



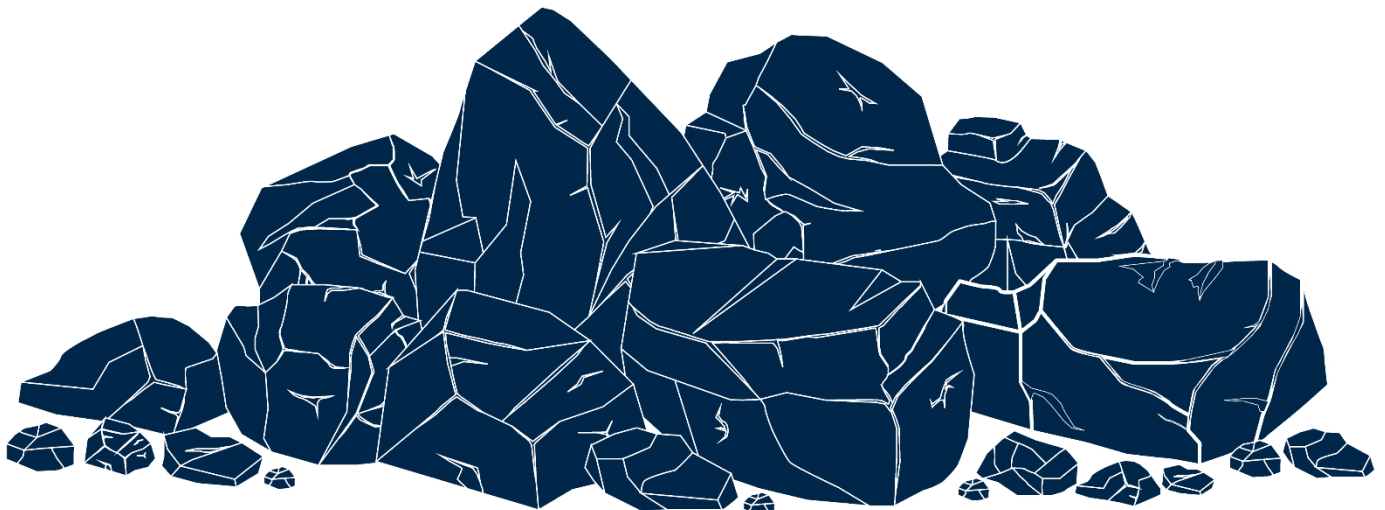
Karuah Hard Rock Quarry  
ABN: 15 093 914 937  
Hunter Quarries Pty Ltd  
Andersite Road, Karuah NSW 2324

W: [www.hunterquarries.com.au](http://www.hunterquarries.com.au)  
E: [admin@hunterquarries.com.au](mailto:admin@hunterquarries.com.au)  
T: 02 4050 0304  
P: PO Box 3284, Thornton NSW 2322

Karuah Hard Rock Quarry

## **Environmental Management Strategy & Monitoring Program**

December 2024



## Revision History

| Version | Date Reviewed | Author | Status                 | Amendment Details   |
|---------|---------------|--------|------------------------|---|
| 1A      | July 2006     | GSSE   | Draft for Consultation | Original Environmental Management Strategy developed to satisfy Schedule 4, Condition 1 of the Development Consent.   |
| 1B      | August 2006   | GSSE   | Draft for Submission   | Updated for Department of Planning comments.  |
| 1C      | August 2006   | GSSE   | Approved               | Updated for additional Department of Planning comments.   |
| 2       | October 2008  | GSSE   | Approved               | Comprehensive review following the findings of the 2008 Independent Environmental Audit.  |
| 3       | December 2014 | SLR    | Approved               | Comprehensive review following the findings of the 2014 Independent Environmental Audit.  |
| 4       | March 2016    | SLR    | Approved               | Comprehensive review.   |
| 5A      | July 2020     | SLR    | Draft for Submission   | Comprehensive review following the findings of the 2019 Independent Environmental Audit.  |
| 5B      | August 2020   | SLR    | Approved               | Updated for DPIE Comments.  |
| 6A      | June 2024     | HQPL   | Draft for Consultation | Comprehensive review of EMS and EMP and consolidation into single contemporary document.<br>Update for Hunter Quarries' current organisation structure and other operational changes.<br>Update for new Hunter Quarries' document template. |
| 6B      | December 2024 | HQPL   | Approved               | Updated following consultation with the NSW EPA (PAE-72340019) and MidCoast Council (PAE-72344996).   |

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page    |
|-----------------|----------------|--------------|---------------|----------------|---------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 2 of 32 |

# Contents

|  |           |
|--|-----------|
| <b>Revision History .....</b>  | <b>2</b>  |
| <b>Contents .....</b>  | <b>3</b>  |
| <b>Terms, Definitions and Abbreviations .....</b>                          | <b>4</b>  |
| <b>1.0 Introduction.....</b>   | <b>5</b>  |
| 1.1 Overview .....   | 5         |
| 1.2 Project Site .....   | 5         |
| 1.3 Purpose .....  | 5         |
| 1.4 Agency Consultation .....  | 5         |
| <b>2.0 Regulatory Requirements .....</b>                                   | <b>9</b>  |
| 2.1 Requirements of the Development Consent (DA 265-10-2004).....          | 9         |
| 2.2 Requirements of the Environment Protection Licence (EPL 11569).....    | 13        |
| <b>3.0 Environmental Management Strategy .....</b>                         | <b>14</b> |
| 3.1 Strategic Framework .....  | 14        |
| 3.2 Roles and Responsibilities .....                                       | 15        |
| 3.3 Environmental Management Documents.....                                | 16        |
| <b>4.0 Environmental Monitoring Program .....</b>                          | <b>17</b> |
| 4.1 Meteorological Monitoring.....   | 17        |
| 4.2 Air Quality Monitoring .....   | 17        |
| 4.3 Blast Monitoring.....  | 19        |
| 4.4 Noise Monitoring .....   | 19        |
| 4.5 Surface Water Monitoring .....   | 20        |
| 4.6 Flora & Fauna Monitoring .....   | 20        |
| 4.7 Rehabilitation Monitoring.....   | 20        |
| 4.8 Waste Monitoring .....   | 20        |
| <b>5.0 Environmental Procedures.....</b>                                   | <b>22</b> |
| 5.1 Community Consultation .....   | 22        |
| 5.2 Agency and Public Reporting .....                                      | 23        |
| 5.3 Complaints Handling .....  | 23        |
| 5.4 Dispute Resolution .....   | 24        |
| 5.5 Non-Compliance and Incident Response .....                             | 24        |
| 5.6 Emergency Response .....   | 26        |
| <b>Appendix A: Agency Consultation (NSW EPA and MidCoast Council).....</b> | <b>27</b> |
| <b>Appendix B: Correspondence with NSW Planning.....</b>                   | <b>31</b> |

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page    |
|-----------------|----------------|--------------|---------------|----------------|---------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 3 of 32 |

## Terms, Definitions and Abbreviations

| Abbreviation / Term | Meaning   |
|---------------------|---|
| ARA                 | Appropriate Regulatory Authority  |
| CCC                 | Community Consultative Committee  |
| COA                 | Conservation Offset Area  |
| DA                  | Development Application   |
| DDG                 | Depositional Dust Gauge   |
| Development Consent | KHRQ Development Consent, DA 265-10-2004                                |
| EC                  | Electrical Conductivity   |
| EMR                 | Environmental Monitoring Report   |
| EMS&MP              | Environmental Management Strategy and Monitoring Program                |
| EoI                 | Expression of Interest  |
| EPA                 | NSW Environment Protection Authority                                    |
| EPL                 | KHRQ Environment Protection Licence, EPL 11569                          |
| IEA                 | Independent Environmental Audit   |
| HQPL                | Hunter Quarries Pty Ltd   |
| HVAS                | High Volume Air Sampler   |
| KHRQ                | Karuah Hard Rock Quarry   |
| MCC                 | MidCoast Council  |
| MEG                 | NSW Department of Regional NSW – Mining, Exploration and Geoscience     |
| NSW Planning        | NSW Department of Planning, Housing and Infrastructure                  |
| Nearby Residents    | Landholders and residents located within a 2 km radius of the site.     |
| NTU                 | Nephelometric Turbidity Unit  |
| PIRMP               | Pollution Incident Response Management Plan                             |
| Planning Secretary  | Secretary of the NSW Department of Planning, Housing and Infrastructure |
| PM10                | Particulate Matter below 10 microns                                     |
| POEO Act            | NSW <i>Protection of the Environment Operations Act 1997</i>            |
| TSP                 | Total Suspended Particulates  |
| TSS                 | Total Suspended Solids  |



## 1.0 Introduction

### 1.1 Overview

Mountain Industries obtained approval to operate the Karuah Quarry in 1997, with the site subsequently purchased by Hunter Quarries Pty Ltd (HQPL) in 2002. In October 2004, HQPL applied to the then Department of Infrastructure, Planning and Natural Resources (now known as the Department of Planning, Housing and Infrastructure – NSW Planning) for approval to expand the quarry into adjoining lands (the Stage 2 extraction area) to allow the extraction of further hard rock resources.

