HUNTER QUARRIES

Karuah Hard Rock Quarry

# Environmental Management Strategy

August 2020

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# BASIS OF REPORT

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

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

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

# DOCUMENT CONTROL

| Reference | Comments | Date Prepared | Prepared By | Reviewed By |
|---|---|---|---|---|
| HQP00-003 | 1 August 2020 | July 2006 | Chrissie Eckersley | |
| HQP00-003 | Revised draft following DOP comment | July 2006 | Chrissie Eckersley | Anthony Alliston |
| HQP00-003 | Revised draft following additional DOP revisions | August 2006 | Chrissie Eckersley | Andrew Hutton |
| HQP00-003 | Final Report | 28 August 2006 | Chrissie Eckersley | Andrew Hutton |
| HQP00-003 | Review following Independent Environmental Audit & DoP comments | October 2008 | Chris Jones | Stephen Bragg |
| 633.HQP00.00300 | -v0.1 Independent Environmental Audit | December 2014 | Chris Jones | Andrew Hutton |
| 633.HQP00.00300-R01-v0.1 | Review following Independent Environmental Audit | August 2020 | Sam McDonald | Renae Gifford |

## ABBREVIATIONS

| | |
|---|---|
| **AEMR** | Annual Environmental Management Report |
| **BCD** | Biodiversity Conservation Division (formerly OEH) |
| **CCC** | Community Consultative Committee |
| **DA** | Development Application |
| **DPIE** | Department of Planning Industry and Environment |
| **DPIE – HD** | Department of Planning Industry and Environment – Heritage Division (formerly NSW NPWS) |
| **EIS** | Environmental Impact Statement |
| **EMP** | Environmental Monitoring Program |
| **EMS** | Environmental Management Strategy |
| **EPL** | Environment Protection Licence |
| **HQPL** | Hunter Quarries Pty Ltd |
| **km** | Kilometre |
| **MCC** | MidCoast Council |
| **PIRMP** | Pollution Incident Response Management Plan |
| **POEO Act** | Protection of the Environment Operations Act 1997 |

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## APPENDICES

# 1 Purpose and Background

## 1.1 Background

The MidCoast Council (MCC) granted conditional Development Consent for a hard rock quarry and crushing plant at Karuah on 3 December 1997. Hunter Quarries Pty Limited (HQPL) purchased the site from Mountain Industries in 2002 and has since operated a hard rock quarry at the site, known as Karuah Hard Rock Quarry (the Quarry). The material extracted at the Quarry is andesite, which is a hard, blue rock used for various purposes such as road base material, construction aggregate, aggregate used for concrete batching, drainage works, fill, landscaping and other uses.

The site is contained wholly within the MCC Area and is located approximately 40km north of Newcastle and 4km north of the Karuah town centre (see **Figure 1**).

Development Consent was granted by the Minister for Infrastructure, Planning and Natural Resources on the 3 June 2005 (ref. DA 265-10-2004), with the approved development including:

- 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 product a year over the next 22 years.

The site has Development Consent (DA 265-10-2004) approval to operate until 3 June 2027. It should be noted that the current lease agreement between HQPL and the owner of Lot 11 expires on 6 May 2024. It is proposed that the Quarry will enter a closure phase for Lot 11 in early 2021. Rehabilitation at Lot 11 will commence in early 2021 and will be completed by 6 May 2021. This will allow three years of rehabilitation monitoring prior to the Lot 11 lease agreement ceasing on 6 May 2024. Lot 21 will continue to be operational until the end of the Development Consent (DA 265-10-2004) (3 June 2027). A rehabilitation program for Lot 21 will be implemented after this date. For more information regarding rehabilitation schedules refer to the Rehabilitation and Closure Plan and subsequent Annual Environmental Management Review (AEMRs).

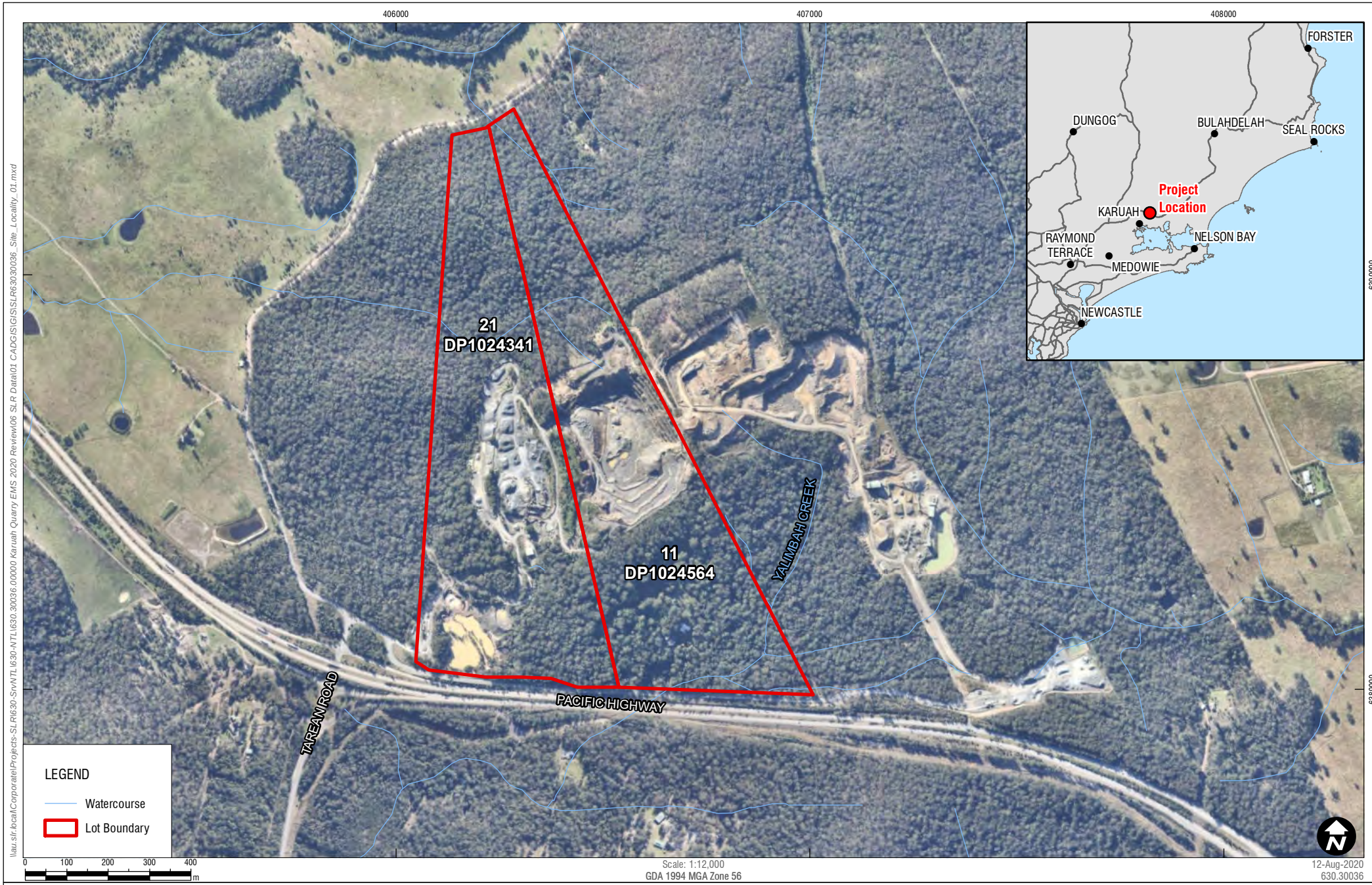
In accordance with Schedule 4, Condition 1 of the Development Consent (DA 265-10-2004), SLR Consulting Australia Pty Ltd (SLR) was engaged by HQPL to update the Environmental Management Strategy (EMS) for the Quarry operation. The EMS has been prepared to satisfy the requirements of the Development Consent (DA 265-10-2004) and to demonstrate environmental due diligence. The EMS was updated following the Independent Environmental Audit in 2014 and following the Independent Environmental Audit in 2019.

This EMS provides guidance and direction to the Quarry operator and incorporates the existing HQPL environmental policies and procedures, as well as relevant legislation, guidelines, standards and policies to ensure best practice environmental management on the site.

The EMS is applicable to all persons employed by HQPL at the Quarry as well as all contractors and visitors to the site. Where contractors may be responsible for the management and/or maintenance of a specific site operation, they may be required to prepare and implement their own EMS in addition to complying with the requirements of this EMS. Where this is required, the contractor will be provided with detail of the required content and format by HQPL.

The EMS is continually changing, responding to changes in the operation, changes in legislation and results of Independent Environmental Audits, and is updated to reflect changes as part of the management review.

**Figure 1**shows the location of the subject land, which includes Lot 21 DP 1024341, Lot 11 DP 1024564 and part of Lot 12 DP 1024564.




Source: Nearmap (June 2020)

Sheet Size : A4

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**Karuah Hard Rock Quarry**
**Site Locality**

**FIGURE 1**

## 1.2 Purpose and Layout

This EMS outlines the following:

- Describes the development in detail, including activities to be undertaken and indicative timing;
- Identifies statutory approvals which apply to the development;
- Provides specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impacts;
- Provides specific systems and actions to achieve compliance with applicable policies, approvals, licenses, permits, consultation agreements and legislation;
- Describes the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
- States objectives and targets for issues that are important to the environmental performance of the development; and
- Outlines a monitoring regime to validate the effectiveness of the implementation of controls.

The structure of this Strategy is based generally on the structure of the international standard for Environmental Management Systems ISO 14001, which follows the 'Plan-Do-Check-Act' process.

## 1.3 Operating Hours

Hunter Quarry Pty Ltd operates the Karuah Hard Rock Quarry as per the operating hours in Schedule 3 Condition 2 of the Development Consent (DA 265-10-2004).

The development shall comply with the following operating conditions in **Table 1**.

**Table 1 Operating Hours**

| Activity | Days of the Week | Time |
|---|---|---|
| • Construction<br>• Extraction and Processing<br>• Internal and off – site transportation of product | Monday – Friday | 7am to 6pm |
| | Saturday | 7am to 1pm |
| | Sunday and public holidays | No work at any time |
| Minor maintenance works on plant and machinery | 7 days a week and public holidays | 7am to 6pm |

## 1.4 Updates to the EMS

### 1.4.1 Updates to the EMS following Audits

A history of management plan preparation is included in the document control section with the first plan being prepared in 2006, with updates also occurring in 2008. This document along with other site management plans, were updated and sent to the then DoP in June 2014 as per the planned periodical review.

Following the completion of the Independent Environmental Audit in 2014 (MCW Environmental), HQPL sent the audit report to the Department of Planning and Environment (now Department of Planning Industry and Environment - DPIE) and responded to the recommended actions from the auditor. The recommendations relating to the EMS and where they are addressed (letter sent to DPIE) on 9 October 2014, are summarised in **Table 2**. Updates have been included in the 2020 EMS revision (**Table 3**) to provide additional context on the 2014 recommendations.

### Table 2 Recommendations from the 2014 Independent Environmental Audit

| Recommendation from Audit | Section and Comment |
|---|---|
| Comprehensive consideration of closure of the Quarry throughout the document as coordinated with the Karuah Hard Rock Quarry Rehabilitation and Closure Plan. It is anticipated that the Rehabilitation and Closure Plan would include risk assessments; statutory requirements relating to closure; the development of closure criteria; management controls required for closure and monitoring of closure activities. If this is the case; reference to the Rehabilitation and Closure Plan would be sufficient in the EMS, however the EMS should drive the overall Strategy for Closure as well as provide sufficient overview of the other related plans. | Rehabilitation and closure covered in the Rehabilitation and Closure Management Plan which is currently being reviewed by DPIE with there being extensive consultation with DPIE in 2019 and 2020. This EMS provides an overview of environmental management of the current operations. |
| The Objectives and Targets should be updated to reflect Closure requirements; | Objectives and targets are outlined in the AEMR, which is submitted in March every year. Objectives and targets include details of closure targets. These objectives and targets will become more specific as the site moves towards rehabilitation and closure within Lot 11. |
| The Complaints sections be updated to cover the requirements and sentiment of Environment Protection Licence (EPL 11569) condition M5.2; | **Section 4.14.3** of the EMS has been updated. |
| Consider whether current auditing is sufficient and suggest alternatives for auditing outside of the frequency defined for Independent Environmental Audits. | **Section 4.9.3** has been updated.<br>The site continues to review environmental performance through inspections and reporting requirements. |
| The strategy required to adequately control and manage weeds are better developed in the document | **Section 2.7** of the Flora and Fauna Management Plan. |
| The EMS define an environmental hazards reporting approach as a means of developing a culture of reporting all issues and providing a leading indicator for environmental management/performance; and | **Section 4.11** of the EMS. |
| Provide an overview of measuring rehabilitation performance against closure criteria – or refer to the Rehabilitation and Closure Plan once developed. | Covered in *Rehabilitation and Closure Plan* which is currently being reviewed by DPIE. |
| That the Blast Management Procedure (**Appendix 7** of the EMS) is updated to include requirements and processes for notification of landholders and interested parties, as required by the Condition.<br>That the procedure includes or have a reference to the register of landowners and other interested parties who are notified of each blast. | **Appendix 7** was updated for the 2020 review. |

| Recommendation from Audit | Section and Comment |
|---|---|
| That HQPL formalise monitoring of waste amounts to better report waste generation at the facility. This should cover all wastes included recycled wastes at the facility.<br>That HQPL:<br>Record waste in a central spreadsheet.<br>Investigate more opportunities for recycling and waste minimisation.<br>Management to meet and discuss measures to reduce packaging entering the site from suppliers.<br>Add additional waste information in the EMS and AEMR.<br>Record waste numbers in AEMR | EMS has been updated. See **Appendix 7 – Waste Management Procedure.**<br>Waste records included in AEMR's. |

Following the completion of the Independent Environmental Audit in 2019 (EMM Consulting), HQPL sent the audit report to DPIE and responded to the recommended actions from the auditor. Recommendations relating to the EMS and where they are addressed (letter sent to DPIE on 19 February 2020) are summarised in **Table 3.**

### Table 3 Recommendations from the 2019 Independent Environmental Audit

| Recommendation from Audit | Section and Comment |
|---|---|
| 6-monthly reports are prepared as discussed in the EMS and as required by Schedule 4, Condition 10 of the consent.<br>Alternatively:<br>• a CCC for Karuah Hard Rock Quarry should be implemented; or<br>• the EMS should be revised to detail an alternative communications strategy that can be met by HQPL. | **Section 4.14.2** of the EMS has been updated to include a revised Communication Strategy. The revised Communication Strategy addresses content, timing and method of communication with residents and the MCC. The requirement for six-monthly reports will be fulfilled by the AEMR and a 6-monthly report (separate to the AEMR) covering the period from January – June. |

### 1.4.2 Updates following comments from DPIE in 2016

In the letter from the DPIE dated 14 March 2016 there were some recommended updates to the EMS document. These are outlined below:

**Table 4 Recommendations from DPIE**

| Recommendation from DPIE | Comment |
|---|---|
| EMS, section 3.2, second paragraph, pg 8 – the correct agency reference is 'EPA' rather than 'OEH'. | Updated to be EPA |
| EMS, section 5.8.2, last sentence, pg 17 – should the reference to 'section 4.12' be 'section 5.12'? | This section should be 4.13. Updated. |
| EMS, section 5.9.3, last sentence of first paragraph, pg 18 – please check whether the correct agency reference is 'Environment Protection Authority' instead of 'Office of Environment and Heritage'. | References in the report for OEH generally updated to be EPA. |
| EMS, section 5.10, last sentence, pg 19 – 'Figure 2' should be Figure 1 of Appendix 9. | Updated |

# 2 Statutory Requirements

## 2.1 Development Consent Requirements

A condition of this Development Consent (DA 265-10-2004) was to prepare and implement an EMS. The details of the relevant conditions and the section(s) in this document where they are addressed are contained in **Table 5**.

**Table 5 Relevant Conditions of Development Consent**

| Condition Number: | Condition Requirement | EMS Section |
|---|---|---|
| Schedule 1. | *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:* | |
| | *provide the strategic context for environmental management of the development;* | EMS – whole document |
| | *identify the statutory requirements that apply to the development;* | **Section 2.0** Statutory Requirements |
| | *describe in general how the environmental performance of the development would be monitored and managed during the development;* | **Sections 2.0, 3.0 & 4.0** Specific information on monitoring is provided in **Section 4.10** |
| | *(a) describe the procedures that would be implemented to:*<br>*keep the local community and relevant agencies informed about the operation and environmental performance of the development;* | **Section 4.7** External Environmental Reporting & **4.14** Community Consultation |
| | • receive, handle and respond to, and record complaints; | **Section 4.14.3** Complaints Management |
| | • resolve any disputes that may arise during the course of the development; | **Section 4.14.3** Complaints Management |
| | • respond to any non-compliance; | **Section 4.12** Review & Corrective Action |
| | • manage the cumulative impacts; and | Risk register and EMPs |
| | • respond to any emergencies | **Section 4.4** Emergency Preparedness & Response |
| | *(e) describe the role, responsibility, authority, and accountability of all key personnel involved in environmental management of the development.* | Whole document |
| Schedule 2. | *Within 3 months of the completion of the Independent Environmental Audit (condition 6), the Applicant shall review, and if necessary revise, the Environmental Management Strategy to the satisfaction of the Director-General.* | **Section 4.13** Management Review |

## 2.2 Legislative Requirements

To maintain regulatory compliance, HQPL will aim to comply with the requirements of the various pieces of environmental legislation relevant to the site's operations. A register of the legal requirements will be maintained on site as part of this EMS document.

### 2.2.1 Requirements Register

The Requirements Register includes, but is not limited to, Federal and State legislation, Industry Codes of Practice, agreements with other stakeholders and industry guidelines. While every attempt has been made to include all relevant information, the register is dynamic. Additional requirements will be added to the register as identified by the Quarry Manager (or suitable delegate). A copy of the Statutory Requirements Register is attached as **Appendix 3.**

The HQPL Quarry Manager (or suitable delegate) is responsible for:

- Establishing and maintaining the Statutory Requirements Register (**Appendix 3**);
- Passing on relevant information, particularly in relation to the obligation to prevent pollution, and offences and penalties, to all employees and contractors working at the Quarry;
- Undertaking periodic audits to ensure satisfactory compliance with the statutes, codes of practice and industry guidelines as relevant to environmental management at the Quarry;
- Ensuring key reporting timeframes are met;
- Demonstrating compliance with the statutes, codes of practice and industry guidelines by undertaking regular reviews and inspections and developing action plans to address any non-compliance(s); and
- Providing copies of the Standard Environmental Conditions (see **Section 2.5** below) to all sub-contractors working at the mine.

### 2.2.2 Amendments and Updates of Environmental Legislation

Amendments and updates to relevant legal and the other relevant documentation will be recorded and maintained by a variety of methods including, but not limited to:

- Advice received from (Federal, State and Local) government bodies, including:

  - <u>Federal:</u>
    - *Commonwealth Department of Environment and Energy;*

  - <u>NSW Government Departments:</u>
    - *Department of Planning Industry and Environment – Resources Regulator (DPIE-RR)*
    - *Department of Planning Industry and Environment (DPIE);*
    - *The Department of Premier and Cabinet - Heritage; and*
    - *NSW Office of Water (NOW);*

  Websites and e-mail updates from the various government agencies. This may include, but not be limited to, the following websites:

  - http://www.environment.nsw.gov.au/ (Heritage website)
  - https://www.resourcesregulator.nsw.gov.au/ (DPIE-RR website)
  - http://www.dpie.nsw.gov.au/ (DPIE website)
- Direct access of (Federal, State and Local) legislation. The following site has been included as a reference:
  - www.austlii.edu.au
- Releases and notification from relevant industry/quarry organisations and professional bodies (e.g. NSW Minerals Council);
- Advice received from the HQPL legal advisors; and
- Subscription to Australian Standards (where available).

## 2.3 Authority Requirements

An Environment Protection Licence (EPL 11569) in accordance with *section 55* of the *Protection of the Environment Operations Act 1997 (NSW)* has been issued to HQPL for the Quarry, and incorporates the Stage 2 area. Copies of EPL 11569 are held both at Karuah Hard Rock Quarryand in the company head office in Thornton. A copy is also contained as **Appendix 2** of this EMS.

