

# Project Approval

## Section 75J of the *Environmental Planning and Assessment Act 1979*

As delegate for the Minister of Planning, I approve the project application referred to in Schedule 1, subject to the conditions in Schedules 2 to 5.

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 project.

Chris Wilson  
**Executive Director**  
**Development Assessment Systems & Approvals**

Sydney

2014

---

Red text represents MOD 1 (Biodiversity Offset Area) - April 2018

### **SCHEDULE 1**

<b>Application Number:</b>	08_0099
<b>Proponent:</b>	GR and AK Jones
<b>Approval Authority:</b>	Minister for Planning
<b>Land:</b>	<b>Lot 1 and 2 DP358717</b>
<b>Project:</b>	Grants Road Sand Quarry Extension

---

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS</b> .....	<b>2</b>
<b>DEFINITIONS</b> .....	<b>3</b>
<b>ADMINISTRATIVE CONDITIONS</b> .....	<b>5</b>
Obligation to Minimise Harm to the Environment .....	5
Terms of Approval .....	5
Lapsing of Approval .....	5
Limits on Approval .....	5
Surrender of Existing Development Approvals .....	5
Structural Adequacy .....	6
Demolition .....	6
Protection of Public Infrastructure .....	6
Operation of Plant and Equipment .....	6
Updating and Staging of Strategies, Plans or Programs .....	6
Production Data .....	6
Identification of Approved Extraction Limits .....	7
<b>ENVIRONMENTAL PERFORMANCE CONDITIONS</b> .....	<b>8</b>
Soil And Water .....	8
Noise .....	9
Air Quality .....	10
Meteorological Monitoring .....	12
Transport .....	12
Biodiversity .....	13
Landscape .....	14
Heritage .....	16
Visual .....	16
Waste Management .....	16
Dangerous Goods .....	17
Bushfire .....	17
<b>ADDITIONAL PROCEDURES</b> .....	<b>18</b>
Notification of Landowners .....	18
Independent Review .....	18
<b>ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING</b> .....	<b>19</b>
Environmental Management .....	19
Reporting .....	21
Auditing .....	21
Access to Information .....	21
<b>APPENDIX 1: STATEMENT OF COMMITMENTS</b> .....	<b>22</b>
<b>APPENDIX 2: NOISE COMPLIANCE ASSESSMENT</b> .....	<b>28</b>
<b>APPENDIX 3: BIODIVERSITY OFFSET STRATEGY</b> .....	<b>29</b>
<b>APPENDIX 4: CONCEPTUAL FINAL LANDFORM</b> .....	<b>30</b>

## DEFINITIONS

Annual Review	The review required by condition 3 of schedule 5
BCA	Building Code of Australia
Biodiversity Offset Strategy	The conservation and management of the Proponent's offset sites on Lot 1 and 2 DP358717, as shown in Appendix 3
CCC	Community Consultative Committee
Conditions of this approval	Conditions contained in Schedules 2 to 5 inclusive
Council	Central Coast Council
Department	Department of Planning and Environment
Dol Water	Department of Industry - Water
DRG	Division of Resources and Geoscience in the Department
EA	Environmental Assessment of the project titled <i>Grants Road Sand Quarry Extension - Environmental Assessment Report</i> prepared by Peter Andrews and Associates, dated April 2013; and the Proponent's response to the issues raised in submissions, dated December 2013
EA (MOD 1)	Environmental Assessment of the project titled <i>Section 75W Modification Application for Changes to Biodiversity Offset Area for Approved Grants Road Sand Quarry Extension 270 Grants Road Somersby</i> , dated December 2017 and supplementary ecological survey report titled <i>Additional Ecological Information Report</i> , dated March 2018
Environmental Consequences	The environmental consequences of quarrying operations, including erosion, sedimentation and adverse impacts on water quality, water quantity and biodiversity
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence issued under the POEO Act
Feasible	Means what is possible and practicable in the circumstances
GDEs	Groundwater Dependent Ecosystems
High Priority GDEs	GDEs listed in Schedule 5 of the <i>Water Sharing Plan for the Kulnura Mangrove Mountain Groundwater Sources 2003</i> , including <i>Hawkesbury Coastal Banksia Woodland</i> and <i>Sandstone Hanging Swamps</i>
Incident	A set of circumstances that: <ul style="list-style-type: none"> <li>• causes, or threatens to cause, material harm to the environment; and/or</li> <li>• breaches or exceeds the limits or performance measures/criteria in this approval</li> </ul>
Land	As defined in the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this approval, where it is defined as the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this approval
Landscape buffer areas	The buffer areas as shown in Appendix 3
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning, or delegate
Minor	Not very large, important or serious
Mitigation	Activities associated with reducing the impacts of the project
Modification 1	The modifications to the project as described in EA (MOD 1)
Negligible	Small and unimportant, such as to be not worth considering
OEH	Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or a mining or quarrying company (or its subsidiary)
Project	The project as described in the documents in condition 2 of Schedule 2, as well as quarrying operations and disturbance existing on the site as at 25 July 2014

Proponent	GR and AK Jones or any person who seeks to carry out the approved project under this approval
Public Infrastructure	Linear and related infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications etc.
Quarrying operations	The extraction, processing and transportation of extractive materials on the site and the associated removal of vegetation, topsoil and overburden
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the project to a good condition and for the purpose of establishing a safe, stable and non-polluting environment
RMS	Roads and Maritime Services
Secretary	Planning Secretary under the EP&A Act or nominee
Site	The land described in Schedule 1
Statement of Commitments	The Proponent's commitments in Appendix 1
VENM	Virgin Excavated Natural Material and/or Excavated Natural Material

## SCHEDULE 2 ADMINISTRATIVE CONDITIONS

### OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance **measures and** criteria established under this approval, the Proponent **must** implement all reasonable and feasible measures to prevent, **if prevention is not reasonable or feasible, minimise any material** harm to the environment that may result from the construction, operation, or rehabilitation of the project.

### TERMS OF APPROVAL

2. The Proponent **must** carry out the project generally in accordance with the:
  - (a) EA;
  - (b) EA (MOD 1); and
  - (c) Statement of Commitments.

*Note: The Statement of Commitments is reproduced in Appendix 1.*

- 2A. **The Proponent must carry out the project in accordance with the conditions of this approval.**
3. If there is any inconsistency between the above documents, the more recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency.
4. The Proponent **must** comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:
  - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this approval;
  - (b) any reviews, reports or audits undertaken or commissioned by the Department regarding compliance with this approval; and
  - (c) the implementation of any actions or measures contained in these documents.

### LAPSING OF APPROVAL

5. If the project has not been physically commenced within 5 years of the date of this approval, then this project approval shall lapse.

### LIMITS ON APPROVAL

#### Quarrying Operations

6. The Proponent may carry out quarrying operations on the site until 30 June 2044.

*Note: Under this approval, the Proponent is required to rehabilitate the site and carry out additional undertakings to the satisfaction of the Secretary. Consequently, this approval will continue to apply in all other respects other than the right to conduct extraction operations until the rehabilitation of the site and those undertakings have been carried out to a satisfactory standard.*

#### Production Limit

7. The Proponent **must** not extract process and transport more than 250,000 tonnes of quarry products from the site in any calendar year.

### SURRENDER OF EXISTING DEVELOPMENT CONSENT

8. By the end of December 2015, or as otherwise agreed by the Secretary, the Proponent **must** surrender all existing development consents that it holds for the site in accordance with Section 104A of the EP&A Act.

*Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of consent should not be*

*understood as implying that works legally constructed under a valid consent can no longer be legally maintained or used.*

9. Prior to the surrender of this development consent, the conditions of this approval shall prevail to the extent of any inconsistency with the conditions of that consent.

### **STRUCTURAL ADEQUACY**

10. The Proponent **must** ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

*Notes:*

- *Under Part 6 of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works; and*
- *Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.*

### **DEMOLITION**

11. The Proponent **must** ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

### **PROTECTION OF PUBLIC INFRASTRUCTURE**

12. The Proponent **must**:
  - (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the project; and
  - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the project.

