

Project Approval

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

I approve the project referred to in Schedule 1, subject to the conditions set out in Schedules 2 to 5.

The reason for these conditions is 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 on-going environmental management of the project.

SIGNED

The Hon Kristina Keneally MP
Minister for Planning

Sydney 24 September 2008

SCHEDULE 1

Project Application:	07-0074
Proponent:	Gunlake Quarries
Approval Authority:	Minister for Planning
Land:	See Appendix 1
Project:	Gunlake quarry

Red Type represents March 2013 modification
Blue Type represents October 2014 modification
Green Type represents April 2015 modification

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DEFINITIONS

Annual review	Annual review, as required under condition 2 of Schedule 5
Biodiversity offset strategy	The conservation and enhancement program described in the EA, Modification 2 and shown conceptually in Appendix 6
Council	Goulburn Mulwaree Council
Cured concrete waste	Cured concrete waste from a batch plant as defined in Section 49 Definitions of waste classifications, in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> , as in force from time to time
Day	The period from 7.00am to 6.00pm on Monday to Saturday, and 8.00am to 6.00pm on Sundays and Public Holidays
Department	Department of Planning and Environment
DRE	Division of Resources and Energy within the NSW Department of Trade and Investment
EA	Environmental Assessment for the project titled <i>Gunlake Quarries Gunlake Quarry Project Environmental Assessment Report and Appendices</i> (4 volumes), dated February 2008, prepared by Olsen Environmental Consulting Pty Ltd, including the Response to Submissions dated 15 May 2008 and 21 May 2008
EEC	Endangered Ecological Community
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 <i>Protection of the Environment Operations Act 1997</i>
Evening	Evening is defined as the period from 6.00pm to 10.00pm
Land	Land means 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
Minister	Minister for Planning, or delegate
Modification 1	Modification application 07-0074 Mod 1 and supporting documentation titled <i>Proposed Modification of Development Consent Gunlake Quarries</i> , dated September 2012, prepared by Olsen Environmental Consulting and email from Olsen Environmental Consulting dated 15 October 2012
Modification 2	Modification application 07-0074 Mod 2 and supporting documentation titled <i>Modification of Project Approval 07-0074</i> , dated September 2014, prepared by Olsen Environmental Consulting, including the Response to Submissions prepared by EMGA Mitchell McLennan (EMM) dated 27 January 2015 and supporting information provided by EMM dated 17 February 2015
Modification 3	Modification application 07-0074 Mod 3 and supporting documentation titled <i>Proposed Modification to Condition 6(b) Schedule 2 of Project Approval</i> , dated September 2014, prepared by Olsen Environmental Consulting and emails from Olsen Environmental Consulting dated 22 September and 25 September 2014
Night	The period from 10.00pm to 7.00am on Monday to Saturday, and 10.00pm to 8.00am on Sundays and Public Holidays
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
Privately owned land	Land not owned by a public agency or the Proponent or its related companies
Project	The development, operation, closure and rehabilitation of the Gunlake quarry as described in the EA
Proponent	Gunlake Quarries, or its successors
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
Site	Land to which the project application applies
Stage 1	Stage 1 product transportation via Brayton Road to the Hume Highway at Marulan
Stage 2	Stage 2 product transportation via the bypass road between Brayton Road and Red Hills Road, and Brayton Road to Marulan for southern destinations. Vehicles returning from the north shall use the South Marulan Interchange to access northbound lanes of the Hume Highway and the bypass road
Statement of Commitments	The commitments in Appendix 3
Quarrying operations	The extraction, processing and transportation of extractive materials on the site and the associated removal of vegetation, topsoil and overburden

SCHEDULE 2 ADMINISTRATIVE

Obligation to Minimise Harm to the Environment

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

Terms of Approval

2. The Proponent shall carry out the project generally in accordance with the:
 - (a) EA;
 - (b) **Modification 1;**
 - (c) **Modification 3;**
 - (d) **Modification 2;**
 - (e) **statement of commitments; and**
 - (f) **conditions of this approval.**

Notes:

- *The layout of the project is shown in the figure in Appendix 2; and*
- *The statement of commitments is included in Appendix 3.*

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

Limits on Approval

5. *Quarrying operations may take place until 30 September 2038.*

Note: Under this approval, the Proponent is required to rehabilitate the site to the satisfaction of the Secretary. Consequently this approval will continue to apply in all other respects other than the right to conduct quarrying operations until the site has been rehabilitated and the offset provided to a satisfactory standard.

6. *Truck movements shall not exceed:*
 - (a) *Stage 1 – 25 truck movements per day (averaged over each calendar month), with a maximum of 38 truck movements on any day; and*
 - (b) *Stage 2 – 164 truck movements per day (averaged over each calendar month), up to a maximum of 320 movements on any day, including 25 truck movements per day (averaged over each calendar month) and a maximum of 38 truck movements on any day on Brayton Road between the bypass road and the intersection of Brayton Road/George Street/Interchange underpass.*
- 6A. *The Proponent may receive and store up to 30,000 tonnes of cured concrete waste on the site in each calendar year. The volume of cured concrete waste held on the site must not exceed 2,500 tonnes at any one time. No other materials classified as waste under the EPA Waste Classification Guidelines 2014 (or its latest version) may be received on the site.*

Structural Adequacy

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

Demolition

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

Protection of Public Infrastructure

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

Operation of Plant and Equipment

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

Crown Road

11. The Proponent shall not commence work on the Crown road without the prior approval of the Department of Lands.
12. The Proponent shall dedicate the bypass road on Lot 1 DP 868065 to Council as a public road prior to the commencement of Stage 2 product transportation.

Section 94 Contributions

13. The Proponent shall pay contributions to Council for the upgrade and maintenance of roads in accordance with the *Mulwaree Shire – Development Contributions Plan 2003-2008*.

The contributions during Stage 2 transport shall be paid at \$0.0313 per kilometre per tonne of product transported by the project on all Council roads, to be paid from the commencement of Stage 2 transport.

Notes:

- contributions shall be indexed from 19 May 2009 in accordance with the *Goulburn Mulwaree Section 94 Contributions Plan 2009*.
- contributions shall be paid annually and in arrears.

SCHEDULE 3 ENVIRONMENTAL PERFORMANCE

GENERAL EXTRACTION AND PROCESSING PROVISIONS

Identification of Boundaries

1. Within 3 months of the date of this approval, **or any modification of this approval involving a change to the approved limits of extraction**, or as otherwise agreed by the **Secretary**, the Proponent shall:
 - (a) engage an independent registered surveyor to survey the boundaries of the approved limit of extraction and the approved ancillary work areas;
 - (b) submit a survey plan of these boundaries to the **Secretary**; and
 - (c) ensure that these boundaries are clearly marked at all times in a permanent manner that allows operating staff and inspecting officers to clearly identify those limits.

Note: The limit of extraction and ancillary areas is shown conceptually on the layout plan in Appendix 2.

NOISE

Operational Noise Assessment Criteria

2. The Proponent shall ensure that the noise generated by the project does not exceed the noise impact assessment criteria in Table 1 at any residence or on more than 25% of any privately-owned land.

Noise Assessment Location	Day	Evening	Night	
	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{Aeq} (15 minute)	L _{A1} (1 minute)
R2	35	35	35	47
R4	35	35	35	45

Table 1: Noise Impact Assessment Criteria

Notes:

- To determine compliance with these noise limits, noise from the project is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the project is impractical, alternative means of determining compliance may be accepted (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.
- The noise limits apply under all meteorological conditions except the following:
 - wind speed greater than 3m/s at 10m above ground level;
 - temperature inversion conditions between 1.5 degrees C/100m and 3 degrees C/100m and wind speed greater than 2m/s at 10m above ground level; or
 - temperature inversion conditions greater than 3 degrees C/100m.
- The **Secretary** may relax the noise limits in Table 1 for any property where the Proponent has an agreement with the relevant owner/s to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.
- For more information on the noise assessment locations see Appendix 4.

Operating Hours

3. The Proponent shall comply with the operating hours in Table 2.

Activity	Day	Time
Construction work	Monday - Friday	7.00am to 6.00pm
	Saturday	8.00am to 1.00pm
	Sunday and Public Holidays	None
Overburden removal and drilling	Monday – Saturday Sunday and Public Holidays	7.00am to 6.00pm None
Blasting	Monday – Friday Sunday and Public Holidays	9.00am to 5.00pm None
Quarrying and processing (excluding tertiary crushing)	Monday – Saturday Sunday and Public Holidays	7.00am to 6.00pm None
Tertiary crushing	Monday – Saturday Sunday and Public Holidays	24-hours except 6.00pm Saturday to 2.00am Monday

Loading and Dispatch	Stage 1 Monday – Friday Saturday Sunday and Public Holidays Stage 2 Monday to Saturday Sunday and Public Holidays	6.00am to 7.00pm 7.00am to 1.00pm None 24-hours except 6.00pm Saturday to 2.00am Monday None
Product Transportation	Stage 1 Monday – Friday Saturday Sunday and Public Holidays Stage 2 <u>Bypass road</u> Monday – Saturday Sunday and Public Holidays <u>Brayton Road to Marulan</u> Monday – Saturday Sunday and Public Holidays	6.00am to 7.00pm 7.00am to 1.00pm None 24-hours except 6.00pm Saturday to 2.00am Monday None 6.00am to 7.00pm None
Maintenance	Monday – Saturday Sunday and Public Holidays	Any Time None

Table 2 – Operating Hours

Notes: This condition does not apply to delivery of material if that delivery is required by police or other authorities for safety reasons, and/or the operation or personnel or equipment are endangered. In such circumstances, notification is to be provided to EPA and the affected residents as soon as possible, or within a reasonable period in the case of emergency.