The Quarry Manager (or suitable delegate) is responsible for ensuring that the conditions contained within the EPL 11569 are met, and where required that the EPA are notified of any change that may result in the licence being reviewed or amended.

The general requirements of the EPL 11569 are incorporated in the HQPL Environment and Community Procedures (see **section 4.2**).

## 2.4 Relevant Guidelines and Standards

Various standards and guidelines apply to the quarrying activities and should be recorded to ensure best practice methods are employed at the site. A copy of the applicable guidelines and standards are attached as **Appendix 3.**

## 2.5 Standard Environmental Conditions (Contractors & Sub Contractors)

All contractors and subcontractors working on the Quarry are required to undertake their work on site in accordance with the HQPL Standard Environmental Conditions (the Standard). These conditions are attached in **Appendix 4.**

The conditions outlined in the Standard are designed to comply with all applicable laws, regulations and standards to the Quarry, including the Ministers conditions of consent. As stated in condition 1, subclause (g) of the Standard, the Development Consent (DA 265-10-2004) overrides any conflicting condition in the Standard.

# 3 Project Activities and Potential Environmental Aspects

## 3.1 Environment and Community Aspects Analysis

To assist in developing relevant Environment and Community Procedures to guide environmental management on the site, the main activities undertaken by HQPL have been identified along with any associated potential environment and community impacts. **Appendix 5** contains the environment and community aspects register with the associated risk rankings for all quarrying activities (environmental risk register) along with the residual risks once appropriate controls have been employed. The risk assessment was reviewed as part of the 2020 update.

The following section outlines the methodology used to identify and assign environmental risk to the various aspects across the site.

### 3.1.1 Identification of Environment and Community Aspects

The purpose of identifying the environment and community aspects is to develop and maintain procedures in order to determine those environmental aspects (activities or operations) under the control of HQPL that have or can have ***significant*** impacts on the environment.

In order to determine the environment and community aspects for the Quarry, the EMS implementation team has undertaken the following:

- Discussion with key operational personnel;
- Review of the EIS and the supplementary reports; and
- Review of current site performance.

The review of potential impacts has been considered for the Quarry during normal operation.

The following key areas were considered during the process of identifying the significant environment and community aspects associated with the Karuah Hard Rock Quarry:

- Air quality;
- Water quality;
- Land integrity (in terms of erosion & sedimentation, pollution & disposal of wastes, landform or shape and land use);
- Levels of noise and vibration;
- Biodiversity;
- Heritage and archaeology sites;
- Fire threat;
- Visual amenity of the area; and
- The location and structure of transport and access routes.

### 3.1.2 Determination and assigning Environment and Community Risk Ratings

The following section briefly outlines the methodology used to assign a specific Environment and Community Risk Rating to each aspect of the HQPL operation. Risk assessment is the formalised means by which hazards, and associated dangers are systematically identified, assessed, ranked according to perceived risk and addressed by means of appropriate and effective controls.

Environment and Community Risk is the likelihood of an unplanned incident occurring that will have an adverse impact upon the environment. The impact will vary in consequence from *Catastrophic* (a major event which could cause severe damage to the environment) through to *Insignificant* (no detrimental impact on the environment is measured or envisaged). The Environment and Community Risk Rating is measured in terms of consequence (severity) and likelihood (probability) of the event happening.

Environment and Community Consequence

The allocation of a Risk Rating was based on the consequence definitions contained in the following table. These definitions have been based on experience within the mining and quarrying industry.

## Table 6 Environmental Consequence Definitions

| | |
|---|---|
| **1. Catastrophic** | A major event which could cause severe damage to the environment.<br>• With actual or potential loss of credibility with key stakeholders.<br>• Environmental liability.<br>• Regulatory intervention, prosecution would occur.<br>• National publicity/complaints<br>• Could close the operation prematurely.<br>• Pollution event causes major downstream damage that is rectified by a long-term remediation program over 12 months, e.g. catastrophic incident that pollutes international waters. |
| **2. Major** | An event which could have a substantial and permanent consequence to the environment.<br>• An environmental incident which would result in prosecution.<br>• Adverse local publicity and community complaints.<br>• Pollution event which causes serious downstream damage that is rectified by a medium-term remediation program over 1-12 months |
| **3. Moderate** | An event which could create substantial temporary or minor permanent damage to the environment.<br>• A reportable incident not likely to result in prosecution.<br>• Flow of mine water off site, other than in accordance with EPA licence causes local reversible damage, e.g. unauthorized water discharge.<br>• Spill of hydrocarbon/chemical on to the ground or mine water bodies which exceeds 205 litres is not readily contained and/or requires more than $10,000 for containment and remediation clean up costs.<br>• Spill of a hydrocarbon/chemical into public water ways.<br>• Spillage of material onto public roads and requires more than $10,000 for containment and remediation clean up costs.<br>• Ongoing community complaints |
| **4. Minor** | An event which could have temporary and minor effects on the environment.<br>• A non-reportable environmental incident, e.g. a minor oil spill<br>• Hydrocarbon/chemical spill on the ground or into mine water body which exceeds 205 litres. It is contained on site.<br>• Damage to rehabilitation areas or environmental management structures that can be repaired readily.<br>• Orientation of lighting such that impacts on adjoining residences or public roads.<br>• Excessive dust emissions. |

| | |
|---|---|
| **5. Insignificant** | No detrimental impact on the environment is measured or envisaged.<br>• Blasts limits exceeding maximum overpressure and/or ground vibration levels as per EPL 11569 and Development Consent (DA 265-10-2004).<br>• Noise generated across site from individual items of plant and equipment which exceeds specified levels.<br>• Inappropriate storage of chemicals/fuels.<br>• Hydrocarbon/chemical spill within a sealed bunded which exceeds 1000L. |

Probability of an Incident occurring

The likelihood (or probability) of each impact occurring was also rated according to the following HQPL definitions, as set out in **Table 7**:

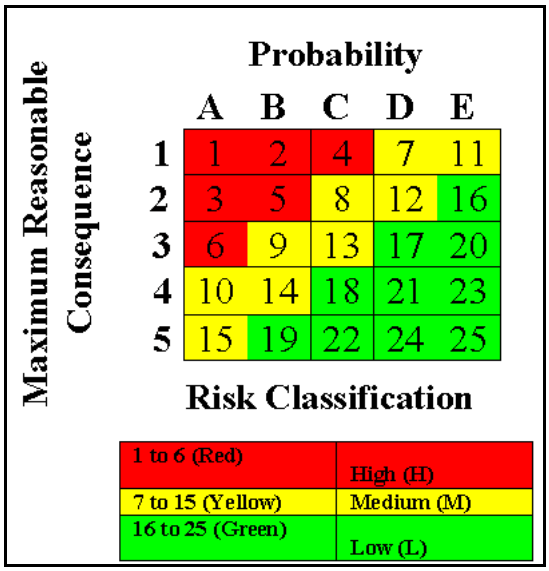
**Table 7 List of Probability Criteria Used**

| PROBABILITY | |
|---|---|
| A | Almost certain to happen |
| B | Likely to happen at some point |
| C | Moderate: possible, heard of it so might happen |
| D | Unlikely: not likely to happen |
| E | Rare: practically impossible |

Environmental Risk Matrix

Risk rankings were allocated for each environmental aspect using the HQPL "ranking matrix" method below. By using the "consequence" and "probability" rating a risk classification was assigned between one (1) and twenty five (25), with one (1) being the highest risk and twenty five (25) the lowest.

**Table 8 Environmental Risk Rating Matrix**



Risk Classification System

A Risk Rating class was then applied to each aspect using the Risk Classification System included on the matrix above. In accordance with this risk classification system, one of the following l Risk Ratings were assigned to each aspect:

**H (High**) being a *Class 1 Risk* requiring immediate management attention - stop/stand down until rectified if deemed necessary.

**M (Moderate)** being a *Class 2 Risk* - acceptable with current controls but requires attention if controls absent or ineffective - where practicable develop other controls to mitigate the risk.

**L (Low)** being a *Class 3 Risk* - assess and control as required.

The aim was to have as many of the Risks in the Low (Class 3) rating as possible. Where necessary to lower the apparent risk rating, appropriate controls were implemented (see section below).

Assessment of Effectiveness of Controls

Risk Rankings were allocated for each environment and community aspect, based on three (3) separate scenarios. The first considering **no controls,** which is a measure of the *raw* risk associated with the activity. The second considered the risk rating with the **current controls** (i.e. in place at the time of the Environment and Community Risk Assessment), and finally where the associated environmental risk was still considered too high, **additional controls** were recommended for the consideration of HQPL. These were included in the Environment and Community Risk Register as possible controls to be considered by HQPL (see **Appendix 5**).

Two types of controls are considered in the context of a Risk Assessment. A control is considered to be either a hard engineering control (e.g. bunds, diversions, etc) or administrative control (e.g. work procedure(s) and/or management plan).

# 4 Environmental Management Elements

## 4.1 Environment and Community Policy

The Environment and Community Policy for HQPL represents a statement of its intentions and principles in relation to its overall environmental performance, and represents commitment from the Quarry Manager (or suitable delegate) to implement this EMS. The Policy has been designed to fulfil the expectations of all stakeholders involved in the development. A copy of the Environment and Community Policy is contained in **Appendix 6.**

The Environment and Community Policy aims to:

- Provide a framework for action;
- Provide a setting for HQPL environmental and community objectives and targets;
- Promote continual improvement in environmental performance and community engagement;
- Be the foundation of the EMS; and
- Be a reference/baseline for company strategies, plans and actions.

Personnel on site have access to copies of the Environment and Community Policy which are located in the office area (weighbridge) and crib room. In addition, copies are available during site inductions and can be made available to any employee and external interested parties by contacting the Environmental Officer.

Communication of the Environment and Community Policy forms part of the environmental training and awareness program. All new starter employees undergo an induction that includes specific reference to the Environment and Community Policy. In addition, the Environment and Community Policy will be routinely addressed in workforce training and awareness toolbox talks.

The Environment and Community Policy will be reviewed for its continuing appropriateness and applicability during the management review of the EMS (refer to section **4.13**).

## 4.2 Environment and Community Procedures

The following Environment and Community Procedures have been developed to assist in the management of potential environmental/community issues at the Quarry. These procedures have been developed based on the results of the risk assessment. The aim is to establish and maintain documented procedures for those aspects (operations and activities) of the Quarry that have been identified as having the potential to cause significant environmental harm.

- Dangerous and Hazardous Goods (incl. Hydrocarbons);
- Dust Control;
- Noise Control; and
- Blasting.

Copies of all Environment and Community Procedures developed for the Quarry are included as **Appendix 7** of this EMS.

Environment and community procedures are to be reviewed regularly and are intended to be altered as required to remain relevant to site activities. Additional procedures may be added as necessary.

The Quarry Manager (or suitable delegate) is responsible for:

- Establishing and maintaining the procedures for identifying and assessing aspects of the Quarry in accordance with the *Environmental Risk Register* (see **section Appendix 3** above);
- Establishing and maintaining environment and community procedures and controls for those high risk activities and operations identified; and
- Ensuring that all personnel undergo regular training on Environment and Community Procedures so that they are aware of the procedures and how they apply to the operation, as well as their own responsibilities.

## 4.3 Environment and Community Management Plans

The following Environment and Community Management Plans have been developed to assist in the management of potential environmental issues at the Quarry. The Environment and Community Management Plans have been completed as per the requirements in the Karuah Hard Rock Quarry Development Consent (DA 265-10-2004).

**Table 9 Environment and Community Management Plans for Karuah Hard Rock Quarry**

| Management Plan | Relevant Consent Condition(s) |
|---|---|
| Noise Monitoring Program | Sc 3 Condition 3 (Covered in Environmental Monitoring Program) |
| Air Quality Monitoring Program | Sc 3 Condition 15 (Covered in Environmental Monitoring Program) |
| Flora and Fauna Management Plan | Sc 3 Condition 19 |
| Site Water Management Plan (includes Erosion and Sediment Control Plan, Surface Water Monitoring Program and Site Water Balance) | Sc 3 Condition 26, 27 |
| Bushfire Management Plan | Sc 3 Condition 36 |
| Rehabilitation and Closure Plan | Sc 3 Condition 38 |
| Environmental Monitoring Program | Sc 4 Condition 3 |
| Pollution Incident Response Management Plan (PIRMP) | Requirement of the NSW EPA |

## 4.4 Emergency Preparedness and Response

Environmental emergencies are managed in accordance with the PIRMP.

The Quarry Manager (or suitable delegate) is responsible for:

- Promoting awareness of the PIRMP;
- Identifying potential emergency situations;
- Developing and maintaining appropriate pollution response procedures;

- Ensuring that all site personnel are trained in emergency response procedures, as appropriate to their position;
- Periodically testing and reviewing emergency procedures where practicable; and
- Reporting all incidents or accidents in accordance with the nominated Environmental Incident Form (**Appendix 10**) (see **Section 4.11** for further details).

## 4.5 Environmental Training and Awareness

HQPL will continue to maintain an environment and community training and awareness program that is to provide the workforce (including subcontractors) with the knowledge and skills necessary to achieve Environment and Community Policy aims and objectives and to ensure a high standard of environmental management on the site.

The Quarry Manager (or suitable delegate) is responsible for:

- Ensuring that the processes and resources exist to adequately train all employees and contractors in the relevant environment and community policy, and environment and community procedures for the Quarry;
- Participating and running toolbox talks and other such forums where environmental and community training and awareness can be undertaken; and
- Maintaining records of all environmental and community training and awareness sessions, including but not limited to, attendees and the topic of discussion.

### 4.5.1 New Starter Inductions (including contractors)

The Quarry Manager (or suitable delegate) will undertake a New-Starter Induction with all new employees prior to their commencement of works at the site. The induction will include, but not be limited to, information related to the HQPL Environment and Community Policy, various aspects of the EMS and will emphasise the roles and responsibilities of employees and contractors.

### 4.5.2 Visitor Induction

The Quarry Manager (or suitable delegate) will ensure that all visitors to the site are taken through a brief Environment and Community Induction upon arrival at the site. The information given in the induction will ensure that the visitor is able to report any environmental and community incidents or issues that they may observe during their visit to the site.

### 4.5.3 Toolbox Talks and Meetings

The Quarry Manager (or suitable delegate) shall undertake monthly meetings to discuss relevant environmental issues with the workforce. Daily toolbox sessions shall be undertaken by workers, and if a particular environmental issue needs to be brought to the immediate attention of the workforce (e.g. following a major environmental incident), it shall be done through this format.

### 4.5.4 Notice Board Attachments

The Quarry Manager (or suitable delegate) will place announcements on Notice Boards around the site to highlight various environmental and or community issues as required.

## 4.6 Internal Communications

Internal communications regarding environmental matters are maintained through a number of methods including daily toolbox talks, monthly meetings, (see **Section 4.5.3**), inductions and bi-annually (every six months) environmental audit/inspection reports (see **Section 4.9.2**).

## 4.7 External Environmental Reporting

The reporting of all monitoring and measurement data will be undertaken in accordance with the requirements of the AEMR and the Annual Return for the EPA licence. Copies of the AEMR will be retained by HQPL at the Thornton Head Office and the Karuah site. Copies of the AEMR will be sent to DPIE, EPA and the MCC.

## 4.8 Documentation and Document Control

This EMS (including the attached Environment and Community Procedures) will be retained in a controlled format at the Quarry by the Quarry Manager (or suitable delegate). Management, retention, revision and superseding of environmental and community documentation are the responsibility of the Quarry Manager (or suitable delegate).

The purpose of establishing and maintaining procedures for controlling all EMS documentation is to ensure that all documents can be located, reviewed and revised as necessary and current and obsolete documents easily identified.

The Quarry Manager (or suitable delegate) is responsible for ensuring that the EMS is controlled in accordance with the procedure detailed below.

### 4.8.1 EMS Documents

If any part of the document is revised and changed, replacement versions are to be sent out to all personnel registered as holding a controlled copy of the EMS. All copies of the old version are to be destroyed, and the old master copy to be marked "***Superseded***" and filed in the central filing system.

### 4.8.2 Environmental Documentation

Copies of all environmental documentation referenced in the EMS are kept in the main office filing system at Karuah Hard Rock Quarry.

To ensure that document control procedures are maintained and effective in enabling documents to be located, reviewed and revised as necessary and for current and obsolete documents to be easily identified, the Quarry Manager (or suitable delegate) will conduct a document audit as part of the management review process in accordance with **Section 4.13** of this EMS.

## 4.9 Environmental Audits and Inspections

The purpose of establishing and maintaining programs and procedures for periodic audits and inspections of the EMS is to determine the level of:

- Conformance with environmental conditions of licences including EPL 11569 and Development Consent (DA 265-10-2004) conditions; and
- On-site implementation and maintenance of the EMS.

### 4.9.1 Opportunistic Environmental Inspection

During normal operations the Environmental Officer will undertake routine inspections of activities around the Quarry. Areas of non-compliance will be immediately brought to the attention of the employees so that they can be rectified to reduce the likelihood of an environmental incident occurring.

### 4.9.2 Bi-annual *Internal* Environmental Inspections

The Environmental Officer will undertake Environmental Inspections at least every six months. The findings from the inspections will be reported internally.

### 4.9.3 Third Party External Environmental Audits and Inspections

Representatives from various regulatory agencies, including but not limited to, the Biodiversity Conservation Division (BCD), EPA, DPIE and the MCC, may undertake environmental compliance audits against the various statues, licences and approvals. These audits will normally be associated with the submission of an AEMR or EPA annual return.

In addition to this, HQPL will engage the services of a suitably qualified "independent party" to undertake compliance audits (Independent Environmental Audit) in accordance with conditions in the Development Consent (DA 265-10-2004) and reported in the AEMR.

Schedule 4, Condition 6 of the Development Consent (DA265 – 10-2004) requires within 2 years of the date of this consent, and every 5 years thereafter, unless the Director General directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. See entire condition below (Schedule 4, Condition 6):

*Within 2 years of the date of this consent, and every 5 years thereafter, unless the Director-General 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 a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General;*
>
> *b) be consistent with ISO 19011:2002 - Guidelines for Quality and/ or Environmental Systems Auditing, or updated versions of this guideline;*
>
> *c) assess the environmental performance of the development, and its effects on the surrounding environment;*

*d) assess whether the development is complying with the relevant standards, performance measures, and statutory requirements;*

*e) review the adequacy of the Applicant's Environmental Management Strategy and Environmental Monitoring Program; and*

*f) if necessary, recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring system.*

HQPL considers the current auditing/inspection program to be sufficient for the operation.

## 4.10 Environmental Monitoring and Measurement

Compliance evaluation and review of environmental performance against relevant licences and approvals is carried out annually as part of the AEMR in compliance with the Development Consent Conditions (DA 265-10-2004).

The HQPL Environmental Officer is responsible for the management and co-ordination of specialist consultants who undertake environmental performance monitoring on behalf of HQPL. The Environmental Officer is responsible for collating all data as provided by specialist consultants and/or gathered on site and for inclusion in the AEMR.

All environmental monitoring undertaken at the Quarry is done in accordance with the site Environmental Monitoring Program. A summary of the environmental monitoring requirements is given below; however the EMP should be referred to for full details.

- Monitoring of water quality in Sediment Dam every 6 months and during discharge;
- Monitoring of site water usage;
- All blasts at the Quarry are monitored for peak particle velocity (ppv) [mm/s] and overpressure (dBL) at location(s) on and adjacent to the Quarry site;
- Flora and fauna monitoring as per the *Flora and Fauna Management Plan*;
- Depositional Dust monitoring at four (4) locations adjacent to the Quarry site;
- Routine sampling of TSP and $PM_{10}$ monitoring using High Volume Air Samplers (HVAS) at a residential property located directly opposite the Quarry (completed as required);
- Operational noise monitoring every 6 months; and
- Monitoring the amount of waste generated by the site.

A map showing the location of environmental monitoring at the existing quarry is attached as **Appendix 9** Monitoring Equipment

Monitoring equipment is installed, serviced and calibrated by qualified consultants where required. The consultants are required to maintain records of calibration and are to provide this information to the Environmental Officer on request.