*Note: This condition does not apply to damage to roads caused as a result of general road usage.*

### **OPERATION OF PLANT AND EQUIPMENT**

13. The Proponent **must** ensure that all the plant and equipment used at the site, **or used to monitor the performance of the project**, is:
  - (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

### **UPDATING AND STAGING OF STRATEGIES, PLANS OR PROGRAMS**

14. To ensure that strategies, plans and programs required under this approval are updated on a regular basis, and that they incorporate any appropriate additional measures to improve the environmental performance of the project, the Proponent may at any time submit revised strategies, plans or programs for the approval of the Secretary. With the agreement of the Secretary, the Proponent may also submit any strategy, plan or program required by this approval on a staged basis.

With the agreement of the Secretary, the Proponent may prepare a revision of or a stage of a strategy, plan or program without undertaking consultation with all parties nominated under the applicable condition in this approval.

*Notes:*

- *While any strategy, plan or program may be submitted on a staged basis, the Proponent will need to ensure that the existing operations on site are covered by suitable strategies, plans or programs at all times. If the submission of any strategy, plan or program is to be staged; then the relevant strategy, plan or program must clearly describe the specific stage/s of the project to which the strategy, plan or program applies; the relationship of this stage/s to any future stages; and the trigger for updating the strategy, plan or program.*
- *For the avoidance of doubt, existing approved management plans, strategies or monitoring programs for the Grants Road Sand Quarry will continue to apply until the approval of a similar plan, strategy or program under this approval (see condition 8 above).*
- *See also condition 5 of Schedule 5.*

### **PRODUCTION DATA**

15. The Proponent **must**:
  - (a) provide annual quarry production data to **DRG** using the standard form for that purpose; and
  - (b) report this data in the Annual Review (see condition 4 of Schedule 5).

#### **IDENTIFICATION OF APPROVED EXTRACTION LIMITS**

16. By 30 September 2014, unless otherwise agreed with the Secretary, the Proponent **must**:
  - (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the entire site; and
  - (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.
17. While quarrying operations are being carried out, the Proponent **must** ensure that these boundaries are clearly marked at all times in a manner that allows operating staff to clearly identify the approved limits of extraction.

#### **COMPLIANCE**

18. The Proponent **must** ensure that all of its employees, contractors (and their sub-contractors) are made aware of, and are instructed to comply with, the conditions of this approval relevant to activities they carry out in respect of the project.

### SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

#### SOIL AND WATER

*Note: Under the Water Act 1912 and/or the Water Management Act 2000, the Proponent is required to obtain the necessary water licences for the project, including in respect of the extraction and/or interception of groundwater.*

#### Water Supply

1. The Proponent **must** ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of operations under the approval to match its available water supply, to the satisfaction of the Secretary.

#### Compensatory Water Supply

2. The Proponent **must** provide a compensatory water supply to any owner of a privately-owned groundwater bore where monitoring indicates that the project is causing (or contributing to, in conjunction with another quarry project) a reduction in pumping yield of more than 10%, or a 2 metre decline in the water table, in consultation with DoI Water, and to the satisfaction of the Secretary.

The compensatory water supply measures must provide an alternative long-term supply of water that is equivalent to the loss attributed to the project. Equivalent water supply must be provided (at least on an interim basis) within 24 hours of the loss being identified.

If the Proponent and the landowner cannot agree on the measures to be implemented, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.

If the Proponent is unable to provide an alternative long-term supply of water, then the Proponent **must** provide alternative compensation to the satisfaction of the Secretary.

#### Pollution of Waters

3. Unless an EPL authorises otherwise, the Proponent **must** comply with section 120 of the POEO Act during the carrying out of the project.

#### Water Management Plan

4. The Proponent **must** prepare and implement a Water Management Plan for the project to the satisfaction of the Secretary. This plan must:
  - (a) be prepared by suitably qualified person(s), approved by the Secretary;
  - (b) be prepared in consultation with DoI Water, and be submitted to the Secretary for approval by the end of November 2014; and
  - (c) include a:
    - (i) Site Water Balance that includes:
      - details of:
        - sources and security of water supply;
        - water use and management on site;
        - any off-site water transfers;
        - reporting procedures; and
      - measures that would be implemented to minimise clean water use on site;
    - (ii) Surface Water Management Plan, that includes:
      - detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the project;
      - a detailed description of the water management system on site, including the:
        - clean water diversion system;
        - erosion and sediment controls;
        - dirty water management system; and
        - water storages;
      - a program to monitor and report on surface water flows and quality in water bodies that could potentially be affected by the project; and

- a comparison of monitoring results with modelled predictions;
- (iii) Groundwater Management Plan, that includes:
- detailed baseline data on groundwater levels, yield and quality in local sandstone aquifers, privately-owned groundwater bores and in areas of high priority GDEs that could be affected by the project;
  - groundwater impact assessment criteria for local sandstone aquifers, privately-owned bores and high priority GDEs;
  - a program to monitor and report on:
    - groundwater inflows to the quarrying operations;
    - the impacts of the project on:
      - local sandstone aquifers;
      - privately-owned groundwater bores; and
      - high priority GDEs,
  - including provision for continuous groundwater monitoring; and
  - a program to validate the groundwater model for the project, and comparison of monitoring results with modelled predictions;
  - a protocol, developed in consultation with Central Coast Sands Quarry, to appropriately apportion responsibility for any potential impacts to privately-owned groundwater bores and/or high priority GDEs that may be affected cumulatively by the project and operations at Central Coast Sands Quarry;
  - an investigation of opportunities to maintain ecosystem function in high priority GDEs to the west and northwest of the project through facilitating run-on of clean surface waters; and
- (iv) a Surface and Ground Water Contingency Strategy, that includes:
- a protocol for the investigation, notification and mitigation of identified exceedances of the surface water and groundwater impact assessment criteria;
  - measures to mitigate and/or compensate potentially affected landowners of privately-owned land, including provision of alternative long-term supply of water to the affected landowner that is equivalent to the loss attributed to the project; and
  - the procedures that would be followed if any unforeseen impacts are detected during the project.

*Note: In the event that there is a dispute between the Proponent and Central Coast Sands Quarry concerning the development, finalisation or implementation of the above protocol, then either party may refer the matter to the Secretary for resolution. The decision of the Secretary on the matter shall be final.*

## **NOISE**

### **Hours of Operation**

5. The Proponent **must** only conduct construction activities and quarrying operations on the site:
- (a) between 7.00 am and 6.00 pm, Monday to Friday;
  - (b) between 7.00 am and 1.00 pm, Saturday; and
  - (c) at no time on Sunday or public holidays.

*Note: The Proponent may carry out other activities e.g. maintenance, on the site provided that these activities are conducted in a manner that is inaudible at all privately-owned residences.*

6. The following activities may be carried out on the site outside the hours specified in condition 5:
- (a) delivery or dispatch of materials as requested by Police or other authorities; and
  - (b) emergency work to avoid the loss of lives, property and/or to prevent environmental harm.

In such circumstances the Proponent **must** notify the Secretary and affected residents prior to undertaking the activities, or as soon as is practical thereafter.

### **Noise Impact Assessment Criteria**

7. The Proponent **must** ensure that the construction and operational noise generated by the project does not exceed the criteria in Table 1 at any residence on privately-owned land.

Table 1: Noise criteria

Receiver Location	$L_{Aeq (15 min)}$ dB(A)
All privately-owned residences	40

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*. Appendix 2 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, the noise criteria in Table 1 do not apply if the Proponent has an agreement with the relevant landowner to exceed the noise criteria, and the Proponent has advised the Department in writing of the terms of the agreement.

### Operating Conditions

8. The Proponent **must**:
- implement best management practice to minimise the construction, operational and road noise of the project;
  - regularly assess noise monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the noise criteria in this approval;
  - maintain the effectiveness of noise suppression equipment on plant and equipment on site;
  - minimise the noise impacts of the project during meteorological conditions under which the noise limits in this approval do not apply (see Appendix 2); and
  - carry out regular noise monitoring to determine whether the project is complying with the relevant conditions of this approval,
- to the satisfaction of the Secretary.