Development Consent, DA 265-10-2004, was granted for the Karuah Hard Rock Quarry (KHRQ) by the Minister for Infrastructure, Planning and Natural Resources on 03 June 2005. The approved development consisting of:

- implementing the remainder of the approved Stage 1 quarry operation;
- extending the quarry operations into the Stage 2 area;
- upgrading and using existing infrastructure on site;
- rehabilitating the site by re-contouring and revegetating exposed surfaces; and
- producing up to 500,000 tonnes of andesite product a year over the next 22 years.

### 1.2 Project Site

The KHRQ site is located approximately five kilometres north-east of the village of Karuah, NSW. The overall site covers an area of approximately 78.5 Ha across the following properties:

- Lot 21 DP 1024564 consisting of material processing and product stockpiling;
- Lot 11 DP 1024564 consisting of the Stage 2 extraction area; and
- Part Lot 12 DP 1024564 consisting of the Conservation Offset Area (COA).

**Figure 1** and **Figure 2** illustrate the site within its broader regional context and site layouts respectively.

### 1.3 Purpose

This document has been prepared to provide HQPL with a consistent approach to the management of environmental matters; and sets out the minimum standards and processes to achieve this intended level of management. The Environmental Management Strategy & Monitoring Program (EMS&MP) applies only to the KHRQ site described in **Section 1.2** and illustrated in **Figure 2**.

### 1.4 Agency Consultation

This EMS&MP has been prepared in accordance with the requirements of the Development Consent, including the requirement for consultation with relevant agencies for the monitoring plan component. In June 2024, consultation was undertaken via the NSW Major Projects Portal with both the NSW Environment Protection Authority (EPA) (PAE-72340019) and MidCoast Council (MCC) (PAE-72344996).

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page    |
|-----------------|----------------|--------------|---------------|----------------|---------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 5 of 32 |

## **Environment Protection Authority**

The EPA's response is provided in **Appendix A** and confirms:

*The EPA encourages the development of such plans to ensure that proponents have determined how they will meet their statutory obligations and designated environmental objectives. However, the EPA does not review, approve or endorse these documents as our role is to set environmental objectives for environmental/ conservation management, not to be directly involved in the development of strategies to achieve those objectives.*

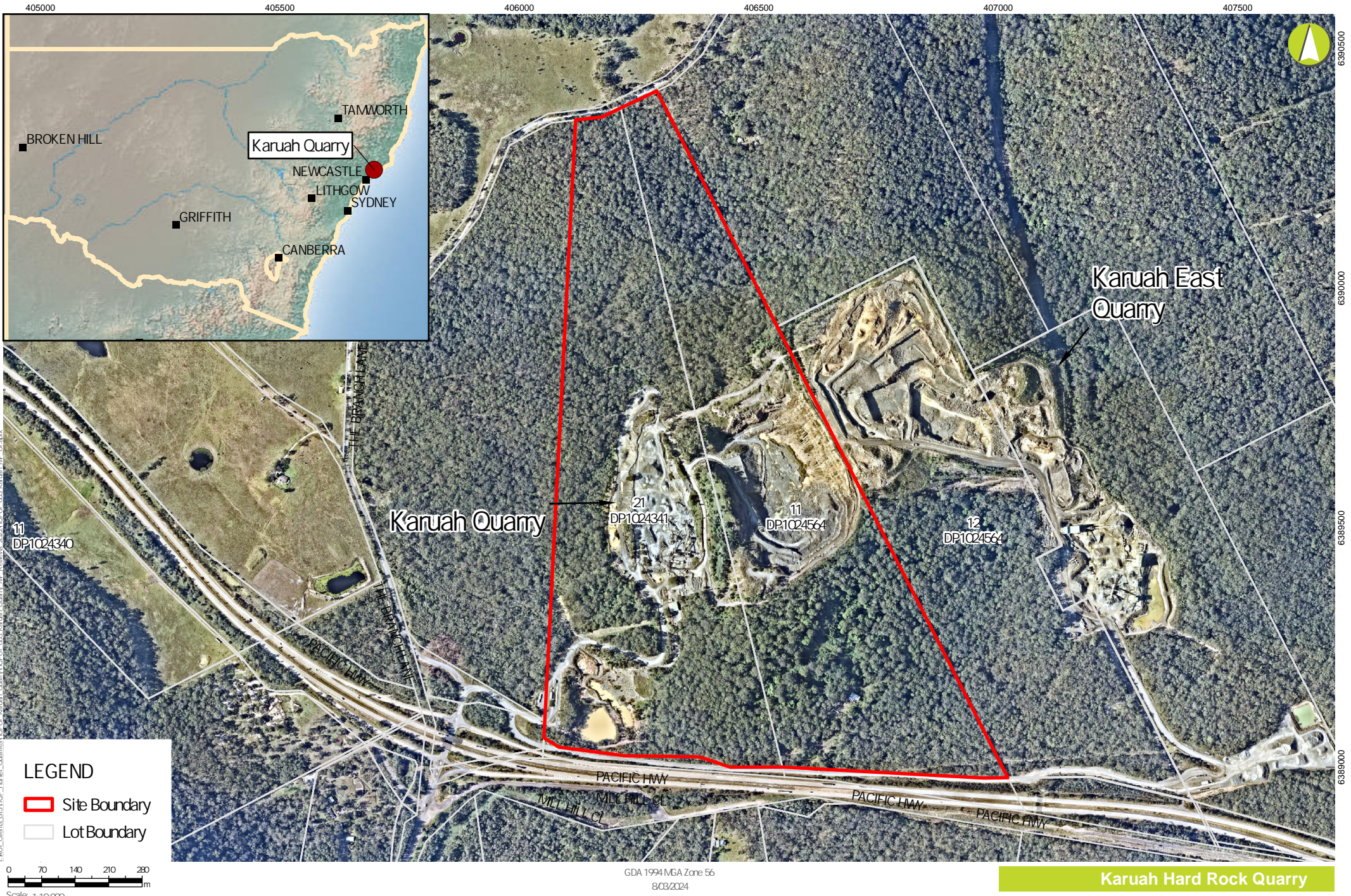
## **MidCoast Council**

MidCoast Council queried regarding the level of detail provided in this EMS&MP in relation to water management aspects, as provided in **Appendix A**.

HQPL can confirm that these queries are addressed in the Site Water Management Plan (SWMP), where as the purpose of the EMS&MP is overarching summary document only.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page    |
|-----------------|----------------|--------------|---------------|----------------|---------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 6 of 32 |





I:\01\_Clients\GIS\HOP\_Hunter\_Quarries\HOP01\_Karuah\_Quarry\HOP01\_03\_Karuah\_Quarry\_MP\_Review\_2024\HOP01\_03\_Karuah\_MP\_01.aprx

