



**Mudgee Stone Company Pty Ltd**

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## NOISE MANAGEMENT PLAN

# OBERON WHITE GRANITE QUARRY



## NOISE MANAGEMENT PLAN

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### Endorsement of NMP by Mudgee Stone Company Director or Delegate

Director

Date



31 / Jan / 2017

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**ABBREVIATIONS**

BMP	Blast Management Plan
NMP	Noise Management Plan
Department	NSW Department of Planning & Environment
EA	Environmental Assessment
EPL	Environment Protection Licence
EMPs	Environmental Management Plans
EMStrat	Environmental Management Strategy
INP	Industrial Noise Policy
MSC	Mudgee Stone Company
NATA	National Association of Testing Authorities, Australia
NSW EPA	NSW Environment Protection Authority
TSP	Total suspended particulate matter
The project	The Oberon White Granite Quarry operating under PA07_0122.

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## 1 INTRODUCTION

### 1.1 Overview

Mudgee Stone Company (hereafter MSC) is a wholly owned subsidiary of Mudgee Dolomite and Lime Pty Ltd based in Mudgee, NSW. MSC own and operate the Oberon White Granite Quarry, located approximately 6km east south-east of Oberon, NSW, covering an area of approximately 40ha.

On 7 September 2012, the Minister for Planning approved the expansion of the Oberon White Granite Quarry, Major Project 07\_0122. The project includes expansion of the extraction area and the rate of extraction at the quarry resulting in recovery of up to 5 million tonnes of granite over a 30 year period transported from the site via road.

MSC has an Environmental Management System to support commitments to minimising impact on the environment and community. The system has been prepared by MSC to establish the overarching framework for the monitoring and environmental management of activities undertaken at the Oberon White Granite Quarry in order to minimise environmental impacts, comply with legal requirements, and incorporate the principles of continuous improvement into environmental management at the site.

The components of the MSC Environmental Management System include:

- Environmental Management Strategy;
- Specific and separate Environmental Management Plans (EMPs), including this document, and Environmental Monitoring Programs which provide details on the management of environmental aspects and impacts;
- Site document control system including training records, monitoring results, site registers, environmental forms; and
- Management roles and accountabilities of key personnel.

### 1.2 Scope

This Noise Management Plan (hereafter NMP) has been prepared to manage the auditory impacts associated with the operation of the Oberon White Granite Quarry. The scope of the plan applies to MSC operations, including MSC management, employees and contractors. The NMP provides provision for the site establishment phase, duration of clearing campaigns and the noise restrictions applicable to continued operations. It also provides provision for noise reduction measures both within the quarry and the surrounding properties. MSC have a Blast Management Plan

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(BMP) which seeks to implement best management practice to comply with the blasting criteria. Impacts of blasting are not addressed in this NMP and reference should be made to the BMP for management measures to minimise potential blasting impacts.

A copy of this Noise Management Plan will be made available to members of the public on the MSC website:

[www.mudgeedolomitelime.com.au](http://www.mudgeedolomitelime.com.au)

### 1.3 Objectives

MSC have developed this Noise Management Plan to address the conditions outlined in the Project Approval; Major Project 07\_0122 (conditions available in **Appendix A**).

The objectives of the NMP are to:

- To provide employees and contractors with a clear description of their responsibilities regarding noise management.
- Identify procedures for implementation of noise management response consistent with industry best management practice.
- Address potential noise issues noise from MSC's operations to the surrounding area.
- Implement a monitoring system to assess the effectiveness of noise management and ensure noise generated does not exceed performance criteria.
- To specify appropriate intervals for noise monitoring to evaluate, assess and report noise emission levels from site establishment and clearing campaigns and normal operations of the quarry.
- Record data suitable to demonstrate compliance with the conditions of PA07\_0122.
- To provide direction to appropriately respond to exceedances of noise criteria or receipt of noise-related complaints.

MSC will provide people, materials, resources and systems to properly perform requirements of the NMP. All MSC employees will be sufficiently competent, experienced and qualified to carry out the requirements, and specialist consultants will be engaged where required.

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## 2 STATUTORY REQUIREMENTS

This Noise Management Plan has been developed to comply with the requirements of relevant legislation, Project Approval conditions the NSW Industrial Noise Policy.

### 2.1 Legislation

The NMP was prepared by MSC in conjunction with suitably qualified persons in consultation with the EPA for approval by NSW Department of Planning and Environment (DPE). Copies of correspondence can be found in **Appendix B**. The EA with technical report prepared by Spectrum Acoustics was assessed under Environmental Planning and Assessment Act 1979 (EP&A Act) and Regulations. All activities carried out by MSC will be in accordance with the Project Approval (07\_0122) and the Statement of Commitments.

Further as required under the Protection of the Environment Operations Act (POEO Act) 1997, an Environment Protection Licence (EPL) has been issued for the site. The EPL conditions in regard to noise management are addressed in this Plan.

### 2.2 Approvals and Licences

**Table 1: MSC Statutory Approvals**

Approval/Licence	Activity	Date	Authority
Approval 07_0122	Project approval – ‘Oberon White Granite Quarry Project’	7 Sept 2012	NSW Department of Planning and Infrastructure (DP&I)
EPL 20551	Licence – Premises Based	17 June 2015	NSW Environment Protection Authority (NSW EPA)

Major Project 07\_0122 (Schedule 3, Condition 9) requires the preparation and implementation of a Noise Management Plan which must:

- a) *Be prepared in consultation with the EPA by a suitably qualified and experienced person whose appointment have been approved by the Director-General;*
- b) *Describe the measures that would be implemented to ensure:*
  - *best management practice is being employed;*

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- *the noise impacts of the project are minimised during vegetation clearing campaigns.*
  - *the noise impacts of the project are minimised during meteorological conditions when the noise limits in the Project Approval do not apply; and*
  - *compliance with the relevant conditions of the Project Approval;*
- c) describe the proposed noise management system in detail; and*
- d) include a monitoring program that:*
- *evaluates and reports on:*
    - *the performance of the project; and*
    - *the effectiveness of the noise management system on site; and*
  - *includes a protocol for determining exceedances of the relevant conditions of the Project Approval.*

*The proponent shall not carry out any development on the site under this approval before this plan has been approved by the Director-General.*

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### 3 BASELINE DATA

#### 3.1 Existing Noise Conditions

Baseline data has been extracted from the Environmental Assessment (EA) complied by R.W. Corkery & Co Pty Ltd. As part of the EA, MSC commissioned Spectrum Acoustics to carry out a noise and vibration assessment for the Project. Further information may be drawn from the assessment undertaken by Spectrum Acoustics (2010) in the EA and previous background noise measurements by Atkins Acoustics (2003). These reports describe the existing noise conditions, i.e. prior to quarry extension under PA07\_0122.

Existing noise levels in the vicinity of the Project Site are influenced by a number of sources including stock, birds, wind, insects, agricultural equipment and traffic along local roads. As there are no significant consistent noise sources in the area, the background noise level, is likely to be less than 30dB(A). Previous background quarry measurements taken for the existing quarry in September 2003 indicated that background noise levels varied between 26dB(A) and 29dB(A) (Atkins Acoustics, 2003).

Rating background noise levels (RBL) based on previous measurement and assessments is below 30dB(A). The INP states that where the RBL is found to be less than 30dB(A), then it is set to 30dB(A). The site of the quarry is located in a quiet rural area, as described, with no consistent noise sources in the vicinity. As such the adopted **RBL is 30dB(A)**.

#### 3.2 Meteorological Conditions and Noise

The atmospheric conditions most relevant to noise assessments are temperature inversions, gentle winds (indicative of possible wind shear) and relative humidity. In accordance with Schedule 3 Condition 20 PA 07\_0122 during the life of the project a meteorological station has been installed to assist in noise and air quality management.

With regard to prevailing wind conditions the noise assessment in the EA determines, excluding residence EE, the major noise source is the Dozer when winds are from the east-northeast. Therefore, in order to minimise the potential for these noise exceedances, the dozer will not operate in exposed areas whilst the winds are from directions ranging from the north-northeast to east-southeast at speeds between 1m/s and 4m/s. Although these winds occur for less than 30% of the time annually. Wind

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speeds greater than 4m/s result in a general increase in environmental noise that would effectively mask any noise from the quarry.

