the Secretary has agreed to the following audit team:

- Natascha Arens, Lead Auditor, technical specialist in biodiversity and rehabilitation management
- Michial Sutherland, Auditor
- Whitney Heiniger, Auditor

Please ensure this correspondence is appended to the Independent Audit Report.

The Independent Audit must be prepared, undertaken and finalised in accordance with the department's *Independent Audit Post Approval Requirements* (2020). This includes a declaration by each auditor and specialist of their independence from the development, as outlined in Section 3.1.1. of the abovementioned document. Failure to meet these requirements will require revision and resubmission.

The Exemplar Global certification for Natascha Arens will expire on 8 October 2022. The approval of the above audit team is conditional upon Natascha maintaining certification as a principal auditor with a relevant industry body for the duration of the audit.

Should you wish to discuss the matter further, please contact Jennifer Sage, Compliance Officer on 0400 245 170 or [compliance@planning.nsw.gov.au](mailto:compliance@planning.nsw.gov.au)

Yours sincerely



Heidi Watters  
Team Leader Northern  
Compliance

As nominee of the Planning Secretary



## Appendix C Agency consultation

### C.1 Department of Planning and Environment



**From:** Michial Sutherland [redacted]  
**Sent:** Monday, 27 June 2022 4:58 PM  
**To:** DPE PSVC Compliance Mailbox <[compliance@planning.nsw.gov.au](mailto:compliance@planning.nsw.gov.au)>  
**Cc:** Whitney Heiniger [redacted]; Shilpa Shashi (Holcim Pty Ltd (Chatswood)) [redacted]  
**Subject:** 22-206 - Jandra Quarry Independent Environmental Audit

Attention: Jennifer Sage

Dear Jennifer,

Please find attached a request for consultation regarding the 2022 independent environmental audit.

Kind Regards

MICHIAL SUTHERLAND  
BUSINESS DEVELOPMENT MANAGER NQ  
MEIANZ  
[redacted]



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[WWW.NGHCONSULTING.COM.AU](http://WWW.NGHCONSULTING.COM.AU)



NGH acknowledges that we work on the traditional lands of First Nations people across Australia and recognises the enduring connection to the land. We pay our respects to elders, past present and emerging.

**From:** Jennifer Sage [redacted]  
**Sent:** Thursday, 7 July 2022 9:37 PM  
**To:** Michial Sutherland [redacted]  
**Subject:** RE: 22-206 - Jandra Quarry Independent Environmental Audit

Hello Michial

I refer to your letter received 27 June 2022 seeking input from the Department of Planning and Environment to the Independent Environmental Audit for Jandra Quarry.

**Complaints**

I can confirm that the Department has not received any complaints during the audit period.

**DPE Audit**

The department carried out an inspection of the Jandra Quarry on 4 May 2021 as part of a rehabilitation review of select quarries across NSW. The inspection identified improvements were required for site access, record keeping, erosion and sediment control and weed management, as outlined in the attached letter.

**Enforcement action**

The department issued a penalty notice to Holcim on 13 May 2021 for non-compliance with Schedule 3 Condition 25 for failure to implement the Biodiversity and Rehabilitation Management Plan by not undertaking monitoring during 2019 and for clearing 3.3 ha of vegetation between 14 and 21 February 2019 without a preclearance survey by an ecologist. While the vegetation clearing was reported in the relevant Annual Review, the failure to conduct a preclearance survey was not reported, nor was the Secretary notified in accordance with the incident reporting requirements.

**Reporting and notification of incidents**

In the 2019, 2020 and 2021 Annual Reviews, Holcim reported instances of non-compliance with the consent which were not reported at the time to the Secretary in accordance with the consent. As such, the department considers that the IEA should include a focus on the adequacy of the plans, programs and strategies for the development to address all notification and reporting requirements of the development consent.

Don't hesitate to get in touch if you have any queries or need any additional information.

Regards  
Jen

**Jennifer Sage**  
Compliance Officer  
Development Assessment  
Department of Planning and Environment  
[redacted]



I acknowledge the traditional custodians of the land and pay respects to Elders past and present. I also acknowledge all the Aboriginal and Torres Strait Islander staff working with NSW Government at this time.