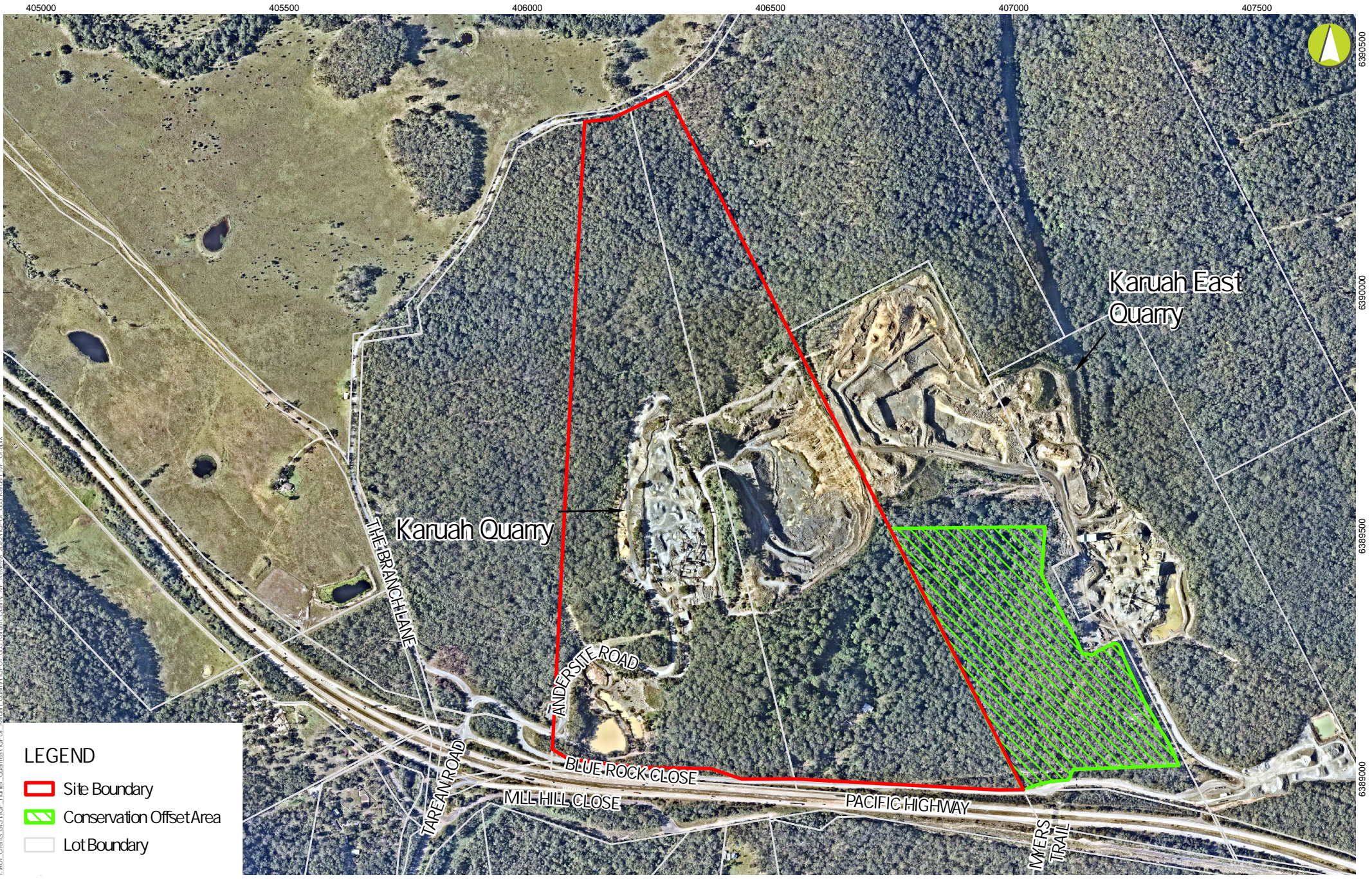
Scale: 1:10,000

**Karuah Hard Rock Quarry**

**Environmental Management Strategy & Monitoring Program**

**FIGURE 1 - Regional and Local Context Plan**





405000 405500 406000 406500 407000 407500



6389000  
6390000  
6391000  
6392000

I:\01\_Clients\GIS\HOP\_Hunter\_Quarries\HOP01\_Karuah\_Quarry\HOP01\_03\_Karuah\_Quarry\_MP\_Review\_2024\HOP01\_03\_Karuah\_MP\_01.aprx

**LEGEND**

- Site Boundary
- Conservation Offset Area
- Lot Boundary



GDA 1994 MGA Zone 56  
8/03/2024

**Karuah Hard Rock Quarry**

**Environmental Management Strategy & Monitoring Program**

**FIGURE 2 - Locality Plan**



## 2.0 Regulatory Requirements

### 2.1 Requirements of the Development Consent (DA 265-10-2004)

The requirements of the Development Consent are summarised by **Table 1**.

**Table 1 Summary of Relevant Conditions of the Development Consent.**

| No  | Requirements  | Section                                       |   |   |    |                                      |    |                    |    |                    |
|---|---|---|---|---|----|--------------------------------------|----|--------------------|----|--------------------|
| <b>Schedule 3 – Specific Environmental Conditions</b> |   |   |   |   |    |                                      |    |                    |    |                    |
| <b>Condition 1</b>                                    | <p><b>Noise Impact Assessment Criteria</b><br/>The Applicant shall ensure that the noise generated by the development does not exceed the criteria specified in Table 2 at any residence or noise sensitive receptor on privately owned land.</p> <p>Table 2: Noise Impact Assessment Criteria for the Development</p> <table border="1"> <thead> <tr> <th>Time Period</th> <th>Noise Limits [dB(A) LA<sub>eq(15min)</sub>]</th> </tr> </thead> <tbody> <tr> <td>Day (7am to 6pm) Monday to Friday; and<br/>7am to 1pm Saturday</td> <td style="text-align: center;">48</td> </tr> <tr> <td>Evening (6 to 10pm) Monday to Friday</td> <td style="text-align: center;">47</td> </tr> <tr> <td>At all other times</td> <td style="text-align: center;">46</td> </tr> </tbody> </table>  | Time Period                                   | Noise Limits [dB(A) LA <sub>eq(15min)</sub> ] | Day (7am to 6pm) Monday to Friday; and<br>7am to 1pm Saturday | 48 | Evening (6 to 10pm) Monday to Friday | 47 | At all other times | 46 | <b>Section 4.4</b> |
|   | Time Period   | Noise Limits [dB(A) LA <sub>eq(15min)</sub> ] |   |   |    |                                      |    |                    |    |                    |
|   | Day (7am to 6pm) Monday to Friday; and<br>7am to 1pm Saturday   | 48  |   |   |    |                                      |    |                    |    |                    |
|   | Evening (6 to 10pm) Monday to Friday  | 47  |   |   |    |                                      |    |                    |    |                    |
|   | At all other times  | 46  |   |   |    |                                      |    |                    |    |                    |
|   | <p>Notes:</p> <ul style="list-style-type: none"> <li>■ Noise from the site is to be measured within thirty meters of any residence or other noise sensitive areas to determine compliance with the noise criteria set out in Table 2.</li> <li>■ LA<sub>eq(15 minute)</sub> is the equivalent continuous noise level - the level of noise equivalent to the energy average of noise levels occurring over a measurement period.</li> <li>■ For the purpose of noise measures required for this condition, the LA<sub>eq</sub> noise level must be measured or computed at the point defined in this condition over a period of 15 minutes using “FAST” response on the sound level meter.</li> <li>■ For the purpose of the noise criteria for this condition, 5dBA must be added to the measured level if the noise is substantially tonal or impulsive in character. The location or point of impact can be different for each development, for example, at the closest residential receiver or at the closest boundary of the development. Measurement locations can be: <ul style="list-style-type: none"> <li>(a) 1 meter from the facade of the residence for night time assessment;</li> <li>(b) at the residential boundary;</li> <li>(c) 30 meters from the residence (rural situations) where boundary is more than 30 meters from residence.</li> </ul> </li> <li>■ The noise emission limits identified in this condition apply for prevailing meteorological conditions (winds up to 3m/s), except under conditions of temperature inversions. Noise impacts that may be enhanced by temperature inversions must be addressed by: <ul style="list-style-type: none"> <li>(a) documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions;</li> <li>(b) where levels of noise complaints indicate a higher level of impact then actions to quantify and ameliorate any enhanced impacts under temperature inversions conditions should be developed and implemented.</li> </ul> </li> </ul> |   |   |   |    |                                      |    |                    |    |                    |
| <b>Condition 3</b>                                    | <p><b>Noise Monitoring</b><br/>Within 6 months of the date of this consent, the Applicant shall prepare and implement a Noise Monitoring Program for the development to evaluate compliance with the noise impact assessment criteria in this consent, in consultation with the DEC, and to the satisfaction of the Director-General.</p>   | <b>Section 4.4</b>                            |   |   |    |                                      |    |                    |    |                    |
|   |   |   |   |   |    |                                      |    |                    |    |                    |

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page    |
|-----------------|----------------|--------------|---------------|----------------|---------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 9 of 32 |

