Appendix C

Gunlake Quarry Environmental Management System

Gunlake Quarry

Environmental Management Strategy

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Table of Contents

1. Introduction

1.1 Purpose

This Environmental Management Strategy (EMS) describes the management and control of environmental issues at Gunlake Quarry. This EMS is issued with the authority of the Gunlake Quarries Director responsible for the Gunlake Quarry Project. All changes to the EMS will be reviewed and authorised by the Director.

The intention of the EMS is to provide a road map on the requirements of Gunlake Quarries in managing environmental aspects at the Gunlake Quarry Project. This EMS has been updated as a result of completion of the Stage 1 road works and transitioning into the Stage 2 development as well as three separate modifications to the Project Approval. This EMS will be further reviewed in light of any additional approvals obtained for the Quarry.

1.2 Objectives of the Strategy

Commitment to high quality environmental management of the site by Gunlake Quarries management is demonstrated by:

- Effective communication of environmental issues and responsibilities to the workforce through mechanisms such as induction, display on Notice Boards and at Quarry meetings,
- Provision of adequate resources to implement and maintain good environmental management, and,
- Establishment of measurable objectives and regular reviews to ensure the suitability and effectiveness of environmental management activities.

All Quarry personnel involved with environmental aspects will be fully familiar with this EMS. The key environmental objectives of Gunlake Quarries are:

- To satisfy all statutory requirements,
- To be recognised as a company that operates the Gunlake Quarry Project in an environmentally responsible manner with due consideration for its role and responsibilities in the community, and,
- To ensure the provision of a consistent and uniform approach to environmental management, including high standards of environmental protection.

This EMS provides a road map of the systems and practices to be implemented to help achieve these objectives.

1.3 Specific Management Plans which form the EMS

The consolidated Project Approval for Gunlake Quarry, which includes modifications of March 2013, October 2014 and April 2015, identifies the following environmental management plans which form part of this EMS:

- Air Quality Management Plan;
- Noise and Blast Management Plan;
- Traffic Management Plan;
- Aboriginal Heritage Management Plan;
- Water Management Plan, incorporating surface, groundwater, pasture irrigation and overall site water balance; and,
- Rehabilitation and Biodiversity Offset Management Plan.

These individual management plans include provisions for environmental monitoring, reporting and communication strategies relevant to each specific plan. This EMS provides an overarching framework under which these plans operate on site. Gunlake also has several separate policies and procedure documents covering Work Health and Safety, Emergency and Hazards Management and a Transport Code of Conduct which have been incorporated into these plans where relevant.

As Gunlake has moved into Stage 2, the original Construction Management Plan and Erosion and Sedimentation Control Plan which covered the construction phase of the project including the Bypass Road are no longer relevant to the ongoing project but the key principles have been incorporated into other plans as necessary. Similarly, the original Landscape Management Plan has been superseded by the current Rehabilitation and Biodiversity Offset Management Plan.

This EMS also reflects the change in key environmental issues relating to the ongoing quarry operation. Now that the quarry is well established and community expectations have been confirmed through the establishment of the Community Consultative Committee (CCC), the primary issues of concern relate to traffic, noise and dust management. In addition to these issues, ongoing liaison with government stakeholders has identified biodiversity and Aboriginal heritage issues as being important. These concerns have been reflected in the component management plans described in Section 3 of this EMS.

1.4 Roles and Responsibilities

Key management personnel responsible for the implementation of this EMS are listed in the following table.

Table 1.1 – Roles and Responsibilities

Personnel	Responsibility
Ed O'Neil	Overall management of the quarry operation including environmental management
Bob Argent/Trevor Dennis	Implementation of environmental works
Kirsty Nielsen	Collection of environmental monitoring data and management

1.5 Legislative Requirements

The Gunlake Quarry operates under the following legislation:

- Environmental Planning and Assessment Act 1979. Project Approval was granted in accordance with Part 3A of this Act and it will regulate all activities associated with development and operation of the Gunlake Quarry Project. The project has been subject to 3 separate modifications and is currently the subject of a State Significant Development application and Environmental Impact Statement covering the life of quarry development. This process will result in additional approval conditions and will trigger an update to this EMS.

