

Development Consent

Section 89E of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I approve the development 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 development.

Oliver Holm
Executive Director
Resource Assessments and Compliance

Sydney	2015
SCHEDULE 1	
Application Number	SSD_6333
Applicant	Oberon Quarries Pty Ltd
Consent Authority:	Minister for Planning
Land:	Lot 3 DP1087170 (formerly Lot 1 DP845776) Lot 2 DP1087170 Lot 3 DP845776 Lot 94 DP757067 Lot 107 DP757067 Lot 108 DP757067
Development	Oberon Quarry Continuation Project

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DEFINITIONS

Annual Review	The review required by condition 9 of Schedule 5
Applicant	Oberon Quarries Pty Ltd, or any other person/s who rely on this consent to carry out the development that is subject to this consent
BCA	Building Code of Australia
Conditions of consent	Conditions contained in Schedules 2 to 5
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this consent
Council	Oberon Council
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development as described in the documents in condition 2 of Schedule 2
DPE-Water	Water Group within the Department
EIS	Environmental Impact Statement titled <i>Proposed Extended Life of Operations and Development Changes to Oberon Quarry</i> , dated January 2015, as modified by the Response to Submissions titled, <i>SSD 6333 – Oberon Quarry Continuation Project Modification</i> , dated 27 July 2015
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2021</i>
EPL	Environment Protection Licence issued under the POEO Act
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build or implement
GPS	Global Positioning System
Incident	A set of circumstances that: <ul style="list-style-type: none"> causes or threatens to cause material harm to the environment; and/or breaches or exceeds the limits or performance measures/criteria in this consent
Laden trucks	Trucks transporting quarry products from the site
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 consent, 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 consent
m AHD	metres Australian Height Datum
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
MEG	Mining, Exploration and Geoscience, within the Department of Regional NSW
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the development prior to or during those impacts occurring
Modification 1	The modification to the development consent as described in MR (MOD 1)
MR (MOD 1)	Modification Report titled 'Oberon Quarries Modification', dated April 2023, prepared by Anditi Pty Limited, Amendment Report titled 'Oberon Quarries 2023 Modification Amendment', dated September 2023, prepared by Anditi Pty Limited
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or the Applicant (or its subsidiary)
Public infrastructure	Linear and other 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 development to a good condition and for the purpose of establishing a safe, stable and non-polluting environment
Secretary	Secretary of the Department, or nominee
Site	The land described in Schedule 1

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Statement of Commitments The Applicant's commitments in Appendix 2

FOR INFORMATION

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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 consent, the Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

TERMS OF CONSENT

2. The Applicant shall carry out the development:
 - (a) generally in accordance with the EIS and MR (MOD 1);
 - (b) in accordance with the Development Layout and Statement of Commitments; and
 - (c) in accordance with the conditions of this consent.

Notes:

- The Development Layout is shown in the figures in Appendix 1.
- The Statement of Commitments is reproduced in Appendix 2.

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

LAPSING OF CONSENT

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

LIMITS ON CONSENT

Quarrying Operations

6. The Applicant shall not extract extractive materials below a level of 1125 m AHD.
7. The Applicant may carry out quarrying operations on the site until 30 August 2045.

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

Production Limits

8. The Applicant shall not transport more than 400,000 tonnes of quarry products from the site in any calendar year.
- 8A. The Applicant may transport an additional 100,000 tonnes of quarry products from the site in the 2023 calendar year. This additional 100,000 tonnes of quarry products must only be transported from existing stockpiles located on the quarry floor.
9. The Applicant shall not transport more than 3,000 tonnes of quarry products from the site on any day.

SURRENDER OF EXISTING DEVELOPMENT CONSENTS

10. Within 6 months of the date of this consent, or as otherwise agreed by the Secretary, the Applicant shall surrender the development consent (DA 92/164) for the existing operations on the site in accordance with clause 97 of the EP&A Regulation.

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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. Surrendering of consent should not be understood as implying that works legally constructed under a valid consent can no longer be legally maintained or used.

11. Prior to the surrender of development consent DA 92/164, the conditions of this consent shall prevail to the extent of any inconsistency with the conditions of development consent DA 92/164.

STRUCTURAL ADEQUACY

12. The Applicant shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Applicant 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 development.

DEMOLITION

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

PROTECTION OF PUBLIC INFRASTRUCTURE

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

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

OPERATION OF PLANT AND EQUIPMENT

15. The Applicant shall ensure that all the plant and equipment used at the site is:
 - (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

PRODUCTION DATA

16. The Applicant shall:
 - (a) provide annual quarry production data to MEG using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review (see condition 9 of Schedule 5).

IDENTIFICATION OF APPROVED EXTRACTION LIMITS

17. By 30 November 2015, unless otherwise agreed with the Secretary, the Applicant shall:
 - (a) engage a registered surveyor to mark out the boundaries of the approved limits of extraction within the development area; and
 - (b) submit a survey plan of these boundaries with applicable GPS coordinates to the Secretary.
18. While quarrying operations are being carried out, the Applicant shall 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.

DEVELOPMENT CONTRIBUTIONS

19. The Applicant shall pay Council road maintenance contributions for the maintenance/repair of public roads. The contribution shall be:
 - (a) paid at a rate of \$0.482 per tonne of extractive materials hauled from the site;
 - (b) paid every month based on the material transported in the preceding month; and
 - (c) indexed annually to changes in the Consumer Price Index (All Groups).

Notes: If the parties are not able to agree on any aspect of the road maintenance contributions, either party may refer the matter to the Secretary for resolution.

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SCHEDULE 3 ENVIRONMENTAL PERFORMANCE CONDITIONS

NOISE

Hours of Operation

1. The Applicant shall comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	Operating Hours
Extraction operations	7 am to 6 pm Monday to Friday 7 am to 5 pm Saturday
Loading and dispatch	6 am to 10 pm Monday to Friday 6 am to 5 pm Saturday
Construction and maintenance activities	7 am to 6 pm Monday to Friday 7 am to 4 pm Saturday
Blasting	9 am to 5 pm Monday to Saturday

Note: The Applicant 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.