### 4.10.1 Environmental Monitoring Standards and Guidelines

All monitoring is to be carried out in accordance with the relevant Australian Standard applicable to each particular area. They include but are not limited to:

- *AS 1055:2018 Acoustics - Description and measurement of environmental;*
- *AS/NZS 3580.9.3:2015 - Methods for sampling and analysis of ambient air Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method;*
- *AS/NZS 3580.1.1:2016 - Methods for sampling and analysis of ambient air Guide to siting air monitoring equipment;*
- *AS/NZS 3580.10.1:2016 - Methods for sampling and analysis of ambient air - Determination of particulate matter - Deposited matter - Gravimetric method; and*
- *AS 2187.2-2006 Explosives – Storage and use of Explosives.*

In addition, the following EPA guidelines apply:

- The NSW Environmental Protection Authority (EPA) (2004) "*Approved Methods for the Sampling and Analysis of Water Pollutants in New South Wales*";
- The NSW Environmental Protection Authority (EPA) (2007) "*Approved Method for the Sampling and Analysis of Air Pollutants in New South Wales*";
- The NSW Environmental Protection Authority (EPA) (1994) Environmental Noise Control Manual; and
- NSW Environmental Protection Authority (EPA) (2017) Noise Policy for Industry (NPI).

Only NATA (or equivalent) accredited laboratories will be used for the analysis of the various parameters required as part of the environmental monitoring and measurement for the Quarry.

### 4.10.2 Chain of Custody Documentation

All samples collected and sent from the Quarry for further analysis will be accompanied by Chain of Custody (CoC) documentation. Contractors will provide their own CoC documentation for monitoring.

### 4.10.3 Reporting

The reporting of all monitoring and measurement data will be undertaken in accordance with the requirements of the AEMR and the Annual Return for EPL 11569 (see **Section 4.7**). Monitoring records will be kept on site for a period of four (4) years in accordance with the requirements of EPL 11569.

## 4.11 Incident Reporting

**Pollution Incident**

*"pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise"* (POEO Act 1997) .

HQPL defines *Minor or Insignificant Environmental Incident* as a smaller/manageable incident that can be contained within the site e.g. 20L oil leak that remains onsite. All minor environmental incidents will be reported to the Quarry Manager (or suitable delegate) on the nominated Environmental Incident reporting form. A minor environmental incident does not cause or threaten material harm. A copy of this form is included in **Appendix 10.**

HQPL defines a *Serious or Moderate Environmental Incident* as a pollution incident which takes place in the course of an activity which could result in a threat and/or material harm to the environment. These could have a potentially substantial and/or permanent consequence to the environment. If a serious or moderate environmental incident occurs, the PIRMP must be enacted immediately. The HQPL Environmental Incident Form **(Appendix 10)** is to be completed and a detailed report is to be sent to the EPA and other relevant regulatory authorities within 7 days. The form will include detail on what happened, who was involved, what action was taken to clean up or contain the incident and recommendations for improvement; so that the environmental incident can be avoided in the future.

Environmental incident reporting forms will be made readily available around the site. Examples of environmental consequence definitions are outlined in **Table 6**.

All incidents that are reported will be recorded by the Quarry Manager (or suitable delegate) and presented for discussion during Toolbox Talks where appropriate. All environmental incidents will be reported in the AEMR in accordance with the Development Consent (DA 265-10-2004). In addition, all major incidents will be reported to the relevant authorities as soon as practical after the incident, with the required reporting process and stakeholders outlined within the PIRMP.

## 4.12 Review and Corrective Action

The purpose of this section is to establish and maintain procedures for identifying and defining the responsibility (and authority) for investigating and correcting environmental non-conformances.

The Quarry Manager (or suitable delegate) is responsible for:

- Establishing and maintaining procedures for identifying and correcting non-conformances with the EMS;
- Receiving notification of non-conformances or non-compliances from employees and any other contractors; and
- The development and distribution of action plans to rectify any non-conformances identified in a timely and effective manner.

## 4.13 Management Review

The purpose of the management review is to assess the suitability and effectiveness of the EMS and to determine whether any changes in policy, objectives, methods or operations are considered necessary to meet the current or future needs of the Quarry.

The Management Review will include scheduled, periodic and minuted meetings that will:

- Assess the continuing suitability and effectiveness of the EMS;
- Assess the relevance of environmental commitments;

- Review outcomes of environmental audits, inspections and non-conformances since the last management review meeting;
- Documentation of meeting decisions; and
- Assess the possible need for change in Environment and Community Policy and/or objectives and targets in light of changing circumstances and in view of continual environmental improvement.

The EMS will be reviewed:

- Every three years;
- Within 3 months following the completion of an Independent Environmental Audit in accordance with Schedule 4, Condition 4 of the DA 265-10-2004;
- As required by a significant change in the operation; and
- The status of proposed actions as reported in the AEMR.

## 4.14 Community Consultation

HQPL acknowledges the need for appropriate community consultation and sees stakeholder engagement as an integral component to environmental management at the site.

### 4.14.1 Community Consultative Committee

In accordance with Schedule 4, Condition 8 of the Development Consent (DA 265-10-2004), HQPL sought expressions of interest from the community to serve as members of a Community Consultative Committee (CCC) in 2007 and again in 2011. The minimum of two expressions of interest were not received, therefore a CCC was not able to be established.

As a CCC has not been established due to no expressions of interest from the community, a Communications Strategy is required to be prepared in accordance with Schedule 4, Condition 10 of the Development Consent (DA 265-10-2004). The Communications Strategy sets out the key elements for consulting with the MCC and residents within two (2) km of the development and is detailed in **Section 4.13.2**.

### 4.14.2 Communication Strategy

Schedule 4 Condition 10 states that where at least two (2) expressions of interest to serve on the CCC are not received then in lieu of a CCC, HQPL is to develop a Communication Strategy for consulting with MCC and the residents within two (2) km of the Quarry.

In accordance with the abovementioned consent condition this Communications Strategy outlines how HQPL will advise MCC and the nearby residents (including the local community) on its environment management plans, monitoring results, audit reports and complaints.

***Communication Strategy for MCC***

- Provide website details where environmental monitoring results and key site contacts can be found.

- As required by Schedule 4, Condition 10, a six-monthly report will be sent to the MCC containing a summary of issues relating to its Environment and Community Management Plans, monitoring results, audit reports and any received complaints. The AEMR constitutes one of the six-monthly reports required by Schedule 4, Condition 10. While the AEMR reports from 16 January -15 January each year, for the purpose of the Communication Strategy it will cover the period from July to December. The six-monthly report (separate to the AEMR) will report on the period from January – June. The reports will also include directions on where MCC can find additional details (i.e. HQPL's website http://hunterquarries.com.au).

***Communication Strategy for Nearby Residents (within 2km of the Quarry)***

- In addition to the communication strategy for the local community, all nearby residents within 2kms of the Quarry have been contacted and provided with the key contact name and phone numbers for the Quarry. Residents are contacted prior to blasting operations.
- A copy of the Karuah Hard Rock Quarry AEMR will be provided electronically to residents on the blasting list unless a hardcopy is requested, in which case the AEMR will be delivered to the requested address.
- A six-monthly report will be sent to residents within 2km of the Quarry containing a summary of issues relating to its Environment and Community Management Plans, monitoring results, audit reports or complaints. As discussed above, this six-monthly report will cover from January to June, while the AEMR will cover the period from July to December to address Schedule 4, Condition 10. The reports will also include directions on where to find additional details (i.e. HQPL's website http://hunterquarries.com.au).

### 4.14.3 Complaints Management

A telephone number has been established by the Quarry to enable the community to contact the Quarry with any complaints or inquiries. The line is available during normal office hours. All complaints received by the Quarry are to be investigated as soon as possible after the event. The complainant will be verbally notified of the outcome from the investigation within 3 working days and where applicable, provide the necessary written responses within 10 working days, or otherwise agreed with the complainant.

Where a complaint is unresolved between the Quarry and the complainant, a Dispute Resolution Process will be followed by HQPL to resolve any disputes that may arise during the course of the development. This process will involve HQPL to:

- Commission a suitably qualified, experienced and independent person (whose appointment has been approved by DPIE) to undertake the complaints investigation and if necessary, the independent person will provide relevant recommendations to appropriately address the issue; and
- Both parties will receive a copy of the complaints investigation report.

Where a complaint specifically relates to properties (within 1 km of the quarry) damaged as a result of blasting at the Quarry, HQPL will undertake an investigation in accordance with the Quarry's Blast Dispute Resolution Process as discussed in **section 3.6** of the ***Environment and Community Procedures – Blast Management***.

All complaints (including the findings of any investigation) are to be recorded on the Complaints Record Form which is attached as **Appendix 12.** The Complaints Form includes the following details (requirement of Condition M4.2 of EPL 11569):

M4.2 The record must include details of the following:

a. the date and time of the complaint;

b. the method by which the complaint was made;

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;

d. the nature of the complaint;

e. the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and

f. if no action was taken by the licensee, the reasons why no action was taken.

All complaints records are kept for at least 4 years.

# 5 Objectives and Targets

## 5.1 Overview

The purpose of establishing and maintaining environmental objectives and targets is to ensure continual improvement in HQPL's environmental performance, and to ensure compliance with regulatory requirements.

All employees and contractors engaged at the Quarry are required to consider the Environmental Objectives and Targets established for the site.

## 5.2 Responsibility for Environmental Objectives and Targets

The Quarry Manager (or suitable delegate) is responsible for:

- Consulting with HQPL management in the preparation of environmental objectives and targets;
- The distribution, and training where necessary, of approved environmental objectives and targets to employees;
- Reporting of the performance against each annual objective and target; and
- Reviewing and setting the objectives and targets to be adopted for the next twelve month period.

## 5.3 Establishing and Reviewing Environmental Objectives and Targets

When establishing and reviewing objectives and targets the following will be considered:

- Legal requirements as detailed in the Requirements Register;
- Significant environmental aspects and associated impacts for the Quarry as presented in **Section 3.1.1**
- Available technology options;
- Financial, operational and business requirements;
- The views raised by stakeholders through the environmental impact assessment and stakeholder consultation; and
- Targets should be specific, measurable and realistic.

Copies of the environmental objectives and targets are recorded as part of the AEMR.

Progress against the environmental objectives and targets will be reported in the AEMR and distributed to the relevant stakeholders as required by the Development Consent (DA 265-10-2004).

# APPENDIX 1

Development Consent (DA 265-10-2004) for the Karuah Hard Rock Quarry

# APPENDIX 1

## Development Consent (DA 265-10-2004)

# Development Consent

## Section 80 of the *Environmental Planning and Assessment Act 1979*

I, the Minister for Infrastructure, Planning and Natural Resources, approve the Development Application referred to in Schedule 1, subject to the conditions in Schedules 2 to 4.

These conditions are required to:
- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the on-going environmental management of the development.

SIGNED

Craig Knowles, MP
**Minister for Infrastructure, Planning and Natural Resources**

Sydney 3 June 2005 File No. S04/00635

**SCHEDULE 1**

| | |
|---|---|
| **Development Application:** | DA 265-10-2004. |
| **Applicant:** | Hunter Quarries Pty Limited. |
| **Consent Authority:** | Minister for Infrastructure, Planning and Natural Resources. |
| **Land:** | Lot 21 DP 1024341, Lot 11 DP 1024564 & Lot 12 DP 1024564. |
| **Proposed Development:** | The development includes:<br>• implementing the remainder of the approved Stage 1 quarry operation;<br>• extending the quarry operations into the Stage 2 area<br>• upgrading and using existing infrastructure on site;<br>• rehabilitating the site by re-contouring and revegetating exposed surfaces; and<br>• producing up to 500,000 tonnes of product a year over the next 22 years. |
| **State Significant** | The proposal is classified as State significant development under section 76A(7) of the *Environmental Planning and Assessment Act 1979* as it is an extractive industry that would extract more than 200,000 tonnes of material a year. |
| **Integrated Development:** | The proposal is classified as integrated development, under section 91 of the *Environmental Planning and Assessment Act 1979* as it requires an additional approval under the *Protection of the Environment Operations Act 1997.* |

| | |
|---|---|
| **Designated Development:** | The proposal is classified as designated development under section 77A of the *Environmental Planning and Assessment Act 1979* as it is an extractive industry that would "obtain or process for sale, or reuse, more than 30,000 cubic metres of extractive material per year…". Consequently, it meets the criteria for designated development in schedule 3 of the *Environmental Planning and Assessment Regulation 2000*. |

*Notes:*

- *To find out when this development consent becomes effective, see section 83 of the Environmental Planning and Assessment Act 1979* (EP&A Act);
- *To find out when this development consent is liable to lapse, see section 95 of the EP&A Act; and*
- *To find out about appeal rights, see section 97 of the EP&A Act*

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## DEFINITIONS

| | |
|---|---|
| AEMR | Annual Environmental Management Report |
| Applicant | Hunter Quarries Pty Limited, or its successors |
| BCA | Building Code of Australia |
| CCC | Community Consultative Committee |
| Council | Great Lakes Shire Council |
| DA | Development Application |
| Day | Day is defined as the period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays |
| DEC | Department of Environment and Conservation |
| Department | Department of Infrastructure, Planning and Natural Resources |
| Director-General | Director-General of the Department of Infrastructure, Planning and Natural Resources, or delegate |
| DPI | Department of Primary Industry |
| EIS | Environmental Impact Statement titled 'Environmental Impact Statement to accompany a State Significant Development Application for an existing Hard Rock Quarry, Property: Lot 21 DP 1024341 and Lot 11 DP 1024564, Pacific Highway, Karuah', Volumes 1, 2 & 3, dated October 2004 and prepared by Asquith and deWitt Pty Ltd |
| EP&A Act | Environmental Planning and Assessment Act 1979 |
| EP&A Regulation | Environmental Planning and Assessment Regulation 2000 |
| EPL | Environment Protection License |
| Evening | Evening is defined as the period from 6pm to 10pm |
| GTA | General Terms of Approval |
| Minister | Minister for Infrastructure and Planning, or delegate |
| Night | Night is defined as the period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays |
| POEO Act | *Protection of the Environment Operations Act 1997* |
| Privately owned land | Land not owned by the Applicant or its related companies or where a private agreement does not exist between the Applicant and the land owner |
| Receiver | As defined in the *NSW Noise Policy for Industry* (EPA 2017) |
| Site | Land to which the DA applies (Lot 21 DP 1024341, Lot 11 DP 1024564 & Lot 12 DP 1024564) |
| Stage 1 | Existing quarry operation approved by Great Lakes Shire Council on 11 November 1997 (DA 302/97) including the 'Karuah Red quarry' site, as marked on the map in Appendix 1. |
| Stage 2 | Proposed quarry extension as marked on the map in Appendix 1. |

## SCHEDULE 2
## ADMINISTRATIVE CONDITIONS

### OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. The Applicant shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the development.

### TERMS OF APPROVAL

2. The Applicant shall carry out the development generally in accordance with the:
   (a) DA 265-10-2004;
   (b) EIS titled *Environmental Impact Statement to accompany a State Significant Development Application for an existing Hard Rock Quarry, Property: Lot 21 DP 1024341 and Lot 11 DP 1024564, Pacific Highway, Karuah*, Volumes 1, 2 & 3, dated October 2004 and prepared by Asquith and deWitt Pty Ltd; and
   (c) conditions of this development consent.

3. If there is any inconsistency between the above, the conditions of this consent shall prevail to the extent of the inconsistency.

4. The Applicant shall comply with any reasonable requirement/s of the Director-General arising from the Department's assessment of:
   (a) any reports, plans or correspondence that are submitted in accordance with this development consent; and
   (b) the implementation of any actions or measures contained in these reports, plans or correspondence.

### LIMITS ON APPROVAL

5. This consent lapses 22 years after the date it commences.

6. The Applicant shall not produce or transport more than 500,000 tonnes of material a year from the development.

7. The Applicant shall not extract more that 11.2 million tonnes of andecite from the site within the period of this consent.

### SURRENDER OF CONSENTS

8. Within 6 months of the date of this consent, the Applicant shall surrender all existing development consents and continuing use rights associated with the site, in accordance with clause 97 of the EP&A Regulation.

### STRUCTURAL ADEQUACY

9. The Applicant shall ensure that any 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.

   *Notes:*
   - *Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for any building works.*
   - *Part 8 of the EP&A Regulation sets out the detailed requirements for the certification of development.*

### DEMOLITION

10. The Applicant shall ensure that all demolition work is carried out in accordance with *AS 2601-2001: The Demolition of Structures,* or its latest version.

### OPERATION OF PLANT AND EQUIPMENT

11. The Applicant shall ensure that all plant and equipment at the site, or used in connection with the development, are:
    a) maintained in a proper and efficient condition; and
    b) operated in a proper and efficient manner.

**IDENTIFICATION OF BOUNDARIES**

12. Within 6 months of the date of this consent, the Applicant shall:
    (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction under Stage 1 and Stage 2;
    (b) submit a survey plan of these boundaries and the proposed timing of extraction within Stage 1 and Stage 2 to the Director-General; and
    (c) ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify these limits.

**SECTION 94 CONTRIBUTIONS**

13. The Applicant shall pay a contribution of 4.7 cents per cubic meter of material per kilometere hauled to Council for the maintenance/repair of public roads in accordance with Council's Section 94 Plan for road haulage, to the satisfaction of Council.

    *Note: The applicable contribution rate is reviewed annually by Council and new rates, if applicable become operational from 1 July each year. The contribution is to be paid at the rate that is current at the time.*

**SCHEDULE 3**
**SPECIFIC ENVIRONMENTAL CONDITIONS**

## [1]NOISE

### Noise Impact Assessment Criteria

1. 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.

| Time Period | Noise Limits dB(A) |
|---|---|
| | $L_{Aeq\ (15minute)}$ |
| Day (7am to 6pm ) Monday to Friday and 7am to 1pm Saturday | 48 |
| Evening (6pm to 10pm) Monday to Friday | 47 |
| At all other times | 46 |

*Table 2: Noise Impact Assessment Criteria for the Development*

*Notes:*

- *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.*
- *$LA_{eq(15\ minute)}$ is the equivalent continuous noise level - the level of noise equivalent to the energy average of noise levels occurring over a measurement period.*
- *For the purpose of noise measures required for this condition, the $LA_{eq}$ 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.*
- *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:*
  - *a) 1 meter from the facade of the residence for night time assessment;*
  - *b) at the residential boundary;*
  - *c) 30 meters from the residence (rural situations) where boundary is more than 30 meters from residence.*
- *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:*
  - *a) documenting noise complaints received to identify any higher level of impacts or patterns of temperature inversions;*
  - *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.*

### Operating Hours

2. The Applicant shall comply with the operating hours in Table 1:

| Activity | Days of the Week | Time |
|---|---|---|
| • Construction<br>• Extraction and processing<br>• Internal and off-site transportation of product | Monday – Friday | 7am to 6pm |
| | Saturday | 7am to 1pm |
| | Sunday and public holidays | No work at any time |
| Minor maintenance works on plant and machinery | 7 days a week and public holidays | 7am to 6pm |

*Table 1: Operating Hours for the Development*

*Note: Delivery of material outside of the hours of operation permitted by condition 2 is only allowed, where that delivery is required by the police or other authorities for safety reasons; and/or where the operation or personnel or equipment are endangered. In such circumstances, prior notification should be provided to the DEC and affected residents as soon as possible, or within a reasonable period in the case of emergency.*

### Noise Monitoring

3. 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.

[1] Incorporates DEC GTAs

## [2]BLASTING AND VIBRATION

### Airblast Overpressure Criteria

4. The Applicant shall ensure that the airblast overpressure level from blasting at the development does not exceed the criteria in Table 3 at any residence or sensitive receiver on privately owned land.

| Airblast overpressure level [dB(Lin Peak)] | Allowable exceedance |
|---|---|
| 115 | 5% of the total number of blasts over a period of 12 months |
| 120 | 0% |

*Table 3: Airblast Overpressure Limits*

### Ground Vibration Criteria

5. The Applicant shall ensure that the peak particle velocity from blasting at the development does not exceed the criteria in Table 4 at any residence or sensitive receiver on privately owned land.

| Peak particle velocity (mm/s) | Allowable exceedance |
|---|---|
| 5 | 5% of the total number of blasts over a period of 12 months |
| 10 | 0% |

*Table 4: Ground Vibration Limits*

### Blasting Restrictions

6. Blasting at the site may only take place:
   a) between 9am and 3pm Monday to Friday inclusive;
   b) once per week; and
   c) at such other times as may be approved by the DEC.

### Public Notice

7. Within 6 months of this consent, the Applicant shall establish a blasting notification register of landowners and other interested persons, within 2 km of the quarry.