| No           | Requirements   | Section   |  |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|--------------|--|---|--|---|--|--------|----------------------|-----------------------------------|--------|----------------------|-----------|------------------|-----------|-----------------------------------|---------|----------------------|-----------|------------------|--|------------------------------------|----------------|--------|---------------------------|---------------------------|-------------|
| Condition 4  | <p><b><u>Airblast Overpressure Criteria</u></b><br/>The Applicant shall ensure that the airblast overpressure level from blasting at the development does not exceed the criteria in Table 3 at any resident or sensitive receiver on privately owned land.</p> <p>Table 3: Airblast Overpressure Limits</p> <table border="1"> <thead> <tr> <th>Airblast overpressure level [dBL(Lin Peak)]</th> <th>Allowable exceedance</th> </tr> </thead> <tbody> <tr> <td>115</td> <td>5% of the total number of blasts over a period of 12 months.</td> </tr> <tr> <td>120</td> <td>0%</td> </tr> </tbody> </table>   | Airblast overpressure level [dBL(Lin Peak)]   | Allowable exceedance                     | 115   | 5% of the total number of blasts over a period of 12 months. | 120    | 0%                   | Section 4.3                       |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Airblast overpressure level [dBL(Lin Peak)]  | Allowable exceedance  |  |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | 115  | 5% of the total number of blasts over a period of 12 months.  |  |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | 120  | 0%  |  |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
| Condition 5  | <p><b><u>Ground Vibration Criteria</u></b><br/>The Applicant shall ensure that the peak particle velocity from blasting at the development does not exceed the criteria in Table 4 at any resident or sensitive receiver on privately owned land.</p> <p>Table 4: Ground Vibration Limits</p> <table border="1"> <thead> <tr> <th>Peak Particle Velocity (mm/s)</th> <th>Allowable exceedance</th> </tr> </thead> <tbody> <tr> <td>5</td> <td>5% of the total number of blasts over a period of 12 months.</td> </tr> <tr> <td>10</td> <td>0%</td> </tr> </tbody> </table>   | Peak Particle Velocity (mm/s)   | Allowable exceedance                     | 5   | 5% of the total number of blasts over a period of 12 months. | 10     | 0%                   | Section 4.3                       |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Peak Particle Velocity (mm/s)  | Allowable exceedance  |  |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | 5  | 5% of the total number of blasts over a period of 12 months.  |  |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
| 10           | 0%   |   |  |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
| Condition 13 | <p><b><u>Air Quality Impact Assessment Criteria</u></b><br/>The Applicant shall ensure that the dust emissions generated by the development do not cause additional exceedances of the ambient air quality impact assessment criteria listed in Tables 6, 7, and 8 at any residence or on more than 25% of, any privately owned land.</p> <p>Table 6: Long-term Impact Assessment Criteria for Particulate Matter</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Total suspended particulate (TSP) matter</td> <td>Annual</td> <td>90 µg/m<sup>3</sup></td> </tr> <tr> <td>Particulate matter &lt; 10 µm (PM10)</td> <td>Annual</td> <td>30 µg/m<sup>3</sup></td> </tr> </tbody> </table> <p>Table 7: Short-term Impact Assessment Criteria for Particulate Matter</p> <table border="1"> <thead> <tr> <th>Pollutant</th> <th>Averaging Period</th> <th>Criterion</th> </tr> </thead> <tbody> <tr> <td>Particulate matter &lt; 10 µm (PM10)</td> <td>24-hour</td> <td>50 µg/m<sup>3</sup></td> </tr> </tbody> </table> <p>Table 8: Long-term Impact Assessment Criteria for Deposited Dust</p> <table border="1"> <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>Deposited dust</td> <td>Annual</td> <td>2 g/m<sup>2</sup>/month</td> <td>4 g/m<sup>2</sup>/month</td> </tr> </tbody> </table> <p>Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 2003, AS3580.10.1- 1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.</p> | Pollutant   | Averaging Period                         | Criterion   | Total suspended particulate (TSP) matter                     | Annual | 90 µg/m <sup>3</sup> | Particulate matter < 10 µm (PM10) | Annual | 30 µg/m <sup>3</sup> | Pollutant | Averaging Period | Criterion | Particulate matter < 10 µm (PM10) | 24-hour | 50 µg/m <sup>3</sup> | Pollutant | Averaging Period | Maximum increase in deposited dust level | Maximum total deposited dust level | Deposited dust | Annual | 2 g/m <sup>2</sup> /month | 4 g/m <sup>2</sup> /month | Section 4.2 |
|              | Pollutant  | Averaging Period  | Criterion                                |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Total suspended particulate (TSP) matter   | Annual  | 90 µg/m <sup>3</sup>                     |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Particulate matter < 10 µm (PM10)  | Annual  | 30 µg/m <sup>3</sup>                     |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Pollutant  | Averaging Period  | Criterion                                |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Particulate matter < 10 µm (PM10)  | 24-hour   | 50 µg/m <sup>3</sup>                     |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Pollutant  | Averaging Period  | Maximum increase in deposited dust level | Maximum total deposited dust level  |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Deposited dust   | Annual  | 2 g/m <sup>2</sup> /month                | 4 g/m <sup>2</sup> /month   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              | Condition 15   | <p><b><u>Air Quality Monitoring</u></b><br/>Within 6 months of the date of this consent, the Applicant shall prepare and implement an Air Quality Monitoring Program for the development to evaluate compliance with the air quality impact assessment criteria in this consent, in consultation with the DEC, and to the satisfaction of the Director-General.</p> | Section 4.2                              |   |  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |
|              |  | Condition 16  |  | <p><b><u>Meteorological Monitoring</u></b><br/>Within 6 months of this consent, the Applicant shall ensure that there is a suitable meteorological station operating in the vicinity of the development in accordance with the requirements in Approved Methods for Sampling of Air Pollutants in New South Wales, and to the satisfaction of the DEC and the Director-General.</p> | Section 4.1  |        |                      |                                   |        |                      |           |                  |           |                                   |         |                      |           |                  |  |                                    |                |        |                           |                           |             |

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 10 of 32 |

| No   | Requirements  | Section               |
|--|---|-----------------------|
| Condition 21   | <i>The Remnant Vegetation Conservation Plan shall:<br/>...<br/>(b) describe how the performance of these measures would be monitored over time.</i>   | <b>Section 4.6</b>    |
| Condition 22   | <i>The Conservation Offset Management Plan shall:<br/>...<br/>(e) describe how the ecological performance of the conservation offset area would be monitored over time</i>  | <b>Section 4.6</b>    |
| Condition 28   | <b><u>Surface Water Monitoring</u></b><br><i>The Applicant shall:<br/>(a) measure:</i> <ul style="list-style-type: none"> <li>■ <i>the volume of the water discharged from the site via licenced discharge points;</i></li> <li>■ <i>the water use on the site;</i></li> <li>■ <i>water transfers across the site; and</i></li> <li>■ <i>dam and water structure storage levels.</i></li> </ul> <i>(b) regularly monitor the quality of the surface water discharged from the licenced discharge points on the site;<br/>to the satisfaction of the DEC and the Director General.</i> | <b>Section 4.5</b>    |
| Condition 34   | <b><u>Waste Management</u></b><br><i>The Applicant shall:<br/>(a) monitor the amount of waste generated by the development;<br/>(b) investigate ways to minimise waste generated by the development;<br/>(c) implement reasonable and feasible measures to minimise waste generated by the development; and<br/>(d) report on waste management and minimization in the AEMR.<br/>to the satisfaction of the Director-General.</i>   | <b>Section 4.8</b>    |
| Condition 39   | <b><u>Rehabilitation Management Plan</u></b><br><i>Within 6 months of the date of this consent, the Applicant shall prepare, and subsequently implement, a Rehabilitation Management Plan for the site, which integrates rehabilitation works for both Stage 1 and Stage 2 areas, to the satisfaction of the Director General. This plan must:<br/>...<br/>(e) describe how the performance of these measures would be monitored over time.</i>   | <b>Section 4.7</b>    |
| Condition 44   | <b><u>Quarry Closure Plan</u></b><br><i>At least 3 years prior to the cessation of quarrying, the Applicant shall prepare a Quarry Closure Plan for the development, in consultation with the Council, and to the satisfaction of the Director General. This plan must:<br/>...<br/>(d) describe how the performance of these measures would be monitored over time.</i>  | <b>Section 4.7</b>    |
| <b>Schedule 4 – Environmental Management, Monitoring, Auditing and Reporting</b> |   |                       |
| Condition 1  | <b><u>Environmental Management Strategy</u></b><br><i>Within 6 months of the date of this consent, the Applicant shall prepare, and subsequently implement an Environmental Management Strategy for the development to the satisfaction of the Director-General. This strategy must:</i>  | <b>Whole document</b> |
|  | <i>(a) provide the strategic context for environmental management of the development;</i>   | <b>Section 3.1</b>    |
|  | <i>(b) identify the statutory requirements that apply to the development;</i>   | <b>Section 2.0</b>    |

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 11 of 32 |

| No                | Requirements  | Section     |
|-------------------|---|-------------|
| Condition 1 cont. | (c) describe in general how the environmental performance of the development would be monitored and managed during the development;   | Section 4.0 |
|                   | (d) describe the procedures that would be implemented to: <ul style="list-style-type: none"> <li>■ keep the local community and relevant agencies informed about the operation and environmental performance of the development;</li> <li>■ receive, handle, respond to, and record complaints;</li> <li>■ resolve any disputes that may arise during the course of the development;</li> <li>■ respond to any non-compliance;</li> <li>■ manage cumulative impacts; and</li> <li>■ respond to emergencies; and</li> </ul>  | Section 5.0 |
|                   | (e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the development.  | Section 3.2 |
| Condition 2       | Within 3 months of the completion of the Independent Environmental Audit (see condition 6 below), the Applicant shall review, and if necessary revise, the Environmental Management Strategy to the satisfaction of the Director-General.   | Section 3.3 |
| Condition 3       | <b><u>Environmental Monitoring Program</u></b><br>Within 6 months of the date of this consent, the Applicant shall prepare an Environmental Monitoring Program, in consultation with the relevant agencies, and to the satisfaction of the Director-General. This program must consolidate the various monitoring requirements in Schedule 3 of this consent into a single document.  | Section 4.0 |
| Condition 4       | Within 3 months of the completion of the Independent Environmental Audit (see condition 6 below), the Applicant shall review, and if necessary revise, the Environmental Monitoring Program to the satisfaction of the Director-General.  | Section 3.3 |
| Condition 5       | <b><u>Annual Reporting</u></b><br>The Applicant shall prepare and submit an AEMR to the Director-General and the relevant agencies. This report must address: <ol style="list-style-type: none"> <li>(a) identify the standards and performance measures that apply to the development;</li> <li>(b) describe the works carried out in the last 12 months;</li> <li>(c) describe the works that will be carried out in the next 12 months;</li> <li>(d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;</li> <li>(e) include a summary of the monitoring results for the development during the past year;</li> <li>(f) include an analysis of these monitoring results against the relevant: <ul style="list-style-type: none"> <li>■ impact assessment criteria;</li> <li>■ monitoring results from previous years; and</li> <li>■ predictions in the EIS;</li> </ul> </li> <li>(g) identify any trends in the monitoring results over the life of the development;</li> <li>(h) identify any non-compliance during the previous year and</li> <li>(i) describe what actions were, or are being undertaken to ensure compliance.</li> </ol> | Section 5.2 |
| Condition 8       | <b><u>Community Consultative Committee</u></b><br>Within 3 months of the date of this consent the Applicant shall seek expressions of interest from members of the local community to serve as a member of a Community Consultative Committee for the development.  | Section 5.1 |