2. The following activities may be carried out on the site outside the hours specified in condition 1:
- (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 Applicant shall notify the Secretary and affected residents prior to undertaking the activities, or as soon as is practical thereafter.

Noise Impact Assessment Criteria

3. The Applicant shall ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Noise criteria dB(A)

Receiver	Day / Evening	Night	
	$L_{Aeq}(15 \text{ min})$	$L_{Aeq}(15 \text{ min})$	$L_{A1(max)}$
All privately-owned residences	35	35	45

Noise generated by the development is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the *NSW Industrial Noise Policy*. Appendix 4 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, these criteria do not apply if the Applicant has an agreement with the relevant landowner to exceed the noise criteria in Table 2, and the Applicant has advised the Department in writing of the terms of this agreement.

Operating Conditions

4. The Applicant shall:
- (a) implement best practice management to minimise the operational and road transportation noise of the development;
 - (b) minimise the noise impacts of the development during meteorological conditions when the noise criteria in this consent do not apply (see Appendix 4);
 - (c) carry out noise monitoring (at least every 3 months, unless otherwise approved by the Secretary) to determine whether the development is complying with the relevant conditions of this consent; and
 - (d) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent, to the satisfaction of the Secretary.

Noise Management Plan

5. The Applicant shall prepare and implement a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:

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- (a) be submitted to the Secretary for approval within 6 months of the date of this consent, unless otherwise agreed by the Secretary;
- (b) describe the measures that would be implemented to ensure compliance with the noise criteria and operating conditions of this consent;
- (c) describe the proposed noise management system in detail; and
- (d) include a monitoring program to be implemented to measure noise from the development against the noise criteria in Table 2, and which evaluates and reports on the effectiveness of the noise management system on site.

BLASTING

Blasting Impact Assessment Criteria

6. The Applicant shall ensure that blasting on site does not cause any exceedance of the criteria in Table 3.

Table 3: Blasting Criteria

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

However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner to exceed the limits in Table 3, and the Applicant has advised the Department in writing of the terms of this agreement.

Blasting Frequency

7. The Applicant may carry out a maximum of 2 blasts per week, unless an additional blast is required following a blast misfire. This condition does not apply to blasts required to ensure the safety of the quarry or workers on site.

Note: For the purposes of this condition, a blast refers to a single blast event, which may involve a number of individual blasts fired in quick succession in a discrete area of the quarry.

Operating Conditions

8. During blasting operations, the Applicant shall:
 - (a) implement best management practice to:
 - protect the safety of people and livestock in areas surrounding blasting operations;
 - protect public or private infrastructure/property in the surrounding area from damage from blasting operations; and
 - minimise dust and fume emissions from blasting;
 - (b) operate a suitable system to enable the local community to get up-to-date information on the proposed blasting schedule on site; and
 - (c) carry out regular monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.

Blast Management Plan

9. The Applicant shall prepare and implement a Blast Management Plan for the development to the satisfaction of the Secretary. This plan must:
 - (a) be submitted to the Secretary for approval within 6 months of the date of this consent, unless otherwise agreed by the Secretary;
 - (b) describe the measures that would be implemented to ensure compliance with the blast criteria and operating conditions in conditions 7 and 8 above;
 - (c) include a monitoring program for evaluating and reporting on compliance with the blasting criteria in this consent;
 - (d) include community notification procedures for the blasting schedule; and
 - (e) include a protocol for investigating and responding to complaints.

AIR QUALITY

Air Quality Impact Assessment Criteria

10. The Applicant shall ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria in Table 4 at any residence on privately-owned land.

Table 4: Air Quality Criteria

Pollutant	Averaging Period	Criterion	
Particulate matter < 10 µm (PM ₁₀)	Annual	a,d 30 µg/m ³	
Particulate matter < 10 µm (PM ₁₀)	24 hour	b 50 µg/m ³	
Total suspended particulates (TSP)	Annual	a,d 90 µg/m ³	
^c Deposited dust	Annual	^b 2 g/m ² /month	a,d 4 g/m ² /month

Notes to Table 4:

a Cumulative impact (ie increase in concentrations due to the development plus background concentrations due to all other sources).

b Incremental impact (ie increase in concentrations due to the development alone, with zero allowable exceedances of the criteria over the life of the development).

c 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.

d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity agreed by the Secretary.

e "Reasonable and feasible avoidance measures" includes, but is not limited to, the operational requirements in conditions 11 and 12 to develop and implement an air quality management system that ensures operational responses to the risks of exceedance of the criteria.

Operating Conditions

11. The Applicant shall:
- implement best practice management to minimise the dust emissions of the development;
 - regularly assess meteorological and air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this consent;
 - minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note d under Table 4);
 - monitor and report on compliance with the relevant air quality conditions in this consent;
 - 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 undertake progressive rehabilitation of the site, to the satisfaction of the Secretary.

Air Quality Management Plan

12. The Applicant shall prepare and implement an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be submitted to the Secretary for approval within 6 months of the date of this consent, unless otherwise agreed by the Secretary;
 - describe the measures that would be implemented to ensure compliance with the air quality criteria and operating conditions of this consent;
 - describe the proposed air quality management system;
 - include an air quality monitoring program that:
 - is capable of evaluating the performance of the development;
 - includes a protocol for determining any exceedances of the relevant conditions of consent;
 - effectively supports the air quality management system; and
 - evaluates and reports on the adequacy of the air quality management system.

Meteorological Monitoring

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

SOIL AND WATER

Water Supply

14. The Applicant shall ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations under the consent to match its available water supply, to the satisfaction of the Secretary.