8. Throughout the life of the development, the Applicant shall notify all registered individuals of up coming blasting operations at the development site.

### Property Inspections

9. Within 3 months of this consent, the Applicant shall advise all landowners within 1 kilometer of the development that they are entitled to a structural property inspection.

10. If the Applicant receives a written request for a structural property inspection from any landowner within 1 kilometer of the development, the Applicant shall within 3 months of receiving this request:
    a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to inspect the condition of any building or structure on the land, and if necessary recommend measures to mitigate any potential blasting impacts; and
    b) give the landowner a copy of the property inspection report.

### Property Investigations

11. If any landowner within 1 kilometre of the site claims that buildings and/or structures on his/her land have been damaged as a result of blasting at the development, the Applicant shall within 3 months of receiving this request:
    (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Director-General, to investigate the claim; and
    (b) give the landowner a copy of the property investigation report.

[2] Incorporates DEC GTAs

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant shall repair the damages to the satisfaction of the Director-General.

If the Applicant or landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Director-General for resolution.

If the matter cannot be resolved within 21 days, the Director-General shall refer the matter to an Independent Dispute Resolution Process (see Appendix 3).

**Operating Conditions**

12. The Applicant shall implement all practical measures to ensure the safety of people, and avoid and/or minimise any blasting impacts of the development on any privately owned land

**[3]AIR QUALITY**

**Air Quality Impact Assessment Criteria**

13. 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 on, or on more than 25 percent of, any privately owned land.

| Pollutant | Averaging period | Criterion |
|---|---|---|
| Total suspended particulate (TSP) matter | Annual | 90 µg/m$^3$ |
| Particulate matter < 10 µm ($PM_{10}$) | Annual | 30 µg/m$^3$ |

*Table 6: Long Term Impact Assessment Criteria for Particulate Matter*

| Pollutant | Averaging period | Criterion |
|---|---|---|
| Particulate matter < 10 µm ($PM_{10}$) | 24 hour | 50 µg/m$^3$ |

*Table 7: Short Term Impact Assessment Criterion for Particulate Matter*

| Pollutant | Averaging period | Maximum increase in deposited dust level | Maximum total deposited dust level |
|---|---|---|---|
| Deposited dust | Annual | 2 g/m$^2$/month | 4 g/m$^2$/month |

*Table 8: Long Term Impact Assessment Criteria for Deposited Dust*

*Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 2003, AS 3580.10.1-1991: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method.*

**Operating Conditions**

14. The Applicant shall implement all practical measures to minimise and/or prevent the emission of dust from the site.

**Monitoring**

15. 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.

**[4]METEOROLOGICAL MONITORING**

16. 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.

[3] Incorporates DEC GTAs

[4] Incorporates DEC GTAs

**FLORA AND FAUNA**

**Conservation Offset Area**

17. The Applicant shall establish, conserve, and maintain the area of vegetation in Lot 12 DP 1024564 marked on the map in Appendix 2, to the satisfaction of the Director- General.

18. Within 3 years of this consent, the Applicant shall implement suitable arrangements to provide long term security for the conservation offset area, to the satisfaction of the Director-General.

    *Note: The long term security of the offset can be achieved through a combination of the following: Deed of Agreement with the Minister, rezoning the land under the Great Lakes Local Environment Plan 1996, caveats on the title under the Conveyancing Act 191, etc….*

**Flora and Fauna Management Plan**

19. Before carrying out any clearing associated with Stage 2 of the development, the Applicant shall prepare, and subsequently implement, a Flora and Fauna Management Plan for the development to the satisfaction of the Director-General. This plan must include:
    a) a Vegetation Clearing Protocol;
    b) a Remnant Vegetation Conservation Plan; and
    c) a Conservation Offset Management Plan.

20. The Vegetation Clearing Protocol shall describe the procedures that would be implemented for:
    a) minimising the areas of remnant vegetation to be cleared;
    b) delineating areas of remnant vegetation to be cleared;
    c) protecting areas outside of the disturbance areas;
    d) undertaking pre-clearance surveys (including observations/surveys for threatened species);
    e) identification of fauna management strategies;
    f) conserving and reusing topsoil;
    g) collecting seed from the site for rehabilitation works;
    h) salvaging and reusing material from the site for habitat enhancement; and
    i) controlling weeds.

21. The Remnant Vegetation Conservation Plan shall:
    a) describe what measures would be implemented to conserve, maintain and enhance the vegetation on the site which will not be cleared as part of the development (in particular sub-populations of Tetratheca juncea (Black-eyed Susan)); and
    b) describe how the performance of these measures would be monitored over time.

22. The Conservation Offset Management Plan shall:
    a) describe the habitat in the conservation offset area for following threatened species:
        - Phascogale tapoatafa (Brush-tailed Phascogale);
        - Ninox strenua (Powerful Owl);
        - Phascolarctos cinereus (Koala); and
        - Tetratheca juncea (Black-eyed Susan).
    b) justify why this area is suitable as a conservation offset for the species described in (a) above;
    c) establish baseline data for the existing habitat in the proposed conservation offset area;
    d) describe how the proposed conservation offset area would be managed, including long-term measures for:
        - feral animal control;
        - weed management;
        - stock management; and
        - bush fire management.
    e) describe how the ecological performance of the conservation offset area would be monitored over time.

**Reporting**

23. The Applicant shall include a progress report on the implementation and performance of the Flora and Fauna Management Plan and the Conservation Offset Strategy in the AEMR.

## [5]SURFACE WATER

### Pollution of Waters

24. Except as may be expressly provided by an Environment Protection License, the Applicant shall comply with section 120 of the *Protection of the Environment Operations Act 1997* during the carrying out of the development.

### Water Discharge Limit

25. The Applicant shall only discharge water from the development in accordance with the provisions of a DEC Environment Protection License

### 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.

### Erosion and Sediment Control

27. The Erosion and Sediment Control Plan must:
    a) be consistent with the requirements of the Department of Housing's Managing Urban Stormwater: Soils and Construction manual;
    b) identify activities that could cause soil erosion and generate sediment;
    c) describe what measures would be implemented to minimise soil erosion and off-site sediment transport from the following locations:
        - the active quarry face and pit;
        - product and top soil stockpile sites;
        - haul roads;
        - workshop areas;
        - rehabilitation areas; and
        - all other exposed and disturbed surfaces within the site.
    d) describe the location and function of erosion and sediment control structures and their capacity to contain runoff in relation to above average rainfall events;
    e) describe what measures would be implemented to maintain the structures over time;
    f) describe how the effectiveness of the Erosion and Sediment Control Plan will be measured and monitored.

### Surface Water Monitoring

28. The Applicant shall:
    a) measure:
        - the volume of water discharged from the site via licensed discharge points;
        - water use on the site;
        - water transfers across the site; and
        - dam and water structure storage levels.
    b) regularly monitor the quality of the surface water discharged from the licensed discharge points on the site;

    to the satisfaction of the DEC and the Director-General.

### VISUAL IMPACT

29. The Applicant shall
    a) implement all practicable measures to minimise the visual impacts of the development;
    b) retain, re-vegetate and subsequently maintain a visual bund within the Stage 1 works area (in accordance with Figures 13 and 14 of the EIS) to minimise the visual impacts of development;
    c) include a progress report on the re-vegetation and maintenance of the visual bund in the AEMR,

    to the satisfaction of the Director General.

[5] Incorporates DEC GTAs

## [6]TRAFFIC AND TRANSPORT

### Pacific Highway

30. The Applicant shall ensure that vehicular access to and from the quarry and the Pacific Highway is via the newly constructed grade separated interchange at Branch Lane.

### Parking

31. The Applicant shall provide sufficient parking on-site for all quarry-related traffic to the satisfaction of the Director-General.

### Road Haulage

32. The Applicant shall ensure that all loaded vehicles entering or leaving the site are covered.

33. The Applicant shall ensure that sediment and/or other pollutants are not tracked onto any public roads servicing the development.

## [7]WASTE MANAGEMENT

34. The Applicant shall:
    a) monitor the amount of waste generated by the development;
    b) investigate ways to minimise waste generated by the development;
    c) implement reasonable and feasible measures to minimise waste generated by the development; and
    d) report on waste management and minimisation in the AEMR.

    to the satisfaction of the Director-General.

35. The Applicant must not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing or disposal or any waste generated at the site to be disposed of at the site, except as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.

    *Note: the above condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the site if it requires an environment protection licence under the Protection of the Environment Operations Act 1997.*

## BUSHFIRE MANAGEMENT

36. The Applicant shall:
    a) ensure that the development is suitably equipped to respond to any fires on-site; and
    b) assist the Rural Fire Service and Emergency Services as much as possible if there is a fire on-site.; and within 6 months of the date of this consent, the Applicant shall prepare a conservation sensitive Bushfire Management Plan for the development, to the satisfaction of Council and the Rural Fire Service.

## PRODUCTION DATA

37. The Applicant shall:
    a) provide annual production data to the DPI (Minerals) using the standard form for that purpose; and
    b) include a copy of this data in the AEMR.

## REHABILITATION

38. The Applicant shall progressively rehabilitate the site to the satisfaction of the Director-General.

### Rehabilitation Management Plan

39. 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:
    a) identify the disturbed area at the site (both Stage 1 and Stage 2);
    b) describe in general the short, medium, and long term measures that would be implemented to rehabilitate the site;
    c) describe in detail the measures that would be implemented over the next 5 years to rehabilitate the site; and
    d) describe in detail how rehabilitation measures will be integrated with:

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[6] Incorporates DEC GTAs

[7] Incorporates DEC GTAs

- erosion and sediment control works on site;
- remnant vegetation and habitat enhancement and conservation works; and
- visual screening works;

e) describe how the performance of these measures would be monitored over time.

40. Within 5 years of providing the Rehabilitation Management Plan to the Director-General, and every 5 years thereafter, the Applicant shall review and update the plan to the satisfaction of the Director-General.

**Reporting**

41. The Applicant shall include a progress report on the Rehabilitation Management Plan in the AEMR.

**Rehabilitation Bond**

42. Within 6 months of the date of this consent, the Applicant shall lodge a suitable conservation and rehabilitation bond for the development with the Director-General. The sum of the bond shall be calculated at $\$2.50/m^2$, or as otherwise agreed to with the Director-General, for the area of disturbance at the development.

    *Notes:*
    - *If the rehabilitation is completed to the satisfaction of the Director-General, the Director-General will release the rehabilitation bond.*
    - *If the rehabilitation is not completed to the satisfaction of the Director-General, the Director-General will call in all, or part of, the rehabilitation bond, and arrange for the satisfactory completion of these works.*

43. Within 3 years of lodging the rehabilitation bond with the Director-General, and every 5 years thereafter, unless the Director-General directs otherwise, the Applicant shall review, and if necessary revise, the sum of the rehabilitation bond to the satisfaction of the Director-General. This review must consider:
    a) the effects of inflation;
    b) any changes to the area of disturbance; and
    c) the performance of any progressive rehabilitation which has been undertaken at the site.

**QUARRY CLOSURE PLAN**

44. 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. The plan must:
    a) define the objectives and criteria for quarry closure;
    b) investigate options for the future use of the site, including any final void(s);
    c) describe the measures that would be implemented to minimise or manage the ongoing environmental effects of the development; and
    d) describe how the performance of these measures would be monitored over time.

## SCHEDULE 4
## ENVIRONMENTAL MANAGEMENT, MONITORING, AUDITING AND REPORTING

### ENVIRONMENTAL MANAGEMENT STRATEGY

1. 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:
   a) provide the strategic context for environmental management of the development;
   b) identify the statutory requirements that apply to the development;
   c) describe in general how the environmental performance of the development would be monitored and managed during the development;
   d) 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;
      - manage cumulative impacts; and
      - respond to emergencies; and
   e) describe the role, responsibility, authority, and accountability of all the key personnel involved in environmental management of the development.

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.

### ENVIRONMENTAL MONITORING PROGRAM

3. Within 6 months of the date of this consent, the Applicant shall prepare an Environmental Monitoring Program for the development, in consultation with the relevant agencies, and to the satisfaction of the Director-General. This program must consolidate the various monitoring requirements in Schedule 4 of this consent into a single document.

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.

### ANNUAL REPORTING

5. The Applicant shall prepare and submit an AEMR to the Director-General and the relevant agencies. This report must address:
   a) identify the standards and performance measures that apply to the development;
   b) describe the works carried out in the last 12 months;
   c) describe the works that will be carried out in the next 12 months;
   d) include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;
   e) include a summary of the monitoring results for the development during the past year;
   f) include an analysis of these monitoring results against the relevant:
      - impact assessment criteria;
      - monitoring results from previous years; and
      - predictions in the EIS;
   g) identify any trends in the monitoring results over the life of the development;
   h) identify any non-compliance during the previous year; and
   i) describe what actions were, or are being taken to ensure compliance.

### INDEPENDENT ENVIRONMENTAL AUDIT

6. Within 2 years of the date of this consent, and every 5 years thereafter, unless the Director-General 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 a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General;
   b) be consistent with *ISO 19011:2002 - Guidelines for Quality and/ or Environmental Systems Auditing*, or updated versions of this guideline;
   c) assess the environmental performance of the development, and its effects on the surrounding environment;
   d) assess whether the development is complying with the relevant standards, performance measures, and statutory requirements;

e) review the adequacy of the Applicant's Environmental Management Strategy and Environmental Monitoring Program; and
f) if necessary, recommend measures or actions to improve the environmental performance of the development, and/or the environmental management and monitoring systems.

7. Within 3 months of commissioning this audit, or as otherwise agreed by the Director-General, the Applicant shall submit a copy of the audit report to the Director-General, with a response to the recommendations contained in the audit report.

**COMMUNITY CONSULTATIVE COMMITTEE**

8. 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.

9. If at least two members of the local community express an interest to serve on the CCC the Applicant shall establish the CCC. The CCC shall:
(a) be comprised of:
- 2 representatives from the Applicant, including the person responsible for environmental management at the quarry;
- 1 representative from Council (if available); and
- at least 2 representatives from the local community,

whose appointment has been approved by the Director-General in consultation with the Council;
(b) be chaired by an independent chairperson, whose appointment has been endorsed by the Director-General;
(c) meet at least twice a year; and
(d) review and provide advice on the environmental performance of the development, including any construction or environmental management plans, monitoring results, audit reports, or complaints.

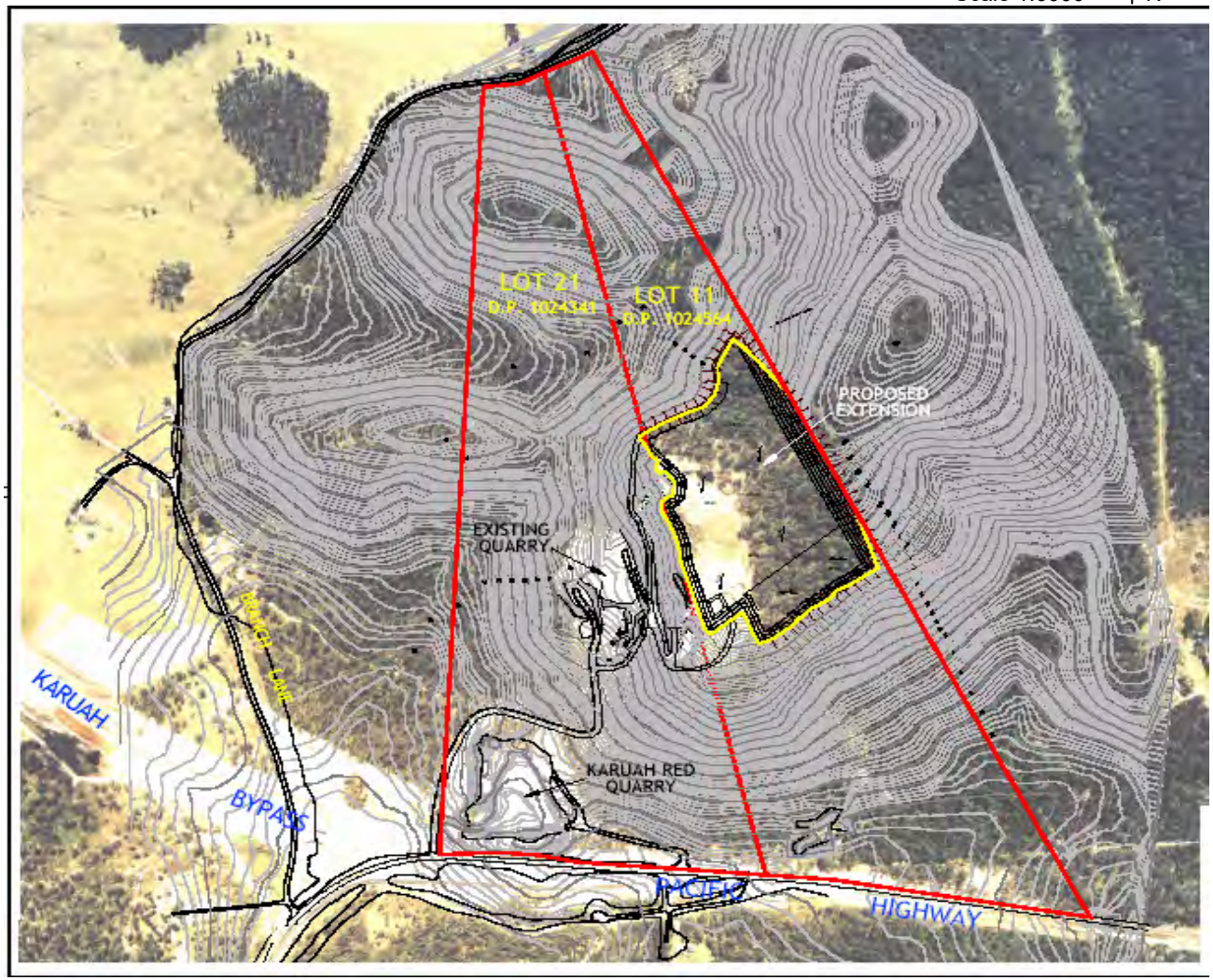
In addition, the Applicant shall, at its own expense:
(a) ensure that 2 of its representatives attend the Committee's meetings;
(b) provide the Committee with regular information on the environmental performance and management of the development;
(c) provide meeting facilities for the Committee;
(d) arrange site inspections for the Committee, if necessary;
(e) take minutes of the Committee's meetings;
(f) make these minutes available to the public for inspection within 14 days of the Committee meeting, or as agreed to by the Committee;
(g) respond to any advice or recommendations the Committee may have in relation to the environmental management or performance of the development; and
(h) forward a copy of the minutes of each Committee meeting, and any responses to the Committee's recommendations to the Director-General within a month of acceptance of the minutes by the Committee.

10. 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.