### Noise Management Plan

9. The Proponent **must** prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with the EPA, and submitted to the Secretary for approval by the end of November 2014;
  - describe the measures that would be implemented to ensure:
    - compliance with the relevant conditions of this approval;
    - best management practice is being employed; and
    - the noise impacts of the project are minimised during meteorological conditions under which the noise criteria in this approval do not apply;
  - describe the proposed noise management system; and
  - include a monitoring program that:
    - uses attended monitoring to evaluate the compliance of the project against the noise criteria in this approval;
    - evaluates and reports on the effectiveness of the noise management system and the best practice noise management measures; and
    - defines what constitutes a noise incident at the project, and includes a protocol for identifying and notifying the Department and relevant stakeholders of any noise incidents.

## AIR QUALITY

### Air Quality Impact Assessment Criteria

10. The Proponent **must** ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the project do not exceed the criteria listed in Tables 2, 3, 4 and 5 at any residence on privately-owned land.

Table 2: Long-term criteria for particulate matter

Pollutant	Averaging Period	<sup>d</sup> Criterion
Total suspended particulate (TSP) matter	Annual	<sup>a</sup> 90 $\mu\text{g}/\text{m}^3$

Particulate matter < 10 µm (PM <sub>10</sub> )	Annual	<sup>a</sup> 30 µg/m <sup>3</sup>
--	--------	-----------------------------------

Table 3: Short-term criteria for particulate matter

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

Table 4: Long-term criteria for deposited dust

Pollutant	Averaging Period	Maximum increase in deposited dust level	Maximum total deposited dust level
<sup>c</sup> Deposited dust	Annual	<sup>b</sup> 2 g/m <sup>2</sup> /month	<sup>a</sup> 4 g/m <sup>2</sup> /month

Table 5: Impact assessment criterion for crystalline silica

Pollutant	Averaging Period	Criterion
<sup>e</sup> Chronic Reference Exposure Level (REL) (PM <sub>4</sub> )	Annual	3 µg/m <sup>3</sup>

References to Tables 2 to 5:

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

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

<sup>c</sup> Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method;

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

<sup>e</sup> Crystalline silica must be analysed in accordance with a test method approved by the Department of Health.

## Operating Conditions

11. The Proponent **must**:
- implement best practice management to minimise the dust emissions of the project;
  - regularly assess air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this approval;
  - minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d under Table 5);
  - implement all reasonable and feasible measures to minimise the release of greenhouse gas emissions from the site; and
  - minimise the area of surface disturbance and maximise progressive rehabilitation of the site; and
  - carry out regular air quality monitoring to determine whether the project is complying with the relevant conditions of this approval,
- to the satisfaction of the Secretary.

## Air Quality Management Plan

12. The Proponent **must** prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with the EPA and submitted to the Secretary for approval by the end of November 2014;
  - describe the measures that would be implemented to ensure:
    - compliance with the relevant conditions of this approval;
    - best practice management is being employed; and
    - the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events;
  - describe the proposed air quality management system; and
  - include an air quality monitoring program that:
    - is capable of evaluating the performance of the project;

- includes a protocol for determining any exceedances of the relevant conditions of approval;
- effectively supports the air quality management system; and
- evaluates and reports on the adequacy of the air quality management system.

## **METEOROLOGICAL MONITORING**

13. For the life of the project, the Proponent **must** ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* guideline.

## **TRANSPORT**

### **Monitoring of Product Transport**

14. The Proponent **must**:
- keep accurate records of the:
    - amount of quarry products transported from the site (per calendar month and year); and
    - number of laden vehicle movements from the site (per hour, day, week, calendar month and year); and
  - publish these records on its website biannually.

### **Operating Conditions**

15. The Proponent **must** ensure that:
- all project-related heavy vehicles enter and exit the site in a forward direction;
  - all laden vehicles entering or leaving the site have their loads covered; and
  - all laden vehicles leaving the site are cleaned of sand and other material that may fall on the road, before leaving the site.

### **Grants Road Maintenance**

16. The Proponent **must**, in conjunction with the operator of the Central Coast Sands Quarry, cause to be prepared a road condition assessment and road maintenance contributions study of Grants Road. The study must:
- be undertaken by a suitably qualified, experienced and independent person(s) endorsed by the Secretary;
  - be undertaken in consultation with Council;
  - be submitted to the Secretary for approval by the end of March 2015;
  - be co-funded by the Proponent and the operator of the Central Coast Sands Quarry on a basis which is proportionate to the maximum number of tonnes of quarry product expected to be dispatched from each quarry over the life of their major project approvals, and the length of Grants Road affected by laden vehicles from each quarry;
  - assess current road condition of the length of Grants Road affected by laden vehicles from each quarry, and future road maintenance requirements for this length of road over the life of the major project approvals for both quarries;
  - give consideration to the usage of Grants Road by laden vehicles from each quarry over the past five years and the predicted usage of Grants Road by laden vehicles from each quarry over the life of their major project approvals, including any importation of VENM; and
  - recommend per tonne/per kilometre road maintenance contributions for the project for the haulage of quarry products and VENM on Grants Road.

If the Proponent and the operator of the Central Coast Sands Quarry cannot agree on any aspect of undertaking this study or the implementation of its recommendations, then either party may refer the matter to the Secretary for resolution. The decision of the Secretary on the matter shall be final.

17. The Proponent **must** pay contributions to Council for the maintenance of Grants Road, in accordance with the study required under condition 16, unless otherwise agreed by the Secretary.

## Traffic Management Plan

18. The Proponent **must** prepare and implement a Traffic Management Plan for the project, to the satisfaction of the Secretary. This plan must:
- be submitted to the Secretary for approval by the end of November 2014;
  - include a drivers' code of conduct to minimise the impacts of project-related trucks on local residences and road users; and
  - describe the measures that would be put in place to ensure compliance with the drivers' code of conduct.

## BIODIVERSITY

### Biodiversity Performance Measures

19. The Proponent **must** ensure that the project does not cause any exceedances of the performance measures in Table 6, to the satisfaction of the Secretary.

Table 6: Biodiversity impact performance measures

Feature	Measure
High priority GDEs located within 1 kilometre of extraction operations	Minor environmental consequences, including: <ul style="list-style-type: none"><li>negligible erosion of the surface of the GDEs;</li><li>negligible sedimentation within the GDEs;</li><li>minor changes in the size of the GDEs;</li><li>no significant change to the composition or distribution of species within the GDEs.</li></ul>
Somersby Mintbush	Negligible environmental consequences

### Offsets

20. If the Proponent exceeds the performance measures in Table 6 and the Secretary determines that:
- it is not reasonable or feasible to remediate the impact or environmental consequence; or
  - remediation measures implemented by the Proponent have failed to satisfactorily remediate the impact or environmental consequence;
- then the Proponent **must** provide a suitable offset to compensate for the impact or environmental consequence, to the satisfaction of the Secretary.

*Note: Any offset required under this condition must be proportionate with the significance of the impact or environmental consequence.*

### Groundwater Dependent Ecosystem Monitoring and Management Program

21. The Proponent **must** undertake additional studies on the high priority GDEs located within 1 kilometre of extraction operations under the approval and potentially impacted by the project. The studies **must** be undertaken in consultation with Dol Water and include:
- a description of the nature and extent of groundwater reliance for each GDE;
  - long-term monitoring of the condition of the GDEs;
  - performance indicators for project-related environmental consequences on GDEs and trigger levels to initiate mitigation/response measures; and
  - mitigation/response measures to ensure minor environmental consequences on the GDEs, to the satisfaction of the Secretary.