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

Water Pollution

15. Unless an EPL authorises otherwise, the Applicant shall comply with Section 120 of the POEO Act.

Water Management Plan

16. The Applicant shall prepare and implement a Water Management Plan for the development 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 the EPA and **DPE Water**;
 - (c) be submitted to the Secretary for approval within 6 months of the date of this consent, unless otherwise agreed by the Secretary;
 - (d) 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; and
 - reporting procedures.
 - 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 development;
 - a detailed description of the surface water management system on site including the:
 - clean water diversion system;
 - erosion and sediment controls;
 - dirty water management system; and
 - water storages; and
 - a program to monitor and report on:
 - any surface water discharges;
 - the effectiveness of the water management system;
 - maintaining sufficient dirty water storage capacity to avoid discharges of sediment-laden water; and
 - surface water flows and quality in local watercourses;
 - (iii) Groundwater Management Plan, that includes:
 - baseline data on groundwater levels, yield and quality in local aquifers and privately-owned groundwater bores that could be potentially affected by the development;
 - a program to monitor and report on groundwater inflows to the quarry pit and the impacts of the development on surrounding aquifers and privately-owned groundwater bores; and
 - an analysis of the monitoring results to predict long-term water levels within the quarry void; and
 - (iv) Surface and Ground Water Contingency Strategy, that includes:
 - a protocol for the investigation, notification and mitigation of identified impacts on surface water flows and quality in water bodies and/or groundwater levels, yield and quality in local aquifers and privately-owned groundwater bores that could be potentially affected by the development; and
 - the procedures that would be followed if any unforeseen impacts are detected during the development.

TRANSPORT

Monitoring of Product Transport

17. The Applicant shall keep accurate records of all truck movements to and from the site (hourly, daily, weekly, monthly and annually) and publish a summary of records on its website every 6 months.

Operating Conditions

18. The Applicant shall ensure that:
- all reasonable measures are taken such that laden trucks have appropriate signage, including a contact phone number, so they can be easily identified by road users;
 - all laden trucks entering or exiting the site have their loads covered;
 - all laden trucks exiting the site are cleaned of material that may fall on the road, before leaving the site;
 - during the periods 6 am to 7 am and 6 pm to 10 pm, a maximum of 4 laden vehicles per hour shall leave the site; and
 - no trucks queue at the entrance to the site before 6 am.

Further Road Maintenance and Contributions

19. Within 6 months from the date of this consent the Applicant shall provide and install "Intersection Advance" (G1-207) warning signage on the eastbound approach to the intersection of Duckmaloi Road and Titania Road.
20. Within two weeks of receiving a written request from Council, or as otherwise agreed by Council, the Applicant shall:
- provide Council with sufficient 14/7 mm sealing aggregate for the intersections of Shooters Hill and Edith Roads; Edith and Titania Roads; and Titania and Duckmaloi Roads; and
 - provide Council with sufficient DGB 20 road base to reconstruct the pavement at the intersection of Edith and Titania Roads to a depth of 200 mm.

Notes:

- The minimum required quantities of materials for each intersection listed in 20(a) and 20(b) are shown in Appendix 5.
- If the parties are not able to agree on any aspect of the maintenance contributions, either party may refer the matter to the Secretary for resolution.

Transport Management Plan

21. The Applicant shall prepare and implement a Transport Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be submitted to the Secretary for approval within 6 months of the date of this consent, unless otherwise agreed by the Secretary;
 - include a Drivers' Code of Conduct to minimise the impacts of development-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.

LANDSCAPE AND REHABILITATION

Rehabilitation Objectives

22. The Applicant shall rehabilitate the site to the satisfaction of the Secretary. This rehabilitation must be generally consistent with the rehabilitation strategy set out in the EIS and the conceptual final landform shown in Appendix 3 and must comply with the objectives in Table 5.

Table 5: Rehabilitation Objectives

Feature	Objective
Site (as a whole)	<ul style="list-style-type: none"> Safe, stable and non-polluting Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and minimising visual impacts when viewed from surrounding land
Surface Infrastructure	<ul style="list-style-type: none"> Decommissioned and removed, unless the Secretary agrees otherwise
Quarry Benches	<ul style="list-style-type: none"> Landscaped and vegetated using native tree and understorey species

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Quarry Pit Floor	<ul style="list-style-type: none"> Landscaped and revegetated using improved pasture species, native trees and understorey species
Final Void	<ul style="list-style-type: none"> Minimise the height and slope of batters Minimise the drainage catchment
Community	<ul style="list-style-type: none"> Ensure public safety Minimise the adverse socio-economic effects of quarry closure

Progressive Rehabilitation

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

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

Landscape and Rehabilitation Management Plan

24. The Applicant shall prepare and implement a Landscape and Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be submitted to the Secretary for approval within 6 months of the date of this consent, unless otherwise agreed by the Secretary;
 - provide details of the conceptual final landform and associated land uses for the site;
 - describe the short, medium and long-term measures that would be implemented to ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;
 - 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 the 3 years covered by the initial approval of the plan) including the procedures to be implemented for:
 - maximising the salvage of environmental resources within the approved disturbance area for beneficial reuse;
 - protecting vegetation and fauna habitat outside the approved disturbance area on-site;
 - minimising the impacts on native fauna;
 - landscaping the site to minimise visual and lighting impacts;
 - reviewing improved pasture species and application rates;
 - controlling weeds and feral pests;
 - controlling erosion;
 - controlling access; and
 - bushfire management;
 - include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria;
 - identify the potential risks to the successful rehabilitation of the site, and include a description of the contingency measures that would be implemented to mitigate these risks; and
 - include details of who would be responsible for monitoring, reviewing, and implementing the plan.