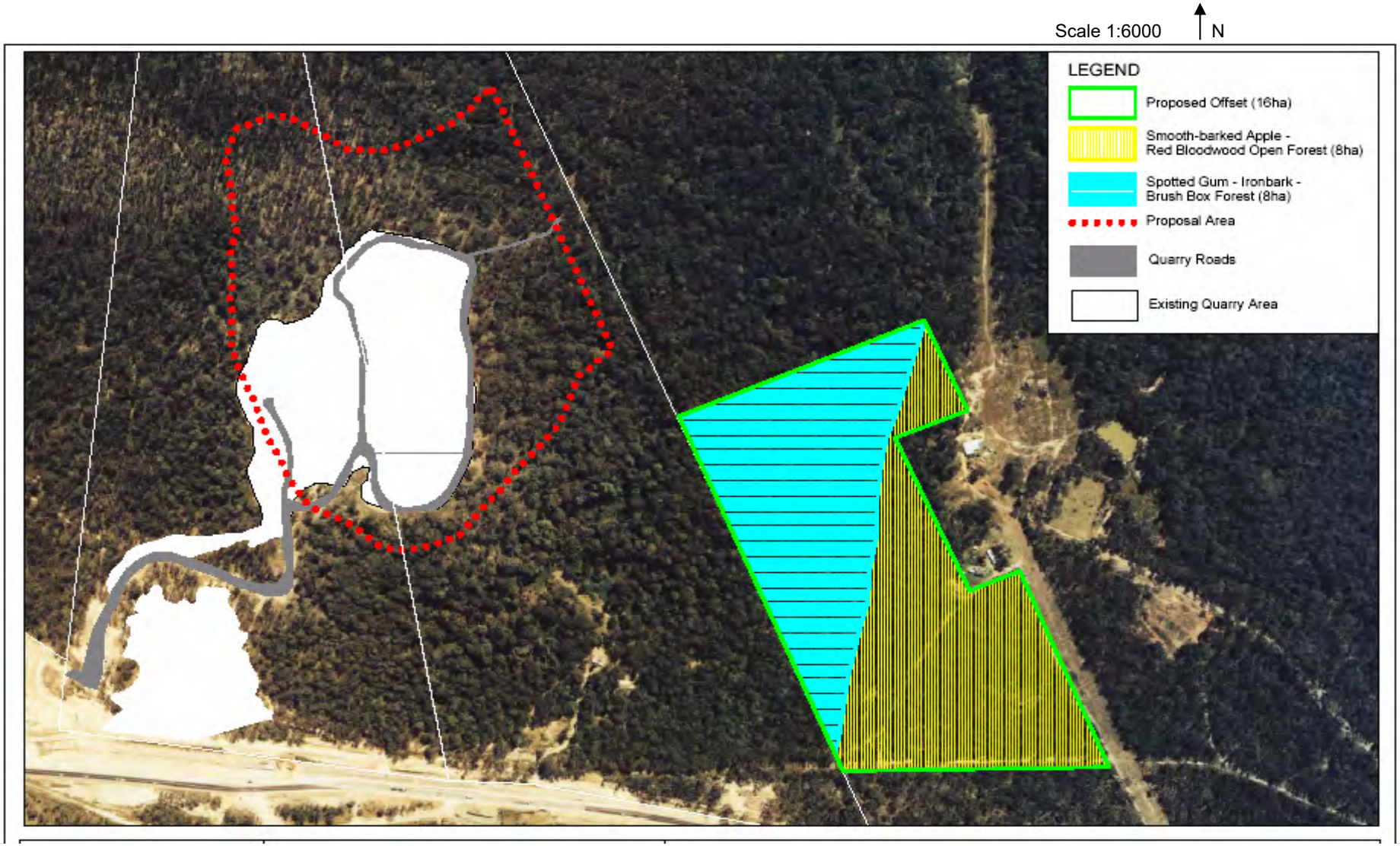
*Notes: If during the course of the development, a Community Consultative Committee that has been established is found to be no longer effective, the Director-General may agree to its disbandment.*

**APPENDIX 1: STAGE 1 AND STAGE 2 QUARRY OPERATIONS**

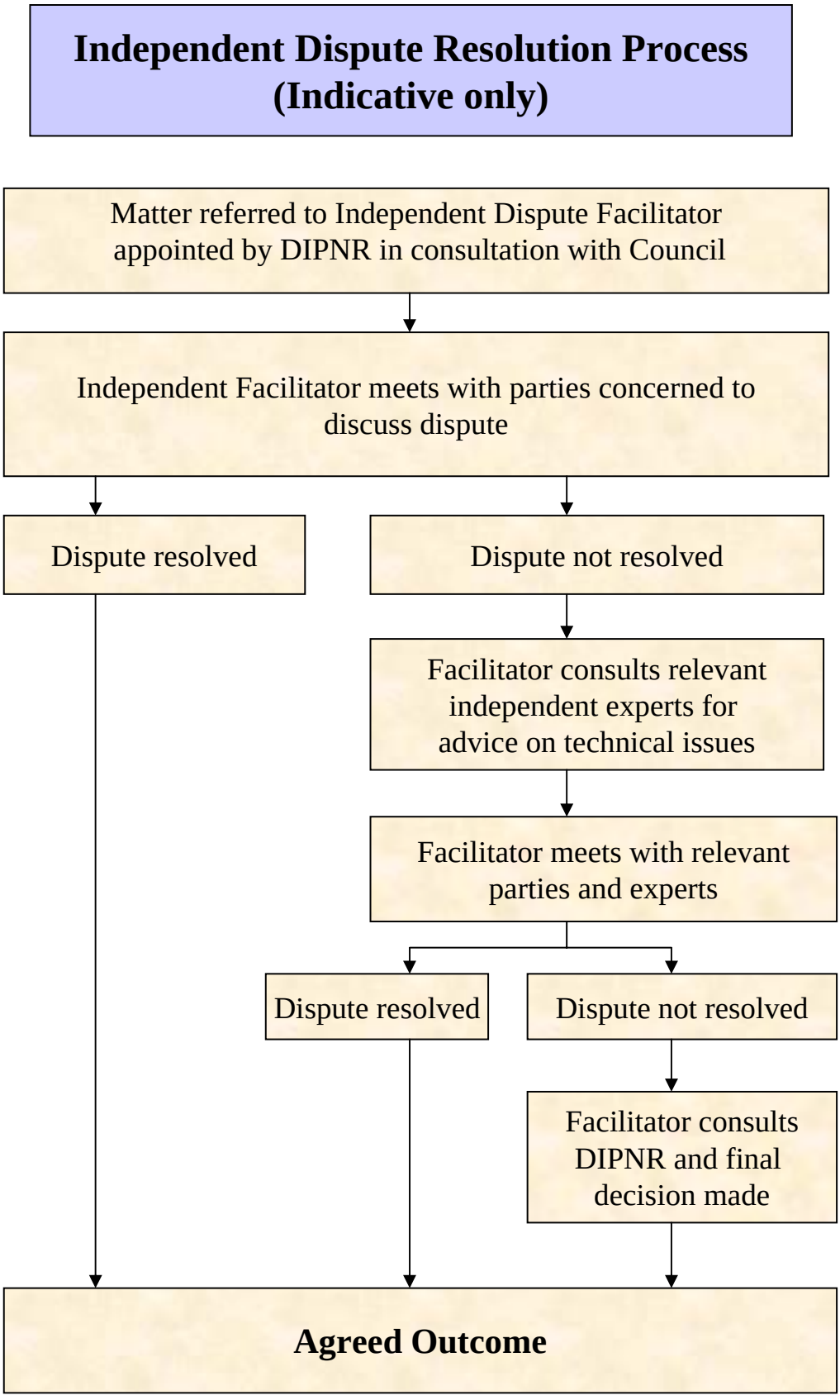
Scale 1:6000 N



**APPENDIX 2: CONSERVATION OFFSET AREA**



**APPENDIX 3: DISPUTE RESOLUTION PROCESS**



# APPENDIX 2

Environment Protection Licence

# Environment Protection Licence

Licence - 11569

| Licence Details | |
|---|---|
| Number: | 11569 |
| Anniversary Date: | 16-January |

**Licensee**

HUNTER QUARRIES PTY LTD

PO BOX 3284

THORNTON NSW 2322

**Premises**

KARUAH QUARRY

CORNER OF ANDERSITE ROAD AND THE BRANCH LANE

KARUAH NSW 2324

**Scheduled Activity**

Crushing, grinding or separating

Extractive activities

| Fee Based Activity | Scale |
|---|---|
| Crushing, grinding or separating | > 100000-500000 T annual processing capacity |
| Land-based extractive activity | > 100000-500000 T annual capacity to extract, process or store |

**Region**

North - Hunter

Ground Floor, NSW Govt Offices, 117 Bull Street

NEWCASTLE WEST NSW 2302

Phone: (02) 4908 6800

Fax: (02) 4908 6810

PO Box 488G NEWCASTLE

NSW 2300

# Environment Protection Licence

Licence - 11569

# Environment Protection Licence

Licence - 11569

# Environment Protection Licence

Licence - 11569

## Information about this licence

### Dictionary

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

### Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 - 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

### Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

### Duration of licence

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

### Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

### Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee; and
- a load-based fee (if applicable).

# Environment Protection Licence

Licence - 11569

The EPA publication “A Guide to Licensing” contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

**Transfer of licence**

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

**Public register and access to monitoring data**

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

## This licence is issued to:

| |
|---|
| **HUNTER QUARRIES PTY LTD** |
| **PO BOX 3284** |
| **THORNTON NSW 2322** |

subject to the conditions which follow.

# Environment Protection Licence

Licence - 11569

## 1 Administrative Conditions

### A1 What the licence authorises and regulates

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.

| Scheduled Activity | Fee Based Activity | Scale |
|---|---|---|
| Crushing, grinding or separating | Crushing, grinding or separating | > 100000 - 500000 T annual processing capacity |
| Extractive activities | Land-based extractive activity | > 100000 - 500000 T annual capacity to extract, process or store |

### A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

| Premises Details |
|---|
| KARUAH QUARRY |
| CORNER OF ANDERSITE ROAD AND THE BRANCH LANE |
| KARUAH |
| NSW 2324 |
| LOT 21 DP 1024341, LOT 11 DP 1024564, LOT 12 DP 1024564 |

### A3 Information supplied to the EPA

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
b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.

# Environment Protection Licence

Licence - 11569

## 2 Discharges to Air and Water and Applications to Land

### P1 Location of monitoring/discharge points and areas

P1.1 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.

P1.2 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.

***Water and land***

| EPA Identification no. | Type of Monitoring Point | Type of Discharge Point | Location Description |
|---|---|---|---|
| 1 | Discharge to waters<br>Discharge quality monitoring | Discharge to waters<br>Discharge quality monitoring | Discharge from sediment dam No 2 identified as "Water Monitoring Site" as shown on map titled "Karuah Hard Rock Quarry Environmental Monitoring Locations, Figure 1" dated 23/06/2014 and filed as EPA document DOC16/422333 on File EF13/3101 |

P1.3 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.

***Air***

| EPA identification no. | Type of Monitoring Point | Type of Discharge Point | Location Description |
|---|---|---|---|
| 2 | Dust deposition monitoring | | Dust deposition gauge DDG1, as shown on map titled "Karuah Hard Rock Quarry Environmental Monitoring Locations, Figure 1" dated 23/06/2014 and filed as EPA document DOC16/422333 on File EF13/3101 |
| 3 | Dust deposition monitoring | | Dust deposition gauge DDG2, as shown on map titled "Karuah Hard Rock Quarry Environmental Monitoring Locations, Figure 1" dated 23/06/2014 and filed as EPA document DOC16/422333 on File EF13/3101 |
| 4 | Dust deposition monitoring | | Dust deposition gauge DDG3, as shown on map titled "Karuah Hard Rock Quarry Environmental Monitoring Locations, Figure 1" dated 23/06/2014 and filed as EPA document DOC16/422333 on File EF13/3101 |
| 5 | Dust deposition monitoring | | Dust deposition gauge DDG4, as shown on map titled "Karuah Hard Rock Quarry Environmental Monitoring Locations, Figure 1" dated 23/06/2014 and filed as EPA document DOC16/422333 on File EF13/3101 |

# Environment Protection Licence

Licence - 11569

## 3 Limit Conditions

### L1 Pollution of waters

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.

### L2 Concentration limits

L2.1 For each monitoring/discharge 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.

L2.2 Where a pH quality limit is specified in the table, the specified percentage of samples must be within the specified ranges.

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.

L2.4 Water and/or Land Concentration Limits

**POINT 1**

| Pollutant | Units of Measure | 50 percentile concentration limit | 90 percentile concentration limit | 3DGM concentration limit | 100 percentile concentration limit |
|---|---|---|---|---|---|
| Oil and Grease | Visible | | | | 5 &/or non-visible |
| pH | pH | | | | 6.5 - 8.5 |
| Total suspended solids | milligrams per litre | | | | 50 |

Note: The oil and grease limit specified in the table above is defined as not more than 5 milligrams per litre (mg/L) and/or no visible oil and grease.

### L3 Waste

L3.1 The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the

premises to be disposed of at the premises, except as expressly permitted by the licence.

L3.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if those activities require an environment protection licence.

## L4 Blasting

L4.1 Blasting in or on the premises must only be carried out between 0900 hours and 1500 hours, Monday to Friday. Blasting in or on the premises must not take place on weekends or Public Holidays without the prior approval of the EPA.

L4.2 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 any residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee as to an alternative overpressure level.

L4.3 The airblast overpressure level from blasting operations in or on the premises must not exceed:
120 dB (Lin Peak) at any time at any residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee as to an alternative overpressure level.

L4.4 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 any residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee as to an alternative overpressure level.

L4.5 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 any residence or noise sensitive location (such as a school or hospital) that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee as to an alternative overpressure level.

L4.6 Error margins associated with any monitoring equipment used to measure airblast overpressure or peak particle velocity are not to be taken into account in determing whether or not the limit(s) has been exceeded.

L4.7 Offensive blast fume must not be emitted from the premises.

*Definition:*

*Offensive blast fume means post-blast gases from the detonation of explosives at the premises that by reason of their nature, duration, character or quality, or the time at which they are emitted, or any other circumstances:*
1. *are harmful to (or likely to be harmful to) a person that is outside the premises from which it is emitted, or*
2. *interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premises from which it is emitted.*

# 4 Operating Conditions

## O1 Activities must be carried out in a competent manner

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
b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

## O2 Maintenance of plant and equipment

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
b) must be operated in a proper and efficient manner.

## O3 Dust

O3.1 All areas in or on the premises must be maintained in a condition that prevents or minimises the emission of dust to the air.

O3.2 Any activity carried out in or on the premises must be carried out by such practical means as to prevent dust or minimise the emission of dust to the air.

O3.3 Any plant operated in or on the premises must be operated by such practical means to prevent or minimise dust or other air pollutants.

O3.4 All trafficable areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the emmission of dust to the air, or emmission from the premises of wind-blown or traffic generated dust.

## O4 Emergency response

O4.1 The licensee must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The licensee must keep the incident response plan on the premises at all times. The incident response plan 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 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.

The licensee must develop the Pollution Incident Response Management Plan in accordance with the

requirements in Part 5.7A of the Protection of the Environment Operations (POEO) Act 1997 and POEO regulations.

### O5 Processes and management

O5.1 All tanks and storage areas for drums containing material that has potential to cause environmental harm must be bunded or have an alternative spill containment system in-place.

The bunding and/or spill containment systems must be properly designed, engineered, and constructed to be suitable for the material types and quantities stored therein in accordance with all appropriate standards, including Australian Standards (AS)1940 and AS1596.

O5.2 Bunds must:
a) have walls and floors constructed of impervious materials;
b) be of sufficient capacity to contain 110% of the volume of the tank (or 110% volume of the largest tank where a group of tanks are installed);
c) have floors graded to a collection sump; and
d) not have a drain valve incorporated in the bund structure,

or be constructed and operated in a manner that achieves the same environmental outcome.

O5.3 The drainage from all areas at the premises which will liberate suspended solids when stormwater runs over these areas must be diverted into adequately sized sedimentation basins.

O5.4 The sedimentation basins must be maintained to ensure that their design capacity is available for the storage of all runoff from cleared areas.

## 5 Monitoring and Recording Conditions

### M1 Monitoring records

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.

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;
b) kept for at least 4 years after the monitoring or event to which they relate took place; and
c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 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;
b) the time(s) at which the sample was collected;
c) the point at which the sample was taken; and
d) the name of the person who collected the sample.

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## M2 Requirement to monitor concentration of pollutants discharged

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:

M2.2 Air Monitoring Requirements

**POINT 2,3,4,5**

| Pollutant | Units of measure | Frequency | Sampling Method |
|---|---|---|---|
| Particulates - Deposited Matter | grams per square metre per month | Monthly | AM-19 |

M2.3 Water and/ or Land Monitoring Requirements

**POINT 1**

| Pollutant | Units of measure | Frequency | Sampling Method |
|---|---|---|---|
| Nitrogen (total) | milligrams per litre | Daily during any discharge | Grab sample |
| Oil and Grease | Visible | Daily during any discharge | Visual Inspection |
| pH | pH | Daily during any discharge | Grab sample |
| Phosphorus (total) | milligrams per litre | Daily during any discharge | Grab sample |
| Total suspended solids | milligrams per litre | Daily during any discharge | Grab sample |

## M3 Testing methods - concentration limits

M3.1 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.

Note: The *Protection of the Environment Operations (Clean Air) Regulation 2010* requires testing for certain purposes to be conducted in accordance with test methods contained in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

M3.2 Monitoring for the concentration of a pollutant emitted to the air required to be conducted by this licence must be done in accordance with:

a) any methodology which is required by or under the Act to be used for the testing of the concentration of the pollutant; or
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
c) if no such requirement is imposed by or under the Act or by a condition of this licence, any methodology approved in writing by the EPA for the purposes of that testing prior to the testing taking place.

## M4 Recording of pollution complaints

M4.1 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.

M4.2 The record must include details of the following:
a) the date and time of the complaint;
b) the method by which the complaint was made;
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;
d) the nature of the complaint;
e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
f) if no action was taken by the licensee, the reasons why no action was taken.

M4.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M4.4 The record must be produced to any authorised officer of the EPA who asks to see them.

## M5 Telephone complaints line

M5.1 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.

M5.2 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.

M5.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

## M6 Blasting

M6.1 The licensee must monitor all blasts carried out in or on the premises at or near the nearest residence or noise sensitive location (such as a school or hospital) that is likely to be most affected by the blast and that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the licensee relating to alternative blasting limits.

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## 6 Reporting Conditions

### R1 Annual return documents

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 a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

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
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.

Note: An application to transfer a licence must be made in the approved form for this purpose.

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
b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.

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').

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.

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
b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

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## R2 Notification of environmental harm

R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.

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.

Note: 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.

## R3 Written report

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.

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.

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;
b) the type, volume and concentration of every pollutant discharged as a result of the event;
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;
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;
e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
g) any other relevant matters.

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.

## R4 Other reporting conditions

R4.1 The licensee must report any exceedence of the licence blasting limits to the regional office of the EPA as soon as practicable after the exceedence becomes known to the licensee or to one of the licensee's

employees or agents.

R4.2 **Blast Monitoring Report**

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;
b) the location of the blast on the premises;
c) the blast monitoring results at each blast monitoring station; and
d) an explanation for any missing blast monitoring results.

# 7 General Conditions

## G1 Copy of licence kept at the premises or plant

G1.1 A copy of this licence must be kept at the premises to which the licence applies.

G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.