Please consider the environment before printing this email

## C.2 Environment Protection Authority

**From:** Michial Sutherland [REDACTED]  
**Sent:** Monday, 27 June 2022 5:15 PM  
**To:** EPA RSD Hunter Region Mailbox <[hunter.region@epa.nsw.gov.au](mailto:hunter.region@epa.nsw.gov.au)>  
**Cc:** Whitney Heiniger [REDACTED]; 'Shilpa Shashi (Holcim Pty Ltd (Chatswood))' [REDACTED]  
**Subject:** 22-206 - Jandra Quarry Independent Environmental Audit

Please find attached a request for consultation regarding the 2022 independent environmental audit.

Kind Regards

MICHIAL SUTHERLAND  
BUSINESS DEVELOPMENT MANAGER NQ  
MEIANZ



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[WWW.NGHCONSULTING.COM.AU](http://WWW.NGHCONSULTING.COM.AU)



*NGH acknowledges that we work on the traditional lands of First Nations people across Australia and recognises the enduring connection to the land. We pay our respects to elders, past present and emerging.*



Anthony Van der Horst [REDACTED]  
To: Michial Sutherland



RORN - OUT - Letter - Holcim Jandra Quarry - Independent Environmental Audit - NGH Mike Sutherland - EPL 2796 -29062022.pdf  
.pdf File

Hi Mike,

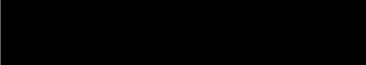
Please find attached the EPA's standard response letter for Independent Environmental Audits.

If I can provide any further assistance, please contact me on (02) 4908 6808.

Kind regards,

Anthony

**Anthony van der Horst**  
Operations Officer  
Regulatory Operations  
NSW Environment Protection Authority



[www.epa.nsw.gov.au](http://www.epa.nsw.gov.au) @NSW\_EPA

### C.3 Transport for NSW

22-206 - Jandra Quarry Independent Environmental Audit

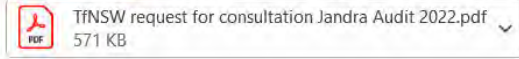


Michial Sutherland

To: stakeholder.relations@transport.nsw.gov.au  
Cc: Whitney Heiniger; 'Shilpa Shashi (Holcim Pty Ltd (Chatswood))'

☺ Reply Reply All Forward 📧 ⋮

Mon 27/06/2022 6:01 PM

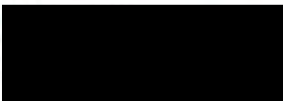


Attention

Please find attached a request for consultation regarding the 2022 audit.

Kind Regards

MICHIAL SUTHERLAND  
BUSINESS DEVELOPMENT MANAGER NQ  
MEIANZ



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[WWW.NGHCONSULTING.COM.AU](http://WWW.NGHCONSULTING.COM.AU)



NGH acknowledges that we work on the traditional lands of First Nations people across Australia and recognises the enduring connection to the land. We pay our respects to elders, past present and emerging.

### C.4 Mid Coast Council

22-206 - Jandra Quarry Independent Environmental Audit

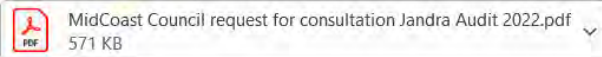


Michial Sutherland

To: council@midcoast.nsw.gov.au  
Cc: Whitney Heiniger; 'Shilpa Shashi (Holcim Pty Ltd (Chatswood))'

☺ Reply Reply All Forward 📧 ⋮

Mon 27/06/2022 5:43 PM



Attention: General Manager

Please find attached a request for consultation regarding the 2022 Audit.

Kind Regards

MICHIAL SUTHERLAND  
BUSINESS DEVELOPMENT MANAGER NQ  
MEIANZ



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[WWW.NGHCONSULTING.COM.AU](http://WWW.NGHCONSULTING.COM.AU)



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## Appendix D Site inspection photos



Sign at front entrance displaying site hours of operation and contact details



Current level in main pit and benching rehabilitation progress



Recently cleared area to the east of the main pit



Secured dangerous goods storage on site



Sediment being washed from vehicle wheels prior to leaving the site.