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 12 of 32 |



| No           | Requirements  | Section     |
|--------------|---|-------------|
| Condition 10 | <p><i>If the Applicant does not receive at least two expressions of interest to serve on the CCC the Applicant shall instead develop a communications strategy for consulting with Council and residents within 2 km of the development, to the satisfaction of the Director-General. This strategy should outline how the Applicant will advise Council and nearby residents on its environmental management plans, monitoring results, audit reports or complaints. This communication should occur twice a year.</i></p> <p><i>Notes: If during the course of the development, a Community Consultative Committee that has been established is found to be no longer effective, the Director-General may agree to its disbandment.</i></p> | Section 5.1 |

## 2.2 Requirements of the Environment Protection Licence (EPL 11569)

The EPA regulates the operations conducted at the KHRQ site through an Environment Protection Licence (EPL 11569) issued under the Protection of the Environment Operations Act 1997 (POEO Act).

There are several conditions relating to environmental management in the EPL that have been addressed in this EMS&MP. Specific EPL conditions are summarised in **Table 2** together with the relevant sections of the EMS&MP indicating where the requirements have been addressed.

**Table 2** *Requirements of the Environment Protection Licence (EPL 11569).*

| Condition | Summary of Condition               | Section     |
|-----------|------------------------------------|-------------|
| P1        | Locations of Monitoring Points     | Figure 4    |
| M4        | Recording pollution complaints     | Section 5.3 |
| M5        | Telephone complaints line          | Section 5.3 |
| R2        | Notification of environmental harm | Section 5.2 |
| R4        | Blast reporting conditions         | Section 5.2 |

## 3.0 Environmental Management Strategy

### 3.1 Strategic Framework

The EMS&MP has been prepared with reference to ISO 14001:2015 *Environmental management systems – Requirements and guidance for use*. The EMS&MP incorporates the Plan-Do-Check-Act concept which provides an iterative process to achieve continual improvement, as outlined by **Figure 3**, and includes:

- **Plan:** – establish environmental objectives and procedures necessary to deliver results in accordance with HQPL’s environmental policy;
- **Do:** – implement the processes as planned;
- **Check:** – monitor and measure processes against environmental objectives, requirements and operating criteria and report results; and
- **Act:** – take actions to continually improve.



**Figure 3** ISO 14001:2015 Plan-Do-Check-Act Model.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 14 of 32 |

## 3.2 Roles and Responsibilities

**Table 3** summarises the key roles and responsibilities for environmental management across the site.

**Table 3** *Roles & Responsibilities for Environmental Management*

| Position   | Responsibility   |
|--|--|
| General Manager  | <ul style="list-style-type: none"> <li>■ Provide sufficient resources for the effective implementation of this EMS&amp;MP.</li> </ul>  |
| Quarry Manager   | <ul style="list-style-type: none"> <li>■ Ensure all employees and contractors undertake the relevant environmental management training; and</li> <li>■ Ensure all employees and contractors carry out work in accordance with this EMS&amp;MP.</li> </ul>  |
| Environment & Development Manager (or suitable delegate) | <ul style="list-style-type: none"> <li>■ Overall responsibility for environment and community compliance with licences and approvals;</li> <li>■ Coordinate environmental monitoring, reporting, inspections, environmental training, authority liaison, maintaining complaints register, rehabilitation planning, and community liaison;</li> <li>■ Prepare the necessary documentation to demonstrate compliance and meet legislative obligations;</li> <li>■ Review outcomes of environment and community incident investigations;</li> <li>■ Record, investigate and respond to complaints and/or enquiries and review outcomes of investigations;</li> <li>■ Investigate community complaints and or enquiries in consultation with the Environmental Specialists and review outcomes of investigations;</li> <li>■ The implementation and adherence to the EMS&amp;MP and other key management plans;</li> <li>■ Providing adequate training to employees and contractors regarding their requirements under the EMS&amp;MP and key environmental management plans;</li> <li>■ Monitor relevant site environmental performance – compliance, risk assessment and improvement actions;</li> <li>■ Planning for adequate resources to implement the EMS&amp;MP; and</li> <li>■ Develop and implement an audit and review schedule for the site.</li> </ul> |
| All employees and contractors                            | <ul style="list-style-type: none"> <li>■ Become familiar and comply with the EMS&amp;MP and key environmental management plans;</li> <li>■ Support HQPL’s commitment to environmental management;</li> <li>■ Work in a manner that will not harm the environment;</li> <li>■ Report all environmental incidents/complaints; and</li> <li>■ Report any inappropriate environmental management practices and take immediate action.</li> </ul>   |

### 3.3 Environmental Management Documents

The Environmental Management System consists of the following documents as summarised by **Table 4**.

**Table 4** *Summary of Environment Management Plans, Strategies and Programs.*

| Document ID    | Document   | Requirement                    | Condition   |
|----------------|--|--------------------------------|---|
| ENV-MP-KHRQ001 | Environmental Management Strategy & Monitoring Program | Development Consent            | Schedule 4, Condition 1 and Schedule 4, Condition 3   |
| ENV-MP-KHRQ002 | Bushfire Management Plan                               | Development Consent            | Schedule 3, Condition 36                              |
| ENV-MP-KHRQ003 | Flora & Fauna Management Plan                          | Development Consent            | Schedule 3, Condition 19                              |
| ENV-MP-KHRQ004 | Pollution Incident Response Management Plan            | Environment Protection Licence | Condition O4  |
| ENV-MP-KHRQ005 | Rehabilitation & Closure Plan                          | Development Consent            | Schedule 3, Condition 39 and Schedule 3, Condition 44 |
| ENV-MP-KHRQ006 | Site Water Management Plan                             | Development Consent            | Schedule 3, Condition 26                              |

In accordance with Schedule 4, Condition 2 and Condition 4 of the Development Consent, these documents will be reviewed at a minimum of every five years, within 3 months of completion of the 5-yearly Independent Environmental Audit (IEA).

Other document reviews will be completed on an as needed basis following material changes to the operation such as the approval of any modification applications to the Development Consent.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 16 of 32 |

## 4.0 Environmental Monitoring Program

In accordance with Schedule 4, Condition 3 and Condition 4 of the Development Consent, this section of the EMS&MP outlines the various aspects of environment monitoring required by the Development and EPL, including:

- Meteorological Monitoring,
- Air Quality Monitoring,
- Blast Monitoring,
- Surface Water Monitoring,
- Flora & Fauna Monitoring
- Rehabilitation Monitoring, and
- Waste Monitoring.

Monitoring locations are illustrated by **Figure 4**.

### 4.1 Meteorological Monitoring

In accordance with Schedule 3, Condition 16 of the Development Consent a meteorological station has been installed and situated at the KHRQ weighbridge, as illustrated by **Figure 4**, in compliance with Approved Methods for Sampling of Air Pollutants in New South Wales guidelines. The station is programmed to continuously record the meteorological parameters as summarised by **Table 5**.

**Table 5** *Meteorological Monitoring Parameters.*

| Measured Parameter   | Unit    | Sample Interval |
|----------------------|---------|-----------------|
| Mean wind speed      | m/s     | 15 minutes      |
| Mean wind direction  | Degrees | 15 minutes      |
| Aggregate Rainfall   | mm      | 15 minutes      |
| Mean air temperature | °C      | 15 minutes      |

This data can be accessed via a website to view the latest hour or download the previously recorded data. Previously recorded data is validated and can be downloaded in intervals of 15 minutes.

The station is maintained through annual calibration testing and maintenance inspections.

### 4.2 Air Quality Monitoring

Schedule 3, Condition 13 of the Development Consent provides air quality impact assessment criteria for the site and Condition P1 of the EPL provides monitoring requirements for air quality parameters. The air quality monitoring regime is outlined below.