G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

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## Dictionary

### General Dictionary

| | |
|---|---|
| **3DGM [in relation to a concentration limit]** | Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples |
| **Act** | Means the Protection of the Environment Operations Act 1997 |
| **activity** | Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment Operations Act 1997 |
| **actual load** | Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009 |
| **AM** | Together with a number, means an ambient air monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*. |
| **AMG** | Australian Map Grid |
| **anniversary date** | The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act. |
| **annual return** | Is defined in R1.1 |
| **Approved Methods Publication** | Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009 |
| **assessable pollutants** | Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009 |
| **BOD** | Means biochemical oxygen demand |
| **CEM** | Together with a number, means a continuous emission monitoring method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*. |
| **COD** | Means chemical oxygen demand |
| **composite sample** | Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples collected at hourly intervals and each having an equivalent volume. |
| **cond.** | Means conductivity |
| **environment** | Has the same meaning as in the Protection of the Environment Operations Act 1997 |
| **environment protection legislation** | Has the same meaning as in the Protection of the Environment Administration Act 1991 |
| **EPA** | Means Environment Protection Authority of New South Wales. |
| **fee-based activity classification** | Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations (General) Regulation 2009. |
| **general solid waste (non-putrescible)** | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997 |

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|---|---|
| **flow weighted composite sample** | Means a sample whose composites are sized in proportion to the flow at each composites time of collection. |
| **general solid waste (putrescible)** | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997 |
| **grab sample** | Means a single sample taken at a point at a single time |
| **hazardous waste** | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997 |
| **licensee** | Means the licence holder described at the front of this licence |
| **load calculation protocol** | Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009 |
| **local authority** | Has the same meaning as in the Protection of the Environment Operations Act 1997 |
| **material harm** | Has the same meaning as in section 147 Protection of the Environment Operations Act 1997 |
| **MBAS** | Means methylene blue active substances |
| **Minister** | Means the Minister administering the Protection of the Environment Operations Act 1997 |
| **mobile plant** | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997 |
| **motor vehicle** | Has the same meaning as in the Protection of the Environment Operations Act 1997 |
| **O&G** | Means oil and grease |
| **percentile [in relation to a concentration limit of a sample]** | Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence. |
| **plant** | Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles. |
| **pollution of waters [or water pollution]** | Has the same meaning as in the Protection of the Environment Operations Act 1997 |
| **premises** | Means the premises described in condition A2.1 |
| **public authority** | Has the same meaning as in the Protection of the Environment Operations Act 1997 |
| **regional office** | Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence |
| **reporting period** | For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 mo nths. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act. |
| **restricted solid waste** | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997 |
| **scheduled activity** | Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997 |
| **special waste** | Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997 |
| **TM** | Together with a number, means a test method of that number prescribed by the *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales*. |

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|---|---|
| **TSP** | Means total suspended particles |
| **TSS** | Means total suspended solids |
| **Type 1 substance** | Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements |
| **Type 2 substance** | Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements |
| **utilisation area** | Means any area shown as a utilisation area on a map submitted with the application for this licence |
| **waste** | Has the same meaning as in the Protection of the Environment Operations Act 1997 |
| **waste type** | Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non-putrescible), special waste or hazardous waste |

Ms Michelle Bruce

Environment Protection Authority

(By Delegation)

Date of this edition: 16-January-2002

## End Notes

| | |
|---|---|
| 1 | Licence varied by notice 1015394, issued on 11-Jul-2002, which came into effect on 05-Aug-2002. |
| 2 | Licence varied by notice 1048149, issued on 30-Jun-2005, which came into effect on 25-Jul-2005. |
| 3 | Licence varied by notice 1061485, issued on 14-Sep-2006, which came into effect on 14-Sep-2006. |
| 4 | Licence varied by notice 1072188, issued on 16-Apr-2007, which came into effect on 16-Apr-2007. |
| 5 | Condition A1.3 Not applicable varied by notice issued on <issue date> which came into effect on <effective date> |
| 6 | Licence varied by notice 1113805, issued on 04-May-2010, which came into effect on 04-May-2010. |
| 7 | Licence varied by notice 1502901 issued on 29-Dec-2011 |
| 8 | Licence varied by notice 1528535 issued on 26-Aug-2016 |

# APPENDIX 3

Statutory Requirements Register

**TABLE 1: Summary of Environmental Legislation**

| Activity/Area of Work | Legislation (as applicable) | Obligations/required Actions – Summary Information Only – Further definition must be sought directly from the relevant legislation. |
|---|---|---|
| **Federal** – Conservation Legislation | • Environmental Protection and Biodiversity Conservation Act 1999 (Cth) | • An Act relating to the protection of the environment and the conservation of biodiversity – administered by Commonwealth Department of Environment & Heritage.<br>• Federal Government approval may be required for activities that have, will have or are likely to have an impact on matters of national environmental significance |
| **State (NSW) -**<br>Planning/Building | • *Environmental Planning and Assessment Act 1979 (NSW)*<br>• *Local Government Act 1993 (NSW)* | • HQPL has obtained Development Consent (DA 265-10-2004) for works; all future works to be in accordance with instructions provided by HQPL from Development Consent Conditions (DA 265-10-2004).<br>• Local Council approval is required to erect/demolish buildings, moveable dwellings and site structures such as compounds. This includes operating a bio-cycle sewerage treatment plant (or similar). |
| Water Management/erosion Control | • *Water Act 1912 / Water Management Act 2000 (NSW)* | • Licences required for bores, test monitoring bores, water works diversions and the active pit area.<br>• |
| Pollution Control | • *Protection of the Environment Operations Act 1997 (NSW)* | • EPL from the EPA. HQPL holds EPL 11569. |
| Hazardous/Dangerous Goods & Contamination | • *Environmentally Hazardous Chemicals Act 1985 (NSW)*<br>• *Contaminated Land Management Act 1997 (NSW)* | • Storage and distribution of certain chemicals requires a licence from the EPA.<br>• Contamination that has a significant risk of harm must be reported to the EPA. If a significant risk exists then the site must be remediated. |
| Land Management | • *Biosecurity Act (2015)*<br>• *Soil Conservation Act 1938 (NSW)* | • Responsibility of occupiers of land to suppress and destroy noxious animals, noxious insects and the control of pest animals as per control orders issued under the Act. Responsibility to control noxious weeds, requirement to notify local council of the presence of noxious weeds and destroy and/or prevent them from spreading depending on classification<br>• Notice may be served of actions required to mitigate or avoid soil erosion, siltation or land degradation associated with prescribed works and catchment areas. |
| Bushfire Management | • *Rural Fire Act (1997)* | • An Act to establish the NSW Rural Fire Service and define its functions; to make provision for the prevention, mitigation and suppression of rural fires; to repeal the Bush Fires Act 1949; to amend certain other Acts; and for other purposes. |

| Activity/Area of Work | Legislation (as applicable) | Obligations/required Actions – Summary Information Only – Further definition must be sought directly from the relevant legislation. |
|---|---|---|
| Archaeology | • *National Parks & Wildlife Act 1974 (NSW)*<br>• *Heritage Act 1977 (NSW)* | • Regulates the disturbance of relics, Aboriginal places and flora and fauna. HQPL is to notify the DPIE – Heritage Division of the discovery of any artefacts or sites.<br>• No items older than 50 years to be disturbed or removed without discussion of the need for a permit from the Heritage Council of NSW. |
| Waste Management | • *Waste Avoidance and Resource Recovery Act 2001 (NSW)*<br>• *Protection of Environment Operations (Waste) Regulation 2014* | • Waste products to be disposed of in a controlled manner. |
| Flora and Fauna/Clearing of vegetation | • *Biodiversity Conservation Act 2016 (NSW)*<br>• *Local Land Services Act 2013 (NSW)* | • Need to consider effect on threatened species and communities. Threatened species sightings are to be reported to the Quarry Manager (or suitable delegate).<br>• To prevent the inappropriate clearing of vegetation and provide for the management and conservation of native vegetation on a regional basis. |
| Storage and use of Explosives | • *Explosives Act 2003 (NSW)* | • An Act to provide for the regulation and control of the handling of explosives and explosive precursors; to provide for the regulation of certain other dangerous goods; and for related purposes. |
| Ozone Materials | • *Ozone Protection Act 1989 (NSW)* | • An Act to empower the regulation and prohibition of the manufacture, sale, distribution, use, emission, re-cycling, storage and disposal of stratospheric ozone depleting substances and articles which contain those substances; and for other purposes. |
| Radioactive Materials | • *Radiation Control Act 1990 (NSW)* | • An Act to make provision for the regulation and control of the sale, use, keeping and disposal of radioactive substances and radiation apparatus and for other purposes. |

**TABLE 2: Summary of relevant Standards and Guidelines**

| Policy, Guideline and Standards | Obligations/required Actions |
|---|---|
| • *Environmental Noise Control Manual (EPA, 1994)* | • Sets criteria for operational noise, detailing monitoring method. Document under which the current consent was approved. |
| • *Noise Policy for Industry (EPA, 2017)* | • To be used for Noise Assessment work in conjunction with the ENCM above (EPA, 2000). |
| • *AS 1055:2018 Acoustics - Description and measurement of environmental noise* | • Australian Standard for the description and measurement of environmental noise. |
| • *AS/NZS IEC 61672.1:2019 - Electroacoustics - Sound level meters Specifications and AS/NZS IEC 61672.2:2019 - Electroacoustics - Sound level meters Pattern evaluation tests* | • Description and types of sound level meters. |
| • *Australian and NZ Water Quality Guidelines for Fresh and Marine Waters (ANZECC, 2000)* | • Set objectives and targets for water quality monitoring. |
| • *Managing Urban Storm water – Soils & Construction (Landcom, 2004) (Blue Book)* | • Management techniques for sediment control/runoff. |
| • *Approved Methods for Sampling & Analysis of Waste Water Pollutants in NSW, EPA (2004)* | • Methods applicable to the sampling and analysis of water on the Quarry. |
| • *Approved Methods for sampling and Analysis of Air Pollutants in NSW (EPA, 2007)* | • Guidelines for sampling and analysis of air pollutants. |
| • *AS/NZS 3580.9.3:2015 - Methods for sampling and analysis of ambient air Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method* | • Australian Standard for sampling and analysis of air pollutants (TSP). |
| • *AS/NZS 3580.9.6:2015 - Methods for sampling and analysis of ambient air Determination of suspended particulate matter - $PM_{10}$ high volume sampler with size selective inlet - Gravimetric method* | • Australian Standard for sampling and analysis of air pollutants ($PM_{10}$). |
| • *AS/NZS 3580.1.1:2016 - Methods for sampling and analysis of ambient air Guide to siting air monitoring equipment* | • Australian Standards for the siting of ambient air monitoring equipment and specifies a number of siting parameters for individual air pollutants. |
| • *AS 2187.2-2006 Explosives – Storage and use of Explosives.* | • The storage of explosives – and reference to limits for ground vibration and overpressure. |

| Policy, Guideline and Standards | Obligations/required Actions |
|---|---|
| • *AS 1940:2017 – The storage and handling of flammable and combustible liquids* | • Give reference to standards required for fuel farms, bunding and the storage of combustible liquids. |
| • *AS44528-1997 – The Storage and Handling of Toxic Substances* | • This Standard sets out requirements and recommendations for the safe storage and handling of toxic substances, including reference to bunding requirements. |

# APPENDIX 4

Standard Environmental Conditions for Contractors and Sub-contractors

**PROTECTION OF ENVIRONMENT**

**(Applicable to all Contractors working on the Quarry)**

**The Contractor shall in carrying out the work under the Contract shall:**

a. Endeavour to achieve a high standard of environmental care at all times and implement environmental management measures which seek continuous improvement in performance by taking account of evolving scientific knowledge and community expectations;

b. Comply with all applicable laws, regulations and standards; uphold the spirit of the law; and where laws do not adequately protect the environment, apply standards that minimise any adverse environmental impacts;

c. Ensure that employees, contractors, subcontractors and suppliers of goods and services are informed about the HQPL Environment and Community Policy and are aware of their environmental responsibilities and act accordingly;

d. Ensure that it has management systems to identify, control and monitor any environmental risks arising in connection with the work under the Contract;

e. Endeavour to conserve resources, minimise wastes, improve processes and protect the environment;

f. Ensure compliance with any plan of management applying to the Site; and

g. Where any condition of the Development Consent is in conflict with any of the conditions outlined in this Standard, then all contractors should note that the conditions outlined in the Development Consent takes precedence.

# APPENDIX 5

Environment and Community Aspects and Impacts Risk Register

# ENVIRONMENT AND COMMUNITY RISK REGISTER

**Original prepared - 2007**
**Update 1 - December 2014**
**Update 2 - August 2020**

| Process Area | Activity | Aspect | Raw | | | | | Existing Controls (2020) | Existing Controls | | | | | Proposed Controls |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | C | P | R | | | | C | P | R | | | |
| | Environmental Monitoring | Completion fo environmental monitoring as per the Managemnt Plans | 4 | b | 4b | 14 | (M) | 1. Existing management plans, including 2020 review. | 4 | b | 4b | 14 | (M) | Implementation of Flora and Fauna Management Plan. . |
| **Karuah Quarry** | Clearing of vegetation | Disturbance/ damage to threatened flora and fauna | 4 | b | 4b | 14 | (M) | 1. Clearing permits<br>2. Relocation of protected species<br>3. Annual flora and fauna checks.<br>4. No additional clearing proposed | 5 | e | 5e | 25 | (L) | |
| | | Disturbance of Aboriginal heritage sites | 3 | b | 3b | 9 | (M) | 1. Clearing permits<br>2. EIS.<br>3. No additional clearing proposed | 5 | e | 5e | 25 | (L) | |
| | | Disturbance of European heritage sites | 5 | d | 5d | 24 | (L) | 1. Clearing permits<br>2. EIS.<br>3. No additional clearing proposed | 5 | e | 5e | 25 | (L) | |
| | | Dust | 4 | b | 4b | 14 | (M) | 1. watch weather conditions<br>2. Dust Control Procedure<br>3. Competant operators<br>4. Supervision<br>5. No additional clearing proposed | 5 | e | 5e | 25 | (L) | |
| | | Noise | 4 | b | 4b | 14 | (M) | 1. Prestart checks<br>2. Maintenance<br>3. 103's<br>4. No additional clearing proposed | 5 | e | 5e | 25 | (L) | |
| | | Erosion with sediment leaving site | 4 | a | 4a | 10 | (M) | 1. Drainage to internal system.<br>2. No additional clearing proposed | 5 | e | 5e | 25 | (L) | |
| | | Potential to introduce weeds | 3 | b | 3b | 9 | (M) | 1. Site specific machines<br>2. Wash down of off site machines<br>3. Inspections pre-use<br>4. Weed management plan.<br>5. No additional clearing proposed. | 5 | e | 5e | 25 | (L) | |
| | Topsoil Stripping | Disturbance of Aboriginal heritage sites | 3 | b | 3b | 9 | (M) | 1. Clearing permits<br>2. EIS.<br>3. No additional clearing/topsoil stripping proposed | 3 | e | 3e | 20 | (L) | |
| | | Potential to introduce weeds | 3 | b | 3b | 9 | (M) | 1. Site specific machines<br>2. Wash down of off site machines<br>3. Inspections pre-use.<br>4. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | | Disturbance of European heritage sites | 5 | d | 5d | 24 | (L) | 1. Clearing permits<br>2. EIS<br>3. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | | Dust | 4 | b | 4b | 14 | (M) | 1. watch weather conditions<br>2. Dust Control Procedure<br>3. Competant operators<br>4. Supervision<br>5. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | | Noise | 4 | b | 4b | 14 | (M) | 1. Prestart checks<br>2. Maintenance<br>3. 103's<br>4. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | | Erosion with sediment leaving site | 4 | a | 4a | 10 | (M) | 1. Drainage to internal system<br>2. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | | Loss of topsoil | 4 | b | 4b | 14 | (M) | 1. Topsoil stripping plans<br>2. Training and awareness<br>3. Supervision<br>4. Competant operator<br>5. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | | Quality of topsoil reduced through damage to soil structure | 4 | c | 4c | 18 | (L) | 1. Minimise rehandle<br>2. Training and awareness<br>3. Supervision<br>4. Competant operator<br>5. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | | Contamination of topsoil by subsoils | 4 | c | 4c | 18 | (L) | 1. Topsoil stripping plans<br>2. Training and awareness<br>3. Supervision<br>4. Competant operator<br>5. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | Drilling | Noise | 4 | b | 4b | 14 | (M) | 1. Prestart checks<br>2. Maintenance<br>3. 103's<br>4. Experienced drilling contractors. | 4 | d | 4d | 21 | (L) | |
| | | Dust | 4 | b | 4b | 14 | (M) | 1. watch weather conditions<br>2. Dust Control Procedure<br>3. Competant operators<br>4. Supervision<br>5. Experienced drilling contractors. | 4 | d | 4d | 21 | (L) | |

# ENVIRONMENT AND COMMUNITY RISK REGISTER

**Original prepared - 2007**
**Update 1 - December 2014**
**Update 2 - August 2020**

| Process Area | Activity | Aspect | Raw | | | | | Existing Controls (2020) | Existing Controls | | | | | Proposed Controls |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | C | P | R | | | | C | P | R | | | |
| | | Transfer of hydrocarbons from fuel truck | 4 | c | 4c | 18 | (L) | 1. Wiggens fittings<br>2. Emergency cutoffs<br>3. Spill kits<br>4. Competant operators<br>5. Double skinned tank.<br>6. Experienced drilling contractors. | 4 | d | 4d | 21 | (L) | |
| | | Spillage of hydrocarbons from damaged hose | 4 | b | 4b | 14 | (M) | 1. Prestart checks<br>2. Maintenance<br>3. 103's<br>4. Report to workshop<br>5. Spill kits. | 4 | c | 4c | 18 | (L) | |
| | Blasting | Noise/ overpressure | 3 | b | 3b | 9 | (M) | 1. Extra stemming<br>2. Airbags<br>3. Blasting procedures - including contact with community<br>4. Experienced blast contractor. | 4 | d | 4d | 21 | (L) | |
| | | Dust | 3 | b | 3b | 9 | (M) | 1. Monitor weather conditions<br>2. Sleep shots | 3 | c | 3c | 13 | (M) | |
| | | Noxious gas released to atmosphere (wet holes) | 3 | b | 3b | 9 | (M) | 1.Blasting procedures<br>2. Holes not wet (avoid rainfall ingress).<br>3. Experienced blast contractor. | 4 | d | 4d | 21 | (L) | |
| | | Vibration | 3 | b | 3b | 9 | (M) | 1. Design procedures<br>2. Experienced blast contractor. | 4 | d | 4d | 21 | (L) | |
| | Excavation of hard rock material and haulage of material | Noise | 4 | b | 4b | 14 | (M) | 1. Prestart checks<br>2. Maintenance<br>3. 103's | 4 | d | 4d | 21 | (L) | |
| | | Dust | 4 | b | 4b | 14 | (M) | 1. Watch weather conditions - access to weather station data.<br>2. Dust Control Procedure<br>3. Competant operators<br>4. Supervision | 4 | d | 4d | 21 | (L) | |
| | | Erosion with sediment leaving site | 4 | a | 4a | 10 | (M) | 1. Drainage to internal system<br>2. No additional clearing/topsoil stripping proposed | 5 | e | 5e | 25 | (L) | |
| | Crusher area | Noise | 4 | d | 4d | 21 | (L) | 1. Prestart checks<br>2. Maintenance<br>3. 103's | 4 | d | 4d | 21 | (L) | |
| | | Dust | 3 | a | 3a | 6 | (H) | 1. Sprinklers<br>2. Watch Weather Conditions. | 3 | b | 3b | 9 | (M) | |
| | | Spillage of hydrocarbons from damaged hose | 4 | c | 4c | 18 | (L) | 1. Prestart checks<br>2. Maintenance<br>3. 103's<br>4. Report to workshop | 4 | c | 4c | 18 | (L) | |
| | | Transfer of hydrocarbons from service truck | 4 | c | 4c | 18 | (L) | 1. Wiggens fittings<br>2. Emergency cutoffs<br>3. Spill kits<br>4. Competant operators | 4 | d | 4d | 21 | (L) | |
| | Conveyors | Noise | 4 | d | 4d | 21 | (L) | 1. Prestart checks<br>2. Maintenance<br>3. 103's<br>4. Covers | 4 | d | 4d | 21 | (L) | |
| | | Dust | 3 | a | 3a | 6 | (H) | 1. watch weather conditions<br>2. Dust Control Procedure<br>3. Competant operators<br>4. Supervision | 3 | b | 3b | 9 | (M) | |
| | Workshop area | Noise | 4 | a | 4a | 10 | (M) | 1. Prestart checks<br>2. Maintenance<br>3. 103's | 4 | d | 4d | 21 | (L) | |
| | | Waste e.g. oily rags, oil filters, kitty litter, absorbant booms, redundant chemicals | 3 | b | 3b | 9 | (M) | 1. Placed in appropriate skip bin<br>2. Waste removed by service contractor<br>3. Waste monitoring | 3 | d | 3d | 17 | (L) | |
| | | Oil spills | 4 | a | 4a | 10 | (M) | 1. Absorbant material<br>2. Training and awareness | 4 | d | 4d | 21 | (L) | |
| | | Parts washer | 5 | a | 5a | 15 | (M) | 1. Removed by Licenced contractor | 5 | d | 5d | 24 | (L) | |
| | Bulk fuel storage | Leakage | 3 | b | 3b | 9 | (M) | 1. Visual inspection<br>2. Secondary Bund. | 4 | d | 4d | 21 | (L) | |
| | | Spillage | 4 | b | 4b | 14 | (M) | 1. Visual inspection<br>2. Bunded | 4 | d | 4d | 21 | (L) | |
| | Vehicle wash down bay | Oil water separator failure | 4 | b | 4b | 14 | (M) | 1. Inspection regime (check frequency with maintenance)<br>2. Hydrocarbon testing in Rowan's Dam | 4 | d | 4d | 21 | (L) | |
| | Waste emplacement area/rock rejects | Dust | 4 | c | 4c | 18 | (L) | 1. Dust Control Procedure<br>2. Competant operators<br>3. Supervision | 4 | d | 4d | 21 | (L) | |
| | | Noise | 4 | c | 4c | 18 | (L) | 1. Prestart checks<br>2. Maintenance<br>3. 103's | 4 | d | 4d | 21 | (L) | |
| | Reshaping for rehabilitation | Dust | 4 | c | 4c | 18 | (L) | 1. Watch weather conditions<br>2. Dust Control Procedure<br>3. Competant operators<br>4. Supervision | 4 | d | 4d | 21 | (L) | Implementation of Rehabilitation and Closure Plan once approved. |
| | | Noise | 4 | c | 4c | 18 | (L) | 1. Prestart checks<br>2. Maintenance<br>3. 103's | 4 | d | 4d | 21 | (L) | |
| | | Erosion and sediment control (including site discharge) | 3 | b | 3b | 9 | (M) | 1. Drainage to internal system | 3 | d | 3d | 17 | (L) | Additional works for discharge point. The Surface Water Management Plan is being updated with further details. |
| | | Dust | 4 | c | 4c | 18 | (L) | 1. watch weather conditions<br>2. Dust Control Procedure<br>3. Competant operators | 4 | d | 4d | 21 | (L) | |

# ENVIRONMENT AND COMMUNITY RISK REGISTER

**Original prepared - 2007**
**Update 1 - December 2014**
**Update 2 - August 2020**

| Process Area | Activity | Aspect | Raw | | | | | Existing Controls (2020) | Existing Controls | | | | | Proposed Controls |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | C | P | R | | | | C | P | R | | | |
| | Topsoil / ameliorants spreading<br><br>*This is an issue with limited topsoil onsite. Other ameliorants may need to be used in rehabilitation.* | Noise | 4 | c | 4c | 18 | (L) | 1. Prestart checks<br>2. Maintenance<br>3. 103's | 4 | d | 4d | 21 | (L) | Implementation of the Rehabilitation and Closure Plan once approved. |
| | | Erosion and sediment control | 3 | b | 3b | 9 | (M) | 1. Drainage to internal system | 3 | d | 3d | 17 | (L) | |
| | | Sediment dams (retention capacity) | 3 | b | 3b | 9 | (M) | 1. Desilted<br>2. Water usage.<br>3. Water Management Procedure. | 3 | d | 3d | 17 | (L) | |
| | | Lime and gypsum dust | 4 | a | 4a | 10 | (M) | 1. Monitor weather conditions<br>2. Wet lime prior to spreading | 4 | c | 4c | 18 | (L) | |
| | | Erosion with sediment leaving site | 4 | a | 4a | 10 | (M) | 1. Drainage to internal system | 4 | d | 4d | 21 | (L) | |
| | Revegetation | Potential to introduce weeds | 3 | b | 3b | 9 | (M) | 1. Site specific machines<br>2. Wash down of off site machines<br>3. Inspections pre-use | 3 | d | 3d | 17 | (L) | |
| | | Failure of rehabilitation | 4 | c | 4c | 18 | (L) | 1. Visual inspections<br>2.. Completion of ecological monitoring.<br>3. Annual Rehabilitation Inspection | 4 | d | 4d | 21 | (L) | |
| | | Bush fire hazard | 4 | b | 4b | 14 | (M) | 1. Bush fire management plan<br>2. Fuel reduction plan<br>3. Water cart<br>4. Emergency response team | 4 | d | 4d | 21 | (L) | |

# APPENDIX 6

Environment and Community Policy

# Environment and Community Policy

Hunter Quarries Pty Ltd (HQPL) is committed to pursuing industry specific best practice in environmental and community performance. It is in both the company's interest and the community's interest for HQPL to accept responsibility for the management of our workplace and surrounding environment.