Rehabilitation Bond

25. Within 6 months of the approval of the Landscape and Rehabilitation Management Plan, the Applicant shall lodge a Rehabilitation Bond with the Department to ensure that the rehabilitation of the site is implemented in accordance with the performance and completion criteria set out in the plan and relevant conditions of this consent. The sum of the bond shall be determined by:
- calculating the cost of rehabilitating the site, taking into account the likely surface disturbance over the next 3 years of quarrying operations; and
 - employing a suitably qualified quantity surveyor or other expert to verify the calculated costs, to the satisfaction of the Secretary.

Notes:

- If capital and other expenditure required by the Landscape and Rehabilitation Management Plan is largely complete, the Secretary may waive the requirement for lodgement of a bond in respect of the remaining expenditure.*
- If the rehabilitation of the site 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.*

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26. Within 3 months of each Independent Environmental Audit (see condition 10 of Schedule 5), the Applicant shall review, and if necessary revise, the sum of the Rehabilitation Bond to the satisfaction of the Secretary. This review must consider the:
- (a) effects of inflation;
 - (b) likely cost of rehabilitating the site (taking into account the likely surface disturbance over the next 3 years of the development); and
 - (c) performance of the implementation of rehabilitation of the site to date.

VISUAL

27. The Applicant shall implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development to the satisfaction of the Secretary.

WASTE

28. The Applicant shall:
- (a) manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Council;
 - (b) minimise the waste generated by the development;
 - (c) ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and
 - (d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.
29. Except as expressly permitted in an EPL, the Applicant must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.

LIQUID STORAGE

30. The Applicant shall ensure that all tanks and similar facilities for storage of liquids (other than for water) are protected by appropriate bunding, which must exceed 110% of the stored volume of the liquid.

DANGEROUS GOODS

31. The Applicant shall ensure that the storage, handling, and transport of dangerous goods is done in accordance with the relevant *Australian Standards*, particularly AS1940 and AS1596, and the *Dangerous Goods Code*.

BUSHFIRE

32. The Applicant shall:
- (a) ensure that the development is suitably equipped to respond to any fires on site; and
 - (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire in the vicinity of the site.

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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 Applicant shall notify the affected landowners in writing of the exceedance, and provide regular monitoring results to each affected landowner until the development is again complying with the relevant criteria; and
 - (b) an exceedance of any relevant air quality criteria in Schedule 3, the Applicant shall 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 development to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision, the Applicant shall:

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

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SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Applicant shall prepare and implement an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) be submitted to the Secretary for approval within 6 months of the date of this consent;
 - (b) provide the strategic framework for environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (e) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, record, handle and respond to complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring to be carried out under the conditions of this consent.

Management Plan Requirements

2. The Applicant shall ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (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 development; and
 - 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 development 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.

Application of Existing Management Plans

3. Prior to the approval of management plans under this consent, the Applicant shall manage development undertaken pursuant to this consent in accordance with any equivalent or similar management plan/s required under development consent DA 92/164.

Staged Submission of Strategies, Plans or Programs

4. With the approval of the Secretary, the Applicant may submit any strategies, plans or programs required by this consent on a progressive basis.

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Note: If the submission of any strategy, plan or program is to be staged; then the Applicant must ensure that the existing strategy, plan or program clearly describes the specific stage to which the strategy, plan or program applies, the relationship of this stage to any future stages, and the trigger for updating the strategy, plan or program.

Revision of Strategies, Plans & Programs

5. Within 3 months of the submission of an:
- (a) incident report under condition 7 below;
 - (b) annual review under condition 9 below;
 - (c) audit report under condition 10 below; and
 - (d) any modifications to this consent,
- the Applicant shall review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 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 development.

Adaptive Management

6. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant 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.

REPORTING

Incident Reporting

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

Regular Reporting

8. The Applicant shall provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

ANNUAL REVIEW

9. By the end of March each year, or other timing as may be agreed by the Secretary, the Applicant shall review the environmental performance of the development to the satisfaction of the Secretary. This review must:
- (a) describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against the:
 - relevant statutory requirements, limits or performance measures/criteria;
 - requirements of any plan or program required under this consent;
 - monitoring results of previous years; and
 - relevant predictions in the EIS;
 - (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 development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, 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 development.

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INDEPENDENT ENVIRONMENTAL AUDIT

10. Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant shall commission and pay the full cost of an Independent Environmental Audit of the development. This audit must:
- (a) be conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL or necessary water licences for the development (including any assessment, strategy, plan or program required under these approvals);
 - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals; and
 - (e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any assessment, strategy, plan or program required under the abovementioned approvals.