### Somersby Mintbush Monitoring and Management Program

22. The Proponent **must** prepare and implement, in consultation with OEH and Council, a Somersby Mintbush (*Prostanthera junonis*) Monitoring Program within the vicinity of the site. This program must include:
- a baseline assessment of the extent and condition of the Somersby Mintbush populations before commencement of quarrying operations under the approval;
  - long-term monitoring of these populations;
  - establishment of performance indicators for project-related environmental consequences on Somersby Mintbush and trigger levels to initiate mitigation/response measures; and

- (d) mitigation/response measures to ensure negligible environmental consequences on the Somersby Mintbush, to the satisfaction of the Secretary.

### Biodiversity Offset Strategy

23. The Proponent **must** implement the **Biodiversity Offset Strategy** as described in the EA, **EA (MOD 1) and Landscape and Rehabilitation Management Plan** and as summarised in Table 7, and shown conceptually in Appendix 3, to the satisfaction of the Secretary.

*Table 7: Summary of the Biodiversity Offset Strategy*

<b>Area</b>	<b>Offset Criteria</b>	<b>Size (hectares)</b>
On-site Offset Area	<p>Existing vegetation to be managed and maintained as:</p> <ul style="list-style-type: none"> <li>• Scribbly Gum Woodland and/or other native vegetation community commensurate with the local surroundings, including at least 4.44 ha in moderate to good condition; and</li> <li>• suitable habitat for threatened fauna species including the provision of at least 36 nest boxes in the biodiversity offset and landscape buffer areas.</li> </ul>	7.0

*Note: See Statement of Commitment No 9 for additional biodiversity offset requirements.*

### Long Term Security of Offset

24. Within 6 months of the determination of Modification 1, or as otherwise agreed by the Secretary, the Proponent must:
- engage an independent registered surveyor to survey and permanently mark the boundaries of the offset areas;
  - submit a survey plan of these boundaries to the Secretary;
  - ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff, the landowner and inspecting officers to clearly identify those boundaries; and
  - cause restrictive and positive covenants under the *Conveyancing Act 1919* to be placed on the titles of the land referring to the surveyed offset areas, to ensure that the Proponent and the landowner:
    - manage the offset areas for conservation in perpetuity;
    - implement the Landscape and Rehabilitation Management Plan; and
    - permit ongoing access to the offset areas by the Department and other relevant public authorities for the purposes of monitoring compliance with the covenants and Landscape and Rehabilitation Management Plan,
 to the satisfaction of the Secretary.

### LANDSCAPE

#### Rehabilitation Objectives

25. The Proponent **must** rehabilitate the site to the satisfaction of the Secretary. This rehabilitation must be generally consistent with the rehabilitation strategy as described in the EA, **EA (MOD 1) and Landscape and Rehabilitation Management Plan** and comply with the objectives in Table 8.

Table 8: Rehabilitation objectives

Feature	Objective
Site (as a whole)	<ul style="list-style-type: none"> <li>• Safe, stable and non-polluting.</li> <li>• Minimise the visual impact of the final landforms as far as is reasonable and feasible.</li> </ul>
Surface Infrastructure	<ul style="list-style-type: none"> <li>• To be decommissioned and removed, unless the Secretary agrees otherwise.</li> </ul>
Quarry Benches	<ul style="list-style-type: none"> <li>• Suitably landscaped and revegetated using native species.</li> </ul>
Quarry Pit Floor	<ul style="list-style-type: none"> <li>• Establish land with a level of at least Class 4 agricultural suitability over 80% of the quarry floor.</li> </ul>
Community	<ul style="list-style-type: none"> <li>• Ensure public safety.</li> <li>• Minimise the adverse socio-economic effects associated with quarry closure.</li> </ul>

### Progressive Rehabilitation

26. The Proponent **must** rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

*Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to further disturbance in future.*

### Landscape and Rehabilitation Management Plan

27. The Proponent **must** prepare and implement a Landscape and Rehabilitation Management Plan for the site, including the offset area, to the satisfaction of the Secretary. This plan must:
- be prepared by suitably qualified person(s) whose appointment has been approved by the Secretary;
  - be prepared in consultation with OEH, DRG and Council, and submitted to the Secretary for approval by the end of July 2015;
  - describe how the implementation of the **Biodiversity Offset Strategy and Statement of Commitment Number 9** would be integrated with the overall rehabilitation of the site;
  - describe the short, medium, and long term measures that would be implemented to:
    - manage the remnant vegetation and habitat on the site and in the offset areas;
    - implement the **Biodiversity Offset Strategy**;
    - **manage the buffer areas surrounding the extraction area; and**
    - **ensure compliance with the rehabilitation objectives and the progressive rehabilitation obligations in this approval;**
  - include detailed performance and completion criteria for evaluating the performance of the **Biodiversity Offset Strategy** and the rehabilitation of the site, including triggers for any necessary remedial action;
  - include a detailed description of the measures that would be implemented over the next 3 years (to be updated for each 3 year period following initial preparation of the plan), including the procedures to be implemented for:
    - enhancing the quality of remnant vegetation and fauna habitat;
    - landscaping the site and along public roads to minimise visual and lighting impacts;
    - restoring native endemic vegetation and fauna habitat;
    - maximising the salvage of environmental resources within the approved disturbance area – including tree hollows, vegetative and soil resources – for beneficial reuse;
    - ensuring minimal environmental consequences for threatened species, populations and habitats;
    - minimising the impacts on native fauna, including undertaking pre-clearance surveys;
    - controlling weeds and feral pests;
    - controlling erosion;
    - controlling access; and
    - bushfire management;
  - include a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;
  - identify the potential risks to the implementation of the **Biodiversity Offset Strategy** and

- rehabilitation of the site, and include a description of the contingency measures that would be implemented to mitigate these risks; and
- (i) include details of who would be responsible for monitoring, reviewing and implementing the plan.

### Conservation and Rehabilitation Bond

28. The Proponent **must** lodge a Conservation and Rehabilitation Bond with the Department within 6 months of the approval of the Landscape and Rehabilitation Management Plan, to ensure that the **Biodiversity Offset Strategy** and rehabilitation of the site are implemented in accordance with the performance and completion criteria set out in the Plan. The sum of the bond **must** be determined by:
  - (a) calculating the cost of implementing the **Biodiversity Offset Strategy** over the next 3 years;
  - (b) calculating the cost of rehabilitating disturbed areas of the site, taking into account the likely surface disturbance over the next 3 years of quarrying operations; and
  - (c) employing a suitably qualified quantity surveyor or other expert to verify the calculated costs, to the satisfaction of the Secretary.

*Notes:*

- *Alternative funding arrangements for long term management of the **Biodiversity Offset Strategy**, such as provision of capital and management funding as agreed by OEH as part of a **Stewardship Agreement** or transfer to conservation reserve estate can be used to reduce the liability of the conservation and biodiversity bond.*
  - *If capital and other expenditure required by the Landscape and Rehabilitation Management Plan is largely complete, the Secretary may waive the requirement for the lodgement of a bond in respect of the remaining expenditure.*
  - *If the rehabilitation of the site area is completed to the satisfaction of the Secretary, then the Secretary will release the bond. If the rehabilitation of the site is not completed to the satisfaction of the Secretary, then the Secretary will call in all or part of the bond, and arrange for the completion of the relevant works.*
29. Within 3 months of each Independent Environmental Audit (see condition 9 of Schedule 5) **or approval of each revised version of the Landscape and Rehabilitation Management Plan**, the Proponent **must** review, and if necessary revise, the sum of the Conservation and Rehabilitation Bond to the satisfaction of the Secretary. This review must:
    - (a) consider the performance of the implementation of the rehabilitation of the site to date;
    - (b) consider the effects of inflation; and
    - (c) calculate the cost of rehabilitating the disturbed areas of the site (taking into account the likely surface disturbance over the next 3 years of quarrying operations).