#### **Depositional Dust**

Four depositional dust gauges are located surrounding the site and are monitored on a monthly basis of between 28 to 32 days. The monitoring regime is summarised by **Table 6** and illustrated by **Figure 4**.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 17 of 32 |

**Table 6 Summary of Depositional Dust Gauges.**

| Station ID | EPL Monitoring Point | Monitoring Location    |               |                | Direction from Quarry Site | Compliance Limit          |
|------------|----------------------|------------------------|---------------|----------------|----------------------------|---------------------------|
|            |                      | Description            | Easting (MGA) | Northing (MGA) |                            |                           |
| DDG 1      | 2                    | Mill Hill Close (West) | 406300        | 6388858        | South                      | 4 g/m <sup>2</sup> /month |
| DDG 2      | 3                    | Mill Hill Close (East) | 406430        | 6388808        | South                      | 4 g/m <sup>2</sup> /month |
| DDG 3      | 4                    | Tarean Road            | 405726        | 6388974        | South-West                 | 4 g/m <sup>2</sup> /month |
| DDG 4      | 5                    | Halloran Road          | 408002        | 6389854        | East                       | 4 g/m <sup>2</sup> /month |

### Particulate Matter

In July 2006, discussions with the EPA commenced regarding the required particulate matter monitoring requirements for the site. It was determined that a trial of sampling of Total Suspended Particulates (TSP) and Particulates Matter < 10 µm (PM10) would be undertaken to determine compliance with the Development Consent. A High-Volume Air Sampler (HVAS) was established at the site and monitored PM10 from 31 October 2006 and TSP from 14 March 2007; and operated until 19 November 2008.

The results of the monitoring undertaken during this period is summarised by **Table 7**.

**Table 7 Summary of HVAS Particulate Matter Monitoring from October 2006 to November 2008.**

| Pollutant    | Result                 | Averaging Period | Criterion            |
|--------------|------------------------|------------------|----------------------|
| Average TSP  | 24.2 µg/m <sup>3</sup> | Annual           | 90 µg/m <sup>3</sup> |
| Average PM10 | 12.7 µg/m <sup>3</sup> | Annual           | 30 µg/m <sup>3</sup> |
|              |                        | 24-hour          | 50 µg/m <sup>3</sup> |

In April 2008, a review of the HVAS particulate matter monitoring of obtained results over a 12-month period from April 2007 to March 2008 was undertaken, in consultation with the EPA and NSW Planning, with the results being well within compliance limits. On 17 July 2008, the EPA confirmed it was satisfied that the obtained data complied with the Development Consent, and it had no objection to ceasing HVAS monitoring for the site.

A revised EMP was subsequently submitted to NSW Planning in August 2008, which was approved in December 2008, formally approving the removal of the HVAS particulate monitoring on a routine basis. However, monitoring would be required to recommence to investigate any community complaints or as directed by NSW Planning.

In 2016, HVAS particulate matter monitoring recommenced, at different location in Mill Hill Close, for the neighbouring Karuah East Quarry (KEQ), operating under Project Approval, MP 09-0175. As such, data obtained for the KEQ will not be routinely reported for the KHRQ; however, will be reviewed and reported in the event of:

- Any exceedances occurring in the obtained KEQ HVAS particulate monitoring data;
- Any community complaints received regarding air quality; and
- Any information requests or other directions received by NSW Planning.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 18 of 32 |

### 4.3 Blast Monitoring

In accordance with Schedule 3, Condition 6 of the Development Consent, blasting will only be conducted between 9.00 am and 3.00 pm Monday to Friday, and within a maximum of one blast per week. No blasting will occur on weekends or public holidays. Any blasting outside of these hours will be conducted with prior approval of NSW Planning.

It should be noted that the blast event, may consist of a number of blasts in the same vicinity, within a short period of time, typically less than two minutes.

In accordance with Schedule 4, Condition 4 and Condition 5 of the Development Consent, all blasts will be monitored for overpressure and ground vibration at the nearest residential receptor, currently located on Mill Hill Close, as illustrated in **Figure 4**, to ensure blasting remains within compliance criteria summarised by **Table 8**.

**Table 8 Summary of Blasting Compliance Criteria.**

| Location                              | Airblast Overpressure [dBL (Lin Peak)] | Ground Vibration, PPV (mm/s) | Allowable Exceedance  |
|---------------------------------------|--|------------------------------|---|
| Any residence on privately-owned land | 120                                    | 10                           | 0%  |
|                                       | 115                                    | 5                            | 5% of the total number of blasts over a period of 12-months |

### 4.4 Noise Monitoring

Schedule 3, Condition 11 of the Development Consent provides noise impact assessment criteria for the site as summarised by **Table 9**. The noise monitoring regime is outlined below.

**Table 9 Summary of Noise Compliance Criteria.**

| Assessment Period  | Time Period  | Noise Limits [dB(A) LA <sub>eq(15min)</sub> ] |
|--------------------|--|---|
| Day                | 7am to 6pm Monday to Friday; and 7am to 1pm Saturday | 48  |
| Evening            | 6 pm to 10pm Monday to Friday                        | 47  |
| At all other times |  | 46  |

Noise monitoring rounds occur on a six-monthly basis consisting of both attended and unattended noise monitoring at the two nearest residential receivers (NM1 and NM2) located on Mill Hill Close, as illustrated by **Figure 4**.

The continuous unattended monitoring will occur over a period of at least four full days; and the attended monitoring will be undertaken for 15-minute intervals during both day and evening assessment periods by a suitably qualified noise consultant.

During the attended monitoring surveys, on-site climatic data will be logged to ensure that the noise assessment periods will be completed during favourable weather conditions as defined by the EPA's *Approved methods for the measurement and analysis of environmental noise in NSW*.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 19 of 32 |

## 4.5 Surface Water Monitoring

In accordance with Schedule 3, Condition 28 of the Development Consent, the following surface water monitoring is undertaken:

- Water volumes are measured via flowmeter to record water consumption through the plant and processing equipment, water extracted by water cart for dust suppression and for controlled water discharges.
- Water quality sampling is conducted via grab sample due to the following triggers:
  - Daily during off-site water discharges;
  - Following major rainfall events (> 20 mm); and
  - Routine surveillance sampling on a six-monthly basis.

Water quality sampling parameters, include:

- pH,
  - Electrical Conductivity, EC ( $\mu\text{S}/\text{cm}$ ),
  - Turbidity (NTU),
  - Total Suspended Solids, TSS (mg/L),
  - Oil and Grease (mg/L),
  - Total Nitrogen (mg/L), and
  - Total Phosphorus (mg/L); and
- Water levels in Sediment Dam 2 by electronic height sensor.

Refer to the **Site Water Management Plan** for further details.

## 4.6 Flora & Fauna Monitoring

In accordance with Schedule 3, Condition 21(b) and Condition 22(e) two-yearly ecological monitoring is conducted for the remnant vegetation across the site and the site's Conservation Offset Area.

Refer to the **Flora & Fauna Management Plan** for further details.

## 4.7 Rehabilitation Monitoring

In accordance with Schedule 3, Condition 39(e) and Condition 44(d) an annual rehabilitation inspection will be completed during the rehabilitation phase of the quarry, post-operations.

Refer to the **Rehabilitation & Closure Plan** for further details.