Minor hydrocarbon leakage, primarily on to geofabric, within the Downer plant area



Aggregate storage within the Downer plant area, no evidence of waste asphalt being brought to the site was observed

**Appendix 5**  
**INDEPENDENT ENVIRONMENTAL**  
**AUDIT**

**RESPONSE ACTION PLAN**

Reference	Approval or licence requirement	Evidence collected 2022	Audit Finding	Compliance status	Action Reference	Holcim Response / Action Plan	Holcim Response / Action Plan Timeframe
18	The Applicant shall provide annual quarry production data to DRE using the standard form for that purpose; and report these data in the Annual Review (see condition 4 of Schedule 5).	Interview M Neil	Evidence of this submission to DRE was unable to be supplied during the audit process. Production data is available in the Annual Reviews.	Not-compliant		The standard online form was completed. Moving forwards a screenshot of the submission will be kept for records.	N/A
1	The Applicant shall ensure that the noise generated by the development does not exceed the criteria in Table 2 or Table 3 at any residence on privately-owned land.	Annual Reviews 2019, 2020, 2021	Noise at the site was generally compliant across all locations during the reporting period. One exceedance was recorded at R2 in March 2021, with <39 dB recorded at a location with a limit of 36dB. This exceedance was due to a bulldozer conducting overburden maintenance as required every two years; the bulldozer was immediately relocated to a lower level within the pit and Holcim implemented a long-term management measure to ensure overburden maintenance is not conducted within the morning shoulder period, when the exceedance was recorded.	Not-compliant		NBMP to be reviewed and updated as necessary following this Audit as per conditions of consent (within three months of submission).	30/06/2023
5	The Applicant shall ensure that blasting on site does not cause any exceedance of the criteria in Table 4.  However, these criteria do not apply if the Applicant has a written agreement with the relevant owner to exceed the limits in Table 4, and the Applicant has advised the Department in writing of the terms of this agreement.	Complaints Register Q1 2022 Blast Plan 197 Holcim Jandra (Maxam 13 January 2022) Interview M Neil Noise and Blast Management Plan (August 2018)	One blast on 27/01/2022 exceeded the allowable airblast overpressure dB limit of 115. The blast was measured at 119.1 dB at monitoring point R2 (112 Spicers Road). No agreement exists with this receiver and as such this remains a non-compliance.	Not-compliant		NBMP to be reviewed and updated as necessary following this Audit as per conditions of consent (within three months of submission).	30/06/2023
19	(b) Surface Water Management Plan that includes: - a detailed description of the surface water management system for the development, including the: - clean water diversion system; - erosion and sediment controls; and - the water storages required for each stage of the development; - identification of all reasonable and feasible measures to improve the quality of surface water on the site, particularly those measures required to improve the water quality in the main dam, and a timeframe for the implementation of any identified improvements; - the measures that would be implemented to minimise water use on site; - surface water impact assessment criteria, - a program to monitor surface water quality, and - a plan to respond to any exceedances of the performance criteria, and mitigate any adverse surface water impacts of the development; and - reporting procedures .	Soil and Water Management Plan Jandra Quarry (2015)	The SWMP addresses site surface water management, including diversions, ESC measures and water storage. It also identifies a number of measures to improve water quality, reduce water use and minimum discharge criteria and monitoring frequency. However, as outlined in the 2019 IEA, the SWMP does not provide a response procedure for exceedance events nor does it provide a reporting procedure for exceedance events. The plan has not been updated since the 2019 IEA and as such remains non-compliant.	Not-compliant		SWMP to be reviewed and updated as necessary following this Audit as per conditions of consent (within three months of submission).	30/06/2023