## HERITAGE

### Heritage Management Plan

30. The Proponent **must** prepare and implement an Aboriginal Cultural Heritage Management Plan for the project to the satisfaction of the Secretary. This plan must:
  - (a) be prepared by suitably qualified person(s) whose appointment has been approved by the Secretary;
  - (b) be prepared in consultation with OEH and local Aboriginal stakeholders;
  - (c) be submitted to the Secretary for approval by the end of November 2014;
  - (d) include a description of the measures that would be implemented for:
    - protecting, monitoring and managing Aboriginal sites within the site, including the **Biodiversity Offset Strategy**;
    - maintaining and managing reasonable access for Aboriginal stakeholders to cultural heritage items on site and in the biodiversity offset areas;
    - managing the discovery of any human remains or previously unidentified Aboriginal objects on site, including (in the case of human remains) stop work provisions and notification protocols;
    - ongoing consultation with the local Aboriginal stakeholders in the conservation and management of Aboriginal cultural heritage both on-site and in the biodiversity offset areas;
    - ensuring any workers on site receive suitable heritage inductions prior to carrying out any activities which may disturb Aboriginal sites, and that suitable records are kept of these inductions; and

- the long term management of the Aboriginal cultural heritage values of the site post extraction operations and rehabilitation of the site.

## **VISUAL**

30. The Proponent **must** implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the project to the satisfaction of the Secretary.
31. The Proponent **must**:
- vegetate any earthen perimeter bund at the project within 3 months of establishing the bund, using appropriate flora species to minimise the visual and off-site sedimentation impacts of the project; and
  - maintain this vegetation in a good condition throughout the remainder of the project, to the satisfaction of the Secretary.

## **WASTE MANAGEMENT**

32. The Proponent **must**:
- minimise and monitor the waste generated by the project;
  - ensure that the waste generated by the project is appropriately stored, handled and disposed of;
  - manage on-site sewage treatment and disposal in accordance with the requirements of Council; and
  - report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.
33. Prior to importing any VENM to the site, the Proponent must obtain a 'resource recovery exemption' under the POEO Act and provide evidence of this approval to the Department.

## **DANGEROUS GOODS**

34. The Proponent **must** ensure that the storage, handling, and transport of dangerous goods are done in accordance with the relevant *Australian Standards*, particularly AS1940 and AS1596, and the *Dangerous Goods Code*.

## **BUSHFIRE**

35. The Proponent **must**:
- ensure that the project is suitably equipped to respond to any fires on site; and
  - assist the Rural Fire Service and emergency services as much as possible if there is a fire in the vicinity of the site.

## **SCHEDULE 4 ADDITIONAL PROCEDURES**

### **NOTIFICATION OF LANDOWNERS**

1. As soon as practicable after obtaining monitoring results showing:
  - (a) an exceedance of any relevant criteria in Schedule 3, the Proponent **must** notify the affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and
  - (b) an exceedance of any relevant air quality criteria in Schedule 3, the Proponent **must** send a copy of the NSW Health fact sheet entitled “Mine Dust and You” (as may be updated from time to time) to the affected landowners and current tenants of the land (including the tenants of land which is not privately-owned).

### **INDEPENDENT REVIEW**

2. If an owner of privately-owned land considers the project to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the project on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary’s decision, the Proponent **must**:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
  - consult with the landowner to determine his/her concerns;
  - conduct monitoring to determine whether the project is complying with the relevant criteria in Schedule 3; and
  - if the project is not complying with these criteria, then identify measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review.

**SCHEDULE 5  
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING**

**ENVIRONMENTAL MANAGEMENT**

**Environmental Management Strategy**

1. The Proponent **must** prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Secretary. The strategy must:
  - (a) be submitted to the Secretary for approval by the end of November 2014;
  - (b) provide the strategic framework for environmental management of the project;
  - (c) identify the statutory approvals that apply to the project;
  - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project;
  - (e) describe the procedures that would be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
    - receive, record, handle, and respond to complaints;
    - resolve any disputes that may arise during the course of the project;
    - respond to any non-compliance;
    - respond to emergencies; and
  - (f) include:
    - copies of any strategies, plans and programs approved under the conditions of this approval; and
    - a clear plan depicting all the monitoring to be carried out under the conditions of this approval.

**Management Plan Requirements**

2. The Proponent **must** ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
  - (a) detailed baseline data;
  - (b) a description of:
    - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - any relevant limits or performance measures/criteria;
    - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;
  - (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
  - (d) a program to monitor and report on the:
    - impacts and environmental performance of the project;
    - effectiveness of any management measures (see c above);
  - (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
  - (f) a program to investigate and implement ways to improve the environmental performance of the project over time;
  - (g) a protocol for managing and reporting any:
    - incidents;
    - complaints;
    - non-compliances with statutory requirements; and
    - exceedances of the impact assessment criteria and/or performance criteria; and
  - (h) a protocol for periodic review of the plan.

*Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.*

**Adaptive Management**

3. The Proponent must assess and manage project-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance

measures constitutes a breach of this approval and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Proponent must, at the earliest opportunity:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur;
- (b) consider all reasonable and feasible options for remediation (where relevant) and submit a report to the Department describing those options and any preferred remediation measures or other course of action; and
- (c) implement remediation measures as directed by the Secretary, to the satisfaction of the Secretary.

#### **Annual Review**

4. By the end of March each year, or other timing as may be agreed by the Secretary, the Proponent **must** review the environmental performance of the project to the satisfaction of the Secretary. This review must:
  - (a) describe the development (including any rehabilitation) that was carried out in the past calendar year, and the development that is proposed to be carried out over the current calendar year;
  - (b) include a comprehensive review of the monitoring results and complaints records of the project over the past calendar year, which includes a comparison of these results against the:
    - relevant statutory requirements, limits or performance measures/criteria;
    - requirements of any plan or program required under this approval;
    - monitoring results of previous years; and
    - relevant predictions in the EA;
  - (c) identify any non-compliance over the past calendar year, and describe what actions were (or are being) taken to ensure compliance;
  - (d) identify any trends in the monitoring data over the life of the project;
  - (e) identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
  - (f) describe what measures will be implemented over the current calendar year to improve the environmental performance of the project.

#### **Revision of Strategies, Plans and Programs**

5. Within 3 months of the submission of an:
  - (a) annual review under condition 4 above;
  - (b) incident report under condition 7 below;
  - (c) audit report under condition 9 below; or
  - (d) any modification to the conditions of this approval,the Proponent **must** review the **suitability of all** strategies, plans and programs required under this approval, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within **6** weeks of the review the revised document must be submitted for the approval of the Secretary.

*Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the project.*

#### **CONSULTATION**

- 5A. Where the conditions of this approval require consultation with an identified party, the Proponent must:
  - (a) consult with the relevant party prior to submitting the subject document to the Secretary for approval; and
  - (b) provide details of the consultation undertaken, including:
    - the outcome of that consultation, matters resolved and unresolved; and
    - details of any disagreement remaining between the party consulted and the Proponent and how the Proponent has addressed any unresolved matters.

However, if the Secretary agrees, a strategy, plan or program may be prepared without consultation being undertaken with an identified party required under a condition of this consent.

## Community Consultative Committee

6. If directed by the Secretary, the Proponent **must** establish and operate a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. Any such CCC must be operated in general accordance with the *Community Consultative Committee Guidelines: State Significant Projects (2016)*.

### Notes:

- *The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Proponent complies with this approval.*
- *In accordance with the Department's guideline, the CCC should be comprised of an independent chair and appropriate representation from the Proponent, Council (if available) and the local community.*
- *This CCC can be combined with any other CCC established under conditions of consent or approval for State Significant quarry developments on the Somersby Plateau.*

## REPORTING

### Incident Reporting

7. The Proponent **must** immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Proponent **must** provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

### Regular Reporting

8. The Proponent **must** provide regular reporting on the environmental performance of the project on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this approval.