Operating Conditions

4. The Proponent shall:
 - (a) implement best practice management to minimise the operational and road transportation noise of the project;
 - (b) minimise the noise impacts of the project during meteorological conditions when the noise limits in this approval do not apply (see notes to Table 1 in Condition 2 above);
 - (c) carry out regular monitoring to determine whether the project is complying with the relevant conditions of this approval;
 - (d) regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this approval; and
 - (e) ensure all reasonable and feasible measures are employed to reduce noise from the tertiary crusher at night,
to the satisfaction of the Secretary.

Noise Management Plan

- 4A. The Proponent shall prepare and implement a Noise Management Plan for the project to the satisfaction of the Secretary. This plan must:
 - (a) be prepared in consultation with the EPA and submitted to the Secretary for approval by 31 August 2015;
 - (b) describe the measures that would be implemented to ensure:
 - compliance with the noise criteria in this approval;
 - best management noise minimisation practice is employed on site; and
 - the noise impacts of the project are minimised during any meteorological conditions when the noise limits in this approval do not apply; and
 - (c) detail a monitoring program that will be put in place to measure noise from the project against the noise criteria in Table 2, and which evaluates and reports on the effectiveness of the noise management system on site.

Construction of Bypass Road

5. Prior to the construction of the bypass road commencing, the Proponent shall undertake noise measurements to establish the construction noise criteria for the construction works, to the satisfaction of the Secretary.

BLASTING AND VIBRATION

Airblast Overpressure Impact Assessment Criteria

6. The Proponent shall ensure that the airblast overpressure level from blasting at the project does not exceed the criteria in Table 3 at any residence on privately owned land.

Airblast Overpressure Level (dB(Lin Peak))	Allowable Exceedance
115	5% of the total number of blasts over a period of 12 months
120	0%

Table 3: Airblast Overpressure Impact Assessment Criteria for Residences on Privately Owned Land

Notes:

- To determine compliance with these limits, airblast overpressure from the project is to be measured at the most affected point at the residential boundary, or at the most affected point within 30 metres of the dwelling where the dwelling is more than 30 metres from the boundary (subject to landowners consent).
- Airblast overpressure is not to be measured within 3.5 metres of any building.

Ground Vibration Impact Assessment Criteria

7. The Proponent shall ensure that the ground vibration level from blasting at the project does not exceed the criteria in Table 4 at any residence on privately owned land.

Ground Vibration Level (mm/s)	Allowable Exceedance
5	5% of the total number of blasts over a period of 12 months
10	0%

Table 4: Ground Vibration Impact Assessment Criteria for Residences on Privately Owned Land

Note: To determine compliance with these limits, ground vibration from the project is to be measured at the most affected point at the residential boundary, or at 30 metres from the dwelling where the dwelling is more than 30 metres from the boundary (subject to landowners consent).

Operating Conditions

8. During blasting, the Proponent shall:
- implement best blasting practice to:
 - protect the safety of people and livestock in the area surrounding blasting operations;
 - protect public or private infrastructure/property in the area surrounding blasting operations from blasting damage people; and
 - minimise the dust and fume emissions from blasting on the site; and
 - co-ordinate blasting on site with blasting at the adjoining Johnniefields quarry and Lynwood quarry to minimise the potential cumulative blasting impacts of the three quarries; to the satisfaction of the [Secretary](#).

Public Notice

9. The Proponent shall:
- notify the landowner/occupier of any residence within 2 kilometres of the quarry pit who registers an interest in being notified about the blasting schedule on site;
 - develop a joint notification process with Johnniefields quarry and Lynwood quarry to alert residents at least 24 hours before any blast;
 - operate a blasting hotline, or alternative system agreed to by the [Secretary](#), to enable the public to get up-to-date information on blasting operations at the project; and
 - keep the public informed about this hotline (or any alternative system), to the satisfaction of the [Secretary](#).

Blast Management Plan

10. The Proponent shall prepare and implement a Blast Management Plan for the project to the satisfaction of the [Secretary](#). This plan must:
- be submitted to the [Secretary](#) for approval by 31 August 2015;

- (b) describe the measures that would be implemented to ensure compliance with the blasting criteria and operating conditions of this approval;
- (c) include a monitoring program for evaluating and reporting on compliance with the blasting criteria in this approval;
- (d) include public notification procedures on the blasting schedule; and
- (e) include a protocol for investigating and responding to complaints.

AIR QUALITY

Impact Assessment Criteria

11. The Proponent shall 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 in Tables 5, 6 and 7 at any residence on privately-owned land.

Pollutant	Averaging period	^d Criterion
Total suspended particulate (TSP) matter	Annual	^a 90 µg/m ³
Particulate matter < 10 µm (PM ₁₀)	Annual	^a 30 µg/m ³

Table 5: Long Term Impact Assessment Criteria for Particulate Matter

Pollutant	Averaging period	^d Criterion
Particulate matter < 10 µm (PM ₁₀)	24 hour	^a 50 µg/m ³

Table 6: Short Term Impact Assessment Criterion for Particulate Matter

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level
^c Deposited dust	Annual	^b 2 g/m ² /month	^a 4 g/m ² /month

Table 7: Long Term Impact Assessment Criteria for Deposited Dust

Notes to Tables 5-7:

- a Total impact (i.e. incremental increase in concentrations due to the project plus background concentrations due to all other sources);
- b Incremental impact (i.e. incremental increase in concentrations due to the project on its own);
- 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; and
- d 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 EPA.

Operating Conditions

12. The Proponent shall:
- (a) implement best management practice to minimise the dust emissions of the project;
 - (b) regularly assess meteorological and air quality monitoring data and relocate, modify, and/or stop operations on site as may be required to ensure compliance with the relevant conditions of this approval;
 - (c) minimise the air quality impacts of the project during adverse meteorological conditions and extraordinary events (see note d to Tables 5-7 above);
 - (d) monitor and report on compliance with the relevant air quality conditions in this approval; and
 - (e) minimise surface disturbance of the site, other than as permitted under this approval, to the satisfaction of the Secretary.

Air Quality Management Plan

13. The Proponent shall prepare and implement an Air Quality Management Plan for the project to the satisfaction of the Secretary. This program shall:
- (a) be submitted to the Secretary for approval by 31 August 2015;
 - (b) be prepared in consultation with EPA;
 - (c) describe the measures that would be implemented to ensure:
 - compliance with the relevant conditions of this approval;
 - best practice management is employed; and
 - the air quality impacts of the project are minimised during adverse meteorological conditions and extraordinary events;
 - (d) describe the proposed air quality management system; and
 - (e) 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

- The Proponent shall ensure the project has a suitable meteorological station in the vicinity of the site that complies with the requirements in the *Approved Methods for Sampling of Air Pollutants in New South Wales* publication.

WATER

Water Supply

- The Proponent must ensure that it has sufficient water for all stages of the project, and if necessary, adjust the scale of quarrying operations to match its water supply.

Note: The Proponent is required to obtain the necessary water licences for the project under the Water Act 1912 and/or Water Management Act 2000.

Water Pollution

- Unless an EPL or the EPA authorises otherwise, the Proponent shall comply with section 120 of the *Protection of the Environment Operations Act 1997* during the carrying out of the project.

Stormwater Management

- The Proponent shall ensure that Water Quality Control Ponds 1, 2, 3, 4 and 5 are designed, constructed and operated to capture and treat polluted waters from storm events equivalent to a 95th percentile storm depth.

Pasture Irrigation

- The Proponent shall only irrigate excess water from Water Quality Control Ponds 1 and 6 in the irrigation areas identified in the Water Cycle Management Plan in Appendix 5.
- Prior to the commencement of pasture irrigation, the Proponent shall relocate irrigation area B to another part of the site in consultation with EPA and to the satisfaction of the Secretary.

Water Management and Monitoring

- The Proponent shall prepare and implement an updated Water Management Plan for the project to the satisfaction of the Secretary. This plan shall:
 - be submitted to the Secretary for approval by 31 August 2015;
 - be prepared in consultation with NOW, Water NSW and EPA; and
 - include a:
 - Site Water Balance;
 - Erosion and Sediment Control Plan;
 - Pasture Irrigation Monitoring Program;
 - Surface Water Monitoring Program; and
 - Groundwater Monitoring Program.
- The Site Water Balance shall:
 - include details of:
 - sources and security of water supply;
 - water use on site;
 - water management on site, including the location and capacity of water storages on site and the means of access;
 - off-site water transfers; and
 - reporting procedures; and
 - investigate and describe measures to minimise water use by the project.
- The Erosion and Sediment Control Plan shall:
 - be prepared by suitably qualified person(s) whose appointment has been approved by the Secretary;
 - be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, 2004* (Landcom);
 - identify activities that could cause soil erosion and generate sediment;
 - describe measures to minimise soil erosion and the potential for the transport of sediment to

- downstream waters;
 - (d) describe the location, function, and capacity of erosion and sediment control structures;
 - (e) demonstrate that the design capacity of basins will not be compromised by storage of operational water; and
 - (f) describe what measures would be implemented to maintain (and if necessary decommission) the structures over time.
23. The Pasture Irrigation Monitoring Program shall include:
- (a) detailed baseline data of the soil properties of the pasture irrigation areas, including bicarbonate levels and a nutrient budget;
 - (b) identify any potential off-site risks and impacts and describe measures to minimise any environmental impacts; and
 - (c) a program to monitor irrigation water and irrigation pasture areas.
24. The Surface Water Monitoring Program shall include:
- (a) detailed baseline data on surface water flows and quality and other waterbodies that could be affected by the project (including Chapmans Creek);
 - (b) surface water quality and stream health assessment criteria, including trigger levels for investigating any potentially adverse surface water impacts; and
 - (c) a program to monitor:
 - surface water flows, quality, and impacts on water users;
 - stream health; and
 - channel stability.
25. The Groundwater Monitoring Program shall include:
- (a) detailed baseline data on groundwater levels, flows and quality in the region, and particularly any groundwater bores, springs and seeps (including spring and seep fed dams) that may be affected by quarrying operations on site;
 - (b) groundwater assessment criteria, including trigger levels for investigating any potentially adverse groundwater impacts;
 - (c) a program to monitor:
 - groundwater inflows to the quarry pit
 - the impacts of the project on:
 - any groundwater bores, springs and seeps (including spring and seep fed farm dams) on privately-owned land; and
 - any groundwater dependent ecosystems; and
 - (d) a protocol for further groundwater modelling and corrective action should groundwater discharge to the quarry void exceed 3.5ML per year.