25	The Applicant shall prepare and implement a Biodiversity and Rehabilitation Management Plan for the site to the satisfaction of the Secretary. This plan must: (a) be prepared by suitably qualified person(s) whose appointment has been approved by the Secretary;	Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	BRMP provides evidence of Department approval of plan author on 1 July 2015 (Appendix 1). The plan was generally implemented throughout the reporting period with the exception of one penalty notice issued by DPE on 21 May 2021. Holcim failed to undertake a pre-clearance survey prior to clearing vegetation in 2019 and failed to appropriately monitor and assess rehabilitated areas during 2019.	Not-compliant	No further action required	BRMP to be reviewed and updated as necessary following this Audit as per conditions of consent (within three months of submission).	30/06/2023
27	Within 12 months of the approval of the Biodiversity and Rehabilitation Management Plan, the Applicant shall lodge a Rehabilitation and Conservation Bond with the Department to ensure that the biodiversity offset strategy and the rehabilitation of the site is implemented in accordance with the performance and completion Criteria set out in the Biodiversity and Rehabilitation Management Plan. The sum of the bond shall be determined by: (a) calculating the cost of implementing the biodiversity offset strategy and rehabilitating the site, and (b) employing a suitably qualified quantity surveyor or other expert to verify the calculated costs, to the satisfaction of the Secretary.	DPIE Approval Letter - Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020) Biodiversity and Rehabilitation Management Plan (Rev 5, Umwelt 2018)	Payment of the Rehabilitation and Conservation Bond was due in August 2019 however was not paid until 1/06/2020. The 2019 IEA identified this as a non-compliance and after discussions with DPE, the bond payment was made by Holcim. The DPE approval letter includes approval of suitably qualified experts to undertake the cost calculation. This will remain as a non-compliance as it relates to initial timing of bond payment.	Not-compliant		Bond has been paid, no further action required.	N/A
28	Within 3 months of each independent Environmental Audit (see condition 8 of Schedule 5), the Applicant shall review, and if necessary revise, the sum of the Rehabilitation and Conservation Bond to the satisfaction of the Secretary. This review must consider the: (a) effects of inflation;	DPIE Approval Letter - Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020)	As the initial payment was not made until June 2020, this is outside of the 3 month timeframe following the Independent Audit undertaken in September 2019. A review was not able to be undertaken within the timeframe as initial submission had not yet been completed.	Not-compliant		Bond to be reviewed within 3 months of submission of this audit.	30/06/2023
	(b) likely cost of rehabilitating the site (taking into account the likely surface disturbance over the next 3 years of the development and implementing the biodiversity offset strategy; and	DPIE Approval Letter - Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020)	As above.	Not-compliant		Bond to be reviewed within 3 months of submission of this audit.	30/06/2023
	(c) performance of the implementation of the rehabilitation of the site performance to date	DPIE Approval Letter - Jandra Quarry Rehabilitation and Conservation Bond (1/06/2020)	As above.	Not-compliant		Bond to be reviewed within 3 months of submission of this audit.	30/06/2023
29	The Applicant shall prepare and implement an Aboriginal Cultural Heritage Management Plan for the Project to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with Aboriginal stakeholders;	Jandra Quarry Aboriginal Cultural Heritage Management Plan Rev B (31/08/2015)	A review of the ACHMP shows that recommendations from the 2016 and 2019 IEAs have not been adopted, as no updates to the consultation section of the ACHMP have been made and no evidence available to indicate that Holcim have tried to close out this lack of consultation in the ACHMP. Forster LALC and Purfleet-Taree LALC have both been attempted to be contacted as per the ACHMP Rev B. Additionally, no approval of the ACHMP is evident within the document, however the requirement for Department approval is noted in Section 1.4	Not-compliant		ACHMP to be reviewed and updated as necessary within 3 months of submission of this audit as per condition of consent.	30/06/2023
33	(c) publish these records on its website at the end of each calendar quarter.	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	At time of the audit, no truck movement data has been posted on the site website since 2020. Data from 2016 - 2020 is available.	Not-compliant	Ensure data is posted as per specified timing.	Holcim to publish up to date truck data on website each quarter.	31/03/2023
1	As soon as practicable after obtaining monitoring results showing an exceedance of any relevant criteria in Schedule 3, the Applicant shall notify affected landowners in writing of the exceedance, except where a negotiated agreement has been entered into in relation to that impact, and provide regular monitoring results to each affected landowner until the development is complying with the relevant criteria.	Interview M Neil	One over pressure exceedance from a discreet blasting event in Feb 2022 occurred. A discussion was held with an affected sensitive receiver who was not disaffected. Subsequent blasts have not resulted in overpressure exceedances due to a change in blasting subcontractors. Exceedance was minor and would have been negated if annual blast numbers had exceeded 20. EPA did not take action against Holcim and incident reported to the EPA.	Not-compliant	No further action required	Jandra Quarry Manager to develop procedure for notifying landowners. NBMP to be reviewed and updated as necessary following IEA.	30/06/2023
2	The Applicant shall assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.	<a href="https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp=no&amp;status=Issued">https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp=no&amp;status=Issued</a>	Non-compliances under conditions in Schedule 3 were recorded during the reporting period. One penalty notice was issued during the reporting period for failing to comply with the BRMP (21 May 2021).	Not-compliant		All management plans will be reviewed and updated as necessary within 3 months of submission of this audit as per the conditions of consent.	30/06/2023