## AUDITING

### Independent Environmental Audit

9. By 30 June 2015 and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent **must** commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
- be **led and** conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
  - include consultation with the relevant agencies **and the CCC**;
  - assess the environmental performance of the project and assess whether it is complying with the requirements in this approval and any relevant EPL or necessary water licences for the project (including any assessment, strategy, plan or program required under these approvals);
  - review the adequacy of strategies, plans or programs required under the abovementioned approvals;
  - recommend appropriate measures or actions to improve the environmental performance of the project, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and**
  - be conducted and reported to the satisfaction of the Secretary.**

*Note: This audit team must be led by a suitably qualified auditor and include experts in any fields specified by the Secretary.*

10. **Within 3 months of commencing each audit, or within another timeframe agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary and any other agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of the recommendations. The Proponent must implement these recommendations, to the satisfaction of the Secretary.**

## ACCESS TO INFORMATION

11. By the end of November 2014, the Proponent **must**:
- make copies of the following publicly available on its website:
    - the documents referred to in condition 2 of Schedule 2;
    - all current statutory approvals for the project;
    - all approved strategies, plans and programs required under the conditions of this approval;
    - a comprehensive summary of the monitoring results of the project, reported in accordance with the specifications in any conditions of this approval, or any approved plans and programs;
    - a complaints register, updated monthly;

- the annual reviews of the project;
  - any independent environmental audit, and the Proponent's response to the recommendations in any audit;
  - minutes of CCC meetings;
  - any other matter required by the Secretary; and
- (b)** keep this information up to date, to the satisfaction of the Secretary.

## APPENDIX 1 STATEMENT OF COMMITMENTS

Subject	Commitments	Timing
1. General Arrangements	The development <b>must</b> be carried out in accordance with the Environmental Assessment (April 2013) prepared by Peter Andrews + Associates Pty Ltd and this Addendum Report. This Addendum Report will override the Environmental Assessment where there is an inconsistency.	Ongoing
2. Staging	Staging of the development will be in accordance with the staging of works set out in the Environmental Assessment (April 2013).	Ongoing
3. Statutory Requirements	Obtain and maintain all relevant approvals and licences.	As required and continuous
	Comply with all conditional requirements in all approvals and licences.	As required
4. Hours of Operation	7.00am to 6.00pm Monday to Friday 7.00am to 1.00pm Saturday	Ongoing
5. Reporting Requirements	Undertake monitoring for the key areas as identified below.	As required
	Incorporate relevant data/monitoring information in the Annual Reports.	Annually
	Incorporate the management measures into the Environmental Management Plan. The development is to operate at all times within the terms and conditions of the Environmental Management Plan.	Prior to commencement and subject to five yearly reviews
	Update procedures manual for the operation of the quarry with regards to the quarry expansion including the following and ensure all staff are aware of procedures. <ul style="list-style-type: none"> <li>• Operation of plant and equipment</li> <li>• Environmental monitoring</li> <li>• Restrictions imposed on quarrying</li> <li>• Vegetation removal</li> <li>• Sedimentation and erosion</li> <li>• Transportation</li> </ul>	Prior to commencement of the operations
	Provision of the annual production data to the Department of Trade and Investment	Annually
6. Soils and Land capability	Locate areas for acoustic earth mounds.	Prior to topsoil stripping operations
	Maintain topsoil for rehabilitation and minimise soil loss through erosion.	Ongoing
	Vegetate all mounds with Kikuyu grass	As required
	Implement downslope sedimentation controls as required	Until the surface of the mounds are vegetated
7. Groundwater	Undertake automatic water level measurements in water level data logger in monitoring bores	Initially 4-hourly samples. Assess data after 12 months and depending on the results, decrease frequency to 8-hourly samples
	Undertake groundwater sampling in representative monitoring bores	Initially 3 monthly. Assess data after 12 months and depending on the results, decrease frequency to 6

Subject	Commitments	Timing
		monthly samples
	Undertake automatic rainfall measurements in tipping bucket rain gauge data logger on site	Continuous logging at every 0.2mm tip with time/date stamps.
	Preparation of the Groundwater Management Plan, which incorporates the development of a water level and water quality monitoring program and the development of a set of trigger levels and mitigation measures if adverse impacts occur on the environmental and/or neighbouring water users.	Within 6 months of the project approval
	Provide a complete set of results of the production and monitoring program including a review and assessment of the statistical analysis to the <i>Senior Hydrogeologist Dol Water</i> and the quarry owner.	Annually
	Communicate with any landowner if there is a scientifically and independently demonstrated significant impact on any neighbouring water users surrounding the site.	As required
8. Surface Water	Preparation of an Environmental Management Plan for the quarry extension based on a continuation of the current environmental management and mitigation measures for the quarry expansion as outlined in the current EMP.	Prior to the commencement of the quarry operations
	Construct earth bunds and surface water diversion banks and drains around the perimeter of the entire quarry pit void. Bunds and/or diversion drains will require ongoing minor realignments as the quarry pit develops and advances especially through zone 'C'.  Bunds can be designed as 'multi-purpose' to provide additional public 'Highwall' safety in addition to surface water flow management.	Prior to the commencement of the quarry operations and ongoing
	Relocate the chicken farming operations storage shed that is currently located on the south west drainage path to the south of the site and bund the storage site to contain runoff while chicken farming is ongoing at the site.	Prior to the commencement of the quarry operations and ongoing
	Construct 'out of pit' containment infrastructure in the south-eastern most section of the property boundary adjacent to Zone E to capture and passively treat contaminated surface water runoff whilst simultaneously providing additional water security. Infrastructure to consist of:  <ol style="list-style-type: none"> <li>1. One 10 Megalitres (ML) Pollution Control Dam (PC Dam) to receive nitrogen rich runoff from Zones F&amp;G where the existing chicken and machinery sheds are located. This dam will gravity flow via a spillway into a shallow polishing pond. Control structures such as rock 'rip rap' or similar will be required to control water runoff velocity prior to entering the PC Dam.</li> <li>2. Broad shallow polishing pond/s will receive any water spilled or transferred from PC Dam and provide passive treatment through suitable wetland plant species.</li> <li>3. Pipeline and pumps for transfer of water each way between the in-pit decant pond and out of pit PC Dam.</li> <li>4. A floating siphon in the PC Dam to maintain a 5 ML operating level.</li> </ol> <p>Ensure PC Dam and pond are located outside of the water pipeline easement and located generally as shown on the plans. Access to the ponds will be along the southern boundary across the water pipeline easement.</p>	Prior to the commencement of the quarry operations and ongoing
	Continue monitoring of surface water at locations W1 and W4	Monitor until stage 2 of the quarry commences.

	<p>After construction of the control pond and polishing pond, it is proposed that the quality of the treated quarry discharge released to the south west waterway is monitored at the future surface water quality monitoring location S1 shown in Appendix 2 of this report. Initially, the control pond and polishing dam will be used mainly to treat runoff from the chicken farming operations, the existing dwelling and a small area of pasture, and will only be used to treat water captured within the quarry during large rainfall events until the commencement of stage 2 of the quarry. As the quarry extends to the maximum quarry footprint in stage 2, pumping out of the quarry may occur as regularly as weekly.</p> <p>Undertake water quality monitoring by a grab sample taken during discharge downstream of the control pond and polishing pond at location S1 on a monthly</p>	Monthly water monitoring
	<p>basis. The parameters will be monitored and compared against the proposed discharge limits as follows:</p> <ul style="list-style-type: none"> <li>• Suspended solids 40mg/L</li> <li>• Oil and grease – 5 and/or none visible</li> <li>• pH – 6.0-8.0</li> </ul>	
9. Biodiversity and Environmental Management	Identify the boundaries of the quarry.	Prior to clearing of vegetation
	Preparation of a detailed Biodiversity Offset Management and Habitat Rehabilitation Plan for areas to be retained as biodiversity offsets within the site.	Prior to the clearing of vegetation
	<p>Biodiversity offsetting will be undertaken to compensate for unavoidable impacts to biodiversity within the site including the removal of 1.5 hectares of Cleared Land with Remnant Trees vegetation and the loss of 18 hollow bearing trees. The areas within the site proposed for biodiversity offsetting are located in the north-eastern section of the site and along the western section of the site. The offsetting strategy proposed will result in the improvement and maintenance of biodiversity values on the site for the medium to long term.</p> <p>A total of 7 hectares of land will be retained and managed as a biodiversity offset to compensate for the loss of 1.5 hectares of Cleared Land with Remnant Trees vegetation.</p> <p>Offset areas will be protected in perpetuity and subject to a 10 year rehabilitation and maintenance period. The areas proposed for retention comprise the following:</p> <ul style="list-style-type: none"> <li>• Offset Area A. 1.05 hectares of Scribbly Gum Woodland in the east of Lot 1 DP358717;</li> <li>• Offset Area B. 1.51 hectares of Scribbly Gum Woodland in the west of Lot 1 DP358717; and</li> <li>• Offset Area C. 4.44 hectares of Red Bloodwood - Scribbly Gum heathy woodland on sandstone plateaux of the Sydney Basin Bioregion in the west of Lot 2 DP358717.</li> </ul> <p>The areas proposed for offsetting will be subject to protective fencing to exclude livestock (all areas) and local populations of feral deer (Areas A and B), replanting of endemic tree and shrub species within cleared areas and weed management of noxious and environmental weeds (Areas A and B). A total of 170 hollow-bearing trees will be retained and 36 nest boxes will be erected to compensate for the loss of 18 hollow bearing trees. Any shortfall in hollow-bearing trees will be supplemented by installing either salvaged hollow sections of trees at a ratio of one salvaged hollow section per hollow-bearing tree, or nest boxes at a ratio of two salvaged nest boxes per hollow-bearing tree.</p>	The first 10 years of Stage 2