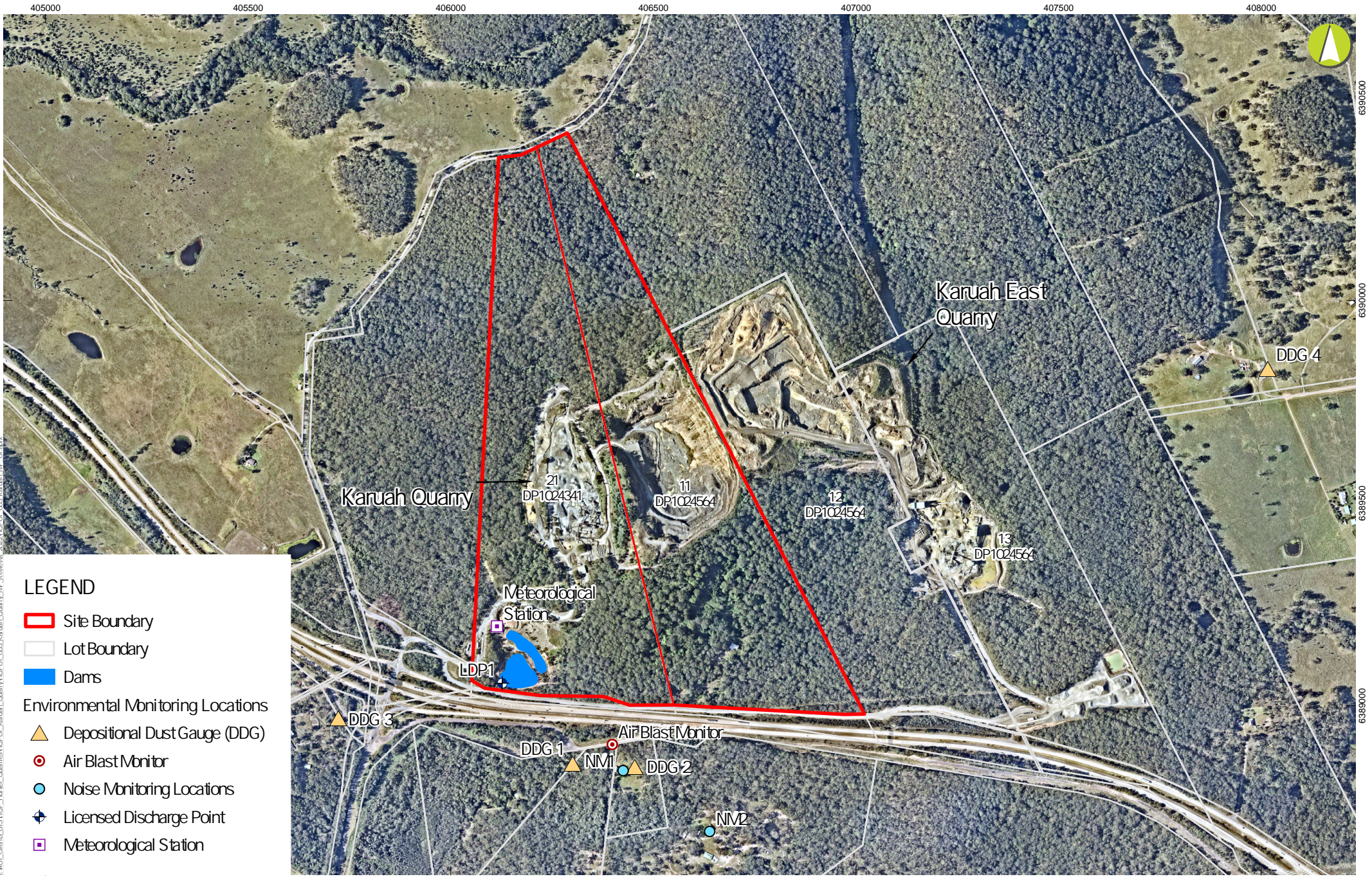
## 4.8 Waste Monitoring

In accordance with Schedule 3, Condition 34 of the Development Consent, waste volumes / tonnages removed from the site are recorded by the waste contractor.

Material recycled or reused offsite are also recorded to illustrate waste minimisation and management performance of the site. Waste minimisation strategies are reporting in the Annual Review.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 20 of 32 |





**LEGEND**

- ▭ Site Boundary
  - Lot Boundary
  - Dams
- Environmental Monitoring Locations**
- ▲ Depositional Dust Gauge (DDG)
  - ⊙ Air Blast Monitor
  - Noise Monitoring Locations
  - ⊕ Licensed Discharge Point
  - ⊞ Meteorological Station



GDA2020 MGA Zone 56  
8/03/2024

**Karuah Hard Rock Quarry**

**Environmental Management Strategy & Monitoring Program**

**FIGURE 4 - Environmental Monitoring Locations**

I:\01\_Clients\GIS\HOP\_Hunter\_Quarries\HOP01\_03\_Karuah\_Quarry\_MP\_Review\_2024\HOP01\_03\_Karuah\_MP\_01.aprx



## 5.0 Environmental Procedures

### 5.1 Community Consultation

#### **Community Consultative Committee**

In accordance with Schedule 4, Condition 8 of the Development Consent, HQPL sought Expressions of Interest (EoI) from the community to serve as members of the proposed KHRQ Community Consultative Committee (CCC) in 2007 and again in 2011.

However, the required minimum of two EoI responses were not received, preventing the ability to establish a CCC for the quarry in accordance with the requirements outlined in Schedule 4, Condition 9 of the Development Consent.

#### **Community Communications Strategy**

In accordance with Schedule 4, Condition 10 of the Development Consent, where a CCC is unable to be established, a communications strategy for consulting with MidCoast Council (MCC) and residents within a 2 km radius of the development (nearby residents) is required, with a minimum frequency of twice per year.

The communications will consist of a six-monthly report covering the January to June and July to December periods and will advise MCC and nearby residents on the site's environmental management plans, monitoring results, audit reports and community complaints.

Electronic reporting copies will be provided to MCC via email; and hardcopies will be distributed to nearby residents, unless electronic copies are requested. The reports will also be published to the Hunter Quarries website (<https://hunterquarries.com.au/reporting/>).

#### **Landholder Blast Notifications**

In accordance with Schedule 3, Condition 7 and Condition 8 of the Development Consent, HQPL has developed a blast notification register for nearby residents.

A text message notification will be issued prior to the day of the planned blast and a day-of reminder to all landholders and other external stakeholders of:

- Site of the planned blast;
- Day of the planned blast; and,
- Approximate time of the planned blast.

Note, individual landholders within the 2 km notification zone may request to be removed from the blast notification register.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 22 of 32 |

## 5.2 Agency and Public Reporting

All significant documents will be published to the Hunter Quarries’ website, including this Management Strategy and Monitoring Plan.

Schedule 3, Condition 37 of the Development Consent requires the annual Extractive Minerals Return to be submitted to the NSW Department of Regional NSW – Mining, Exploration and Geoscience (MEG).

Schedule 4, Condition 5 of the Development Consent outlines the requirement for annual reporting through the Annual Review reporting process. The Development Consent requires specific reporting of:

- Implementation and performance of the Flora & Fauna Management Plan (Schedule 3, Condition 23);
- Re-vegetation and maintenance of the visual bund (Schedule 3, Condition 29);
- Waste management and minimisation (Schedule 3, Condition 34);
- Production data (Schedule 3, Condition 37); and a
- Progress report on the Rehabilitation Management Plan (Schedule 3, Condition 41).

Schedule 4, Condition 10 of the Development Consent requires a Community Communications Strategy consisting of twice-yearly communications to MCC and nearby residents, as outlined by **Section 4.1**.

Section 66(6) of the *NSW Protection of the Environment Operations Act 1997* (POEO Act) requires all monitoring results and other environmental performance data to be made publicly available on the Hunter Quarries website ([www.hunterquarries.com.au/reporting/](http://www.hunterquarries.com.au/reporting/)). This information is currently produced on a monthly basis through monthly Environmental Monitoring Reports (EMR’s).

Condition R2 of the EPL requires notification of environmental harm immediately to the EPA’s Environment Line; with a follow-up written report within 7-days.

Condition R4.1 of the EPL requires any exceedance of the licence blasting limits to be reported to the regional office of the EPA as soon as practicable after the exceedance is identified.

Condition R4.2 of the EPL requires an annual blast monitoring report to be included in the Annual Return submitted to the EPA within 60x days of the EPL’s anniversary date via the EPA eConnect portal.

## 5.3 Complaints Handling

All complaints received regarding environmental matters associated with the operation will be acknowledged within 24 hours by appropriate personnel and investigated as soon as reasonably practicable. The complainant will be kept updated at key milestones of the investigation and will be notified of the outcome once available.

HQPL will operate a telephone complaints line (**1800 329 161**) for the purposes receiving complaints from members of the public in relation to activities conducted at the premises.

HQPL will keep a record of any complaints made to the quarry in relation to the project site for at least four years after the complaint was made. Additionally, the record will be available to any authorised officer of the EPA who wishes to view them.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 23 of 32 |

Records will include:

- date and time of complaint;
- method by which the complaint was made;
- personal details of the complainant (if provided);
- nature of the complaint;
- weather conditions corresponding to the time of the complaint;
- action taken by the quarry and any follow up actions; and
- if no action was taken, the reason why no action was taken.

Additionally, Condition M4 of the EPL outlines the process for recording pollution complaints.

## 5.4 Dispute Resolution

In accordance with Schedule 3, Condition 11 of the Development Consent, if a landholder within 1 km of the site considers that any structures on their land has been damaged as a result of blasting activities at the KHRQ, HQPL will engage a suitably qualified, experienced and independent person, whose appointment has been endorsed by the Planning Secretary, to investigate the claim.

If the investigation confirms that landholder’s claim and both HQPL and the landholder agree with the findings, HQPL will compensate the landholder for the assessed damages to the satisfaction of the Planning Secretary.

If the either HQPL or the landholder disagrees with the findings, then either party may refer the matter to the Planning Secretary for resolution.

If the matter cannot be resolved within 21 days, the Planning Secretary will commence the Independent Dispute Resolution Process as outlined by Appendix 3 of the Development Consent.

Any other disputes will be managed by the dispute resolution flowchart provided by **Figure 5**.

## 5.5 Non-Compliance and Incident Response

HQPL will notify NSW Planning as soon as reasonably practicable after it becomes aware of a reportable incident. The notification will be in writing and via the NSW Major Projects Planning Portal.

HQPL will notify NSW Planning within seven days of becoming aware of a reportable non-compliance. The notification will be in writing and via the NSW Major Projects Planning Portal.

It should be noted that an exceedance of the air quality, blast or noise limits is typically classified as a non-compliance rather than an incident.

Where a significant pollution incident occurs which causes an impact or material harm, reference will be made to the KHRQ Pollution Incident Response Management Plan (PIRMP).