3	(e) a contingency plan to manage any unpredicted impacts and their consequences;	Jandra Quarry Environmental Management Strategy (undated) Jandra Quarry Noise and Blast Management Plan Rev D (20/08/2018) Jandra Quarry Soil and Water Management Plan Rev B (31/08/2015)	The updated AQMP (2021), BRMP and ACHMP address this condition through the provision of a plan-specific Contingency Plan or similar, however the SWMP and NBMP do not provide a Contingency Plan or similar method for addressing unpredicted impacts.	Not-compliant	Update plans to address specific requirements of Condition 3	SWMP and NBMP to be reviewed and updated as necessary following this IEA.	30/06/2023
	(g) a protocol for managing and reporting any: - incidents; - complaints; - non-compliances with statutory requirements; and - exceedances of the impact assessment criteria and/or performance criteria; and	Jandra Quarry Biodiversity and Rehabilitation Management Plan Final (Umwelt, August 2018) Jandra Quarry Air Quality Management Plan (November 2021)	The ACHMP and SWMP do not include protocols for incident response in relation to complaints or exceedances and the ACHMP does not include measures to be taken in the event of unexpected impact on known Aboriginal cultural heritage items. These items were identified in the 2019 IEA but have not been rectified during the reporting period as these plans have	Not-compliant	Update plans to address specific requirements of Condition 3	ACHMP to be reviewed and updated as necessary following this IEA.	30/06/2023
5	Within 3 months of the submission of an: (a) annual review under condition 4 above;	Annual Reviews 2019, 2020, 2021	With the exception of the AQMP, management plans have not been updated during the reporting period despite audit recommendations, some changes in site operations and changes in legislation.	Not-compliant	A review of all management plans is recommended to adopt audit recommendations, updates in legislation and any changes to site operations.	All management plans will be reviewed and updated as necessary within 3 months of submission of this audit as per the conditions of consent.	30/06/2023
	(c) audit report under condition 8 below; and	2019 IEA Report	The 2019 IEA completed by GHD provided a number of recommendations across management plans that have not been revised during the reporting period.	Not-compliant	A review of all management plans is recommended to adopt audit recommendations, updates in legislation and any changes to site operations.	All management plans will be reviewed and updated as necessary within 3 months of submission of this audit as per the conditions of consent.	30/06/2023
9	Within 3 months of commissioning this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.		Due to unforeseen environmental and site staffing challenges within Holcim during the audit period, this audit report will not satisfy this condition.	Not-compliant		Submission of this audit closes out this non-compliance action.	N/A
10	By 31 August 2015, the Applicant shall: (a) make the following information publicly available on its website: - the documents listed in condition 2 of Schedule 2; - current statutory approvals for the development; - approved strategies, plans or programs; - a summary of the monitoring results of the development, which have been reported in accordance with the various plans and programs approved under the conditions of this consent; - a complaints register, which is to be updated on a quarterly basis; - the annual reviews (over the last 5 years); - any independent environmental audit, and the Applicant's response to the recommendations in any audit; and - any other matter required by the Secretary; and	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	No evidence is available on the website that plans are approved and 2021 Annual Review is not available on the website. Previous audit responses and recommendations are also not available.	Not-compliant	Update information available on the site website in accordance with this condition.	Ensure all required information on website is up to date	30/04/2023
	(b) keep this information up-to-date, to the satisfaction of the Secretary.	<a href="https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw">https://www.holcim.com.au/about-us/community-link/jandra-quarry-possum-brush-taree-nsw</a>	As above.	Not-compliant		Ensure all required information on website is up to date	30/04/2023
3	Unless otherwise directed by the Secretary, attended quarterly monitoring is to be used to evaluate compliance with the relevant conditions of this consent.	Annual Review 2021 Noise Monitoring Assessments - Muller Acoustic Consulting (MAC) EPL 2796	On 27 August 2021, an EPL variation was issued to EPL 2796 allowing noise monitoring to be undertaken on an annual basis instead of quarterly, based on no noise complaints being received since 2016 and ongoing compliance of noise monitoring results. Noise monitoring was carried out quarterly until 2021. This condition under the Modified Consent still directs noise monitoring to be undertaken quarterly; no evidence of approval of this change in monitoring frequency by the Secretary has been sighted.	Not-compliant	Confirm that EPL monitoring requirements are approved by the Secretary to align with Modified Consent.	The approved NBMP allows the project to move to annual monitoring on the schedule (2 years after stage commences) as provided in 6.2 of the NBMP. Plan was approved by DPIE on 22 August 2018. No further action required.	N/A