	All hollow-bearing trees to be removed are to be inspected and sectionally dismantled by an arborist, under the supervision and direction of an ecologist. Where possible, escaped fauna is to be caught by the consulting ecologist and transported to a suitable release area. If juvenile or injured fauna are encountered they are to be captured and transported to a wildlife carer or a veterinary surgeon as required. In the case where the arborist declares a tree or stag unsafe to climb, machine removal with a rotating grab or similar will be required.	Prior to removal of the hollow-bearing trees
10. Noise	<p>Incorporate noise reducing measures (upgraded exhausts, enclosures/panels to engines, or localised plant specific shielding*) to achieve the following noise reductions:</p> <ul style="list-style-type: none"> <li>• Dozer 4db;</li> <li>• Trencor 3dB;</li> <li>• McCloskey 3dB; and</li> <li>• Sandwash Plant 8dB for air cooled 6 cylinder engine* (Smaller 4 cylinder engine is now operating with a purpose designed enclosure and exhaust resulting in an 8dB reduction and does not require further attenuation).</li> </ul> <p>All reversing alarms replaced with level varying or broadband "quacker" type alarms.</p>	Prior to the use of the plant equipment.
	Plant and equipment to be maintained to ensure acoustic performance is not de-rated and complies with the recommended limits outlined in the Noise Impact Assessment (NIA) and incorporating the specified noise controls.	Throughout the life of the quarry.
	A Site Operational Management Plan (SOMP) be developed to ensure that the dozer, Trencor and McCloskey do not operate simultaneously.	Throughout the life of the quarry.
	Provision of an earth mounds 3-4 metres high along the southern and south-eastern quarry boundaries as shown on Figure 14 of the Environmental Assessment before commencing Precincts E, F and G.	Prior to quarrying of stage 2.
	The SOMP to document procedures to maximise site shielding and minimise number of plant and equipment on exposed locations, particularly on the eastern and southern portions of the quarry (areas B, C, F and G). That is, where practical and feasible only one (1) item of plant would operate at an exposed level (<8m below ground level) at any one time and extraction to proceed against a working face where practical.	During quarrying of the stage 2.
	<p>A site weather station will be installed and continually monitor ambient weather conditions including wind speed and direction at a height of ten (10) metres above ground level. The current weather conditions would be utilised to manage day to day quarry operations, and the SOMP incorporate strict protocols including:</p> <ul style="list-style-type: none"> <li>• Cease operations within Precinct F and G during north-north-west or west wind conditions up to 3m/s with respect to the operation of the dozer, Trencor and McCloskey in exposed locations (&lt;8m below ground level); and</li> <li>• Utilise periods of high winds &gt;5m/s (particularly east and south-east winds) and/or rain with elevated background noise levels to extract material within exposed locations (Areas B, F and G).</li> </ul>	During quarrying of the relevant precincts.

	<p>A Complaints Management Procedure (CMP) be prepared to deal with any noise complaints as follows and include:</p> <ul style="list-style-type: none"> <li>• Site contact telephone number during business hours to lodge complaints or seek additional information (and message service for out of hours). If phone unattended it should divert to mobile phone of site quarry manager;</li> <li>• Log to record complaint including time of alleged noise issue, duration, description of noise, prevailing weather conditions and complainants contact details;</li> <li>• Complaints to be responded to in a timely manner. Where the noise is currently occurring, Quarry Manager <b>must</b> investigate and determine noise source is noise is likely to be exceeding Approval Noise Limits. If exceedance is occurring, operations to be amended or ceased;</li> <li>• Audits at sensitive receiver locations to identify noise contributions, compliance and determine if additional procedures or controls to minimise noise from the site are required;</li> <li>• A record of noise investigations to be maintained on site and complainants informed of outcomes of investigations and actions implemented following any noise complaints; and</li> <li>• All site plant including trucks to be regularly inspected and maintained to ensure that the equipment is operating in accordance with specifications and satisfied the noise limits referenced in the NIA (min Annually).</li> </ul>	Prior to the commencement of the quarry extensions.
	<p>Undertake an Annual Noise monitoring program that incorporates:</p> <ul style="list-style-type: none"> <li>• Site attended noise measurements at the three (3) reference locations and record aural observations, statistical noise levels (LA90, LAeq), weather conditions and quarry operations. Typically measurement considering of two (2) 15 minute measurement periods at each receiver;</li> <li>• Attended nearfield or midfield measurements to confirm operating noise levels and determine sound power levels of individual plant and equipment for comparison with source noise data utilised in the EIS Noise Impact Assessment;</li> <li>• Assessment of noise audit measurement results against Conditions of Consent and any pending Licence to determine compliance;</li> <li>• Provide recommendations for ameliorative or management measures for Quarry operator where noise exceedances are identified;</li> <li>• Preparation of Annual Noise Monitoring Report for submission to Consent Authority and/or EPA.</li> </ul>	Annually
11. Air Quality	Preparation of an air quality management plan incorporating PM <sub>10</sub> monitoring at the most affected off-site sensitive location.	Annually
	<p>Minimise dust impacts at sensitive residences through the following onsite management procedures. These procedures to meet the KPIs outlined in this report and be reviewed.</p> <ul style="list-style-type: none"> <li>• Water of unsealed roads;</li> <li>• Use of wheel-wash and operation of sealed road from wheel-wash to the front gate;</li> <li>• Covering of loads during hauling;</li> <li>• Water of stockpiles when necessary;</li> <li>• Limiting vehicle speed onsite; and</li> </ul>	Annually
	<ul style="list-style-type: none"> <li>• Limiting the area of disturbed land and progressive rehabilitation of completed areas.</li> </ul>	