HQPL is committed to:

- Complying with environmental legislation, regulations, and codes of practice relevant to our particular business;
- Operating our business to minimise and eliminate adverse environmental impacts;
- Conduct business with suppliers and contractors who also have a commitment to a responsible Environment and Community Policy; and
- Remediate our sites to standards set by government authorities.

HQPL is committed to the implementation and maintenance of environmental management systems to protect and conserve our environment. Through communication and training, all employees and contractors will be encouraged and assist to enhance our environmental performance.

**Greg Dressler**

Quarry Manager

August 2020

# APPENDIX 7

Environment and Community Procedures

# DANGEROUS AND HAZARDOUS GOODS MANAGEMENT

| ENVIRONMENT AND COMMUNITY PROCEDURES<br>DANGEROUS & HAZARDOUS GOODS MANAGEMENT | RESPONSIBILITY |
|---|---|
| **1. Objectives**<br>The following objectives apply to dangerous and hazardous goods management at the Karuah Hard Rock Quarry:<br>• To store and use dangerous and hazardous materials in a controlled manner to reduce risk of contamination;<br>• Provide training to all personnel in the management of dangerous and hazardous goods and contamination response procedures;<br>• To respond quickly and appropriately to contamination events; and<br>• To maintain spill response equipment in all relevant areas.<br>**2. Scope**<br>This procedure applies to all HQPL quarry operations, personnel, contractors and subcontractors operating on the HQPL Karuah development site.<br>**3. Requirements**<br>The following requirements apply to dangerous and hazardous goods management at the Karuah Hard Rock Quarry;<br>**3.1 Identification of dangerous and hazardous goods**<br>• A register of all dangerous and hazardous goods is to be retained. This register is to be used to track the materials on site, including delivery, storage and disposal.<br>**3.2 Storage and Handling – Hazardous Waste**<br>• Dangerous Goods depots are to be signposted and marked as required by the Dangerous Goods Licence held by HQPL (as applicable);<br>• The Safety Data Sheets (SDS) for all dangerous goods are to be obtained from the supplier and displayed adjacent to all places where the material is stored or used. All staff are to be trained on how to use SDS.<br>• All dangerous ad hazardous goods storage areas are to be bunded to at least 110% capacity of the largest vessel within the bund.<br>• Adequate PPE is to be made available by HQPL to employee for the safe handling and spill response as required.<br>• Appropriate spill response material (e.g. absorbent material, pads and booms, etc) is to be stored on site to enable employees to respond appropriately in the unlikely event of a spill or other such incident.<br>**3.3 Transportation**<br>• All dangerous and hazardous goods are to be transported in accordance with the SDS requirements – fuels are to be transported in specific fuel transport trucks.<br>• All vehicles carrying dangerous and hazardous goods are to carry adequate spill response equipment. | **3. Quarry Manager (or suitable delegate)**<br>**Staff and Contractors** |

| ENVIRONMENT AND COMMUNITY PROCEDURES<br>DANGEROUS & HAZARDOUS GOODS MANAGEMENT | RESPONSIBILITY |
|---|---|
| **3.4 Refuelling**<br>• Refuelling is to be undertaken at the refuelling station;<br>• Fuel pumps are to have emergency stop valves and cut off switches (or similar); and<br>• Wiggin's fittings will be used to minimise spillage during fuel transfer from the bulk storage tank and the equipment/vehicle being refuelled.<br>**3.5 Disposal of Hazardous Wastes**<br>• No hazardous are to be disposed at the site<br>• All hazardous goods are to be stored in identified containers and areas (with SDS displayed) for collection by an EPA approved hazardous waste collection contractor.<br>**3.6 Spill Response**<br>• See Emergency Response Preparedness and Response in **Section 4.4** of the EMS.<br>• The following response is required in the event of a spill at the site:<br>• **STEP 1**: Stop and Control the Spill – switch off any pumps, cover spill with absorbent materials such as mats, sand.<br>• **STEP 2**: Contain the Spill - contain using earth bunds or booms.<br>• **STEP 3**: Clean up – clean up hazardous material and place contaminated soil and product in an appropriately labelled (with SDS) waste disposal drum.<br>• **STEP 4**: Notify Supervisor – advise your supervisor that the spill has occurred and have them inspect the area to ensure that the cleanup has been satisfactory.<br>• **STEP 5**: Report – Complete an environmental incidents form (see **Section 4.11**) If triggered enact the PIRMP. | |
| **4. Monitoring**<br>All dangerous and hazardous goods storages will be inspected monthly as part of the environmental inspection checklist (see section 5.9 of the EMS). | **4. Quarry Manager (or suitable delegate)** |
| **5. Review**<br>This procedure is to be reviewed every three years as part of the EMS review. Staff and contractors are to be made aware of updates. | **5. Quarry Manager (or suitable delegate)** |
| **6. Records**<br>Records of dangerous goods are kept on site. | **6. Quarry Manager (or suitable delegate)** |
| **7. References**<br>• *Protection of the Environment Operations Act (1997).*<br>• EPA Licence for Karuah Hard Rock Quarry (No. 11569).<br>• HQPL Environment and Community Policy | |

| ENVIRONMENT AND COMMUNITY PROCEDURES<br>WASTE MANAGEMENT | RESPONSIBILITY |
|---|---|
| **1. Objectives**<br>The following objectives apply to waste management at the Karuah Hard Rock Quarry:<br>• To store general waste in a controlled manner to reduce risk of contamination;<br>• Provide training to all personnel in the management of general waste;<br>• Reduce general waste produced through; and<br>• Where practical undertake recycling.<br>**2. Scope**<br>This procedure applies to all HQPL quarry operations, personnel, contractors and subcontractors operating on the HQPL Karuah development site.<br>**3. Requirements**<br>The following requirements apply to dangerous and hazardous goods management at the Karuah Hard Rock Quarry;<br>**3.1 Minimising Waste and Reuse of Products**<br>• HQPL purchase products with minimal packaging;<br>• Records of products delivered to site are recorded;<br>• On time delivery of materials when they are required; and<br>• Where possible reuse products (eg. on – site packaging materials), rather than disposal.<br>**3.2 Storage and Handling – General Waste**<br>• All waste is stored in defined areas;<br>• Waste disposed of in bins supplied by the waste contractor; and<br>• Recycling of materials where possible (eg. Wooden pallets separated for recycling).<br>**3.3 Transportation**<br>• Waste is collected by a licensed waste contractor and transported offsite.<br>**3.4 Disposal of Waste**<br>• This is the last option, where re-use of recycling is not possible.<br>**4. Monitoring**<br>All waste will be inspected every two months as part of the environmental inspection checklist (see section 5.9 of the EMS). The Quarry Manager (or suitable delegate) completes daily inspections of the site which includes a review of waste management. Total waste from the operations will be recorded the AEMR. Waste totals will be recorded in a spreadsheet.<br>**5. Review**<br>This procedure is to be reviewed every three years as part of the EMS review. Staff and contractors are to be made aware of updates. The HQPL management team will discuss ways to reduce waste and undertake a recycling program during the 'Management Review'.<br>**6. Records**<br>Records of waste management are kept on site. | **3. Quarry Manager (or suitable delegate)**<br>**Staff and Contractors**<br>**4. Quarry Manager (or suitable delegate)**<br>**5. Quarry Manager (or suitable delegate)**<br>**6. Quarry Manager (or suitable delegate)** |

| | |
|---|---|
| **7. References**<br>• *Protection of the Environment Operations Act* (1997).<br>• EPA Licence for Karuah Hard Rock Quarry (No. 11569).<br>• HQPL Environment and Community Policy | |

| ENVIRONMENT AND COMMUNITY PROCEDURES<br>PARTICULATE MATTER & DUST CONTROL | RESPONSIBILITY |
|---|---|
| **1. Objectives**<br>The following objectives apply to air quality management at the Karuah Hard Rock Quarry:<br>• To minimise particulate matter and dust generated by quarrying activities through the use of dust control equipment;<br>• To minimise exposed surfaces to reduce the potential for particulate matter and dust generation;<br>• To respond promptly and effectively if a complaint is received at the Quarry; and<br>• To prevent inference with the Depositional Dust Gauges around the Quarry.<br>**2. Scope**<br>This procedure applies to all HQPL quarry operations, personnel and subcontractors operating on the HQPL Karuah development site.<br>**3. Requirements**<br>The following requirements apply to air quality management at the Karuah Hard Rock Quarry;<br>**3.1 Identification of Potential Particulate Matter and Dust Generating Activities**<br>• Potential particulate matter and dust generating activities associated with new site operations and appropriate control mechanisms to reduce particulate matter and dust are to be identified prior to the commencement of work.<br>**3.2 Potential Particulate Matter and Dust Generating Activities**<br>• Potential dust generating activities associated with the Quarry include:<br>- construction activities (e.g. roads, stockpile pads);<br>- use of haul roads;<br>- Vegetation removal and stripping topsoil;<br>- drilling and blasting;<br>- extracting the hard rock material;<br>- conveyors;<br>- stockpiling; and<br>- Un-rehabilitated, bare areas and the active quarry working area.<br>**3.3 Particulate Matter & Dust Control**<br>• A water cart is to be retained on site and used to apply water to all roadways being used on the site;<br>• Employees, contractors and subcontractors are to remain on established roadways when moving around the site;<br>• Excavation of material to cease if dust being generated from the Quarry is excessive (particularly during strong winds);<br>• Topsoil stripping is to be undertaken when the material is slightly moist to limit the likelihood of dust generation.<br>• Disturbed areas are to be rehabilitated as soon as possible to minimise the disturbed areas exposed to the wind; | **3. Quarry Manager (or suitable delegate) Staff and Contractors** |

| ENVIRONMENT AND COMMUNITY PROCEDURES<br>PARTICULATE MATTER & DUST CONTROL | RESPONSIBILITY |
|---|---|
| • Water sprinklers are to be used on stockpiles and on the conveyors and crushers in the processing areas;<br>• Stockpile locations are to be established so as to use natural topography (and vegetation) to protect them from exposure to high winds;<br>• Stockpiles will also be watered down by the water cart uses to control dust on the roadways<br>• All drill rigs are to be fitted with dust shrouds or sprays to minimise dust during exploration and other drilling; and<br>• Topsoil stockpiles are to be seeded with pasture species to stabilise as soon as possible after completed. | |
| **4. Monitoring**<br>***Depositional Dust:***<br>• Depositional Dust monitoring is undertaken in accordance with **Section 3.3** above and **Section 5.2** of the Environmental Monitoring Plan.<br>• Four (4) depositional dust gauges are located nearby the site, and are monitored by a suitably qualified contractor. The locations of the gauges are shown on the Environmental Monitoring Plan.<br>• It is intended that depositional dust monitoring will continue for the life of the development.<br>***$PM_{10}$ and TSP:***<br>The requirement to complete $PM_{10}$ and TSP monitoring was removed by then EPA in 2008. $PM_{10}$ and TSP monitoring is only completed if requested by the EPA or if required for further investigation of dust complaints. | **4. Quarry Manager (or suitable delegate)** |
| **5. Review**<br>This procedure is to be reviewed every three years as part of the EMS review. | **5. Quarry Manager (or suitable delegate)** |
| **6. Records**<br>The reporting of all monitoring and measurement data will be undertaken in accordance with the requirements of the AEMR and the Annual Return for the EPA licence. | **6. Quarry Manager (or suitable delegate)** |
| **7. References**<br>• *Protection of the Environment Operations Act (1997).*<br>• SLR Consulting, Environmental Monitoring Plan for Karuah Hard Rock Quarry, Updated 2014.<br>• EPA Licence for Karuah Hard Rock Quarry (No. 11569).<br>• HQPL Environment and Community Policy (**Appendix 6**). | |

| ENVIIRONMENTAL PROCEDURES<br>NOISE CONTROL | RESPONSIBILITY |
|---|---|
| **1. Objectives**<br>The following objectives apply to noise management at the Karuah Hard Rock Quarry;<br>• To reduce and/or control noise associated with the mine operations; and<br>• To train all relevant personnel in methods to reduce/control noise.<br>**2. Scope**<br>This procedure applies to all HQPL quarry operations, personnel and subcontractors operating on the HQPL Karuah development site.<br>**3. Requirements**<br>The following requirements apply to noise management at the Karuah Hard Rock Quarry;<br>**3.1 Identification of Potential Noise Generating Activities**<br>Potential noise generating activities associated with new site operations and appropriate control mechanisms to reduce noise are to be identified prior to the commencement of work.<br>**3.2 Potential Noise Generating Activities**<br>Potential noise generating activities associated with the Quarry include;<br>- Blasting (overpressure);<br>- Use of plant and equipment on the site;<br>- Crusher and conveyors; and<br>- Warning signals (reverse beepers).<br>**3.3 Noise Control**<br>• Being aware of temperature inversions (generally am early morning condition in winter) where air is trapped nearer the ground, leading to higher noise levels being carried from the operation. Plant and equipment may need to be stood down during these times;<br>• Maintaining plant and equipment to ensure engine and exhaust noise is minimised; and<br>• Reducing the loudness of reverse beepers and horns, without compromising the OH&S function.<br>**4. Monitoring**<br>Noise monitoring is undertaken in accordance with the Environmental Monitoring Plan. HQPL uses a specialist noise consultant to complete 6 monthly attended and unattended noise monitoring.<br>**5. Review**<br>This procedure is to be reviewed as part of the Management Review (see **Section 4.13** of the EMS).<br>**6. Records**<br>The reporting of all monitoring and measurement data will be undertaken in accordance with the requirements of the AEMR and the Annual Return for the EPA licence.<br>**7. References** | **3. Quarry Manager (or suitable delegate)**<br>**4. Environmental Officer**<br>**Noise Consultant**<br>**5. Quarry Manager (or suitable delegate)**<br>**6. Quarry Manager (or suitable delegate)** |

| ENVIIRONMENTAL PROCEDURES<br>NOISE CONTROL | RESPONSIBILITY |
|---|---|
| • *Protection of the Environment Operations Act 1997.*<br>• Industrial Noise Policy (2000).<br>• SLR Consulting, Environmental Monitoring Plan for Karuah Hard Rock Quarry, Updated 2014.<br>• EPA Licence for Karuah Hard Rock Quarry (No. 11569).<br>• HQPL Environment and Community Policy (see **Appendix 6**). | |

| ENVIRONMENT AND COMMUNITY PROCEDURES<br>BLAST MANAGEMENT | RESPONSIBILITY |
|---|---|
| **1. Objectives**<br>The following objectives apply to blast management at the Karuah Hard Rock Quarry;<br>• To ensure that appropriate meteorological conditions exist prior to any blasting activities. This will ensure that any dust, fumes or noise generated from the blast will not impact upon neighbouring properties,<br>• To ensure that the appropriate personnel and neighbouring properties are notified prior to all blasting events at the Quarry, and,<br>• To ensure that where necessary, all blast related disputes with the any landowner within 1 km of the development is appropriately address using the Quarry's Dispute Resolution Process (see **Section 4.14.3** of the EMS and **Section 3.6** below).<br>**2. Scope**<br>This procedure applies to all HQPL quarry operations, personnel and subcontractors operating on the HQPL Karuah development site.<br>**3. Requirements**<br>The following requirements apply to blast management at the Karuah Hard Rock Quarry.<br>**3.1 Condition associated with blasting at the Quarry**<br>• All blasting is to be undertaken in accordance with the Conditions of Consent (DA 265-10-2004) issued by the DPIE and EPL 11569 issued by the EPA.<br>**3.2 Property Inspection and Baseline Pre-blasting study (Completed)**<br>• In accordance with Schedule 3, conditions 9 and 10 of DA 265-10-2004, HQPL shall advise all landowners within 1 km of the Quarry that they are entitled to a structural property inspection (previously completed).<br>• If the HQPL receives a written request for a structural property inspection from any landowner within 1 km of the Quarry, then within 3 months of receiving the request, HQPL will:<br>- commission a suitably qualified, experienced and independent person (whose appointment has been approved by DPIE) to inspect the condition of any building or structure on the land and if necessary, recommend measures to mitigate any potential blasting impacts; and<br>- Give the landowner a copy of the property inspection report.<br>**3.3 Assessing Meteorological Conditions prior to blasting**<br>• The meteorological conditions are to be assessed by the Blast Contractor prior to any blasting activities at the Quarry. | **3. Quarry Manager (or suitable delegate) + Shot firer** |

- Where low cloud cover is <80% extra caution is needed to ensure that an exceedance in over-pressure from the blast is not recorded.
- Where it is determined that environmental conditions are not suitable the blast will be delayed until conditions improve. Where necessary this may require sleeping the blast overnight, however due to OH&S concerns this will be avoided where possible.
- Where it is determined by the Blast Contractor that it is possible that a temperature inversion is occurring (i.e. still, winter mornings) the blast will be delayed until more favourable conditions return.

**3.4 Improving general site knowledge**

- By monitoring all blasts at the quarry a general knowledge of the effects of temperature inversions, cloud cover, wind speed and wind direction will be developed. The blast practices will be modified as necessary when meteorological conditions are unfavourable.
- This will be achieved by recording the relevant information on the shot firers report, including but not limited to, date, time, cloud cover, wind speed and direction along with the name of the person recording the information.

**3.5 Complaints Management**

- All complaints will be managed in accordance with Section **4.14.3** of the EMS.
- Where a blast complaint relating to property damage is reported by a landowner residing within 1 km of the Quarry, HQPL will undertake an investigation in accordance with the quarry's Blast Dispute Resolution Process outlined in **Section 3.6** below.