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

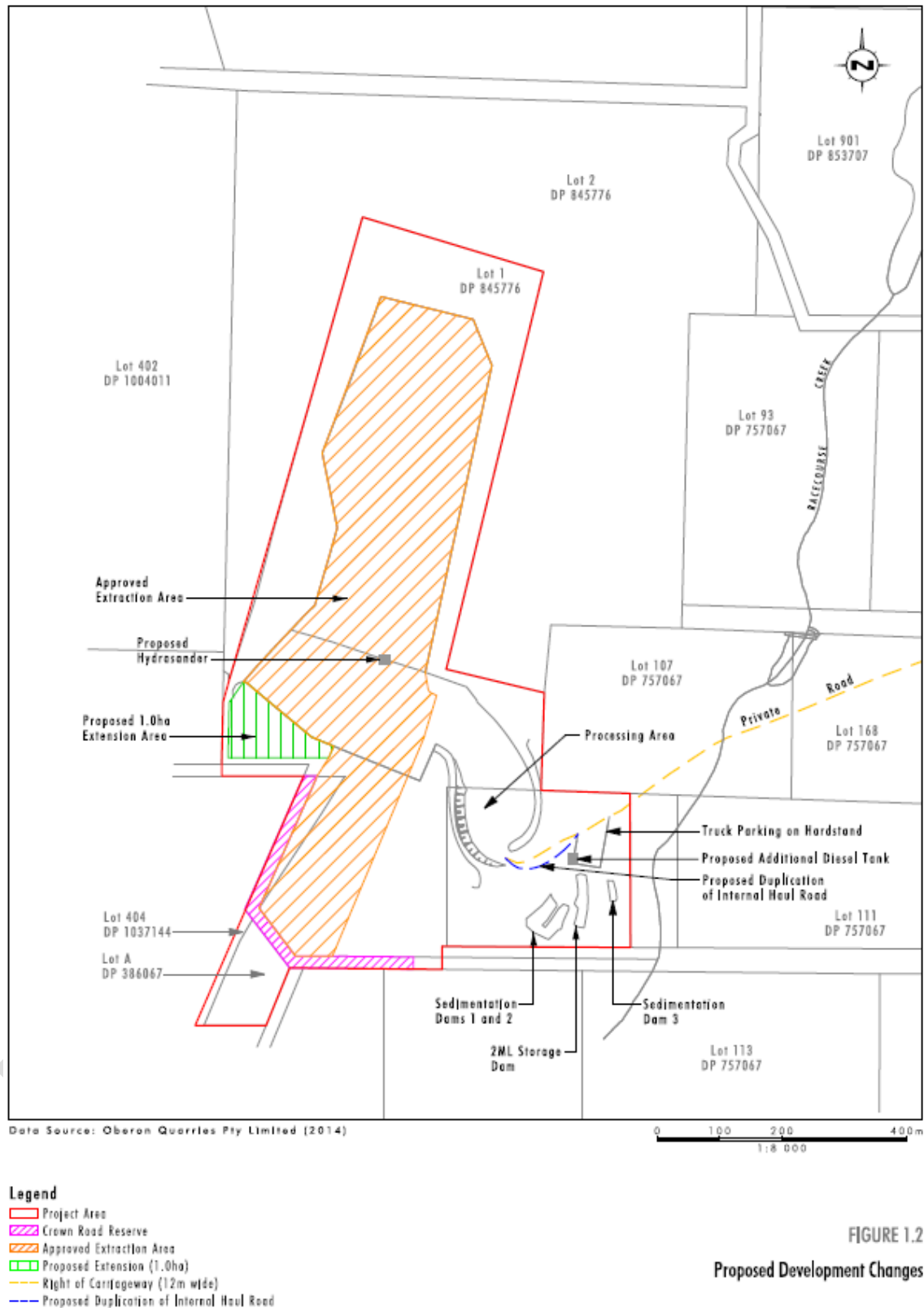
11. Within 6 weeks of completion of this audit, or as otherwise agreed by the Secretary, the Applicant shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

ACCESS TO INFORMATION

12. Within 6 months of the date of this consent, the Applicant shall:
- (a) make the following information publicly available on its website:
 - the documents listed in condition 2 of Schedule 2;
 - current statutory approvals for the development;
 - all approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a complaints register, updated monthly;
 - the annual reviews of the development;
 - any independent environmental audit, and the Applicant's response to the recommendations in any audit; and
 - any other matter required by the Secretary; and
 - (b) keep this information up-to-date, to the satisfaction of the Secretary.

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APPENDIX 1 DEVELOPMENT LAYOUT



APPENDIX 2 STATEMENT OF COMMITMENTS

Clause 7(1)(e) of Schedule 2 EP&A Regulation Requirements requires that the EIS include a compilation of the mitigation measures (refer to Section 4.2.1.2).

If development consent is granted under Part 4 of the EP&A Act for the Project, Oberon Quarries will commit to the following controls.

Hours of Operation

Oberon Quarries' approved hours of operation are as per Condition 16 of DA 92/164, and are dependent on the activity being undertaken; approved hours are detailed in Table 7.1. Hours of operation will not change as a result of the Project.

Table 7.1 – Approved Hours of Operation

Activity	Approved Hours of Operation
Quarrying and Processing Areas	7.00 am to 6.00 pm, Mondays to Fridays 7.00 am to 5.00 pm, Saturdays No quarrying or processing shall be undertaken on Sundays or public holidays.
Loading Haul Trucks	6.00 am to 10.00 pm, Mondays to Fridays 6.00 am to 5.00 pm, Saturdays No loading of haul trucks shall be undertaken on Sundays or public holidays.
Product Delivery	6.00 am to 10.00 pm, Mondays to Fridays 6.00 am to 5.00 pm, Saturdays No product delivery trucks are to enter the quarry prior to 6.00 am on any day. During the periods 6.00 am to 7.00 am and 6.00 pm to 10.00 pm a maximum of 4 laden delivery trucks shall leave the site per hour (total 8 truck movements per hour).
Construction of Haul Road and Quarry Infrastructure	7.00 am to 6.00 pm Mondays to Fridays 7.00 am to 4.00 pm Saturdays No construction shall be undertaken on Sundays or public holidays.
Maintenance	7.00 am to 6.00 pm Mondays to Fridays 7.00 am to 4.00 pm Saturdays

Erosion and Sediment Control

Current site infrastructure and management practices successfully manage sediment and erosion control for the operation. Surface water management infrastructure at the quarry has been established and fully operational since 1995. The existing water management system at the site includes diversion drains, catch drains and sedimentation dams. Diversion drains and embankments have been constructed around the disturbance area and are vegetated. Catch drains have been constructed with rock weirs and convey sediment-laden runoff from the extraction area to a series of sedimentation dams.

In addition to the diversion drains and sedimentation ponds, Oberon Quarries will continue to implement localised sediment and erosion controls, as required, in accordance with *Managing Urban Stormwater – Soils and Construction* (Landcom, 2001) to reduce the impacts on the water quality in the quarry's dirty water management system.