REHABILITATION AND BIODIVERSITY

Rehabilitation Objectives

26. The Proponent shall rehabilitate the site to the satisfaction of the Secretary. The rehabilitation must comply with the objectives in Table 8.

Feature	Objective
Site (as a whole)	• Safe, stable & non-polluting • Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and has minimal visual impact when viewed from surrounding land
Surface Infrastructure	• To be decommissioned and removed, unless DRE agrees otherwise
Land identified in the biodiversity offset strategy and other vegetated land	• Conserved and enhanced with native, endemic vegetation • Containing self-sustaining ecosystems that have been maintained or established
Quarry Benches	• Landscaped and vegetated using native tree and understorey species
Quarry Pit Floor	• Landscaped and revegetated using native tree and understorey species

Table 8: Rehabilitation Objectives

Progressive Rehabilitation

- 26A. The Proponent 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.

Biodiversity Offsets

27. The Proponent shall implement the biodiversity offset strategy as outlined in Table 9 and shown conceptually in Appendix 6, to the satisfaction of the Secretary.

Offset Area	Offset Type	Minimum Size (hectares)
Biodiversity Offset Area - existing vegetation to be enhanced and maintained	Existing vegetation to be enhanced and maintained as well as assisted regeneration of Box Gum Woodland EEC and Speckled Warbler habitat, including a minimum of 30.38 hectares of Box Gum Woodland EEC.	30.38
Biodiversity Offset Area - vegetation regeneration	A minimum of 46.16 hectares of cleared pasture to be regenerated and/or replanted using species representative of pre-clearing vegetation, including Box Gum Woodland EEC.	46.16
Additional Biodiversity Offset Area	Box Gum Woodland EEC to be enhanced and maintained.	2.28
Total		78.82

Table 9: Biodiversity Offset Strategy

- 27A. By 31 October 2015, unless otherwise agreed by the Secretary, the Proponent shall revise the offset strategy to identify and include the Additional Biodiversity Offset Area required in Table 9 above, in consultation with OEH, and to the satisfaction of the Secretary.

Security of Offsets

28. By 30 April 2016, unless otherwise agreed with the Secretary, the Proponent shall make suitable arrangements to provide appropriate long-term security for the offset areas, to the satisfaction of the Secretary.

Note: Mechanisms to provide appropriate long-term security to the land within the biodiversity offset strategy include a Biobanking Agreement or an alternative mechanism that provides for a similar conservation outcome. Any mechanism must remain in force in perpetuity.

Rehabilitation and Biodiversity Offset Management Plan

29. The Proponent shall prepare and implement a Rehabilitation and Biodiversity Offset Management Plan for the project to the satisfaction of the Secretary. This plan must be prepared by suitably qualified person(s) whose appointment has been approved by the Secretary, in consultation with OEH, and submitted to the Secretary for approval by 31 October 2015 and include:
- a description of the short, medium, and long term measures that would be implemented to:
 - manage the native vegetation and fauna habitat on the site;
 - implement the biodiversity offset strategy required in Table 9 above; and
 - ensure compliance with the rehabilitation objectives in Table 8, and progressive rehabilitation obligations in this approval;
 - performance and completion criteria for the rehabilitation of the site and implementation of the biodiversity offset strategy;
 - a detailed description of the measures that would be implemented for:
 - progressively rehabilitating disturbed areas;
 - landscaping and vegetating the quarry pit and overburden emplacement
 - implementing the biodiversity offset strategy;
 - protecting areas outside the disturbance areas (including updating operational plans and maps to identify the location of riparian areas to be protected);

- rehabilitating creeks on the site outside of approved disturbance areas (including Chapman's Creek) to improve aquatic and riparian habitat;
 - undertaking pre-clearance surveys;
 - managing impacts on fauna, including establishment of habitat for threatened fauna species including the Speckled Warbler;
 - managing any unexpected threatened fauna or flora located during the project;
 - providing two nest boxes for each tree-hollow destroyed by vegetation clearing;
 - landscaping the site to minimise visual impacts;
 - excluding stock from the biodiversity offset areas (unless grazing can be demonstrated as a management tool for achieving conservation outcomes);
 - conserving and reusing topsoil;
 - collecting and propagating seed for rehabilitation works;
 - salvaging and reusing material from the site for habitat enhancement;
 - controlling weeds and feral pests;
 - controlling access; and
 - bushfire management;
- (d) a program to monitor the effectiveness of these measures, and progress against the performance and completion criteria;
- (e) a description of the potential risks to successful rehabilitation of the site and the implementation of the biodiversity offset strategy, and a description of the contingency measures that would be implemented to mitigate these risks; and
- (f) details of who would be responsible for monitoring, reviewing, and implementing the plan.

Rehabilitation and Conservation Bond

30. Within 3 months of the approval of the Rehabilitation and Biodiversity Management Plan, the Proponent shall lodge a Rehabilitation and Conservation Bond for the project with the Secretary 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 Rehabilitation and Biodiversity Management Plan and relevant conditions of this approval. The sum of the bond shall be determined by:
- (a) calculating the cost of implementing the biodiversity offset strategy and rehabilitating the site, and
 - (b) employing a suitably qualified quantity surveyor or other expert to verify the calculated costs, to the satisfaction of the Secretary.

Note: If the rehabilitation of the site and the implementation of the biodiversity offset strategy is completed to the satisfaction of the Secretary, then the Secretary will release the bond. If the rehabilitation of the site and the implementation of the biodiversity offset strategy 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.

31. Within 3 months of submitting a copy of the Independent Environmental Audit report to the Secretary (see condition 8 of Schedule 5), the Proponent shall review, and if necessary, revise the sum of the Rehabilitation and Conservation 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 project) and implementing the biodiversity offset strategy; and
 - (c) performance of the implementation of the rehabilitation of the site and the biodiversity offset strategy to date.

ABORIGINAL HERITAGE

Aboriginal Heritage Plan

32. The Proponent shall prepare and implement an updated Aboriginal Heritage Management Plan for the project to the satisfaction of the Secretary. The plan must:
- (a) be prepared in consultation with OEH and the registered Aboriginal parties;
 - (b) be submitted to the Secretary for approval by 31 August 2015; and
 - (c) include a:
 - description of the measures that have been and/or would be implemented for the mapping, and salvage or relocation of the archaeological sites GL1-5;
 - description of the measures that would be implemented to avoid disturbance to known sites of archaeological significance (including relocated sites) during the project (including updating operational plans and maps to identify the location of sites to be protected);
 - description of the measures that would be implemented if any new Aboriginal objects or relics are discovered during the project; and
 - protocol for the ongoing consultation and involvement of the registered Aboriginal parties in the conservation and management of Aboriginal cultural heritage on the site.

TRAFFIC AND TRANSPORT

Road Works

33. Prior to carrying out Stage 1 product transportation, the Proponent shall upgrade Brayton Road between the quarry site and the entrance to Johnniefelds quarry in accordance with draft Development Control Plan - Provisions for Heavy Vehicle Generating Development to the satisfaction of the Council.
34. Prior to carrying out Stage 2 product transportation, the Proponent shall:
- upgrade the existing intersection between Red Hills Road and the Hume Highway (shown conceptually in Appendix 7) and following the satisfactory completion of the works close the existing median access point on the Hume Highway, to the satisfaction of the **RMS**;
 - deleted**;
 - construct the new bypass road between **Brayton Road** and Red Hills Road to the satisfaction of the Council; and
 - upgrade Red Hills Road between the bypass road and the Hume Highway in accordance with draft Development Control Plan - Provisions for Heavy Vehicle Generating Development to the satisfaction of the Council.

Notes:

- The design of these works shall be in accordance with relevant **RMS** standards and specifications (except where varied by Council's draft Development Control Plan - Provisions for Heavy Vehicle Generating Development) including:
 - geometric road design in accordance with **RMS** Road Design Guide; and
 - pavement design in accordance with the AUSTROADS Pavement Design Guide;
- The Proponent will be required to meet all the costs upfront associated with the road works, including design, land acquisition, gazettal of new boundaries and access point, construction and project management.