**3.6 Blasting Dispute Resolution Process: Investigations for damaged properties within 1 km of the Quarry**

- If any landowner within 1 km of the Quarry claims that buildings and/or structures on the landowner's land have been damaged as a result of blasting at the Quarry, HQPL shall within 3 months of receiving the claim:
  - Commission a suitably qualified, experienced and independent person (whose appointment has been approved by the DPIE) to investigate the claim; and
  - HQPL will give the landowner a copy of the property investigation report.
- If the independent property investigation confirms the landowner's claim, and both parties agree with these findings, then HQPL shall repair the damages to the satisfaction of DPIE.
- If HQPL or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to DPIE for resolution.
- If the matter cannot be resolved by DPIE within 21 days, the DPIE shall refer the matter to an Independent Dispute Process (see Appendix 3 of the Development Consent).

**4. Blasting Methodology**

- HQPL personnel visitor and contractors are notified of a blast the morning prior to the event.
- Thirty minutes before the blast, Road trucks are held at the weigh bridge by Weighbridge Supervisor.
- All Quarry personnel, visitors and contractors are directed to the weighbridge by the Quarry Manager (or suitable delegate).
- Communication is by UHF Channel 33.
- Meteorological conditions are assessed prior to blasting as per section 3.3 above. Blasting only occurs.
- Quarry Manager (or suitable delegate) blocks access road above the weigh bridge and notifies the shot firer that it is clear to go ahead with blast.
- After the blast is completed, the shot firer will go up and inspect blast for cut offs and misfires. The shot firer will then five the all clear.

**4. Notification – Quarry Manager (or suitable delegate)**

- Quarry Manager (or suitable delegate) relays the message "all clear" to the weighbridge supervisor.

**Notification System**

- All neighbours within 2 km of the blast are to be notified by the Quarry Manager (or suitable delegate) that a blast is to take place the day prior to a blast taking place. The notification list is recorded at site, with records of all notifications stored at site. Notification is via telephone.
- HQPL have erected a blast notification sign on the intersection of the access road near the front of the property. The sign indicates the date and the time that the blast will be carried out.
- HQPL have requested local residences that upon notification of a blast must notify anyone that may be visiting the property.
- Residences which are located within the blast zone (as determined by the DPIE) are required to assemble at the intersection of the access road at least half an hour before the blast (where the blast notification sign is). These residences are familiar with the process.
- HQPL weighbridge supervisor will call the affected residences on their phone when the blast has been completed and the all clear has been given.
- Affected residents are not to return to their home until the all clear has been given.

**5. Monitoring**

Blast monitoring is undertaken in accordance with the Environmental Monitoring procedure above and the Development Consent.

**6. Review**

This procedure is to be reviewed as part of the Management Review (see **section 4.13** of the EMS).

**7. Records**

The reporting of all monitoring and measurement data will be undertaken in accordance with the requirements of the AEMR and the Annual Return for the EPA licence.

**8. References**

- *Protection of the Environment Operations Act 1997.*
- Industrial Noise Policy (2000).
- SLR Consulting, *Environmental Monitoring Procedure, Updated 2014.*
- EPA Licence for Karuah Hard Rock Quarry (No. 11569).
- HQPL Environment and Community Policy

**5. Quarry Manager (or suitable delegate)**

**6. Quarry Manager (or suitable delegate)**

**7. Quarry Manager (or suitable delegate)**

# APPENDIX 8

Six Monthly Environmental Audit and Inspection

# SIX - MONTHLY ENVIRONMENTAL INSPECTION FORM

**Site:** Karuah Hard Rock Quarry

**Date and time of Inspection:**

**Inspection completed by:**

**Weather Conditions:**

**Summary of operations during inspection:**

**Areas Inspected:**

**Table 1 Pit and Highwalls**

| Pit and Highwalls | | | | | | |
|---|---|---|---|---|---|---|
| **Highwall** | | | | | | |
| **Status** | **Yes/No** | **Risk (I/H/M/L) Refer to Table 8 for risk rankings** | **Comment** | **Action** | **Close out date** | **Action Sign Off** |
| Stable | | | | | | |
| Drainage Effective | | | | | | |
| **Pit** | | | | | | |
| Stable | | | | | | |
| Drainage Effective | | | | | | |
| Other comments: | | | | | | |

## Table 2 Rehabilitation and Offset

| Rehabilitation and Offsets | | | | | | |
|---|---|---|---|---|---|---|
| **Rehabilitation Area** | | | | | | |
| **Status** | **Yes/No** | **Risk (I/H/M/L) Refer to Table 8 for risk rankings** | **Comment** | **Action** | **Close out date** | **Action Sign Off** |
| Stable | | | | | | |
| Drainage Effective | | | | | | |
| Presence of Weeds | | | | | | |
| Damage to Rehabilitation | | | | | | |
| **Offset Areas** | | | | | | |
| Stable | | | | | | |
| Drainage Effective | | | | | | |
| Presence of Weeds | | | | | | |
| Damage to Rehabilitation | | | | | | |
| Other comments: | | | | | | |

## Table 3 Roads

| Roads | | | | | | |
|---|---|---|---|---|---|---|
| **Haul Road** | | | | | | |
| **Status** | **Yes/No** | **Risk (I/H/M/L) Refer to Table 8 for risk rankings** | **Comment** | **Action** | **Close out date** | **Action Sign Off** |
| Stable | | | | | | |
| Drainage Effective | | | | | | |
| Minimal dust | | | | | | |
| **Access Road** | | | | | | |
| Stable | | | | | | |
| Drainage Effective | | | | | | |
| Minimal dust | | | | | | |
| Other comments: | | | | | | |

## Table 4 Crushing and Stockpile Area

| Crushing and Stockpile Area | | | | | | |
|---|---|---|---|---|---|---|
| **Crushing Plant** | | | | | | |
| **Status** | **Yes/No** | **Risk (I/H/M/L) Refer to Table 8 for risk rankings** | **Comment** | **Action** | **Close out date** | **Action Sign Off** |
| Stable | | | | | | |
| Drainage Effective | | | | | | |
| Minimal dust | | | | | | |
| **Stockpile Area** | | | | | | |
| Stable | | | | | | |
| Drainage Effective | | | | | | |
| Minimal dust | | | | | | |
| Other comments: | | | | | | |

## Table 5 Workshop

| Workshop | | | | | | |
|---|---|---|---|---|---|---|
| **Status** | **Yes/No** | **Risk (I/H/M/L) Refer to Table 8 for risk rankings** | **Comment** | **Action** | **Close out date** | **Action Sign Off** |
| No evidence of hazardous substances and contamination | | | | | | |

| Workshop | | | | | | |
|---|---|---|---|---|---|---|
| Drainage Effective | | | | | | |
| Minimal dust | | | | | | |
| Other comments: | | | | | | |

## Table 6 Weighbridge - Admin Building and Carpark

| Weighbridge - Admin Building and Carpark | | | | | | |
|---|---|---|---|---|---|---|
| **Weighbridge** | | | | | | |
| Status | Yes/No | **Risk (I/H/M/L) Refer to Table 8 for risk rankings** | Comment | Action | Close out date | Action Sign Off |
| No evidence of hazardous substances and contamination | | | | | | |
| Drainage Effective | | | | | | |
| Minimal dust | | | | | | |
| **Admin Building** | | | | | | |
| No evidence of hazardous substances and contamination | | | | | | |

| Weighbridge - Admin Building and Carpark | | | | | | |
|---|---|---|---|---|---|---|
| Drainage Effective | | | | | | |
| Minimal dust | | | | | | |
| **Carpark** | | | | | | |
| No evidence of hazardous substances and contamination | | | | | | |
| Drainage Effective | | | | | | |
| Minimal dust | | | | | | |
| Other (write comments below) | | | | | | |

The following environment and community aspects need to be reviewed as part of the Six Monthly Environmental Inspection. Were these reviewed?

**Table 7 Follow-up Actions**

| Aspect | YES | NO | NA | Comment |
|---|---|---|---|---|
| Vegetation management | | | | |
| Soil management (topsoil and subsoil) | | | | |
| Weed management | | | | |
| Water management and erosion and sediment control | | | | |
| Rehabilitation | | | | |

| Aspect | YES | NO | NA | Comment |
|---|---|---|---|---|
| Cultural Heritage | | | | |
| Noise | | | | |
| Dust | | | | |
| Lighting | | | | |
| Waste management | | | | |
| Hazardous substances and contamination | | | | |
| Traffic and transport | | | | |

## Table 8 Definition of priorities:

| Priority | Action |
|---|---|
| Immediate | Issue to be addressed immediately and closed out on the day of the inspection. |
| High | Within 24 hours |
| Medium | Within 3 working days |
| Low | Within 5 working days |

# APPENDIX 9

Environmental Monitoring Locations


Scale: 1:12,000
GDA 1994 MGA Zone 56

05-Aug-2020
630.30036

Source: Nearmap (June 2020)

Sheet Size : A4

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# Karuah Hard Rock Quarry
# Environmental Monitoring Locations

**APPENDIX B**

# APPENDIX 10

Environmental Incident Form

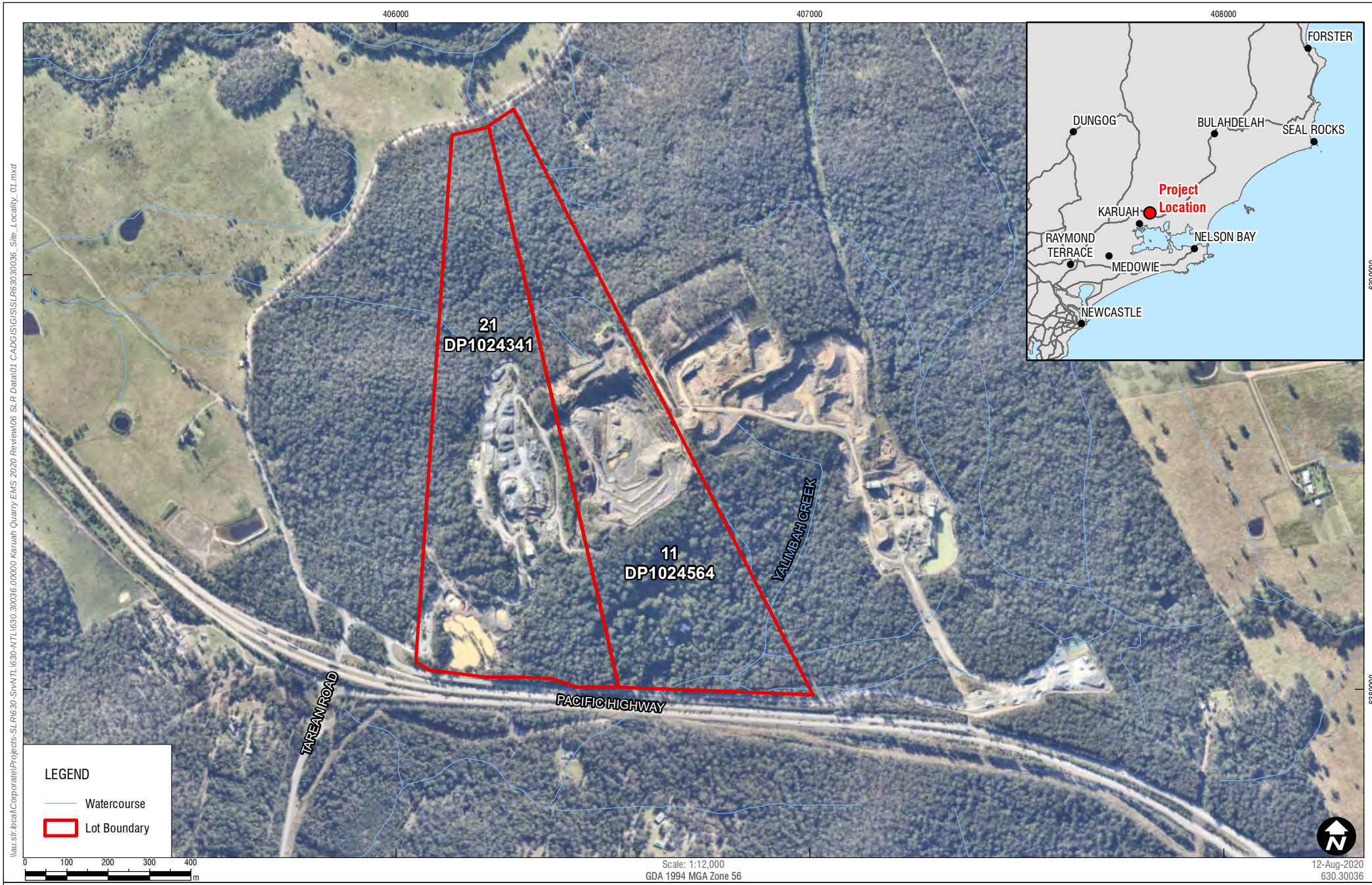
# Environmental Incident Report – Karuah Quarry

This report is to be completed for all environmental incidents associated with Karuah Quarry.

| **INCIDENT SUMMARY** | |
|---|---|
| Location of the Incident: | |
| Date of Incident: | |
| Type of Incident: | |
| Duration of Incident: | |
| Reported to: | a) Name……<br>b) Organisation……<br>a) Contact No……<br>b) Address…….. |
| Incident Reported by: | a) Contact No……<br>b) Address…….. |
| Supervisor Responsible: | a) Contact No……<br>b) Address…….. |
| Description of Incident: | |
| Symptom of Incident: | |
| Cause of Incident: | |
| Immediate Actions: | |
| **INCIDENT INVESTIGATION** | |
| Further Actions if required (mitigation measures, preventative measures) | |
| Has this incident had an impact to the community? | |
| **INCIDENT NOTIFICATION** | |
| Was the Environment Protection Authority and the Department of Planning Industry and Environment required to be notified? If so please provide details? | |
| Was the Pollution Incident Response Management Plan (PIRMP) required to be enacted?<br><br>Was it enacted? | |
| Were Staff and Contractors Notified? | |
| **INCIDENT REPORT SIGN OFF** | |
| Person Reporting the Incident: | a) Name (print)……<br>b) Date and Time……<br>c) Signature…… |

| | |
|---|---|
| Supervisor: | a) Name (print)……<br>b) Date and Time……<br>c) Signature…… |

**Please Mark the Location of the Incident on the Figure Below:**




Source: Nearmap (June 2020)

Sheet Size : A4

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**Karuah Hard Rock Quarry**
**Site Locality**

**FIGURE 1**

# APPENDIX 11

Management Review and Feedback Form

# ENVIRONMENTAL MANAGEMENT REVIEW

| | | |
|---|---|---|
| **Review No:** | **Completed by:** | **Position:** |
| **Issue:** | | **Date:** |

**Participants:**

**Discussion:**

**Recommendation/Outcome/Improvement/Change:**

| | |
|---|---|
| **To be Actioned By:** | **Date Required:** |

| | |
|---|---|
| **To be Checked By:** | **Date Completed:** |

# APPENDIX 12

Complaints Record Form

***ENVIRONMENTAL COMPLAINTS RECORD FORM***:

**Complaint Summary**:

a. Date that complaint was received: ……/……./……

b. Complaint received by:…… At am /pm.

c. Method of notification of complaint:

□ In Person □ Telephone □ Written □ E-mail

**Complainant Details**:

a. First Name …….. Surname: ……..

b. Contact Number: Phone ( ) …… Email ( )
……..

c. Address:
……...

……..

**Follow Up Actions**:

a. The following have been advised:

□ Quarry Manager □ Quarry Employees
□ Dept of Planning Industry and Environment □ Great Lakes Council
□ Other ……

b. Complainant Contacted: yes / no by …… on ……../……../……..

If no, reason why not:

……
…

……..
….

c. Further information provided:
……..
……
…

……
…

d. Investigation Initiated (description / by)
……

| |
|---|
| **WHAT:** Describe the complaint. What is its exact nature? Air, noise, water, light, vibration etc. |

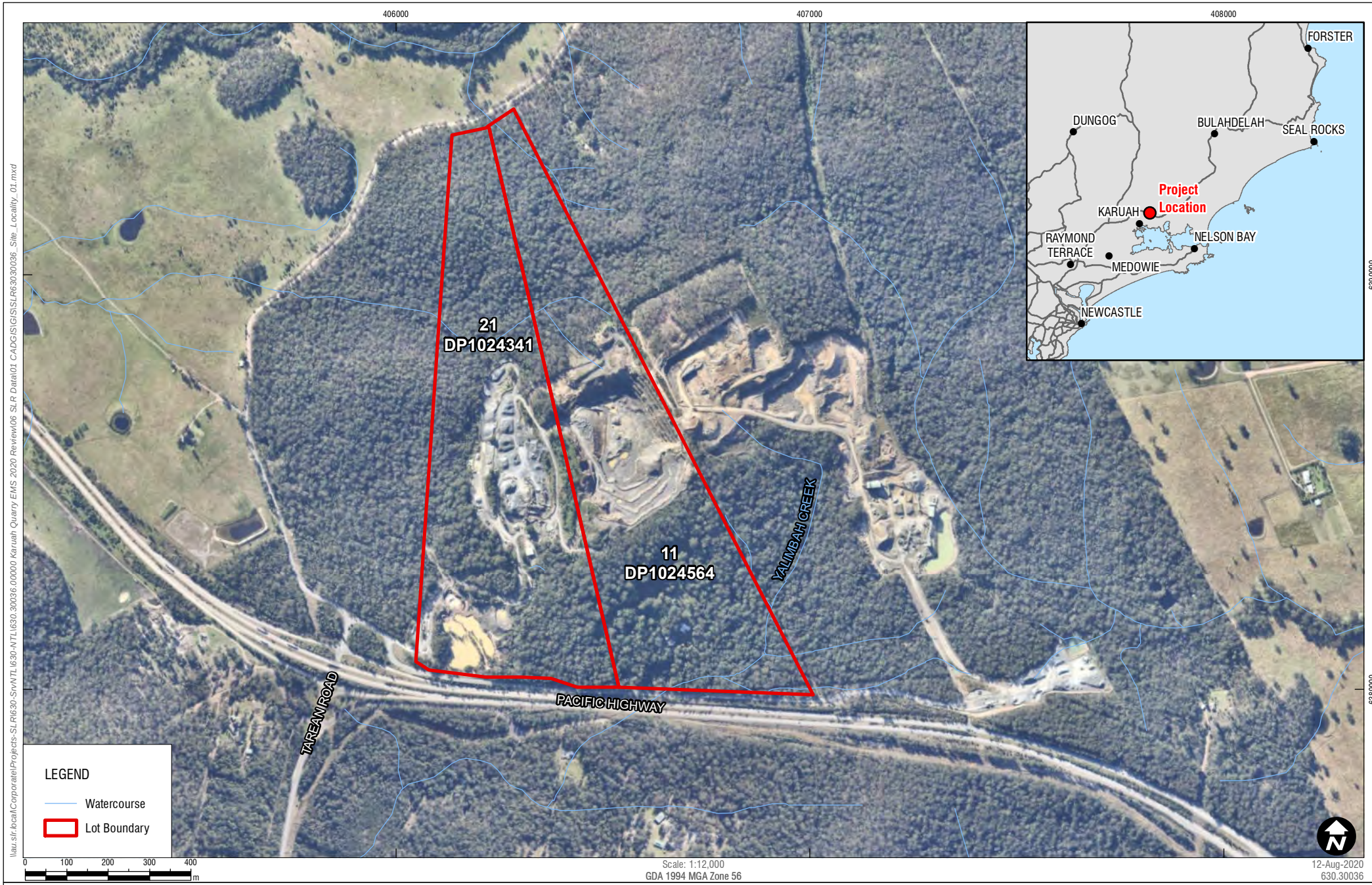
□ Blasting □ Noise □ Dust □ Lighting □ Odour □ Other (Specify):……..

**WHERE:** Geographically, where does the concern exist? Mark on map if possible.

**WHEN:** When was the problem noticed? (What time, hour/ day / date) When was the firsttime?
Have you contacted us about this concern previously?

**EXTENT** Is the problem getting worse or better? How severe is the problem?

Mark the location on the figure below:




Source: Nearmap (June 2020)

Sheet Size : A4

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**Karuah Hard Rock Quarry**
**Site Locality**

**FIGURE 1**