P1.4	The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.	Interview M Neil Annual Reviews 2019, 2020, 2021 Blast Reports 2019 - 2022	Noise and weather monitoring are being carried out at the specified locations. Airblast overpressure and ground vibration have only been undertaken at Receptor R2 (EPA ID 3) during blasting operations. During an interview with M Neil, it was discussed that the wording from L5.2 ad L5.3 "...at either monitoring point 2 or 3 of this licence" had been interpreted as only one of these monitoring points needing to be monitored during blasting activities. Subsequently, only R2 (112 Spicers Rd) has had airblast overpressure and vibration monitoring carried out during the reporting period.	Not-compliant	Ensure both R2 and R4 are monitored as specified during blasting activities.	Both R2 and R4 to be monitored. Previous Quarry manager interpreted wording incorrectly. NBMP to be reviewed and updated as required following submission of IEA	30/06/2023
L3.2	The licensee must not: • Process more than 3000 tonnes of concrete "wash-out" per annum; • Store more than 1000 tonnes of concrete "wash-out" on the premises at any one time.	Site observations Interview M Neil Email correspondence P Wilson Wash Out Waste Data Register 2019 - 2022	Imported concrete washout waste tonnages are approximated as per correspondence with P Wilson. By tonnage approximations, concrete waste imported onto the site totalled 3600T in 2020, 1770T in 2021 and 2862.9T in 2022 up until the date of the audit. 2020 tonnages exceeds the annual limit of 3000T p.a. It is noted that tonnages recorded within the spreadsheet are seemingly non approximated as of April 2022.	Not-compliant		Measurements are no longer estimated. No further action required.	NA
L4.1	Noise generated at the premises must not exceed the noise limits in the tables below. The locations referred to in the tables below are indicated in the document titled: "Jandra Quarry Intensification of Production Environmental Assessment (DA 231-10-99 MOD 5)" Dated July 2014		As below.	Not-compliant		N/A - line item not a non compliance in itself	N/A