Traffic Management

35. The Proponent shall prepare and implement an updated Traffic Management Plan for the project to the satisfaction of the Secretary. The plan must:
- be prepared by a suitably qualified traffic consultant, in consultation with RMS and Council, and submitted to the Secretary for approval by 31 August 2015;
 - describe the measures that would be implemented to avoid dispatching large groups or convoys of laden trucks via Red Hills Road onto the Hume Highway during peak periods;
 - include a code of conduct for heavy vehicle drivers that addresses:
 - travelling speeds;
 - procedures to ensure that drivers adhere to the designated transport routes; and
 - procedures to ensure that drivers implement safe driving practices, particularly when entering the Hume Highway from Red Hills Road;
 - describe the measures that would be implemented to ensure compliance with the transport operating conditions under this approval; and
 - include a program to monitor the effectiveness of the implementation of these measures.

Creek Crossings

36. The Proponent shall design and construct the crossings of Chapmans Creek and Joarimin Creek in accordance with relevant **NOW** standards and specifications.

Haulage Records

37. The Proponent is to record and maintain a log of the extraction quantities and traffic movement in and out of the subject site, available for inspection at the request of the **Secretary** or the Council.

Road Haulage

38. The Proponent shall ensure that:
- all loaded vehicles entering or leaving the site are covered; and
 - all loaded vehicles leaving the site are cleaned of materials that may fall on the road, before they leave the site.

VISUAL

Visual Amenity

39. The Proponent shall minimise the visual impacts of the project to the satisfaction of the **Secretary**.

Lighting Emissions

40. The Proponent shall:
- take all practicable measures to mitigate off-site lighting impacts from the project; and

- (b) ensure that all external lighting associated with the project complies with *Australian Standard AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting*, to the satisfaction of the [Secretary](#).

Advertising

- 41. The Proponent shall not erect or display any advertising structure(s) or signs on the site without the written approval of the [Secretary](#).

Note: This does not include traffic management and safety or environmental signs.

WASTE MANAGEMENT

Waste Minimisation

- 42. The Proponent shall minimise the amount of waste generated by the project to the satisfaction of the [Secretary](#).

EMERGENCY AND HAZARDS MANAGEMENT

Dangerous Goods

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

Safety

- 44. The Proponent shall secure the project to ensure public safety to the satisfaction of the [Secretary](#).

Bushfire Management

- 45. The Proponent shall:
 - (a) ensure that the project is suitably equipped to respond to any fires on-site; and
 - (b) assist the Rural Fire Service and emergency services as much as possible if there is a fire on site.

PRODUCTION DATA

- 46. The Proponent shall:
 - (a) provide annual production data to the [DRE](#) using the standard form for that purpose; and
 - (b) include a copy of this data in the [Annual Review](#).
-

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. If the results of monitoring required in Schedule 3 identify that impacts generated by the project are greater than the relevant impact assessment criteria, then the Proponent shall notify the [Secretary](#) and the affected landowners and/or existing or future tenants accordingly, and provide quarterly monitoring results to each of these parties until the results show that the project is complying with the relevant criteria.

INDEPENDENT REVIEW

2. If a landowner of privately owned land considers that the operations of the quarry are exceeding the impact assessment criteria in Schedule 3, then he/she may ask the Proponent 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, the Proponent shall within 3 months of the [Secretary](#) advising that an independent review is warranted:

- (a) consult with the landowner to determine his/her concerns;
 - (b) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the [Secretary](#), to conduct monitoring on the land, to determine whether the project is complying with the relevant criteria in Schedule 3, and identify the source(s) and scale of any impact on the land, and the project's contribution to this impact; and
 - (c) give the [Secretary](#) and landowner a copy of the independent review.
-

SCHEDULE 5 ENVIRONMENTAL MANAGEMENT, MONITORING, REPORTING & AUDITING

ENVIRONMENTAL MANAGEMENT STRATEGY

1. The Proponent shall update the Environmental Management Strategy for the project to the satisfaction of the Secretary. This strategy shall be submitted to the Secretary for approval by 31 August 2015 and must:
 - (a) provide the strategic framework for environmental management of the project;
 - (b) identify the statutory requirements that apply to the project;
 - (c) describe how the environmental performance of the project would be monitored and managed;
 - (d) describe the procedures that would be implemented to:
 - keep the local community and relevant agencies informed about the construction, operation and environmental performance of the project;
 - receive, handle, respond to, and record complaints;
 - resolve any disputes that may arise during the life of the project;
 - respond to any non-compliance;
 - manage cumulative impacts; and
 - respond to emergencies;
 - (e) include:
 - copies of any strategies, plans and programs approved under the conditions of this approval; and
 - a clear plan depicting all the monitoring required to be carried out under the conditions of this approval.

ANNUAL REVIEW

2. By the end of September each year, or other timing as may be agreed by the Secretary, the Proponent shall review the environmental performance of the project to the satisfaction of the Secretary. This review must:
 - (a) describe the project (including rehabilitation) that was carried out in the previous financial year, and the project that is proposed to be carried out over the current financial year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the project over the previous calendar year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of previous years; and
 - the relevant predictions in the EA;
 - (c) identify any non-compliance over the last 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

3. Within 3 months of a modification to this approval or following the submission of an:
 - (a) annual review under condition 3 above;
 - (b) incident report under condition 6 below; or
 - (c) audit report under condition 8 below,the Proponent shall review, and if necessary revise, the strategies, plans, and programs required under this approval to the satisfaction of the Secretary.

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

COMMUNITY CONSULTATIVE COMMITTEE

4. The Proponent shall establish and maintain a Community Consultative Committee (CCC) for the project to the satisfaction of the Secretary. This CCC must be operated in general accordance with the *Guidelines for Establishing and Operating Community Consultative Committees for Mining Projects* (Department of Planning, 2007, or its latest version).

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 guideline, the Committee should comprise an independent chair and appropriate representation from the Proponent, Council and the local community.*
- *This condition may be satisfied by a combined CCC covering a number of quarry operations in the region.*

REPORTING

Incident Reporting

5. The Proponent shall immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Proponent 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

6. The Proponent shall 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, and to the satisfaction of the Secretary.

INDEPENDENT ENVIRONMENTAL AUDIT

7. Within 12 months of the date of the commencement of the project, and every 3 years thereafter, unless the Secretary directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit shall:
 - (a) be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been approved by the Secretary
 - (b) include consultation with the relevant agencies;
 - (c) assess the environmental performance of the project, and whether it is complying with the relevant requirements in this approval and any relevant EPL (including any assessment, plan or program required under these approvals);
 - (d) review the adequacy of any strategy/plan/program required under these approvals, and
 - (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under these approvals.

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

8. Within 6 weeks of the completion of this audit, unless the Secretary agrees otherwise, the Proponent shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

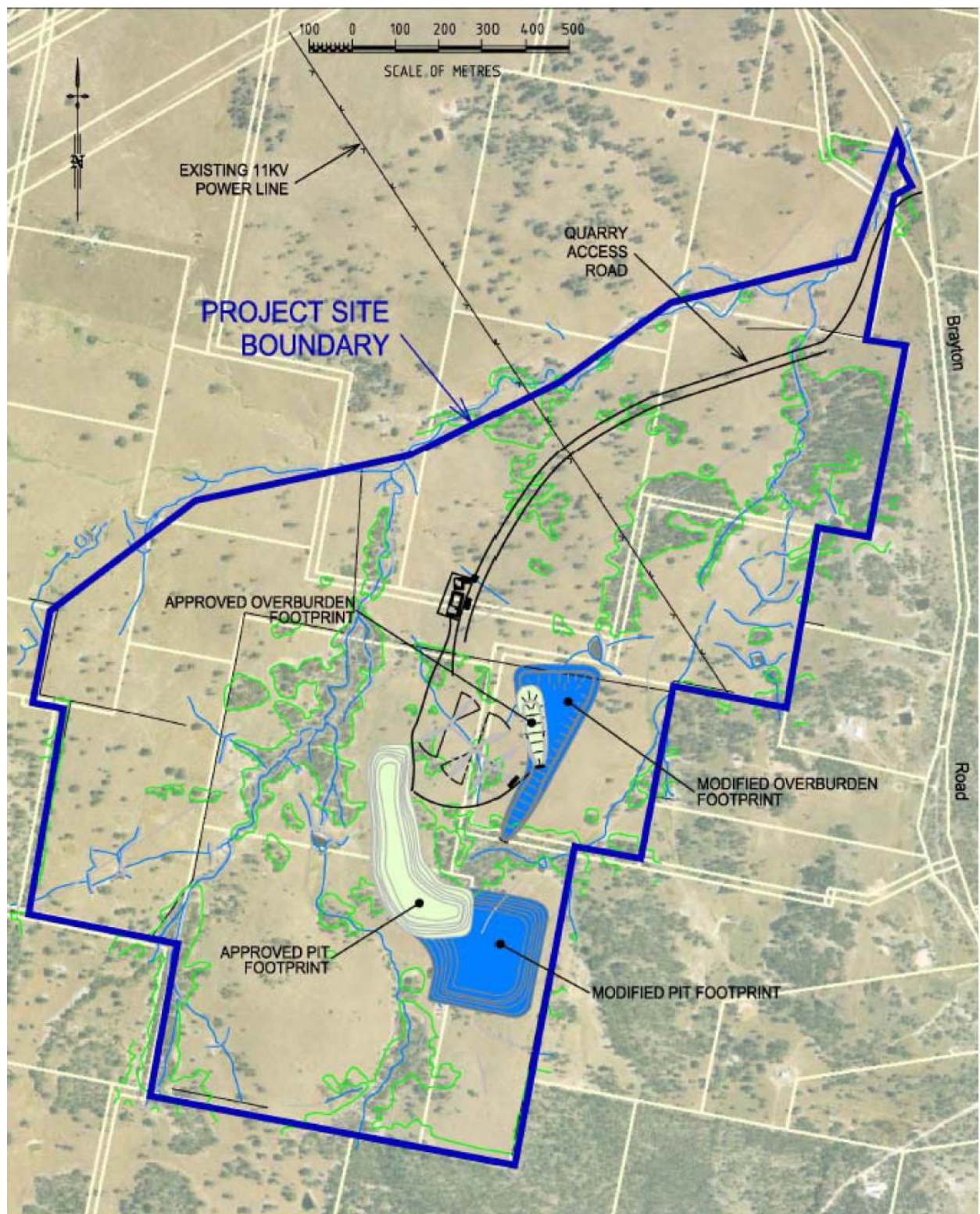
ACCESS TO INFORMATION

9. For the duration of the project, the Proponent shall:
 - (a) make copies of the following publicly available on its website:
 - the EA;
 - all relevant statutory approvals for the project;
 - all 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 approved plans or programs required under the conditions of this or any other approval;
 - a complaints register, which is to be updated on a monthly basis;
 - minutes of CCC meetings;
 - the annual reviews of the project (for the last 5 years);
 - any independent environmental audit of the project, and the Proponent's response to the recommendations in any audit;
 - any other matter required by the Secretary; and
 - (b) keep this information up-to-date, to the satisfaction of the Secretary.
-