Noise

Key noise management and mitigation measures to limit potential operational noise impacts currently being implemented at Oberon Quarries' operations and that will be applied to future operations include:

- consideration of seasonal influences on noise impacts, to avoid or otherwise minimise noise impacts to sensitive receivers;
- undertaking prescribed works within the approved hours of operation. Works undertaken outside these hours include:
 - emergency work to avoid the loss of life, property and/or prevent environmental harm; and
 - any other work as agreed through negotiation between Oberon Quarries and potentially affected noise receivers or as otherwise agreed by the EPA.
- where practical aural reversing alarms on mobile plant will be muffled;
- regular inspections of all site plant and equipment to ensure ongoing compliance with manufacturers' noise specifications;
- provision of noise awareness training to site workers;
- positioning (i.e. location and orientation) mobile plant and equipment to minimise any potential noise impact on the surrounding residential receivers;
- implementing noise attenuation controls, where feasible, on mobile and stationary equipment that is potentially generating noise levels above that predicted and/or are generating noise complaints;
- installation of a new crushing plant that has a SWL 6 dB less than the existing equipment and the screening plant that has a SWL 3 dB less than the existing equipment;
- limiting truck speeds on the internal haul roads to 40 km/h;
- not permitting the use of compression brakes on internal haul roads and Oberon Quarry Road;
- drilling associated with blasting will only take place between the hours of 7.00 am and 6.00 pm, 5 days per week;
- restricting truck movements during the periods 6.00 am to 7.00 am and 6.00 pm to 10.00 pm to a maximum of 4 laden truck movements per hour (total 8 truck movements per hour);
- undertaking noise compliance monitoring and reporting (i.e. attended noise monitoring to assess compliance and assist with minimising impacts) once the new crusher and screen are installed. A noise report will be prepared by an independent and suitably qualified person, to assess compliance with the noise levels generated by the quarrying, processing and transportation of quarry products; and
- minimising noise impacts at residential locations, unless there is an alternative agreement with the private resident.

Oberon Quarries will operate a community contact line. The local community is encouraged to use this point of contact to report any instances of excessive noise. All enquiries are to be recorded and the subsequent investigation, action and response logged. The action taken is also communicated to the person who made the enquiry.

These are considered the only feasible measures available to mitigate noise impacts.

Blasting

Oberon Quarries will continue to implement the existing blast management measures:

- all relevant quarry personnel will be trained on the environmental obligations in relation to blasting controls;
- the surrounding landowners and Council will be notified prior to undertaking a blast;
- the date, location of blast holes and quantity of explosive used each day will be documented;
- blasts will be designed to comply with overpressure and vibration criteria;
- monitoring will be undertaken at the nearest private residence and/or other sensitive locations (as required) to verify compliance with the relevant criteria (refer to Figure 6.1);
- the maximum number of holes to be detonated in a blast is 300;
- sufficient distance will be maintained between the blast hole and the quarry face;
- appropriate delays will be used;
- blast monitoring data will be used on an ongoing basis to further refine the blast design and management;
- blast design and blast management procedures will be periodically reviewed to evaluate performance and identify corrective action, if required; and
- blasting will be undertaken between 9.00 am and 5.00 pm, Monday to Saturday inclusive, except under apparent temperature inversions conditions when blasting shall only occur between 11.00 am and 1.00 pm Monday to Saturday. No blasting is undertaken on Sundays or public holidays, without approval of the Secretary.

Air Quality

Oberon Quarries has committed to implementing the following dust management and mitigation practices:

- regular watering of unsealed haul roads within the extraction and processing areas and working areas;
- mist sprays on conveyors discharging to product stockpiles;
- limiting vehicles speeds on unsealed surfaces to 40 km/h;
- progressive stabilisation/rehabilitation of exposed areas no longer needed for operational purposes;

- rehabilitating the final landform surface as soon as practicable;
- minimisation of the total disturbed/working areas at any one time;
- implementing temporary stabilisation measures (e.g. cover crops or mulch) on disturbed areas soon as practicable, if rehabilitation is not to be undertaken within the coming three months;
- where practical/possible conduct drilling and blasting during suitable meteorological conditions (i.e. not during high winds);
- drill holes will be capped with stemming to restrict the upward emission of dust;
- undertaking preventative maintenance on all dust suppression plant and equipment;
- truck wheel wash facility will be maintained to be fully functional;
- covering of all laden trucks leaving the site; and
- monitoring of depositional dust levels and analysis of the data for trends (refer to Figure 6.1 for locations).

Oberon Quarries will continue to implement the existing air quality monitoring program which comprises four dust deposition gauges and monitor the dust levels at these locations at monthly sample intervals.

These are considered the only feasible measures available to mitigate air quality impacts.

Surface Water

The existing water management system including diversion drains, catch drains and sedimentation dams will continue to be managed as per current operations. The system can and will be readily augmented to allow for the additional 1.0 hectare extension area.

Oberon Quarries holds a surface water licence (80SI05018, WAL 34279) that allows extraction of water from Racecourse Creek. No other water licensing will be required for the continued operation of the quarry.

In addition Oberon Quarries will continue to implement localised sediment and erosion controls, as required, in accordance with *Managing Urban Stormwater – Soils and Construction* (Landcom, 2001) to reduce the impacts on the water quality in the quarry's dirty water management system.

Surface water monitoring will continue in accordance with Condition 26 of DA 92/164, and EPL Condition P1.3, surface water quality is monitored at two sites on Racecourse Creek (refer to Figure 6.1):

- W1 – upstream of the quarry; and
- W2 – downstream of the quarry.

The samples are analysed for pH, conductivity, turbidity, non-filterable residue (NFR), total nitrogen (TKN), total phosphorus (TP), and total petroleum hydrocarbons (TPH).

EPL condition M2.1 requires the monitoring of Oil & Grease, Total Suspended Solids (TSS) and pH. TPH has been used at the quarry for many years as a suitable measurement for Oil & Grease.

Groundwater

Groundwater will continue to be monitored in accordance with Condition 26 of DA 92/164. Oberon Quarries undertakes groundwater monitoring to determine any potential impacts as a result of quarry operations. Groundwater is monitored for pH and conductivity at a spring-fed dam (GW1) at 'Langley Heights', downslope of the quarry on Racecourse Hill (refer to Figure 6.1).