	Carry out campaign monitoring for respirable crystalline silica. The monitoring would assess the exposure of quarry workers to respirable crystalline silica (in accordance with Australian Standard (AS 2985-2009) - Workplace atmospheres - Method for sampling and gravimetric determination of respirable dust.	First year of the quarry extension (on a day of maximum throughput). Monitoring to be repeated quarterly in the first year and if more than two consecutive results demonstrate low risk, monitoring would be discontinued.
	Incorporate greenhouse gas reduction measures for the operation of the project including: <ul style="list-style-type: none"> <li>• Opportunities to increase energy efficiency will be continuously reviewed including opportunities to minimise haul distances for quarry material, ensuring trucks are fully loaded to maximise productivity and efficiency, reducing trips by coordinating delivery and removal of materials.</li> <li>• Consideration of the use of alternative fuels where economically and practically feasible.</li> <li>• Regular maintenance of diesel powered equipment to ensure operation at peak efficiency.</li> <li>• Consideration of energy efficiency for all electrical equipment, appliances, lighting and hot water system.</li> </ul>	Throughout the life of the quarry
12. Roadworks and Traffic Management	All vehicles leaving the site with loads of extracted material are to be sufficiently covered to prevent windblown dust.	Ongoing
13. Heritage	Grants Rd RE1 and RE2 sites are to be preserved.	Continuous
	Incorporate a ten (10) metre buffer on the southern, eastern and western boundary of the anthropomorphic figure (Grants Rd RE1).	For the life of the quarry
	The bund wall for the quarry extension in the area of Grants Rd RE1 to be constructed of block wall rather than earth in between the engraving and the boundary.	Prior to the quarrying of Precinct C
	The engraving (Grants Rd RE1) is incorporated into the monitoring programme currently in place for the adjacent Howes Aboriginal Reserve.	Five yearly
	A protective fence is constructed 8 metres around each side of the Grants Rd RE 1 site to prevent inadvertent damage. The fence should incorporate appropriate signage to ensure the access within the fenced zone is limited to maintenance activities such as grass cutting.	Prior to the quarrying of Precinct C
	Traffic is to be directed around the small mound at the Grants Rd RE 2 site to ensure minimal disturbance.	Continuous
	An additional monitoring site visit be undertaken to review the recommendations effectiveness to protect the site.	12 months after the project approval
	The quarry operator to develop and implement an Aboriginal Cultural Heritage Induction Program for all personnel associated with the quarry operations. A register is to be kept off staff/contractors that have been inducted.	Prior to the commencement of the quarry extensions
Should any materials suspected of being of Aboriginal occupation origin be located during the quarry operations that work cease in that location immediately and that the Office of Environment & Heritage be contacted immediately.	For the life of the quarry	
14. Visual Impact	Vegetate all stockpiles and the acoustic earth mounds using appropriate species noting that the current conditions of consent requires the use of Kikuyu grass for the stabilisation of stockpiles.	For the life of the quarry
	Maintain grass covered mounds.	For the life of the quarry
	Maintain the site.	For the life of the quarry
	Keep the site clean and tidy where possible.	Continuous

	Progressively revegetate all areas where quarrying is completed.	Upon completion of quarrying in a precinct
15. Bushfire Protection	Provision of an on-site mobile water pump and tank, with firefighting hose connections to be located on site.	For the life of the quarry
	Management of the site to provide a defensible space to the bushfire hazard. These areas are to be regularly inspected and maintained by the landowners.	For the life of the quarry
16. Waste Management	Keep the site clean and tidy where possible	For the life of the quarry
	Ensure all general waste / garbage is removed by a licensed waste collection contractor at least on a weekly basis.	Continuous
	Preparation of a waste management plan for the demolition of any structures.	Prior to demolition.
17. Mine Rehabilitation	Ensure completed areas of the quarry are revegetated to reduce sedimentation and erosion and dust emissions and visual impact.	As required
	Preparation of a quarry rehabilitation plan to identify staging for rehabilitation.	Within five years of commencement of the quarry extension
	A detailed decommissioning plan will be prepared as part of the review of the Environmental Management Plan.	Towards the end of the life of the Quarry (two years prior)
	A five year monitoring program to be implemented upon completion of the rehabilitation.	Five years after the rehabilitation.

## APPENDIX 2 NOISE COMPLIANCE ASSESSMENT

### Applicable Meteorological Conditions

1. The noise criteria in Table 2 is to apply under all meteorological conditions except the following:
  - a) during periods of rain or hail; or
  - b) wind speeds greater than 3 m/s measured at 10 m above ground level.

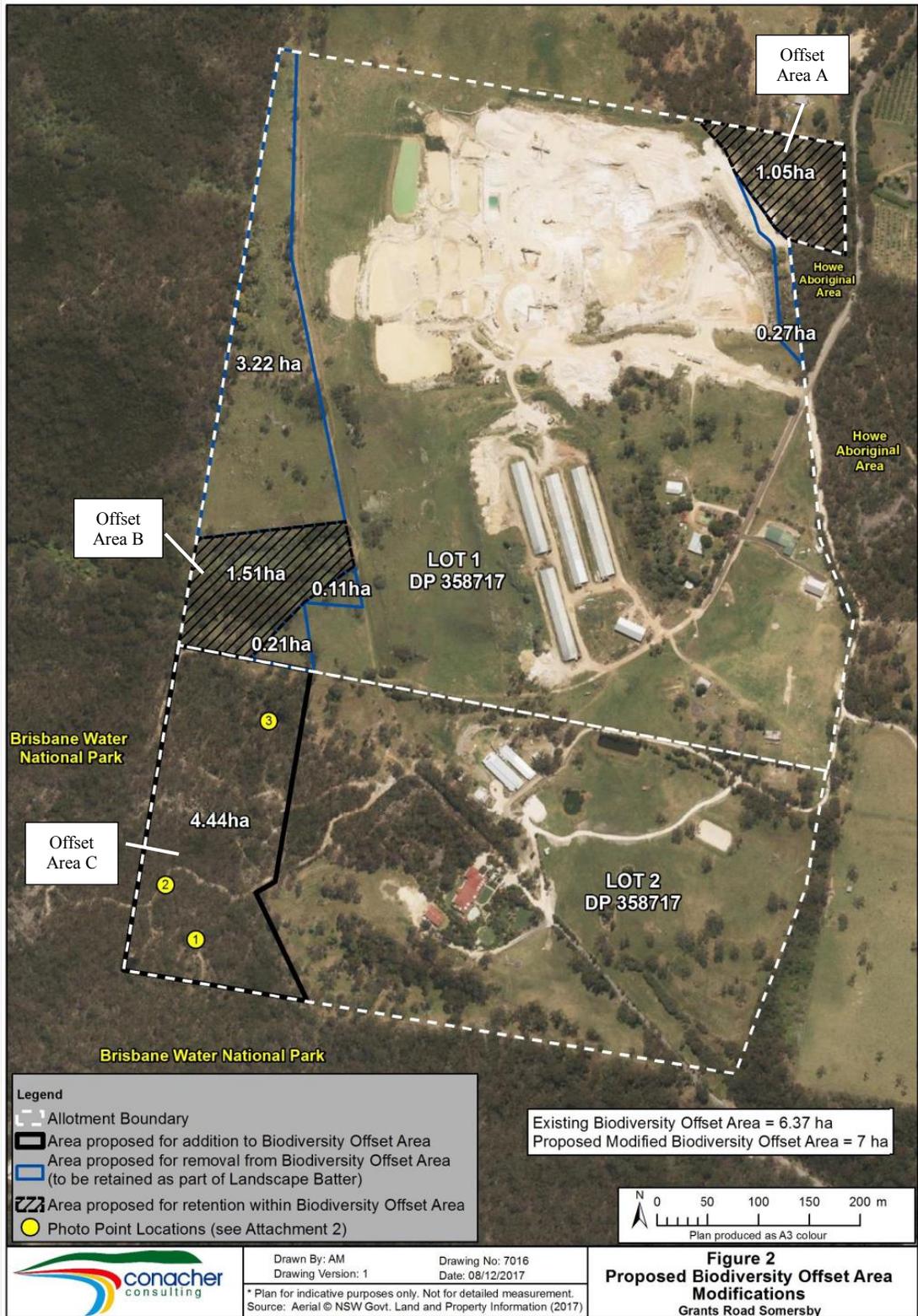
### Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions **must** be that recorded by the meteorological station in the vicinity of the site.

### Compliance Monitoring

3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this approval.
4. Unless otherwise agreed with the Secretary, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
  - a) monitoring locations for the collection of representative noise data;
  - b) meteorological conditions during which the collection of noise data is not appropriate;
  - c) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment; and
  - d) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration.

**APPENDIX 3  
BIODIVERSITY OFFSET AND LANDSCAPE BUFFER AREAS**





**APPENDIX 4  
CONCEPTUAL FINAL LANDFORM**