**APPENDIX 1
SCHEDULE OF LAND**

Quarry Site	• Lot 13 DP 1123374
Bypass Road	• Lot 1 DP 868065 • Crown public road south of Lots 22, 23 and 24 DP 750053 and lot1 DP 834993
Road Works	Road reserve of: • Brayton Road between quarry site and Johnniefields quarry; • Red Hills Road between Hume Highway and Crown public road; • Hume Highway – intersection with Red Hills Road.

APPENDIX 2
GENERAL LAYOUT OF PROJECT



Gunlake Quarry Project
Figure 2.1. Project Site Layout

APPENDIX 3 STATEMENT OF COMMITMENTS

1.1 General Project Commitments

- Gunlake will develop an Environmental Management Plan (EMP) for the Gunlake Quarry. The EMP will also detail the monitoring regime that will provide the data necessary to determine compliance with environmental performance criteria.
- All available reclaimable topsoil will be used for preparing disturbed surface areas for revegetation.
- The proposed hard rock quarry would be operated with comprehensive systems to manage and monitor groundwater, surface water, noise, blasting, air quality, Aboriginal heritage, flora, fauna, traffic, visual and socio-economic aspects.
- Gunlake would seek approval from the Council for the installation on the Project Site of an aerated wastewater treatment system (AWTS) that will provide secondary treatment effluent suitable for disposal by irrigation. All domestic waste water will be collected and treated in the waste water management system.
- Clearing of the vegetation within the quarry area would be undertaken using a progressive campaign basis with the extent of clearing undertaken in each campaign being just sufficient for the subsequent year of quarry development.
- The size and location of water and soil erosion control structures would vary depending on the surface area and location of disturbance but would be based on the structure designs and construction notes identified in the Landcom publication, "Soils and Construction Volume 1" 4th Edition March 2004.
- Wherever practicable, stripped topsoil and subsoil would be directly replaced on completed sections of the final landform.
- Explosives and detonators would not be stored on site.
- The rock processing plant will feature atomised water dust suppression systems at all discharge points. There will also be atomised water sprays for dust control at the tipping point into the apron feeder and at the primary crusher input and discharge. The product conveyors will be covered. All screens will be enclosed to provide dust and noise attenuation.
- Potable water, ie. water for drinking purposes, and water for toilets and showering would be transported from Marulan to supplement rainwater collected off buildings and stored in tanks.
- Water required for operational purposes would be obtained from the various sedimentation and fresh water dams that form part of the site surface water and quarry pit management system.
- The Project will be powered by electricity from the State Supply Grid. Mobile plant will be powered by diesel fuel.
- A dedicated 1000m² irrigation field will be established to accommodate the predicted wastewater generated on site. This field will be located in the area identified by Sydney Catchment Authority as appropriate.
- Fuel storage and refuelling facilities for the mobile quarry fleet, comprising storage for 50kL diesel in a WorkCover-approved self-bunded fuel tank and a refuelling bay would be located adjacent to the Maintenance Workshop.
- The bulk of transport activities associated with the Project would revolve around the road transportation of saleable products from the Project Site to widely distributed markets.
- Gunlake will develop a mechanism to record and resolve complaints. This will support the Company's ongoing Community Liaison Programme.
- A Road Construction Management Plan would be prepared to ensure appropriate procedures are in place for the management of both quarry-related and public traffic during road construction activities.
- Gunlake has commenced consultation with Goulburn Mulwaree Council to develop a road maintenance and capital improvement agreement to cover transport route impacts associated with the movement of finished product.
- An Occupational Health and Safety Management System and a Major Hazard Management System

would be developed.

- On cessation of quarrying and processing activities, a number of structures and facilities would be decommissioned and removed as part of the rehabilitation of the Project Site.
- At the completion of the Project a thorough inspection of the soil directly below and surrounding fuel storage and refuelling areas would be conducted to ensure any contaminated soil is identified. Gunlake will conduct a Phase 1 Hydrocarbon Contamination assessment and undertake appropriate action as determined by that review.
- All demountable buildings and structures erected on the Project Site would be transported off site at the completion of the Project.
- Gunlake would undertake an ongoing rehabilitation program. Gunlake would take the necessary precautions to prevent excessive development of weeds within the rehabilitated areas. They would implement a monitoring and maintenance program throughout and beyond the operation of the proposed Gunlake Quarry.
- Gunlake propose to undertake some replanting of riparian corridor habitat in the major creek lines on the Project Site. There will also be an area of Endangered Ecological Community (EEC) established on the western edge of the Gunlake property. Significant sections of existing EEC areas on the Project Site have been identified for fencing and management for conservation purposes.
- It is planned to produce further Community Newsletters as required throughout the approval process and during the operation of the Quarry.
- A meteorological station will be installed on the Project Site.

1.2 Traffic

- New road intersections will be constructed at the intersection of Brayton Road with the mine access road, Brayton Road and the By-pass road connecting to Red Hills Road and the Red Hills Road intersection with the Hume Highway.
- Brayton Road between the Quarry Access road and the entry to Johnniefields will be upgraded to a 7m wide total seal.
- Gunlake will construct a new By-pass road to connect Brayton Road to Red Hills Road.
- During Stage 2 of the Project Gunlake will improve the section of Red Hills Road to the Hume Highway including a total 7m seal.
- During Stage 1, product will only be transported from the site from 6am to 7pm Mondays to Fridays, and from 7am to 1pm on Saturdays. During Stage 2, trucks going south (ie. Along Brayton Road and through the edge of Marulan) will continue to operate during these hours. Trucks using the By-pass Road would operate from 2am Monday morning till 6pm Saturday afternoon.

1.3 Water, Soil and Agriculture

- Topsoil will be stripped and stockpiled from areas to be developed, including the quarry access road and By-pass road.
- Topsoils and subsoils will be stockpiled separately.
- A Conceptual Soil and Water Management Plan (SWMP) has been prepared. This Plan describes how soil and water will be managed during the establishment stage to the requirements of the Landcom Blue Book 2004. Following Project Approval a detailed version will be prepared which will consider any conditions imposed by the approval and contain detailed drawings of any engineering structures. Gunlake commits to implementing the finally agreed SWMP. Maintenance and monitoring programmes are included in the SWMP.
- A Conceptual Water Management Plan (WMP) has been proposed. This Plan flows logically from the SWMP and describes how stormwater will be managed during the operational stage and how a neutral or beneficial effect on water quality will be obtained. Following Project Approval a detailed version will be prepared which will consider any conditions imposed by the approval and contain detailed drawings of any engineering structures. Gunlake commits to implementing the finally agreed WMP. Maintenance and monitoring programmes are included in the WMP.
- Except as may be expressly provided by an Environment Protection Licence, the proponent would not discharge any dirty water from the quarry or ancillary operations.

1.4 Groundwater

- Measurements of water level will be continued in the monitoring network prior to the commencement of any quarry operations in order to build on the existing baseline database.
- An ongoing long-term program of regular water level and water quality monitoring will be carried out following commencement of mining operations. Measurements of water level will be collected using the existing installed automated water level data loggers and recorders in the representative monitoring bores.
- Sampling and testing of groundwater in the representative monitoring bores will be carried out on a three (3) monthly basis for 12 months following the commencement of mining operations then on a six (6) monthly basis. In this way, analysis of the results will establish any trends in water quality. Careful analysis and progressive assessment of the results may lead to the reduction of the number of analytes determined and the frequency of sampling.
- A representative network of monitoring bores will be maintained. Three new monitoring bores are proposed.
- If there is a scientifically demonstrated significant impact on any of the springs or registered bores surrounding the Project Site, a set of mitigation options has been developed for each.