### **3.3 Transport Conditions**

Project-related heavy vehicles travelling on public roads may be audible at nearby residences, as is the case with existing traffic travelling along these roads, however, Spectrum Acoustics has determined that traffic noise levels on Hampton Road would be below the day time criterion at the façade of all receivers greater than 10m from the edge of the near lane of traffic and the night time criterion at the façade of all receivers greater than 30m from the near lane of traffic. Based on aerial photography, between the quarry and the Oberon Township and Jenolan Caves Road no residences are known to be situated within 10m or 30m of Hampton Road and are generally well in excess of 30m from Ferndale Road.

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## 4 PERFORMANCE CRITERIA

During the life of the Project, MSC will endeavour to implement best management practice to comply with statutory requirements and adopted performance criteria. The adherence to the Noise Limits is central to the assessment of performance.

MSC aims for nil substantiated complaints in regard to noise issues for the duration of establishment, clearing campaigns and the life of operations.

### 4.1 Noise Limits

#### 4.1.1 Noise Limits – Site Establishment

- The project specific construction noise limit is 42dB(A) $L_{Aeq(15min)}$ .
- During the site establishment phase of the Project, a number of activities have been considered as construction activities which should be assessed against relevant construction noise criteria provided within the Interim Construction Noise Guideline (DECC 2009) which establishes a project specific limit 42dB(A) $L_{Aeq(15min)}$ .

#### 4.1.2 Noise Limits – Clearing Campaigns

- The project specific clearing campaign noise limit is 42dB(A) $L_{Aeq(15min)}$ .
- Clearing campaign noise limits are as per the site establishment noise limits, 42dB(A) $L_{Aeq(15min)}$ . Attended monitoring will be carried out at representative residences during the campaign.

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### 4.1.3 Noise Limits - Operations

The project specific operations noise limits are shown in **Table 2** below. A property map is provided as **Figure 2** in **Section 6.1**.

**Table 2: Noise Limits during Operations**

<b>Property</b>	<b>L<sub>Aeq</sub> (15 mins) dB(A)</b>
5	42
6	37
2	37
All other privately owned properties	35

- The project specific noise goal is 35dB(A) L<sub>Aeq</sub>(15 min) and is applicable during all of the day, evening and night time periods. This limit is applicable to surrounding sensitive receivers, such as residences.

### 4.1.4 Noise Limits – Exemptions

#### Agreements

The Noise Limits - Operations do not apply if MSC negotiates an agreement with the owner/s of the relevant residence to generate higher noise levels, and the Department has been advised in writing of the term of this agreement.

#### Certain Meteorological Conditions<sup>1</sup>

The Noise Limits apply under the meteorological conditions determined by the INP to be relevant to the site. This is to ensure that the limits apply under typical meteorological conditions relevant to the site. With reference to the INP the noise limits apply under all meteorological conditions except for the following:

- Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
- Stability category G temperature inversion conditions.

<sup>1</sup> Also refer to EPL 20551 condition L4.3.

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**4.1.5 Environment Protection Licence EPL 20551**

Limit conditions pertaining to noise generated at the premises (EPL conditions L4.1) are consistent with the Project Approval limits during operations. With regard to the EPL conditions- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays. Evening is defined as the period 6pm to 10pm. Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.

**4.2 Performance Indicators**

With reference to the performance criteria based on the Project Approval and EPL, monitoring results demonstrating compliance and the number of complaints received regarding noise, will be kept as indicators of performance for MSC's Oberon Quarry.

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## 5 NOISE MANAGEMENT AND CONTROL MEASURES

### 5.1 Management Measures

MSC has committed to managing its operations to minimize impact on the environment and community, including noise issues. All activities will be undertaken in such a manner as to reduce the noise level generated and minimize impacts on surrounding residents and/or landholders. The NMP is guided by the following management measures.

#### Planning Controls

- Regular review of monitoring results to ensure they are meaningful and assessment of their application to mine operation.
- Consideration of noise output levels when purchasing/transferring equipment.
- Written warning, with be provided two weeks prior to commencement of noisy activities specifically site establishment and vegetation clearing campaigns to neighboring properties and any other registered parties.
- Training of staff in operational controls and precautions necessary in certain meteorological conditions.

#### Summary –Planning Controls:

<b>Trigger</b>	<b>Action</b>	<b>Responsible individual</b>
<i>Planning controls: review, training, research, indicates the need for further actions.</i>	<i>Operational response where necessary will be enacted in response to review.</i>	<i>Production Manager</i>

#### Meteorological Measures

- An on-site weather station is installed and used to determine meteorological conditions and enable assessment of adverse weather conditions and management of potentially noise intrusive activities.
- Ensure that the dozer is only employed in unexposed areas during occasions when wind from the N/NE-E/NE between 1m/s-4m/s occurs.

#### Summary – Meteorological Measures:

<b>Trigger</b>	<b>Action</b>	<b>Responsible individual</b>
<i>Wind from the N/NE-E/NE between 1m/s-4m/s.</i>	<i>Cease dozer operation in exposed areas of the quarry.</i>	<i>Quarry Supervisor</i>
<i>Conditions occur that are consistent with the INP exemptions to noise limits.</i>	<i>Continue to employ management measures to reduce noise impacts.</i>	<i>Production Manager &amp; Quarry Supervisor</i>

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## Vegetation Clearing Measures

- No rock hammering will be undertaken during the operation of the drill rig or during vegetation clearing campaigns.
- Vegetation clearing campaigns will be restricted to between 9:00am and 5:00pm Monday to Friday and be carried out at a maximum of two weeks per annum.
- All immediately adjacent neighboring residents or those potentially affected will be notified in writing prior to the planned site establishment and subsequent vegetation clearing campaigns including the expected commencement and completion dates at least two weeks prior (including all those likely to experience noise above the operational noise limits).

### Summary – Vegetation Clearing:

<b><i>Trigger</i></b>	<b><i>Action</i></b>	<b><i>Responsible individual</i></b>
<i>Clearing campaigns are required for next stage to commence.</i>	<i>Planning controls to be employed and neighbor notification undertaken.</i>	<i>Production Manager</i>
<i>Clearing campaigns are occurring.</i>	<i>Cease all rock hammering.</i>	<i>Quarry Supervisor</i>
<i>Clearing campaigns are occurring.</i>	<i>Cease operation of the drill rig.</i>	<i>Quarry Supervisor</i>
<i>Clearing campaigns are occurring.</i>	<i>Hours and extent of clearing to be limited to that approved.</i>	<i>Production Manager &amp; Quarry Supervisor</i>

## Operational Controls

- The crusher will, as far as practicable, be located behind product or raw material stockpiles to create additional acoustic shielding. This is achieved by preferential stockpiling of products in the appropriate locations.
- Rock hammering will only be undertaken for up to 16 hours per month between 10:00am and 12:00pm Monday to Friday.
- All rock hammering will be undertaken on the quarry floor within 20m of the quarry face (for acoustic shielding purposes).
- The operation of the excavator will be restricted to the quarry floor during operation of the drill rig.
- All mobile plant on site will use frequency modulated reversing alarms (as opposed to beeping reversing alarms).
- All plant and equipment on site will be regularly serviced to ensure no unnecessary noise emissions due to poor maintenance. Defective machinery is not to be used operationally until all repairs are complete.

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- The on-site road network will be regularly maintained to limit noise from the bodies of empty trucks travelling on the internal roads.
- Product trucks being loaded within the stockpile area will be preferentially loaded on the western side of the product stockpiles, particularly during early morning loading operations, in accordance with the Statement of Commitments.
- Abide by the operating conditions given in Schedule 3 Condition 8 and the measures adopted in the EMStrat and supporting plans.
- The proponent shall comply with the restrictions in **Table 3**. These restrictions do not apply to activities that are inaudible at residential receivers.