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 24 of 32 |

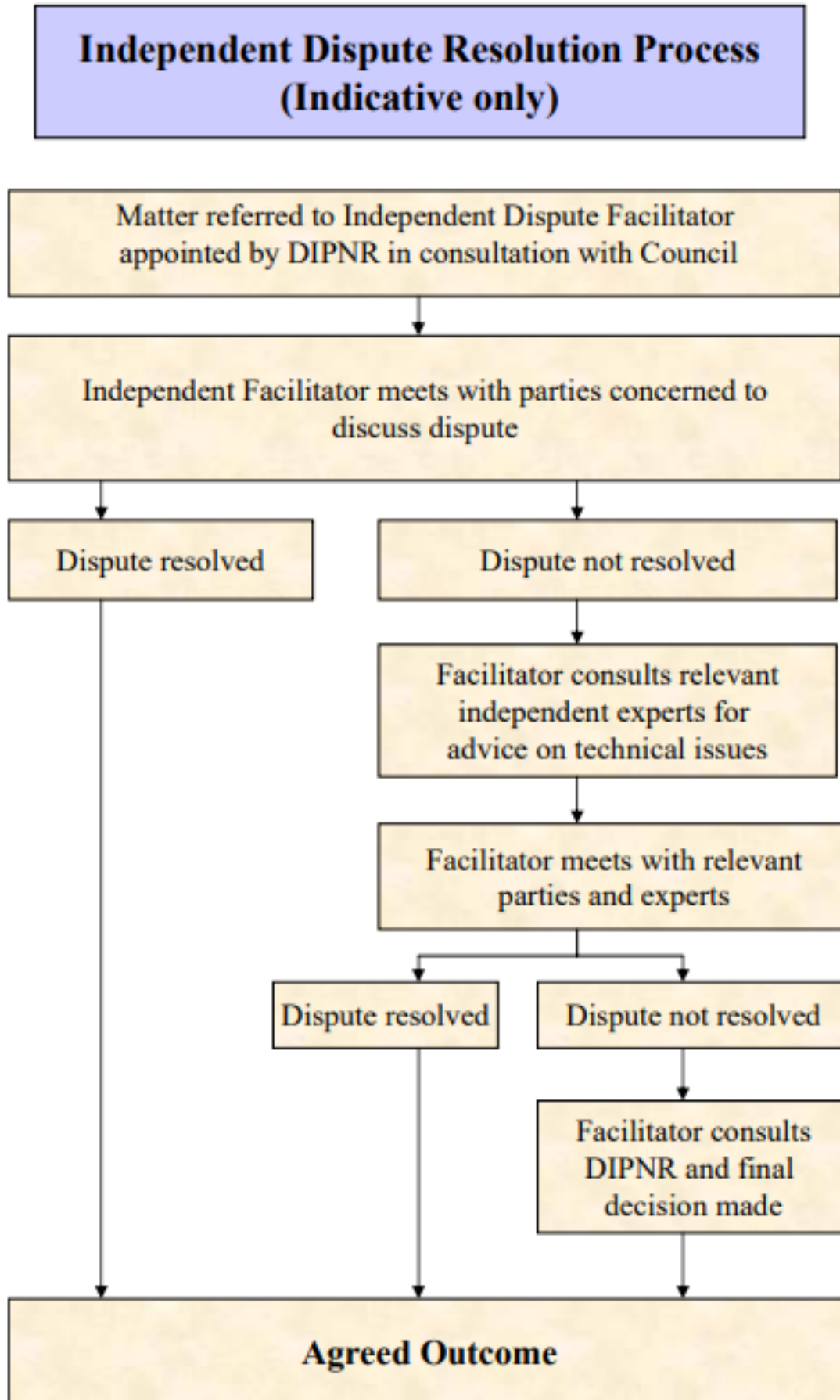


Figure 5 Flowchart for the Dispute Resolution Process.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 25 of 32 |

## 5.6 Emergency Response

HQPL has developed a Pollution Incident Response Management Plan (PIRMP) which covers the key actions to minimise occurrence of a pollution incident and manage a pollution incident if one occurs (during and after a pollution incident).

The PIRMP has been prepared for managing the impact to human health (employees and nearby neighbours) and the environment (onsite and offsite) and are required to immediately report pollution incidents to Appropriate Regulatory Authorities (ARA's) and relevant sensitive receivers.

The PIRMP will be tested annually (simulation) and within one month (incident review) of any pollution incidents occurring to ensure the plan is up-to-date and remains capable of being implemented in a workable and effective manner.

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 26 of 32 |

## Appendix A: Agency Consultation (NSW EPA and MidCoast Council)

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 27 of 32 |



DOC24/408029-2

KARUAH EAST QUARRY PTY LIMITED  
PO Box 23  
KARUAH, NSW, 2324  
Via email: [se@hunterquarries.com.au](mailto:se@hunterquarries.com.au)  
Attention: Scott Ellerton

Dear Scott,

**Karuah East Quarry Pty Limited Environmental Management Strategy and Monitoring Program (PAE-72340019)**

The Environment Protection Authority (EPA) refers to the Karuah East Quarry Pty Limited revised and consolidated Environmental Management Strategy and Monitoring Program (EMS&MP). Thank you for providing the document for our records.

The EPA encourages the development of such plans to ensure that proponents have determined how they will meet their statutory obligations and designated environmental objectives. However, the EPA does not review, approve or endorse these documents as our role is to set environmental objectives for environmental/ conservation management, not to be directly involved in the development of strategies to achieve those objectives.

Please note that it is a requirement for activities at the premises to remain consistent with relevant approvals, Environment Protection Licence No. 20611 and the *Protection of the Environment Operations Act 1997*.

If you have any questions regarding this matter, please contact me on (02) 49086831 or via email: [info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au), marked to my attention.

Yours sincerely

**Emma Coombs**  
**A/Unit Head Operations**  
**Environment Protection Authority**

**Phone** 131 555  
**Phone** +61 2 9995 5555  
(from outside NSW)

**TTY** 133 677  
**ABN** 43 692 285 758

Locked Bag 5022  
Parramatta  
NSW 2124 Australia

4 Parramatta Square  
12 Darcy St, Parramatta  
NSW 2150 Australia

[info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au)  
[www.epa.nsw.gov.au](http://www.epa.nsw.gov.au)



31 October 2024

Scott Ellerton  
Environment & Development Manager  
Hunter Quarries

Dear Scott

Karuah Hard Rock Quarry

Thank you for providing the opportunity for Council to comment on the revised and consolidated Environmental Management Strategy and Monitoring Program (EMS&MP)

In general, the the management plan is considered OK – however we do have some queries.

Specifically in relation to Condition 26 where the condition reads;

**Site Water Management Plan**

*26. Within 12 months of the date of this consent, the Applicant shall prepare, and subsequently implement, a Site Water Management Plan for the development, in consultation with the DEC, and to the satisfaction of the Director-General. The plan shall detail how site water management on site will be integrated with existing surface water management and erosion and sediment control systems and address surface water management and erosion and sediment control at both the construction and operation phases of the development. This plan must include:*

- a) an Erosion and Sediment Control Plan;*
- b) a Surface Water Monitoring Program; and*
- c) a site water balance.*

1. It is noted that all of the documents are missing the following and how they relate to the SWMP;
  - a) an Erosion and Sediment Control Plan;
  - b) a site water balance.
2. Further to this, the reports do not outline the above and how they relate to the Construction and Operational phases as notes in the condition of consent (?). it is unclear what phase we are currently within.
3. Also we find that some of the key performance criteria for monitoring is *too qualitative* – e.g. visual inspection of water colour to ascertain the pollution level. What are the quantitative measures for this and what does it trigger, where is the protocol for flocculation and what is the dosing etc.

Council acknowledges that it is not the regulator and only a referral agency and as such these comments are provided as recommendations.

Yours faithfully,

A handwritten signature in black ink that reads "Bruce Moore". The signature is written in a cursive style with a large, stylized initial "B".

Bruce Moore  
**Coordinator Major Assessment**

## Appendix B: Correspondence with NSW Planning

| Document Number | Version Number | Version Date | Revision Date | Document Owner | Page     |
|-----------------|----------------|--------------|---------------|----------------|----------|
| ENV-MP-KHRQ001  | Version 6B     | 05/12/2024   | 05/12/2029    | E&D Manager    | 31 of 32 |

Scott Ellerton  
Environment & Development Manager  
Hunter Quarries Pty Ltd  
PO Box 23  
Karuah, NSW, 2324

18 December 2024

---

Subject: Environmental Management Strategy and Monitoring Program

Dear Mr Ellerton

I refer to the Environmental Management Strategy and Monitoring Program submitted in accordance with Condition 1, Schedule 4 of the consent for the Karuah Hard Rock Quarry Project (DA265-10-2004).

The Department has carefully reviewed the document and is satisfied that it meets the requirements of the relevant conditions in consent (DA265-10-2004).

Accordingly, as nominee of the Planning Secretary, I approve the Environmental Management Strategy and Monitoring Program (version 6B, dated December 2024).

You are reminded that if there are any inconsistencies between the Strategy and the conditions of consent, the conditions prevail.

Please ensure you make the document publicly available on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Kristina Robinson on 02 9860 1543 or at [Kristina.Robinson@dpi.nsw.gov.au](mailto:Kristina.Robinson@dpi.nsw.gov.au).

Yours sincerely



James McDonough  
Team Leader  
Resource Assessments

As nominee of the Planning Secretary