1.5 Noise and Vibration

- All blasts will be monitored at the closest/potentially most affected residence (subject to the owners approval) in order to establish compliance with the nominated criteria and to progressively update the blast emissions site laws (ground vibration and airblast) in order to optimise future blast designs, based on actual site conditions.
- In accordance with the INP, Gunlake will implement the following management procedures where required:
 - o Noise monitoring on site and within the community.
 - o Prompt response to any community issues of concern.
 - o Refinement of on site noise mitigation measures and quarry operating procedures, where practical.
 - o Discussions with relevant property holders to assess concerns.
 - o Consideration of acoustical mitigation at the receivers.
 - o Consideration of negotiated agreements with property holders.
 - o Blasthole drilling operations being restricted to daytime only.
 - o All fixed and mobile plant being selected to have a sound power level (SWL) not exceeding those outlined in **Table 4B.52** of Section 4B.4 of Volume 1 of the EA

1.6 Air Quality

- Specific design and operational safeguards have been planned for implementation at the Project Site, including the following:
 - o Water spraying in excess of 2L/m²/application applied to internal haul roads;
 - o Temporary partial enclosure of stockpiles and processing area through installation of wind breaks (Hessian screen) along the western side of the processing area (subject to monitoring results);
 - o Stabilisation and/or revegetation of the overburden emplacement;
 - o Installation of water sprays at the tipping point to the apron feeder and at the primary crusher input;
 - o Instigation of water spraying at discharge points to stockpiles when winds in excess of 8m/s are recorded on the on-site weather station; and
 - o Minimising of exposed surfaces where possible.

- The dust deposition monitoring currently undertaken at the site will be continued.
- Monitoring of 24-hour concentrations of PM₁₀ will be undertaken at one location for an appropriate period, as agreed with the EPA. Monitoring will be conducted on a one-day-in-six cycle using a High Volume Air Sampler (HVAS). A suitable location would be at resident R1, the closest resident to the Site. The actual site chosen will depend on agreement with the land owner and site conditions. Monitoring for PM₁₀ will be conducted for a period of at least one year and at maximum quarry throughput.
- An on-site Weather Station will be established to monitor wind speed and wind direction. The weather station will be fitted with an alarm / automatic notification system for when wind speeds exceed 8m/s.
- Monitoring will be undertaken according to the EPA document *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales 2005*.

1.7 Cultural Heritage

- Salvage and relocation of all sites (GL1–5) will be completed prior to the commencement of works. The salvage will be completed in accordance with the NPWS Act 1974 (NSW).
- There are commitments detailed in Section 4B.6.4 of Volume 1 of the EA about discovery of cultural heritage items not identified prior to works commencing. These will be implemented by Gunlake.
- There are commitments detailed in Section 4B.6.4 of Volume 1 of the EA about discovery of skeletal remains not identified prior to works commencing. These will be implemented by Gunlake.

1.8 Flora and Fauna

- Gunlake will implement weed control in accordance with the Goulburn Mulwaree Council policy publications *“Management Plan for the Enforcement of Class 4 Noxious Weeds”* and *“Noxious Weed Management Program Guidelines”*.
- As wide a buffer as possible will be maintained between the top of the creek bank and the edge of the proposed quarry pit, haul road or By-pass roads (except where creek crossings are required).
- Habitat trees will be retained if possible. As some habitat trees are likely to require removal, this should be timed so as to avoid the breeding season of hollow-reliant threatened fauna.
- For any habitat trees being removed during tree-felling operations, an experienced wildlife handler will be in attendance in order to rescue injured or displaced wildlife.
- The introduced shrubs and small trees near the By-pass road route will be retained to maintain Speckled Warbler habitat.
- Appropriate sediment and erosion control measures will be implemented for the duration of construction and quarrying operations in all affected parts of the study area. In particular, steps will be taken (silt fences, cut-off drains, detention basins etc.) to prevent silt and sediment from the quarry or roads from entering the watercourses.
- At the old tip site near the proposed Joarimin Creek crossing, a number of ‘junk’ piles of concrete, tin, etc. provide excellent habitat for a range of reptile species and these will be retained.
- Livestock proof fencing will prevent grazing of areas undergoing regeneration.
- Offset areas will be set aside for regeneration of riparian corridors and establishment of new and protection of existing Endangered Ecological Communities on the Project Site.
- A vegetation and weed management strategy will be prepared. Wherever possible, all shrubs, including dead plants, will be left in situ until suitable replacement native shrubs are able to provide important shelter for the Speckled Warbler and other small birds.
- Rehabilitation efforts will incorporate areas identified as forming part of the Endangered Ecological Community (EEC) in the study area. Assisted natural regeneration of the vegetation is the preferred approach wherever practical. However, if artificial plantings are to be used, only native species currently occurring on the subject site or local species listed as occurring within the EEC according to the Final Determination (NSW Scientific Committee 2002a) will be used.
- Prior to clearing for construction of the By-pass road between Brayton Road and Joarimin Creek, targeted seasonal flora surveys will be carried out to determine whether the Endangered species

Genoplesium plumosum and *Leucochrysum albicans* var. *tricolor* occur within or immediately adjacent to the proposed road alignment. The likelihood of either species occurring in the alignment is considered to be very low (particularly for *Genoplesium plumosum*) but a targeted seasonal survey will allow for a more informed conclusion.

1.9 Bushfire

- **Table 4B.64** of Volume 1 of the EA identifies the series of commitments Gunlake has made to reduce likelihood of bushfire.

1.10 Socio-economic

- Gunlake will return a proportion of the Project Site to agricultural land.
- Gunlake will implement a policy that encourages employment of local district personnel, with arrangements for training and certification put in place to ensure suitable applicants can acquire the necessary skills.
- During the operational stage the Quarry will require the services of maintenance workers and truck drivers. It is anticipated that the bulk of these requirements can be serviced by locally or regionally based companies and individuals.