**Table 3: Hours of Operation**

Activity	Permissible Hours
<ul style="list-style-type: none"> <li>- Site establishment</li> <li>- Construction activities</li> <li>- Blasting and small charge popping</li> <li>- Dozer operations</li> </ul>	9 am to 5 pm Monday to Friday (except public holidays)
Vegetation clearing campaigns	9 am to 5 pm Monday to Friday (except public holidays) for up to 2 weeks per annum
Drilling	8 am to 5 pm Monday to Friday (except public holidays)
Rock hammering	10 am to 12 pm Monday to Friday; and at no time on Saturday, Sunday or public holidays
<ul style="list-style-type: none"> <li>- Processing</li> <li>- Heavy vehicle transportation (arrival at or departure from the site)</li> </ul>	7 am to 6 pm Monday to Friday (except public holidays); 8 am to 6 pm Saturday; and at no time on Sunday or public holidays

Summary – Operational Controls:

<b>Trigger</b>	<b>Action</b>	<b>Responsible individual</b>
<i>Operational noise is to be minimized during all campaigns.</i>	<i>Acoustic shielding is to be employed and rock hammering location to be restricted as per adopted operational controls. Hours of operation to be adhered to. Noise attenuated plant deployed appropriately.</i>	<i>Production Manager/ Quarry Supervisor</i>

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<b>Trigger</b>	<b>Action</b>	<b>Responsible individual</b>
Noise from equipment needs to be moderated.	All mobile plant to be fitted with frequency modulated reversing alarms prior to operation at the site. All plant and equipment on site will be regularly serviced.	Production Manager
Rock hammer is operated.	Cease operation of the drill rig.	Quarry Supervisor
Drill rig is operated.	Cease operation of the rock hammer.	Quarry Supervisor
Defective equipment is identified.	Submit to workshop for maintenance/repair.	Operator

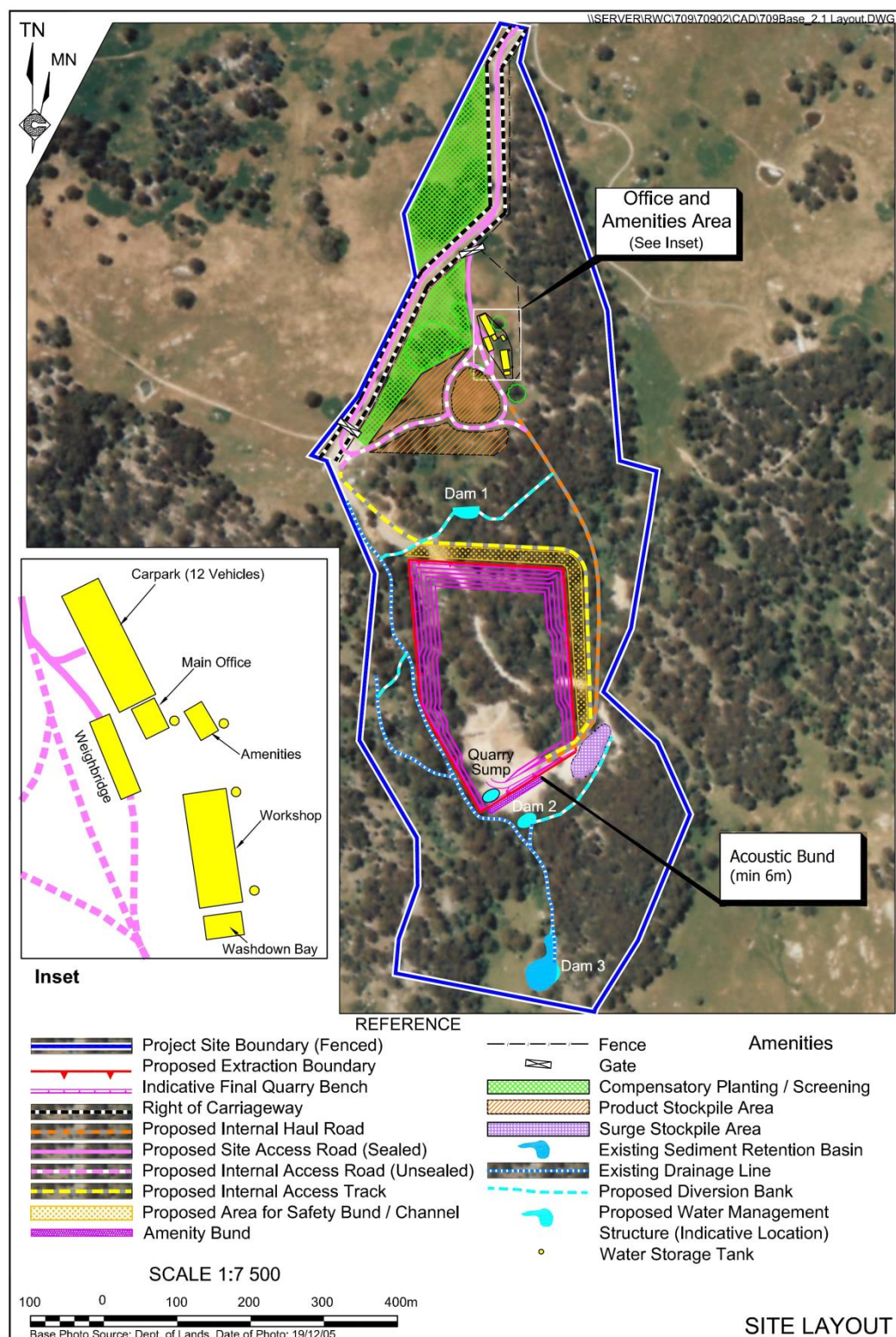
### Engineering Controls

- The 6m acoustic bund will be maintained along the southern boundary of the extraction area (refer to **Figure 1** below).
- All equipment on site will be maintained in the most efficient condition.

### Summary – Engineering Controls

<b>Trigger</b>	<b>Action</b>	<b>Responsible individual</b>
The Quarry has been operational for three (3) months.	The 6m acoustic bund is to be installed and maintained along the southern boundary.	Production Manager
Feasible noise mitigation measures are adopted as part of the NMP and EMStrat.	Acoustic shielding is to be employed and equipment maintained to reduce noise emissions.	Production Manager

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**Figure 1: Location of 6m Acoustic Bund**

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## 6 MEASUREMENT AND EVALUATION

MSC have developed a Noise Monitoring Program in accordance with Condition 9(d) Schedule 3 of the Project Approval 07\_0122. The objectives of the Noise Monitoring Program as undertaken by MSC are to:

- Evaluate and report on:
  - the performance of the project against the project specific noise criteria for noise;
  - the effectiveness of the noise management system on site.
- Include a protocol for determining exceedances of the relevant conditions of the approval.
- Facilitate reactive and proactive noise management; and
- Assess and review community complaints.

### 6.1 Noise Monitoring Program

All noise monitoring to be undertaken by MSC is to be performed in accordance with the requirements of the Project Approval, the EPL, the INP, and the following Australian Standards:

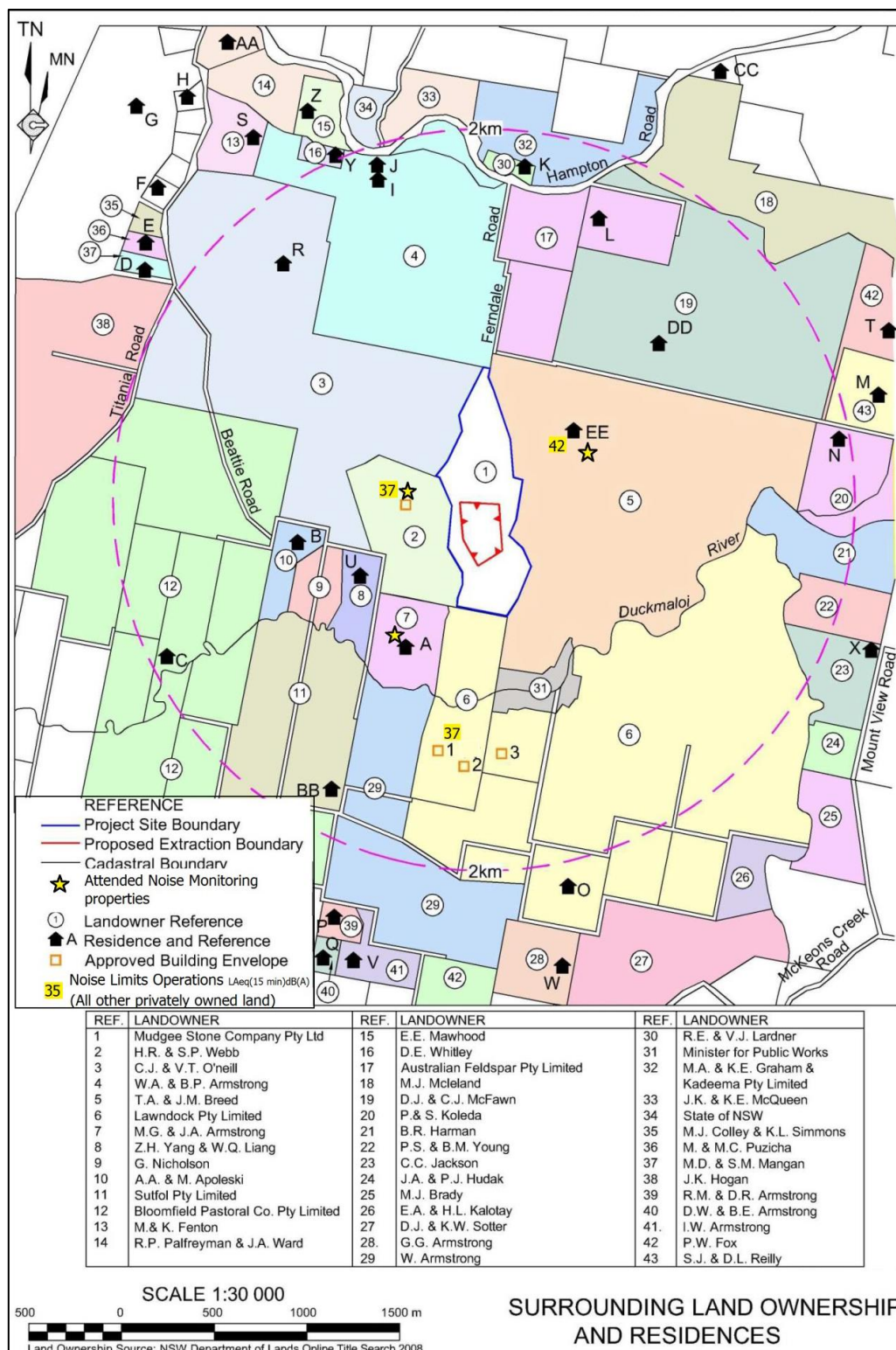
- AS1055.1, AS1055.2 and AS1055.3 Acoustics – Description and measurement of environmental noise.
- AS2659.1 – Guide to the use of sound measuring equipment.
- AS2659 – Sound level meters.

As part of the ongoing assessment of MSC noise criteria, attended noise monitoring is to be carried out by consultant specialists engaged by MSC, to identify potential non-compliances. **Figure 2** depicts the location of sensitive receptors to the quarry and the location of monitoring to be carried out at minimum. Monitoring is to evaluate the compliance with the noise limits as detailed within **Section 4.1** of this NMP.

All non-compliance results from the attended noise monitoring will be utilised for further investigations, to confirm whether there is non-compliance. The results of the noise monitoring program will be regularly reviewed by the Production Manager and reported to the Directors prior to being posted on the MSC web site. Non-compliances will be handled and reported in accordance with **Section 10** of this NMP.

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**Figure 2: Sensitive Receptors/Attended Noise Monitoring Sites and Operation Noise Limits**

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### 6.1.1 Attended Noise Monitoring

Monitoring of noise conditions will occur at nominated sites by qualified acoustic engineers with the use of attended noise monitoring equipment (refer to **Figure 2**). Records of equipment calibration and testing are to be maintained by the noise specialist undertaking the monitoring. Noise monitoring will be carried out at the frequency outlined below in **Table 4**, subject to local access constraints.

**Table 4: Frequency of Attended Noise Monitoring**

Phase	Activity Detail	Monitoring Frequency
Site Establishment Phase	The period 24 weeks from the date work commences. Includes construction of the site access road.	Attended noise monitoring to be carried out on one day, once every three (3) months.
Vegetation Clearing Campaigns	Periodic short-term activity. Site clearing for the progression of each stage of the quarry.	Attended noise monitoring to be carried out on one day, once every three (3) months for 2 years. After this period the frequency will be reviewed in consultation with DPE.
Extraction and processing campaigns	Typical operations.	
Other	All Phases described above.	Supplementary attended noise monitoring may be carried out in addition to other monitoring in response to complaints, exceedances or for the purpose of refining work methods or techniques to minimise noise.

Detailed record of all quarry operations and meteorological conditions will be kept during noise monitoring to identify the sources, if any, of limit exceedance. Records should be regularly reviewed to ensure that they are meaningful. Landholders will be provided with the results gathered from their land and the results will be included in the Annual Review and published on the web site.

The Proponent intends to through written correspondent initially and their preferred method of correspondence thereafter, maintain dialogue with surrounding residents

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to ensure any concerns over site establishment and construction, operational or transport noise are addressed and noise controls adjusted appropriately.

The EPL specifies in condition L4.4 :

*"L4.4 To determine compliance:*

- a) With  $L_{eq}(15\text{minute})$  noise limits in condition L4.1<sup>2</sup>, the noise measurement equipment must be located:*
  - i. Approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or*
  - ii. within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable*
  - iii. within approximately 50 metres of the boundary of a National Park or a Nature Reserve.*
- b) with the noise limits in condition L4.1, the noise measurement equipment must be located:*
  - i. at the most affected point at a location where there is no dwelling at the location; or*
  - ii. at the most affected point within an area at a location prescribed by condition L4.5(a).*

*L4.5 A non-compliance of condition L4.1 will still occur where noise generated from the premises in excess of*

- a) the appropriate limit is measured:*
  - iii. at a location other than an area prescribed in L4.4(a) and L4.4(b); and/or*
  - iv. at a point other than the most affected point at a location." (Excerpt EPL 20551).*

The location of monitoring equipment will be situated in accordance with the EPL conditions by specialist consultants for any monitoring to determine compliance.

<sup>2</sup> Locality and Locations – Day  $L_{Aeq}(15\text{ minute})$  limits as per Table 2: Noise Limits during Operations.

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## 7 CONTINGENCY PLAN

Where noise management measures have been instigated in accordance with this NMP, and unauthorised impact is considered likely, contingency measures will be implemented:

- As soon as practicable for direct impacts; and
- After appropriate evaluation, consultation, planning and design for indirect impacts.

Measures include:

- Ceasing or modifying quarry operations until issues can be determined or managed.
- Upon receiving a request from the owner on property 5, the Proponent shall implement additional noise mitigation measures (such as double glazing, insulation, or air conditioning) at the residence in consultation with the owner as per Schedule 3 Condition 7.
- Undertake the process in accordance with the protocol in **Figure 4** and enact a preventative action plan. This may include consolation of future installation of real time monitors at residences who experienced significant periods of noise above the limits specified and an alarm system that notifies the quarry supervisor when noise limits are reached.
- In the case of noise incidents the Production Manager will discuss management actions in consultation with the Department and NSW EPA.
- Management will undertake review and ensure that ongoing impacts are within acceptable limits or issues resolved as quickly as possible.

In the event that any recorded exceedances cannot be avoided through the implementation of additional practicable management measures, the Proponent would seek an agreement with the landowner, to allow higher noise levels involving compensation for the verified exceedances or acquisition of the landholding or part thereof.

Where MSC has obtained an agreement with a resident to generate higher noise levels than the criteria outlined in Schedule 3 Condition 6 of the Project Approval (refer to **Section 4.1**) the Department is to be notified in writing of the terms of the agreement.