Traffic and Transport

In accordance with existing consent requirements, Oberon Quarries pays and will continue to pay Oberon Council a tonnage based and indexed road maintenance contribution for wear and tear on roads (i.e. road pavement damage).

Flora and Fauna

To ensure the ecological impacts of the quarry are minimised, Oberon Quarries has committed to implementing the following management and mitigation measures:

- installing survey pegs to mark the extent of extraction;
- create a stable final landform within the quarry pit consisting of self-sustaining vegetation communities characteristic of the pre quarry environment;
- progressively conduct rehabilitation and revegetation of the post quarry area over the life of the operations and as quarrying operations of the second bench allow (refer to Section 6.18);
- minimising the extent of vegetation clearance to that associated with the next blast area; and
- identifying the weed management controls for the Project Area, i.e. types of weeds known to be present, required control methods and frequencies, as well as monitoring frequencies.

Aboriginal Archaeology

To ensure the archaeological impacts of the quarry are minimised, Oberon Quarries has committed to implementing the following management and mitigation measures:

- Oberon Quarries should ensure that all parties involved in the Project are aware that it is an offence under Section 86 of the NPW Act to harm or desecrate an Aboriginal object unless that harm or desecration is the subject of an AHIP;
- Oberon Quarries will submit an ASIR form to correct the status of site AHIMS #44-6-0060, which appears as valid on the AHIMS database but was located within the approved extraction area;
- in the event that an Aboriginal object (or objects) is uncovered during the proposed works, ground disturbance works will cease within 20 metres of the object(s) and OEH and the relevant Aboriginal parties will be contacted so that appropriate management strategies can be identified;

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- In the unlikely event that a potential burial site or potential human skeletal material is exposed within the Project Area, the following procedure should be followed in accordance with the *Policy Directive – Exhumation of Human Remains* (NSW Department of Health, 2008), *Skeletal Remains – Guidelines for the Management of Human Skeletal Remains under the Heritage Act 1977* (NSW Heritage Office, 1998) and the *Aboriginal Cultural Heritage Standards and Guidelines Kit* (NPWS, 1997):
 - as soon as remains are exposed, work in the vicinity of the remains is to halt immediately to allow assessment and management;
 - the relevant manager of the project will be informed and will contact local police, OEH and the Heritage Branch;
 - if the remains are suspected to be human, a physical or forensic anthropologist should inspect the remains *in situ*, and make a determination of whether the remains are human and if so, the likely ancestry (Aboriginal or non-Aboriginal) and antiquity (pre-contact, historic or forensic);
 - if the remains are identified as forensic the area is deemed as crime scene;
 - if the remains are identified as Aboriginal, the site is to be secured and OEH and the relevant Aboriginal parties are to be notified in writing; or
 - if the remains are non-Aboriginal (historical) remains, the site is to be secured and the Heritage Branch is to be contacted.

This process functions only to appropriately identify the remains and secure the site. From this time, the management of the remains is to be determined through liaison with the appropriate stakeholders and in accordance with the *Public Health Act 1991*.

Greenhouse Gas and Energy

There are a number of mitigation and management measures proposed to be implemented for the ongoing operations. These are outlined in Table 7.2 below.

Table 7.2 – Greenhouse Gas and Energy Mitigation and Management Measures

Mitigation/Management Measure	Application
<i>Improving transport diesel use efficiency</i>	
Limiting the length of transport routes	The transport route is selected based on considering the shortest route and traffic congestion/delays.
Fuel efficient haul trucks	The existing transport fleet over the life of the ongoing operations will be replaced by more efficient trucks. Fuel use efficiency will be an important factor in selecting new haul trucks.
Maximising payload	Oberon Quarries ensure the each truck carries the maximum legal payload.
Reducing idling times	Oberon Quarries will continuously try to improve idle times. Idle times are typically minimal given there is a front end loader specifically for truck loading.
<i>Improving on-site diesel use efficiency</i>	
Scheduling activities so that equipment and vehicle operation is optimised	Quarry operations are scheduled to optimise the productivity and efficiency of equipment.

Table 7.2 – Greenhouse Gas and Energy Mitigation and Management Measures (cont)

Mitigation/Management Measure	Application
Fuel efficient equipment	The existing quarry fleet over the life of the ongoing operations will be replaced by more efficient trucks, excavators and front end loaders. Fuel use efficiency will be an important factor in selecting quarry fleet.
Blasting strategies to improve extraction efficiency	Blasting will be undertaken using best practice.
Maximising resource recovery efficiency	Resource recovery will be optimised within the constraints of the Project.
Working machines to their upper design performance	Machines will be worked to their upper design performance. Optimising machine performance is a key performance indicator for operators. This will be an important factor in selecting new machines.
Haul Truck Options	
Limiting the length of material haulage routes	The quarry planning process paid particular attention to reducing haul route distances.
Optimising ramp gradients	Over the life of the quarry the excavation depth will be increased, thereby reducing the haul road gradient between the processing area and the quarry pit.
Fuel efficient haul trucks	The existing haul truck over the life of the ongoing operations will be replaced by a more efficient truck. Fuel use efficiency will be an important factor in selecting new haul trucks.
Maximising payload	Trucks will be matched with excavators to maximise payload.
Improving rolling resistance of haul roads	Haul road locations are constantly changing and it would be very expensive to pave every haul route. The haul roads are regularly maintained to improve the rolling resistance of haul roads.
Reducing idling times	Oberon Quarries will continuously try to improve idle times. Idle times are typically minimal given there is a front end loader and/or excavator specifically for haul truck loading.
Improving electricity efficiency of processing equipment	
Reducing reject percentage	The installation of the new crushers is expected to reduce the percentage of 5 millimetres minus material that is created from 30 per cent to 25 per cent. This results in a 5 per cent efficiency gain in production and reduces the need for double handling. It is anticipated that the existing markets for the 5 millimetres minus material will be expanded over time and new markets will be developed such as production of manufactured sand as is proposed. This has the potential to create up to a 25 per cent gain in energy efficient per tonne of product.
High efficiency motors	Will occur as part of on-going upgrades to the processing plant. Likely to be financially reasonable.
Variable Speed Drives	Will occur where appropriate as part of on-going upgrades to the processing plant. Likely to be financially reasonable.
Optimising motor size to load	Will occur as part of on-going upgrades to the processing plant.
Optimising basalt throughput	The processing plant has been designed to match the maximum throughput of the quarry.