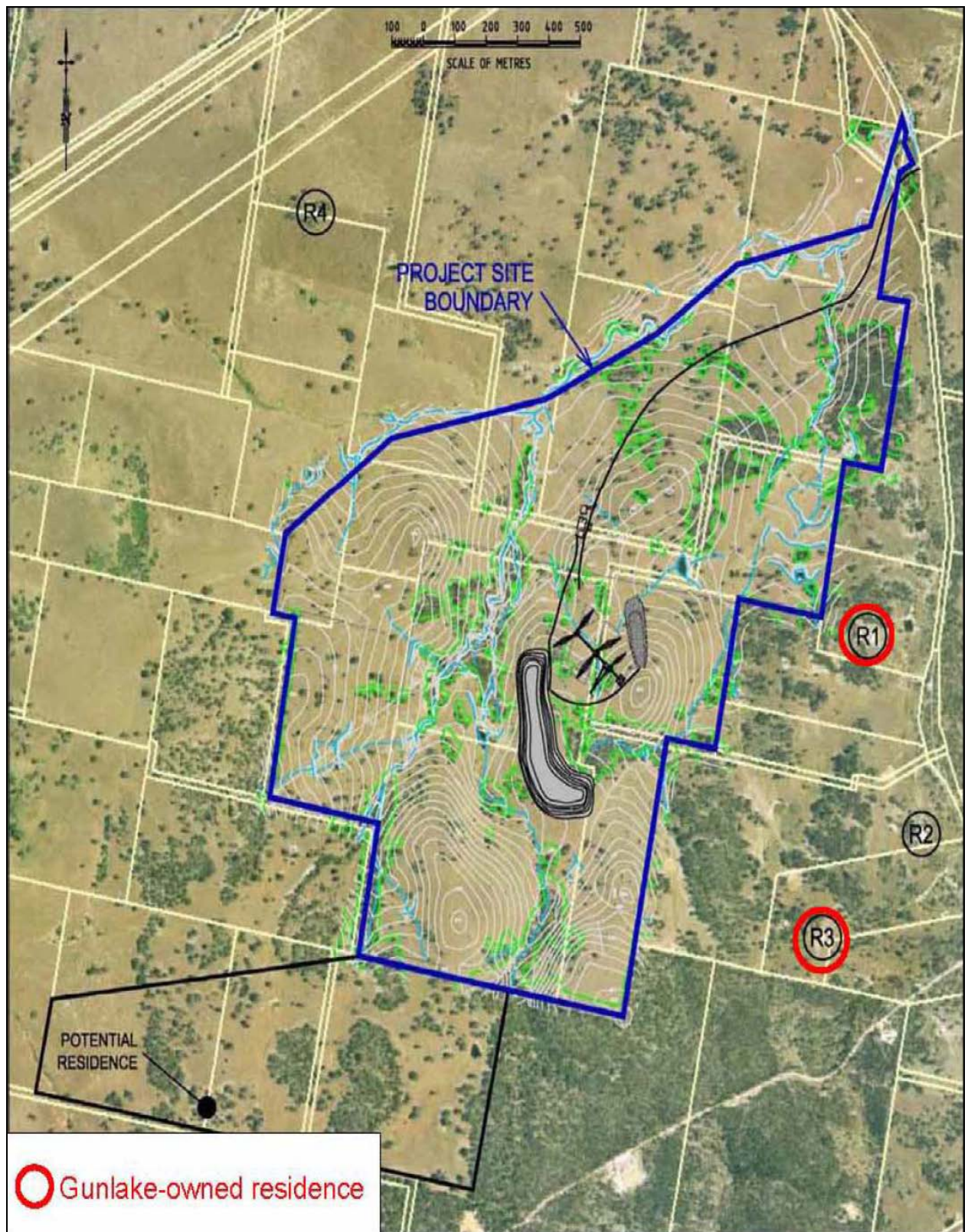
1.11 Road Upgrading

- The Laterals Review of Environmental Factors of the road upgrading component of the Gunlake Quarry Project made a number of recommendations that have been accepted by Gunlake and will form the basis of environmental management of the road upgrade activities.
- Vacant land is most likely to be used for the works compound and stockpile sites. Suitable sites will be selected by the preferred contractor at the time of construction. Site selection criteria are included in the Laterals REF and these will be applied at the appropriate time.
- The working hours for road modifications will be 7am to 6pm Monday to Friday (excluding Public holidays) and 8am to 1pm Saturdays. No work is proposed to be carried out on a Sunday or on Public holidays. Any extension of these working hours for extenuating circumstances may only be approved by the Quarry Manager and potentially affected landowners and residents will be advised by a letter box drop or site visit at least 2 days prior to the work occurring.
- Contractors will employ their specific construction techniques but will comply with the design requirements for the road and the need to employ environmental mitigation measures as identified in the REF and other laws normally applying within the state.
- To minimise or eliminate potential adverse impacts on air quality, the following controls and measures will be implemented:
 - o Areas of exposed soil will be limited to those areas being worked at any one time.
 - o All areas of exposed soil will be stabilised as soon as possible, and progressively stabilised as work areas are completed.
 - o All loads of soil or other potential dust generating materials transported by vehicles will be covered during transportation.
 - o The tailgates of all vehicles will be kept securely closed during transportation.
 - o Dust will be suppressed as necessary during construction by spraying exposed soil with water from a water cart which would be maintained on-site.
 - o Specific dust suppression measures will be implemented around the works compound site as necessary if it is located close to any residence.
 - o Dust producing activities will be avoided on high wind days.
 - o Soil stockpiles will be kept covered or planted with cover crops until used.
 - o Haul roads and site compounds will be topped with gravel or kept moist.
 - o Cleared timber or other materials will not be burned.
 - o Mud spilt or tracked by construction equipment onto the sealed section of road or other sealed roads will be cleaned up regularly.

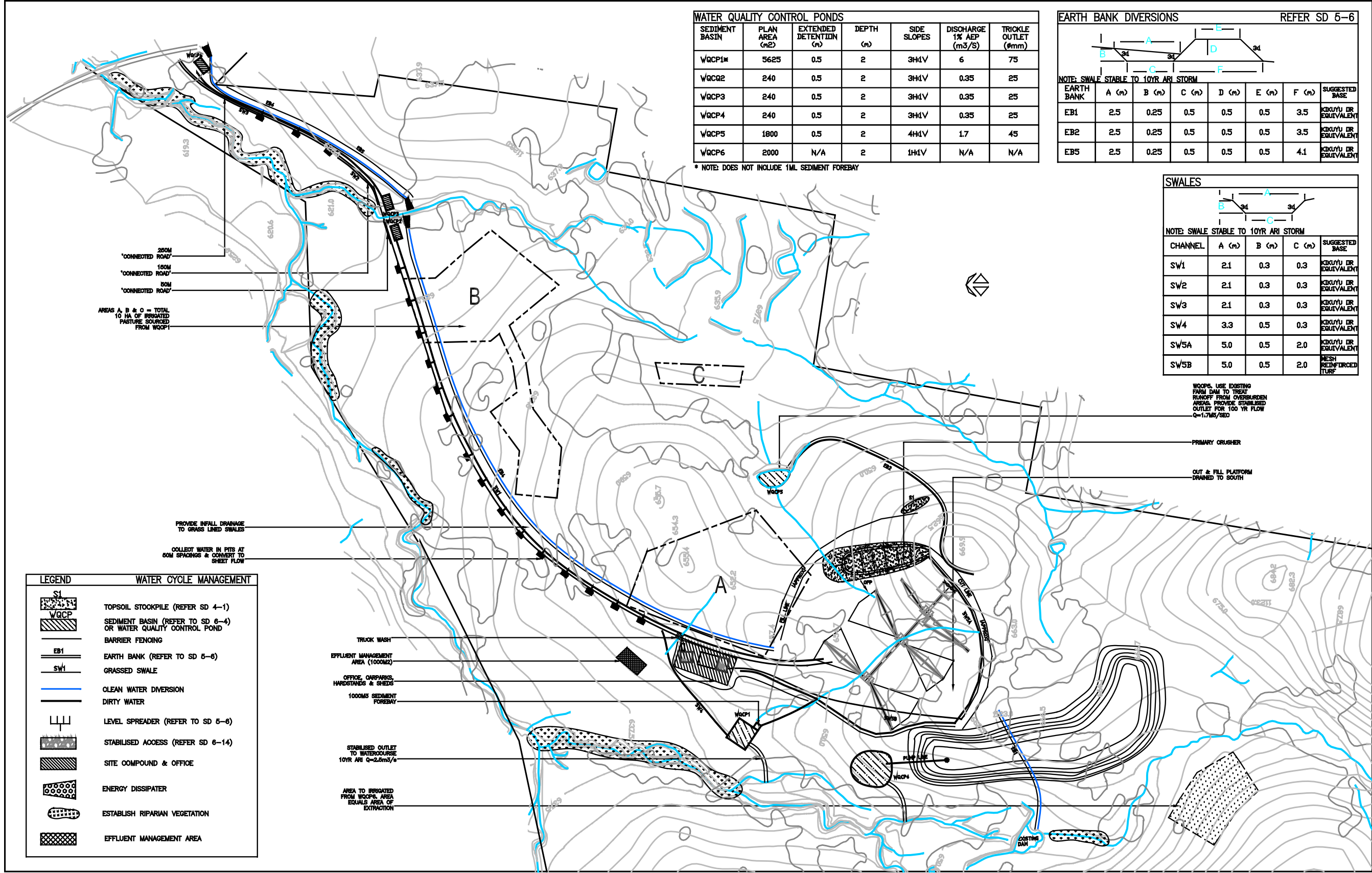
- o All plant and equipment will be maintained in accordance with the manufacturers' specifications to ensure they operate efficiently and do not produce excessive exhaust emissions.
- In order to minimise potential impacts on water, the following controls and measures will be implemented:
 - o The erosion and sediment control measures adopted in the Environmental Management Plan be implemented to ensure a neutral impact on surface and ground water quality.
 - o Where stream bed scour is currently occurring at culvert outlets, the need for scour protection will be investigated and installed if required.
 - o Plant and equipment will be inspected regularly to ensure there are no leakages of fuel, oil or hydraulic fluid.
 - o An environmental emergency plan for pollutant spillages will form part of the erosion and sediment controls in the Environmental Management Plan.
 - o An appropriate spill containment kit will be kept on site at all times.
- The following controls and measures will be implemented to ensure that construction noise and vibration are kept to the minimum:
 - o Work compounds, parking areas, equipment and material stockpiles will be located as far away from dwellings as possible.
 - o If the works compound is located near a residence, strategies will be implemented in consultation with the residents to minimise construction noise and vibration.
 - o The residents of the nearby dwellings will be advised of any potential high noise or vibration producing activities at least one week prior to that activity occurring, and a noise and vibration management plan should be devised in consultation with them if they are concerned.
 - o The residents will be notified in advance of any proposed work outside of normal working hours that is likely to be noisy or to produce high vibration levels.
 - o A procedure for dealing with complaints will be developed and specified in the Environmental Management Plan for the road upgrade works.
 - o Vibration from construction will be kept to the minimum practically achievable.
 - o If a complaint is received, adjustments to work practices will be undertaken as required to try to eliminate the source of the excessive noise or vibration.
- To minimise or eliminate potential adverse impacts on flora and fauna and to ensure that the road upgrading project does not have a negative impact on biodiversity the following controls and measures will be implemented:
 - o Soil disturbance shall not be more than is required to undertake the work. Vehicle, plant and stockpile impacts will be restricted to areas already devoid of vegetation.
 - o An Environmental Management Plan (EMP) that incorporates erosion and sediment control measures for the site will be prepared prior to soil being disturbed.
 - o Disturbed banks and batters will be rehabilitated by the addition of topsoil and sowing and maintenance of suitable species as soon as is practical to avoid the establishment of weed species in accordance with an Erosion and Sediment Control Plan.
 - o Vegetation removal will be undertaken in a way that minimises impact to retained vegetation.
 - o Where possible dead hollow wood will be retained or added as terrestrial habitat to the road reserve at a density no greater than one to two logs per ten metres.
 - o Works and stockpile compounds will be in areas already cleared of native vegetation, such as the construction zone or agricultural paddocks. They will be established where native vegetation disturbance is minimal or weeds dominate, and requiring no clearing of native vegetation. No trees or large shrubs will be removed for the establishment of the works compound or stockpile sites if they are located outside the construction zone.
 - o Topsoil that is stripped from the construction areas will be stockpiled and spread over

- disturbed areas prior to seeding or planting of rehabilitation grasses and trees.
- o Weeds will be removed and taken to an approved waste management facility.
- o The area to be disturbed for construction will be kept to the minimum required for safe and efficient activity.
- o Tree felling will be undertaken so that minimal damage occurs to trees intended for retention.
- o Excess timber logs may be made available to local residents for fire wood, while the rest of the vegetation (including stumps) will either be chipped on site using a mobile chipper or fractured and left for fauna use.
- o Chipped native vegetation will be used where available to protect exposed areas and excess sold as landscape supplies.
- o Cleared vegetation or other materials will not be burned on site.
- o Areas of the road reserve disturbed by works will be rehabilitated using locally occurring native plants.
- A Waste Management Plan will be incorporated into the road upgrading Environmental Management Plan. The Waste Management Plan will, if necessary, address transportation and disposal arrangements for waste produced from the site.
- The following waste controls and measures will be implemented:
 - o A Resource and Waste Management Plan (RWMP) would be prepared in accordance with the Resource Management Hierarchy established under the *Waste Avoidance & Resource Recovery Act 2001*.
 - o Waste produced on the road upgrade works will be minimised, reused or recycled wherever possible.
 - o Unavoidable wastes would be disposed of in an appropriate manner at a licensed waste disposal facility, as addressed in the Waste Management Plan.
 - o Waste material would be classified in accordance with the Department of Environment and Climate Change's Environmental Guidelines: "*Assessment, Classification and Management of Liquid and Non-Liquid Wastes*".
 - o Waste oil will be sent to approved recyclers.
 - o Topsoil will be stockpiled and used in the stabilisation and rehabilitation of the works site.
 - o Removed vegetation (including stumps) will be either chipped on site using a mobile chipper or left for fauna use. Any chipped material will be used on site for stabilisation and rehabilitation works, or if too great a volume is produced, sold to landscape suppliers or made available to local residents for garden use.
 - o Portable, self-contained toilet and washroom facilities will be provided at the work site and should be regularly emptied and serviced by the contractor providing them.
 - o Putrescible and other waste not able to be recycled will be collected regularly and disposed of at a licensed landfill or other disposal site in the area.
 - o Cleared vegetation or other materials will not be burned on site.
 - o Secure rubbish bins with heavy lids will be provided within the site compound. These will be regularly emptied.
 - o The work site will be left in a tidy and rubbish free state at the end of each working shift and upon completion of the works.
 - o Contaminated materials will be disposed of at a licensed disposal site in accordance with the appropriate EPA licences and approvals.