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## 8 INCIDENT RESPONSE PROTOCOL

All incidents must be reported to the Production Manager immediately. Every person is responsible for reporting accidents and near miss incidents, without delay after the occurrence. Incidents will be responded to in accordance with the Incident Response Communication Protocol outlined in **Figure 3**.

The Production Manager will assess the incident and where deemed necessary will stop all operations of the quarry immediately until a full investigation of the incident is carried out and the safety of all employees and environmental factors on site are determined.

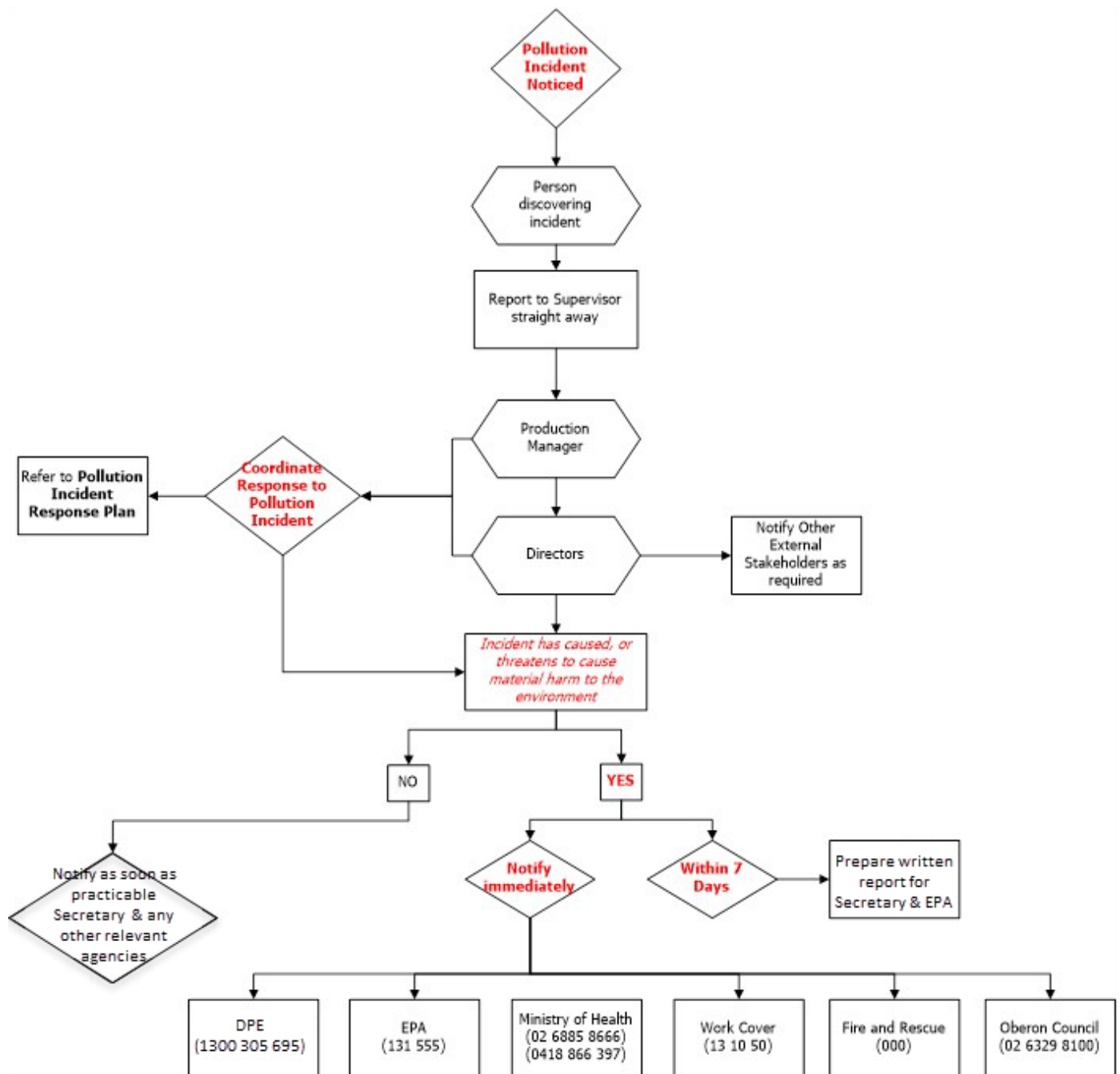
The people listed in the table below are authorised to manage the response to any incident. The particulars are 24 hour contact details.

**Table 5: Details for People Responsible for Incident Management**

Position	Person	Phone Number
General Manager	Robert Murdoch	0438 722 389
Quarry Production Manager	Brian Murdoch	0427 722 466

Exceedances of statutory limits will be notified and reported to the Department likewise as an incident that has caused or threatens to cause material harm to the environment.

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**Figure 3: Incident Response Communication Protocol**

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## 9. COMPLAINTS RESPONSE

The MSC community complaints response process outlined in the EMStrat details how to receive, respond to, and record any community complaints. Where possible a proactive approach will be taken to engage the community in discussing proposed activities that may affect them. Any complaints received will be recorded and responded to in a professional and timely manner by the Production Manager, Director or delegate.

The Community Complaints recording requires information including:

- The nature of the complaint;
- Method of the complaint;
- Monitoring results, meteorological data, at the time of the complaint;
- Site investigation outcomes;
- Site activity and activity changes; and
- Any necessary actions assigned.

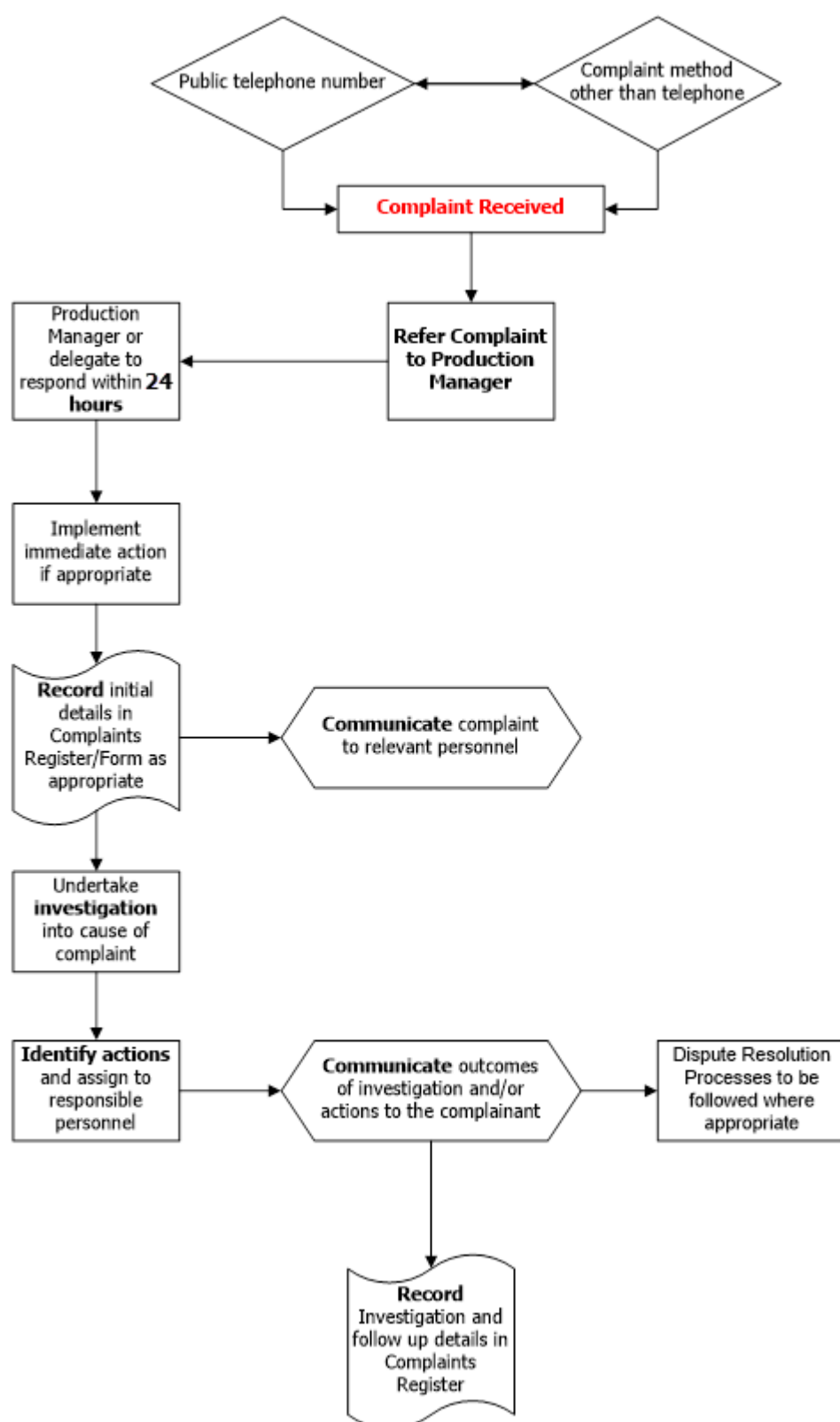
Mudgee Stone has a phone number advertised in the local media, displayed at the site entry and available at <http://www.mudgeedolomitelime.com.au/> for the community to report complaints.