L4.2	Noise from the premises during quarrying operations only must not exceed the limits specified in the following table:	Noise Monitoring Assessments - Muller Acoustic Consulting (MAC): Q3 2019 Q4 2019 Q1 - Q4 2020 Q1 2021 Q1 2022 Annual Reviews 2019, 2020, 2021	Noise at the site was generally compliant across all locations during the reporting period. One exceedance was recorded at R2 (EPA13) in March 2021, with <39 dB recorded at a location with a limit of 36dB. This exceedance was due to a bulldozer conducting overburden maintenance as required every two years; the bulldozer was immediately relocated to a lower level within the pit and Holcim implemented a long-term management measure to ensure overburden maintenance is not conducted within the morning shoulder period, when the exceedance was recorded.	Not-compliant		This item is currently subject to investigation by DPE. Holcim have responded to an information request and are currently awaiting further response from DPE. Holcims initial response noted that the site responded to this elevated noise result by immediately relocating the bulldozer to a lower level to attenuate the impact. Subsequent monitoring during the same Q1 2021 noise monitoring event at R6 (EPA16), which is only 60 metres away from R2, was below the noise criteria following relocation of the dozer. Further Holcim would like to note that there have been no further noise exceedances at Jandra quarry since the Q1 2021 monitoring event. This is evidenced in the monitoring results provided in the 2021 Annual report, and those which will be provided by March 31 2023 in the 2022 Annual Report. Holcim received a warning letter for the breach which instructed Holcim to review and if necessary revise the Noise and Blast Management Plan by 31 March 2023. However, given that the warning letter was based upon an out of date management plan (2015), DPE subsequently advised the warning letter would be withdrawn and reissued. Holcim are awaiting the reissue and direction of the warning letter. Regardless, the NMBP will be reviewed and updated as necessary within 3 months of this audit as per the conditions of consent.	30/06/2023
M1.1	The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.	This audit.	See findings below.	Not-compliant		N/A - line item not a non compliance in itself	N/A
M1.3	b) the time(s) at which the sample was collected;	2022 PM10 Data Spreadsheet - Holcim Jandra Quarry Weather & Waste Data Spreadsheet – 2019 – 2022 - Holcim Annual Return 2021_Appendices (Data 2020 – onwards) - Holcim	Raw monitoring data available included PM10 monitoring data, which included a column for time of sampling that was largely incomplete. Other monitoring data available did not include sample times.	Not-compliant		it is a 24 hr equipment sampling period for PM10. Date provided is therefore adequate. It is unclear what 'other data' is being referred to by the auditor. Holcim note that all Chain of Custody documents record the time the sample was collected.	N/A
	d) the name of the person who collected the sample.	2022 PM10 Data Spreadsheet - Holcim Jandra Quarry Weather & Waste Data Spreadsheet – 2019 – 2022 - Holcim Annual Return 2021_Appendices (Data 2020 – onwards) - Holcim	Raw monitoring data available did not include the name of person collecting the sample.	Not-compliant		Name is in Chain of Custody documents which is normal practice to meet this condition. Holcim keep a copy of all CoC documents.	N/A
R1.1	The licensee must complete and supply to the EPA an Annual Return in the approved form comprising: 1. a Statement of Compliance, 2. a Monitoring and Complaints Summary, 3. a Statement of Compliance - Licence Conditions, 4. a Statement of Compliance - Load based Fee, 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data; and 7. a Statement of Compliance - Environmental Management Systems and Practices. At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.	Interview M Neil Pers com A van der Horst (NSW EPA) 2nd Nov 2022	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified. Confirmed with NSW EPA representative 2 November 2022 via phone call that all Annual Returns within the reporting period had been submitted.	Not-compliant	Ensure Annual Returns are saved as .pdf files on accessible servers (instead of only saving within the EPA portal) so all relevant staff have access.	Annual Returns were submitted as per the approved form as evidenced on the EPA eConnect website.	N/A
R1.5	The Annual Return for the reporting period must be supplied to the EPA via eConnect EPA or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').	EPL 2796 Licence Summary on EPA Website: <a href="https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp=no&amp;status=issued">https://apps.epa.nsw.gov.au/prpoeoapp/Detail.aspx?instid=2796&amp;id=2796&amp;option=licence&amp;searchrange=licence&amp;range=POEO%20licence&amp;prp=no&amp;status=issued</a>	Annual Return for 2019 - 2020 received by EPA 8th July 2020 - outside of 60 day timeframe Annual Return for 2020 - 2021 received by EPA 5th July 2021 - outside of 60 day timeframe Annual Return for 2021 - 2022 received by EPA 29th June 2022 - within 60 day timeframe	Not-compliant		Holcim note the 21/22 Annual Return was submitted within the timeframe. Changes in staffing resulted in improved compliance which will be maintained going forward.	N/A