- Protection of the Environment Operations Act 1997 (POEO Act) - The POEO Act is administered by the EPA and requires licensing for environmental protection, including waste generation and disposal, water, air and noise pollution. Gunlake Quarry has been issued with an Environment Protection Licence under Section 47 of this Act.

- Protection of the Environment Legislation Amendment Act 2011 – The POELA Act requires the preparation and implementation of a pollution incident response management plan. This has been prepared and implemented at Gunlake Quarry.

- Roads Act 1993 - An approval under Section 75 of this Act from the Roads and Maritime Service is required for works associated with State roads. In addition, an approval from Goulburn Mulwaree Council has been obtained under Section 133 of this same Act to create, modify or improve Council managed roads. These approvals relate to the Bypass Road and intersection upgrades.

- Water Act 1912 and Water Management Act 2000. These Acts regulate the extraction of surface and ground water.

- NSW National Parks and Wildlife Services Act 1974. A Section 90 approval was obtained from the Office of Environment and Heritage (OEH) for the salvage and relocation of the 5 identified Aboriginal Heritage sites covering the initial quarry development. Future approvals and ongoing liaison with OEH will be required as potential Aboriginal sites have been identified within the proposed future quarry development area that will be subject of the SSD project.

- NSW Threatened Species Conservation Act 1995. There are known rare and endangered species on site as well as defined Ecological Endangered Communities. Gunlake will continue to liaise with OEH regarding the Biodiversity Offsets and ongoing vegetation management on site in conjunction with the Department of Planning and Environment.
- Commonwealth Environment Protection and Biodiversity Conservation Act 1999 - The EPBC Act came into effect on 16 July 2000 and is administered by the Commonwealth Department of the Sustainability, Environment, Water, Population and Communities (SEWPaC). Part 3 of the EPBC Act states that an action that has, will

have or is likely to have a significant impact on a Matter of National Environmental Significance (MNES), may not be undertaken without prior approval of the Minister for SEWPaC. There are no MNES relevant to the operation of Gunlake Quarry however, should any matters be determined as relevant to the ongoing operations a Referral will be submitted to SEWPaC for consideration. The EPBC Act is however relevant to the definition of some of the vegetation communities on site which have ecological significance. This forms part of the Biodiversity Offset Management Plan.

Gunlake Quarry falls under State Environmental Planning Policy (Major Projects) 2005. Consequently, Environmental Planning Instruments, other than State Environmental Planning Policies (SEPPs) do not apply to the quarry operation and any future development approvals. The SEPPs applicable to Gunlake Quarry are:

SEPP Major Projects 2005. Defines the environmental assessment and planning approval processes and subsequent management for the Project.

SEPP (Mining Petroleum Production and Extractive Industries) 2007. This SEPP consolidated many existing planning provisions related to mining, petroleum and extractive industries. This new SEPP has incorporated the traffic management requirements of the superseded SEPP 11 Traffic Generating Developments.

SEPP 33 Hazardous and Offensive Development. During the project approval process an assessment was undertaken in accordance with this SEPP and it determined that the Gunlake Quarry Project is neither hazardous nor offensive.

SEPP 44 Koala Habitat Protection. Studies have shown that there is no Koala habitat likely to be impacted by the Gunlake Quarry Project.

SEPP 55 Remediation of Land. Assessment has demonstrated that there is unlikely to be contaminated land associated with the Gunlake Quarry Project.

There are a number of Regional Environmental Plans (REPs) and Local Environmental Plans (LEPs), that, although they do not strictly apply to Major Developments such as Gunlake Quarry, they form a basis for determining operational and environmental management objectives. The following paragraphs identify some of these Environmental Planning Instruments.

Regional Environmental Plan (REP) No. 1 2007. Drinking Water Catchments. The objectives of this REP include ensuring that developments within Sydney's water catchment area do not have a detrimental impact on the quality of drinking water supply. Gunlake Quarry is located within Warragamba Catchment area.