Complaints will be recorded and reported to the Production Manager, Directors or appropriate delegate who will respond to all complaints received and attend to required action items. Complaints details will be retained in a register on site. Records of complaints will be kept on site for at least 4 years.

An overview of the community complaint management process is detailed within **Figure 4**.

Every effort will be made to ensure that concerns are addressed in a manner that facilitates a mutually acceptable outcome for both the complainant and MSC. If required, the Independent Dispute Resolution Process will be entered into. This process is illustrated in the Environmental Management Strategy (EMStrat).

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**Figure 4: Community Complaints Response Process**

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## 10. NONCOMPLIANCE, CORRECTIVE ACTION AND PREVENTATIVE ACTION

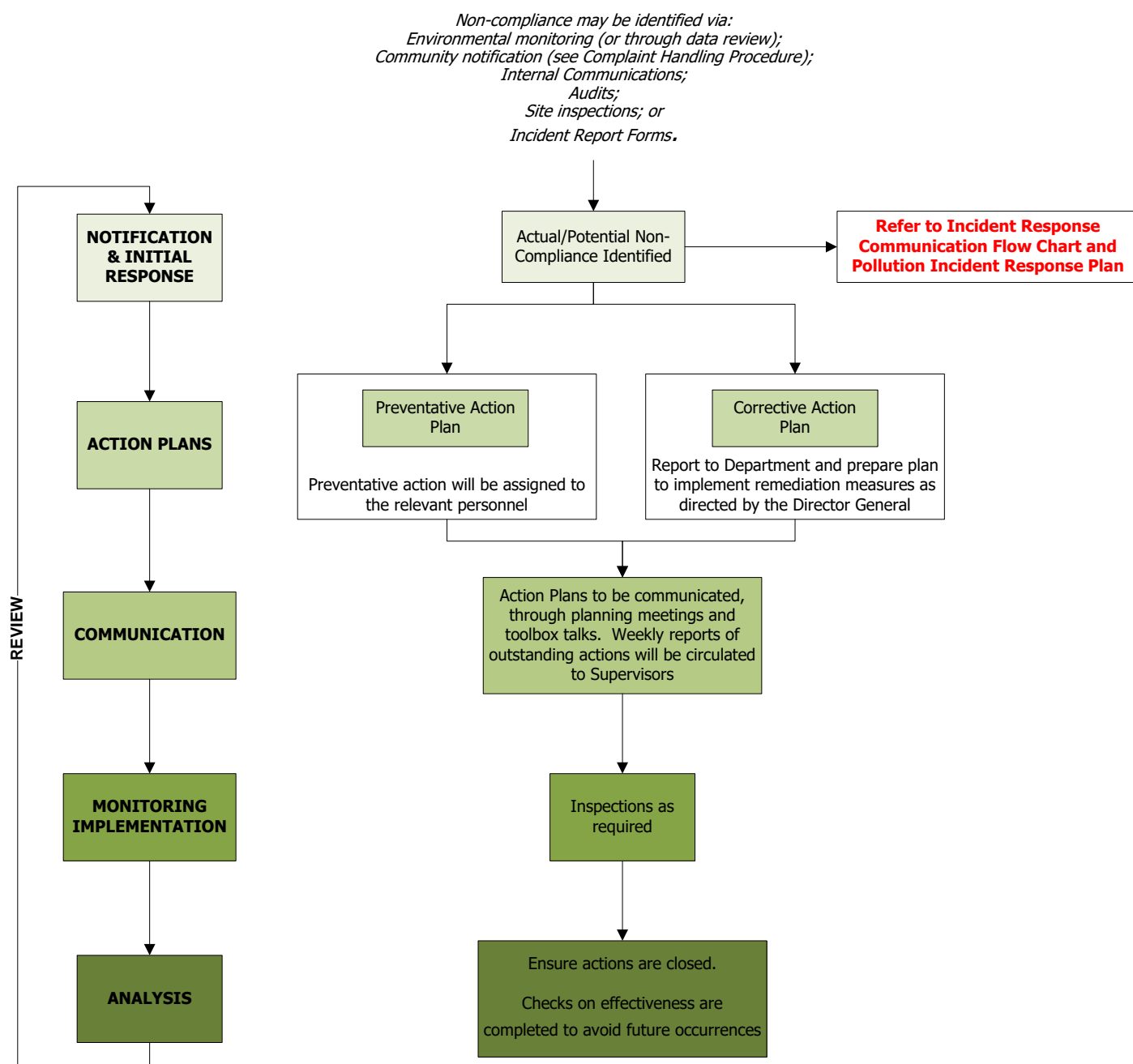
Any actual or potential non-compliance against environmental criteria will be investigated initially by the Production Manager. Environmental incidents will be recorded on the Incident Form. Corrective actions and relevant reporting will be implemented, if necessary, according to the EMStrat and the process below.

Non-compliance results from the attended noise monitoring (refer to **Section 6.1**), along with monthly inspections, ongoing review of environmental monitoring results, and any incidents and/or community complaints, will determine any trends and need for preventative action or identify compliance issues and be reported to the Directors on a monthly basis. Refer to **Figure 5** the protocol for managing any non-compliance with statutory requirements, and exceedances of the assessment criteria and/or performance criteria.

Internal reporting will occur in accordance with the provisions within the EMStrat. Externally, in accordance with the requirements of Project Approval 07\_0122, at the earliest opportunity of detecting an exceedance of the limits/performance criteria, MSC shall notify the Department and other relevant agencies of the exceedance/incident.

MSC will take all reasonable and feasible measures to ensure that the exceedances do not recur. A report to the Department considering reasonable and feasible options and preferred remediation measures or other course of action would be prepared.

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**Figure 5: Protocol for managing non-compliance with statutory requirements, and exceedances of the assessment criteria and/or performance criteria**

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## 11. REVIEW

MSC will review the NMP to ensure it is appropriate and is being implemented effectively. This NMP will be reviewed upon any change to required licences and approvals.

Changes may also arise from a change of scope, incident management or from opportunities for improvement. The Plan will then be updated to reflect any changes which have occurred. The revised document and the input which led to the revisions will be reviewed by MSC directors, approved internally and then forwarded to the Department and NSW EPA for their approval.

The planned target dates (or frequencies) at which the NMP will be subject to formal review and the personnel who will participate in the review are identified below:

This plan will be reviewed and revised if necessary:

- Every three (3) years and / or;
- When triggered by any event, incident or finding(s) that identifies improvement in the controls that effectively manage the identified hazards;
- Within 3 months of any changes to project approval (each time a modification of consent is approved) or licence conditions relating to pollution incidents;
- Following an independent environmental audit which recommends changes to the management plan;
- If there is a relevant change in technology or legislation.