R1.6	The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their retention periods were not able to be verified.	Not-compliant		Copy is retained on eConnect, the 'approved form'. Holcim will also ensure a copy is held on their own server going forwards. The last 4 years of Annual returns have been downloaded from eConnect and are on the Holcim system in pdf format.	N/A
R1.7	Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by: a) the licence holder; or	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant		This was completed and as such is not a non-compliance.	N/A
	b) by a person approved in writing by the EPA to sign on behalf of the licence holder.	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant		This was completed and as such is not a non-compliance.	N/A
R4.1	A noise compliance assessment report(s) must be submitted to the EPA with each Annual Return. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include: a) an assessment of compliance with noise limits detailed in the limit conditions of this licence;	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant		Noise reports were produced and submitted through the Annual Reporting process to DPE. However they are not provided to EPA alongside the annual return. It has now been noted in Holcims Annual Environmental Commitments Planner that the reports must be provided with the Annual Return submission.	As per Annual Return requirements. Within 60 days of 27 August 2023.
	b) details of all quarrying activities that were occurring during each of the periods of monitoring, and	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant		Noise reports were produced and submitted through the Annual Reporting process to DPE. However they are not provided to EPA alongside the annual return. It has now been noted in Holcims Annual Environmental Commitments Planner that the reports must be provided with the Annual Return submission.	As per Annual Return requirements. Within 60 days of 27 August 2023.
	c) an outline of any management actions taken within the monitoring period to address any exceedences of the limits detailed in the limit conditions of this licence.	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant		Noise reports were produced and submitted through the Annual Reporting process to DPE. However they are not provided to EPA alongside the annual return. It has now been noted in Holcims Annual Environmental Commitments Planner that the reports must be provided with the Annual Return submission.	As per Annual Return requirements. Within 60 days of 27 August 2023.
R4.2	The licensee must supply, with each Annual Return, a Blast Monitoring Report which must include the following information relating to each blast carried out within the premises during the reporting period covered by the Annual Return: a) the date and time of the blast;	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant		Blast monitoring was reported and submitted through the Annual Reporting process to DPE. However it was not provided to EPA alongside the annual return. It has now been noted in Holcims Annual Environmental Commitments/ Site Improvement Planner that the reports must be provided with the Annual Return submission.	As per Annual Return requirements. Within 60 days of 27 August 2023.
	b) the location of the blast on the premises;	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant		Blast monitoring was reported and submitted through the Annual Reporting process to DPE. However it was not provided to EPA alongside the annual return. It has now been noted in Holcims Annual Environmental Commitments/ Site Improvement Planner that the reports must be provided with the Annual Return submission.	As per Annual Return requirements. Within 60 days of 27 August 2023.
	c) the blast monitoring results at each blast monitoring station; and d) an explanation for any missing blast monitoring results.	Interview M Neil Pers com R Townsend	Copies of Annual Returns within the reporting period were not able to be supplied by Holcim and as such their contents could not be verified.	Not-compliant		Blast monitoring was reported and submitted through the Annual Reporting process to DPE. However it was not provided to EPA alongside the annual return. It has now been noted in Holcims Annual Environmental Commitments/ Site Improvement Planner that the reports must be provided with the Annual Return submission.	As per Annual Return requirements. Within 60 days of 27 August 2023.
3	In the 2019, 2020 and 2021 Annual Reviews, Holcim reported instances of non-compliance with the consent which were not reported at the time to the Secretary in accordance with the consent. As such, the department considers that the IEA should include a focus on the adequacy of the plans, programs and strategies for the development to address all notification and reporting requirements of the development consent.	Interview M Neil	Holcim's reporting and notification systems are detailed in both the EMS and relevant subplans, however these have not been updated within the reporting period in response to reporting failures. Reporting and notification relies primarily upon site staff communicating non-compliances with corporate environmental staff however no tangible changes appear to have been made following lack of reporting in this instance.	Not-compliant	Update the EMS as required, communicate the reporting process to all site staff and ensure all subplans are updated to include usable reporting procedures.	Holcim have switched monitoring contractors to one that utilises an online portal with alert system. This alert is sent to both site and corporate staff. Reporting has improved dramatically following the implementation of this system, with no further evidence of failure to report. Holcim have moved to iCare incident reporting system which notifies corporate staff through an online notification protocol.	Already implemented.