Waste

The current site waste management practices will continue to be implemented for the life of the Project.

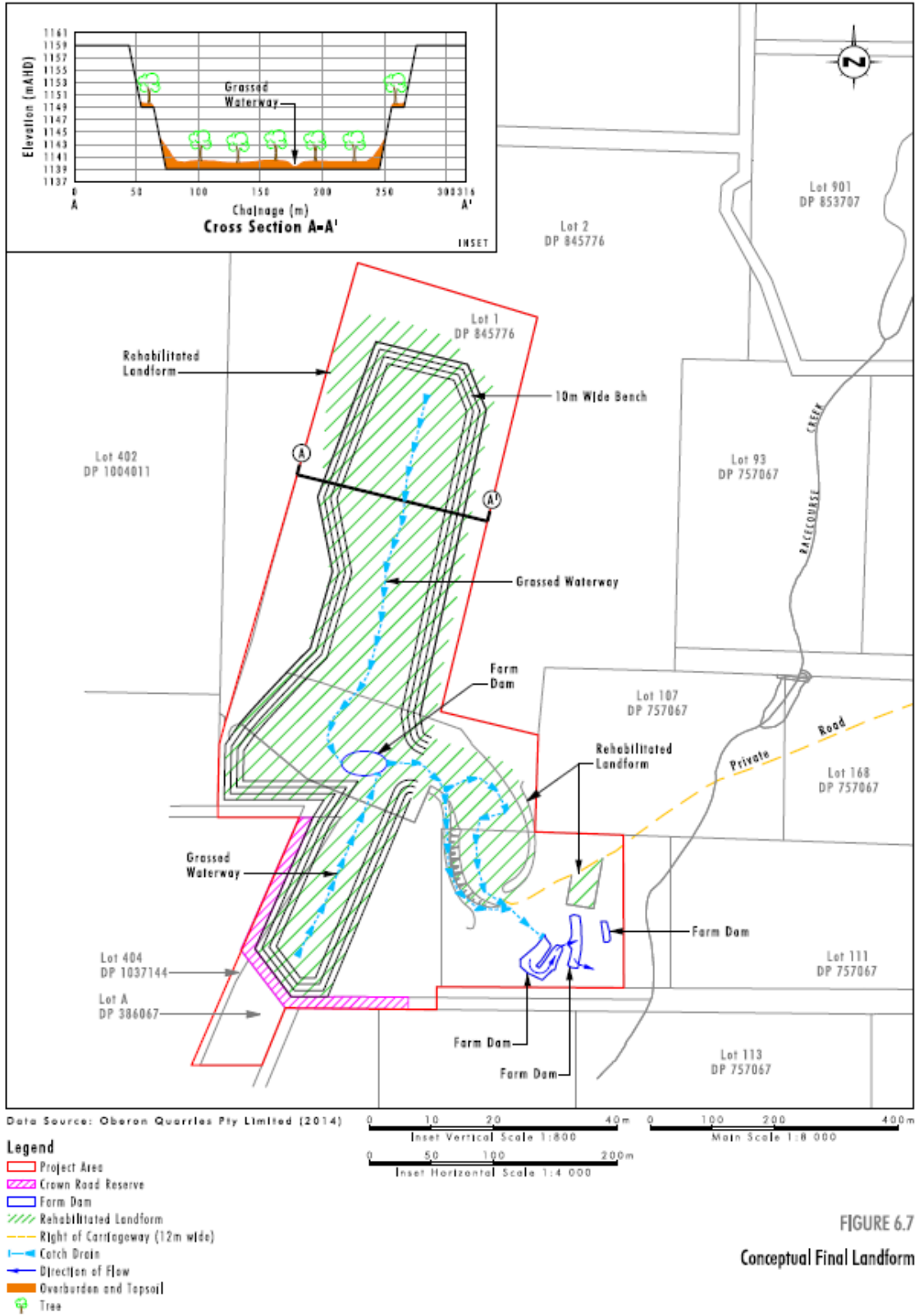
Bushfire

The Council approved Bushfire Management Plan for the site will continue to be implemented for the life of the Project.

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APPENDIX 3

CONCEPTUAL FINAL LANDFORM



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APPENDIX 4 NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 of the conditions is to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - (b) stability category F temperature inversion conditions and wind speeds greater than 2 m/s at 10 m above ground level; or
 - (c) stability category G temperature inversion conditions.

Determination of Meteorological Conditions

2. Except for wind speed at microphone height, the data to be used for determining meteorological conditions shall be that recorded by the meteorological station required under condition 13 of Schedule 3.

Compliance Monitoring

3. Attended monitoring is to be used to evaluate compliance with the relevant conditions of this consent.
4. Unless the Secretary agrees otherwise, 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 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.

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APPENDIX 5 ROAD MATERIALS CONTRIBUTIONS

The quantities of materials to be provided for each intersection are as follows:

- (a) Shooters Hill/Edith Road Intersection (surface area 1400 m²) — 21.5 tonnes of sealing aggregate;
- (b) Edith/Titania Road Intersection (surface area 1500 m²) — 23 tonnes of sealing aggregate and 750 tonnes of road base; and
- (c) Titania/Duckmaloi Road Intersection (surface area 1300 m²) — 20 tonnes of sealing aggregate.