At the conclusion of each calendar year after the commencement of development on the site under project approval 07\_0122, an annual review will be undertaken regarding the environmental performance of the project, adhering to the criteria given in Condition 4 of Schedule 5 of the project approval. Within three months of submission of the annual review the strategies, plans, and programs required under this approval will be reviewed.

The Directors, Production Manager and Quarry Supervisors, and consultant specialists may take part in the review of the NMP. MSC will maintain records of any review and document version will be noted on the Plan.

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## 12. TABLE OF RESPONSIBILITIES

**Table 6: Responsibilities**

Position	Task	Timing
Directors	Provide people, materials, resources and systems to properly perform requirements of the NMP.	During budget planning.
	Set internal performance criteria adopted under this Plan.	Annually.
	Approve appointment of specialist consultants to be engaged where required.	As required.
	Participate in periodic reviews of the NMP.	
	Respond to complaints and communicate complaints to personnel involved in accordance with the protocol.	As required.
	Implement upon request from the owner of any residence on property 5 additional noise mitigation measures (such as double glazing, insulation etc) in accordance with Schedule 3 Condition 7 of PA 07_0122.	Upon request.
	Authorise agreements under the NMP with private parties.	As required.
Production Manager	Ensure adopted management measures under this NMP are implemented in accordance with Section 5.	At all times.
	Direct the establishment of attended noise monitoring at nominated properties in consultation with the resident/landholder and at the appropriate times.	In accordance with the monitoring program.
	Notify, in writing, surrounding residences 2 weeks prior to any vegetation clearing campaign likely to experience noise above criteria.	2 weeks prior to vegetation clearing campaigns.
	Respond to complaints and communicate complaints to personnel involved in accordance with the protocol.	As required.
	Participate in periodic reviews of the NMP.	As required.
	Report to Directors results of any monitoring, monthly inspections, any incidents and/or community complaints, any trends.	As required.
	Undertake initial investigation when any non-compliance is identified. In the event of exceedances of noise limits, a report is to be prepared to the Department considering	As required.

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Position	Task	Timing
	reasonable and feasible options and preferred remediation measures or other course of action.	
	Collate and report monitoring carried out under the NMP for public reporting.	Monthly.
	Ensure the meteorological station is installed and utilised in accordance with the NMP.	At all times.
	Respond to incidents - where deemed necessary direct to stop all operations of the quarry immediately until a full investigation of the incident is carried out.	As required.
Quarry Supervisor	Ensure all operators have appropriate training.	At all times.
	Ensure equipment is operated in accordance with noise management measures and timing.	At all times.
	Ensure all operating conditions in Schedule 3 Condition 8 PA 07_0122 are implemented in adhered to during all campaigns.	At all times.
	Ensure that all operators are aware of the operating conditions.	During training.
	Ensure the hours of operation are adhered to.	At all times.
Operators	Participate in training as required.	Prior to operation under PA 07_0122 and as required thereafter.
	Abide by the operating conditions and operating hours.	At all times.
	Submit to workshop for maintenance/repair and defective equipment.	As required.
Administration Staff	Maintain the MSC web site and upload required data and documents.	On going.
	Maintain records and databases under the NMP.	On going.

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### 13. REFERENCES

Atkins Acoustics (2003) *Noise and Blast Impact Assessment White Granite Quarry Oberon*.

RW Corkery and Co Pty Limited (Nov 2010) *Environmental Assessment for the Oberon White Granite Quarry*, unpublished report prepared on behalf of Mudgee Stone Company Pty Ltd.

Spectrum Acoustics (2010) *Oberon White Granite Quarry Noise and Vibration Assessment* (Part 4 of the Specialist Consultant Studies Compendium of the EA).

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# APPENDIX A

# STATUTORY REQUIREMENTS

Document	Version	Effective	Review	Author	Approved
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Condition Number	Action	Section addressed												
Schedule 3 Condition 3	<p>Hours of Operation</p> <p>The proponent shall comply with the restrictions in Table 2. These restrictions do not apply to activities that are inaudible at residential receivers.</p> <p>Table 2 Hours of operation</p> <table><tr><th>Activity</th><th>Permissible Hours</th></tr><tr><td><ul style="list-style-type: none"><li>- Site establishment</li><li>- Construction activities</li><li>- Blasting and small charge popping</li><li>- Dozer operations</li></ul></td><td>9 am to 5 pm Monday to Friday (except public holidays)</td></tr><tr><td>Vegetation clearing campaigns</td><td>9 am to 5 pm Monday to Friday (except public holidays) for up to 2 weeks per annum</td></tr><tr><td>Drilling</td><td>8 am to 5 pm Monday to Friday (except public holidays)</td></tr><tr><td>Rock hammering</td><td>10 am to 12 pm Monday to Friday; and at no time on Saturday, Sunday or public holidays</td></tr><tr><td><ul style="list-style-type: none"><li>- Processing</li><li>- Heavy vehicle transportation (arrival at or departure from the site)</li></ul></td><td>7 am to 6 pm Monday to Friday (except public holidays); 8 am to 6 pm Saturday; and at no time on Sunday or public holidays</td></tr></table>	Activity	Permissible Hours	<ul style="list-style-type: none"><li>- Site establishment</li><li>- Construction activities</li><li>- Blasting and small charge popping</li><li>- Dozer operations</li></ul>	9 am to 5 pm Monday to Friday (except public holidays)	Vegetation clearing campaigns	9 am to 5 pm Monday to Friday (except public holidays) for up to 2 weeks per annum	Drilling	8 am to 5 pm Monday to Friday (except public holidays)	Rock hammering	10 am to 12 pm Monday to Friday; and at no time on Saturday, Sunday or public holidays	<ul style="list-style-type: none"><li>- Processing</li><li>- Heavy vehicle transportation (arrival at or departure from the site)</li></ul>	7 am to 6 pm Monday to Friday (except public holidays); 8 am to 6 pm Saturday; and at no time on Sunday or public holidays	Section 5.1, Table 3
Activity	Permissible Hours													
<ul style="list-style-type: none"><li>- Site establishment</li><li>- Construction activities</li><li>- Blasting and small charge popping</li><li>- Dozer operations</li></ul>	9 am to 5 pm Monday to Friday (except public holidays)													
Vegetation clearing campaigns	9 am to 5 pm Monday to Friday (except public holidays) for up to 2 weeks per annum													
Drilling	8 am to 5 pm Monday to Friday (except public holidays)													
Rock hammering	10 am to 12 pm Monday to Friday; and at no time on Saturday, Sunday or public holidays													
<ul style="list-style-type: none"><li>- Processing</li><li>- Heavy vehicle transportation (arrival at or departure from the site)</li></ul>	7 am to 6 pm Monday to Friday (except public holidays); 8 am to 6 pm Saturday; and at no time on Sunday or public holidays													
Schedule 3 condition 4	<p>Vegetation Clearing Campaigns</p> <p>During the establishment phase and vegetation clearing campaigns, the proponent shall ensure that the noise generated on site does not exceed 42 dB (a) <math>L_{Aeq} (15 min)</math> at any residence or privately owned land.</p> <p>Note: the site establishment period is defined as the period 24 weeks from the date work commences.</p>	Section 4.1.2												
Schedule 3 condition 5	<p>Vegetation Clearing Campaigns</p> <p>At least two (2) weeks prior to any vegetation clearing campaigns, the proponent shall notify in writing all the residents that are likely to experience noise levels that are greater than the criteria in Table 3 during the campaign.</p>	Section 5.1												
Schedule 3 condition 6	<p>Noise Level Restrictions</p> <p>The proponent shall ensure that the noise generated by the project does not exceed the criteria in Table 3 at any residence on privately-owned land.</p> <p>Table 3 noise limits</p> <table><tr><th>Land</th><th>Operations <math>L_{Aeq} (15 min)</math> dB (A)</th></tr></table>	Land	Operations $L_{Aeq} (15 min)$ dB (A)	Section 4.1.3 & Table 2										
Land	Operations $L_{Aeq} (15 min)$ dB (A)													