APPENDIX 4 NOISE ASSESSMENT LOCATIONS

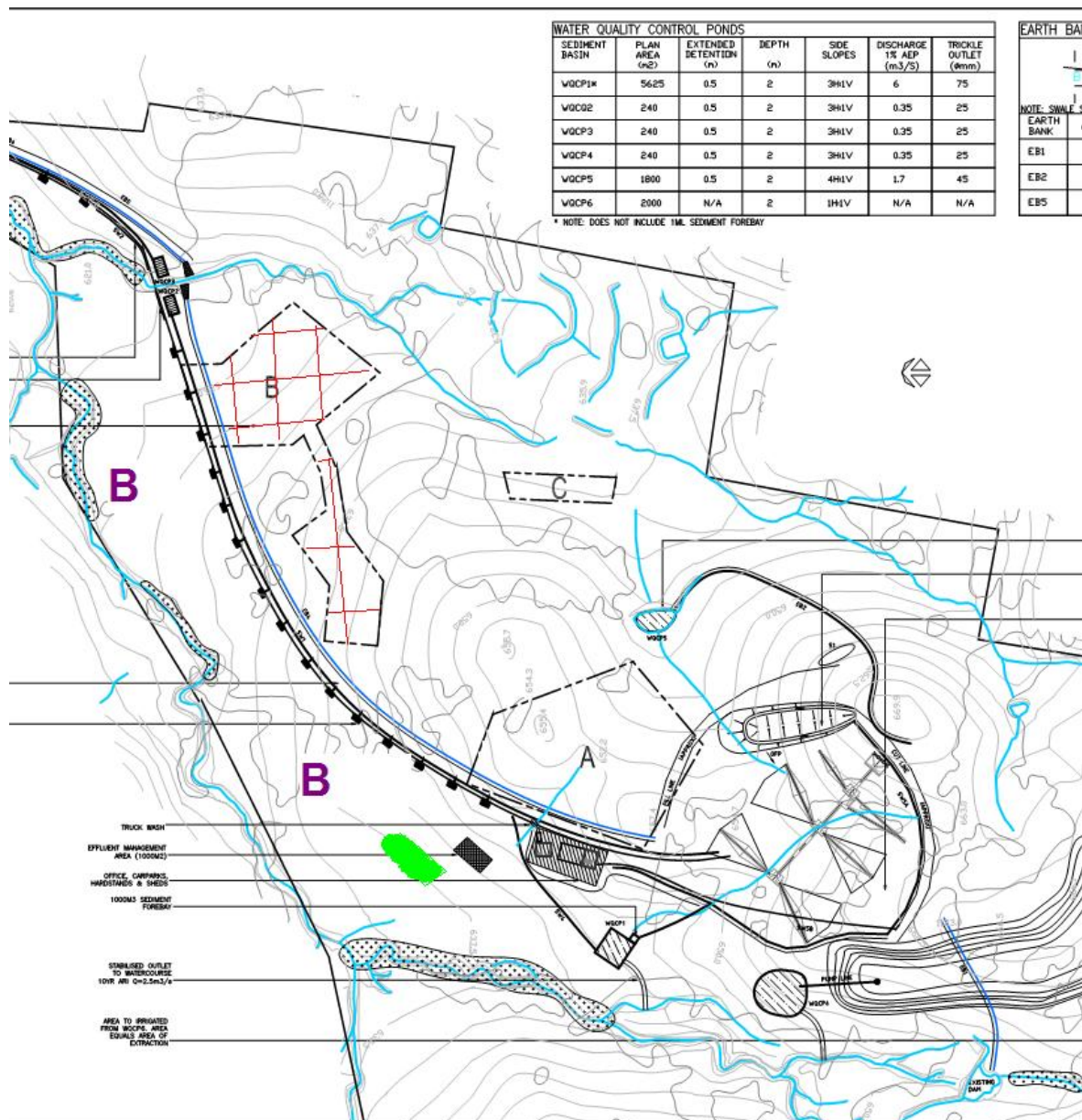


APPENDIX 5
WATER CYCLE MANAGEMENT



The Water Cycle Management Plan is amended as follows:

- red hatching – Irrigation Area B is not approved;
- **B** – alternative areas recommended for investigation as new irrigation area B – refer to condition 19 of Schedule 4; and
- area shaded in green – recommended location (approximate) of effluent management area.



APPENDIX 6 BIODIVERSITY OFFSET STRATEGY

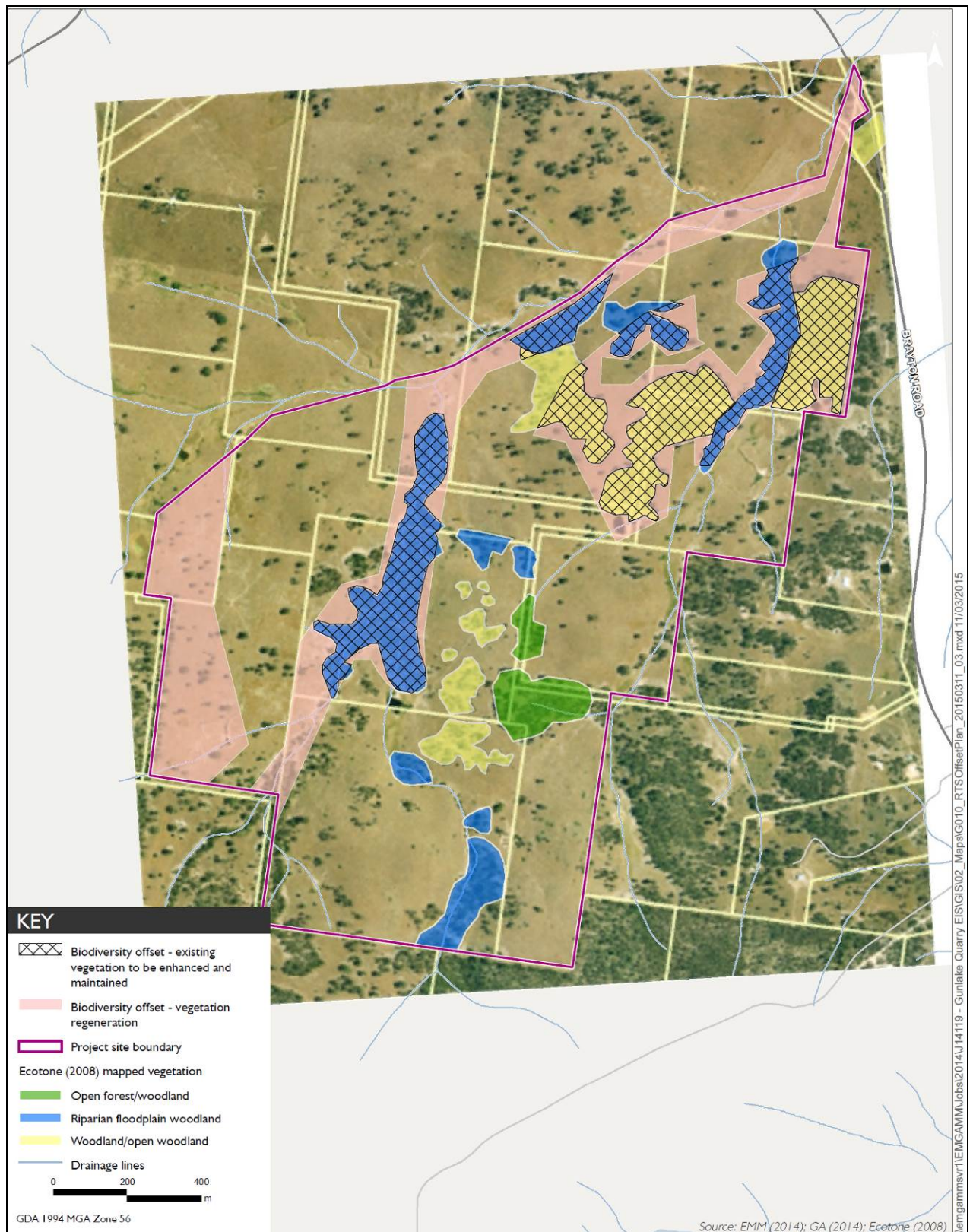


FIGURE 4: HUMEHWY/RED HILLS RD INTERSECTION