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Condition Number	Action		Section addressed	
	5	42		
	6	37		
	2	37		
	Any other privately-owned land			35
	Notes: <ul style="list-style-type: none"><li>- To interpret the land referred to in Table 3, see the applicable figure in Appendix; and</li><li>- Noise generated by the project is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy</li></ul> <p>However, these criteria do not apply if the proponent has an agreement with the owner /s of the relevant residence to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement</p>			
Schedule 3 condition 7	Upon receiving a request from the owner on property 5, the Proponent shall implement additional noise mitigation measures (such as double glazing, insulation, or air conditioning) at the residence in consultation with the owner. These measures must be reasonable and feasible and directed towards reducing the noise impacts of the project on the residence.  If within 3 months of receiving this request from the owner, the Proponent and the owner cannot agree on the measures to be implemented of these measures, then either party may refer the matter to the director general.  Note: to identify Property 5 refer to appendix		Section 7	
Schedule 3 condition 8	The proponent shall <ul style="list-style-type: none"><li>a) Implement best management practice, including all reasonable and feasible noise mitigation measures, to minimise the construction, operational, low frequency and traffic noise of the project;</li><li>b) Only operate rock hammers on the floor of the quarry pit and within 20 meters of the extraction face</li><li>c) Not operate rock hammers and drill rigs on the site concurrently</li><li>d) Ensure that a six meter high acoustic bund is installed and maintained along the southern boundary of the extraction, and that the bund is in place within 3 months of the commencement of development on the site under this approval</li><li>e) Maintain the effectiveness of noise suppression equipment on plant at all times and ensure that defective plant is not used operationally until fully repaired;</li><li>f) Ensure that noise attenuated plant is deployed preferentially in locations relevant to sensitive receivers; and</li><li>g) Minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply,</li></ul>		Section 5.1, Section 5, Figure 1	

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Condition Number	Action	Section addressed
	To the satisfaction of the Director-General	

## Environment Protection Licence – EPL 20551

Condition Number	Action	Section addressed										
<b>L4 Noise limits</b>  L4.1	<p>Noise generated at the premises must not exceed the noise limits in the table below. The locations referred to in the table below are indicated on the figure in Appendix 2 of Department of Planning and Environment’s Project Approval 07_0122 dated 7 September 2012.</p> <table><tr><th>Locality and Location</th><th>Day - LAeq (15 minute)</th></tr><tr><td>Property No. 5</td><td>42</td></tr><tr><td>Property No. 6</td><td>37</td></tr><tr><td>Property No. 2</td><td>37</td></tr><tr><td>All other privately-owned property</td><td>35</td></tr></table> <p>Note: The above noise limits do not apply at properties where the licensee has a written agreement with the landowner to exceed the noise limits.</p>	Locality and Location	Day - LAeq (15 minute)	Property No. 5	42	Property No. 6	37	Property No. 2	37	All other privately-owned property	35	Section 4.1.3, Section 4.1.5 & Table 2
Locality and Location	Day - LAeq (15 minute)											
Property No. 5	42											
Property No. 6	37											
Property No. 2	37											
All other privately-owned property	35											
L4.2	<p>For the purpose of the condition above;</p> <p>a) Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays.</p> <p>b) Evening is defined as the period 6pm to 10pm.</p> <p>c) Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sunday and Public Holidays.</p>	Section 4.1.5										
L4.3	<p>The noise limits set out in condition L4.1 apply under all meteorological conditions except for the following:</p> <p>a) Wind speeds greater than 3 metres/second at 10 metres above ground level; or</p> <p>b) Temperature inversion conditions up to 3°C/100m and wind speeds greater than 2 metres/second at 10 metres above ground level; or</p> <p>c) Temperature inversion conditions greater than 3°C/100m.</p>	Section 4.1.4										
L4.4	<p>To determine compliance:</p> <p>a) with the Leq(15 minute) noise limits in condition L4.1, the noise measurement equipment must be located:</p> <p>i) approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or</p> <p>ii) within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable</p> <p>iii) within approximately 50 metres of the boundary of a National Park or a Nature Reserve.</p>	Section 6.1.1										

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	b) with the noise limits in condition L4.1, the noise measurement equipment must be located: i) at the most affected point at a location where there is no dwelling at the location; or ii) at the most affected point within an area at a location prescribed by condition L4.5(a).	
L4.5	A non-compliance of condition L4.1 will still occur where noise generated from the premises in excess of the appropriate limit is measured: i) at a location other than an area prescribed in L4.4(a) and L4.4(b); and/or ii) at a point other than the most affected point at a location.	Section 6.1.1
L4.6	For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.	Section 6.1.1

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# APPENDIX B

## COPIES OF CORRESPONDENCE

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Your reference :  
Our reference : EF13/4935; DOC13/41414  
Contact : Mr Andrew Helms; (02) 6332 7604

Ms Emma Yule  
Environmental Scientist  
Minespex Pty Limited  
PO Box 604  
MUDGEES NSW 2850

8 August 2013

Dear Ms Yule

I refer to the draft noise, air and landscape management plans (the Plans) for the Oberon White Granite Quarry received by the Environment Protection Authority (EPA) on 2 August 2013.

Thank you for forwarding the Plans for our records. The EPA encourages the development of Environmental Management Plans/Programs to ensure that proponents have determined how they will meet their statutory obligations and environmental objectives as specified by any Project/Development Approval and/or the conditions of an environment protection licence. However; the EPA does not review these plans/programs (unless in circumstances deemed necessary) as the role of the EPA is to set conditions/criteria for environmental protection and management, not to be directly involved in the development of strategies to comply with such conditions/criteria.

In this instance, the EPA will not be reviewing or endorsing the Plans.

As a management tool, such plans should assist Mudgees Stone Company Pty Limited in meeting their commitment to statutory compliance and wider environmental management and where appropriate should be integrated with other operational or management plans. The EPA recommends that such plans be audited to an industry standard or certified to the ISO 14001 standard (if applicable) as part of any overall environmental management system.

Should you have any further enquiries in relation to this matter please contact Mr Andrew Helms at the EPA's Central West Office (Bathurst) by telephoning (02) 6332 7604.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Darryl Clift'.

**DARRYL CLIFT**  
Head Central West Unit  
Environment Protection Authority

PO Box 1388 Bathurst NSW 2795  
Level 2, 203 – 209 Russell Street Bathurst NSW 2795  
Tel: (02) 6332 7600 Fax: (02) 6332 7630  
ABN 30 841 387 271  
[www.epa.nsw.gov.au](http://www.epa.nsw.gov.au)

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# APPENDIX C

## APPROVAL OF SUITABLY QUALIFIED PERSON TO PREPARE THE NMP

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**Planning &  
Environment**

**Planning Services**

**Resource Assessments & Compliance**

Contact: Genevieve Seed

Phone: 9274 6489

Email: [genevieve.seed@planning.nsw.gov.au](mailto:genevieve.seed@planning.nsw.gov.au)

Ms Emma Yule  
Atlas Environment and Planning  
PO BOX 464  
Mudgee NSW 2850

Dear Ms Yule

**Oberon White Granite Quarry Project (MP 07\_0122)  
Management Plan Expert Approval**

I refer to your email dated 31 October 2016, notifying the Department that you have been engaged to finalise the Management Plans for the Oberon White Granite Quarry Project.

The Department has reviewed your qualifications and experience and the Secretary has approved your appointment to oversee the finalisation of the following plans:

- Noise Management Plan;
- Blast Management Plan;
- Air Quality Management Plan;
- Surface water component of the Water Management Plan;
- Transport Management Plan; and
- Environmental Management Strategy.

I would also like to note that the Department is still awaiting information on the names and CVs of suitably qualified persons to prepare the following plans:

- Landscape and Rehabilitation Management Plan; and
- Groundwater component of the Water Management Plan.

If you require any further information, please contact Genevieve Seed at the details above.

Yours sincerely

  
14/11/2016

Matthew Sprott  
**A/Director Resource Assessments**  
as nominee of the Secretary

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