Goulburn Mulwaree Development Control Plan (DCP) 2009. This DCO controls development within the Goulburn Mulwaree Shire LGA. Local planning matters are important to Gunlake Quarry and a Community Consultative Community includes a Council representative. There are a number of development strategies that describe regional development objectives, Mulwaree Settlement Strategy and the Sydney - Canberra Corridor Regional Strategy.

1.6 Statutory Environmental Approvals

The Quarry is controlled by two main statutory environmental approvals;

- The Project Approval (as modified); and
- The EPA Environment Protection Licence

1.6.1 Project Approval

The Project Approval was issued in September 2008 and subsequently modified in March 2013, October 2014 and April 2015, and contains the overriding environmental requirements for the project. The Project Approval incorporates specific environmental performance criteria and objectives for a range of matters including, air quality, noise emissions, surface and groundwater, and ecology and rehabilitation. Is also defines operating hours, transport routes and permitted traffic levels.

In addition, the Project Approval required the preparation of a series of Programs and Plans that together form the Environmental Management Strategy for the Quarry, which are described in Section 3.

The development and implementation of this Strategy is required under Condition 1, Schedule 5 of the Project Approval. Details of the consent conditions specifically relating to the Strategy and where they area addressed within the document are provided in Table 1.2

Table 1.2 – Project Approval Conditions: Environmental Management Strategy

Condition	Requirement		Where Addressed
Schedule 5:	Environmental Management, Monitoring, Reporting and Auditing		
1	Environmental Management Strategy 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.		Noted
	(a)	Provide the strategic framework for environmental management of the project;	Chapter 2
	(b)	identify the statutory requirements that apply to the project;	Section 1.5
	(c)	Describe how the environmental performance of the project would be monitored and managed;	Section 3.2
	(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;	Chapter 4 Section 4.2 Section 4.4.3

Condition	Requirement		Where Addressed
Schedule 5:	Environmental Management, Monitoring, Reporting and Auditing		
		❒ Respond to any non-compliance; ❒ Manage cumulative impacts; and ❒ Respond to emergencies;	Section 5.3 Section 5.1 Section 5.9
	(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.	Component Management Plans Figure 2 Appendix A

1.6.2 Environment Protection Licence

Gunlake Quarries hold Environment Protection Licence (EPL) 13012 issued under the requirements of the Protection of the Environment Operation Act 1997 (POEA). Gunlake must hold an EPL in order to operate the quarry and must operate in accordance with the conditions of the EPL.

The EPL expands on the conditions of the Project Approval and details the environmental criteria for the Project, defines monitoring locations and methodology. The EPL requires an annual compliance report that includes:

- A Monitoring and Complaints Summary
- A signed Statement of Compliance with the conditions of the EPL; and
- An explanation of any non-compliances.

2. Strategic Framework

2.1 Management Structure

Gunlake has established the following Project Management Structure to ensure that the objectives of this EMS are met:

- The Gunlake Quarries Director is responsible for all matters relating to Environmental Management at the Gunlake Quarry Project.
- The Quarry Manager has the day to day responsibility of ensuring that all site activities are undertaken in accordance with this EMS.
- The Environmental Consultant appointed by the Gunlake Quarries Director is responsible for giving advice and recommendations to the Director and undertaking internal auditing/inspections and consulting role as required.

Every three years, as defined by the Project Approval Schedule 5, Condition 7, the Quarry Manager will organise a suitably qualified Consultancy to undertake an independent environmental audit and subsequent report.

2.1.1 Responsibilities and Authorities

Gunlake Quarries Director

The Director is responsible for:

- Reviewing and authorising the EMS,
- Assigning environment responsibilities to the Quarry Manager,
- Continually monitoring environmental performance to ensure compatibility and continued effectiveness with the objectives,
- Ensuring effective communications with Government Agencies and the local community. This includes establishing and ensuring the facilitation of the Community Consultative Committee as required in Project Approval Schedule 5, Condition 8, and,
- Providing sufficient resources to ensure the EMS practices are implemented.

The Quarry Manager

The Quarry Manager is responsible for:

- Ensuring all quarry personnel are suitably trained, and possess the necessary skills to undertake their designated activities with due consideration of environmental considerations, and,
- Ensuring day to day operations are undertaken in accordance with this EMS and its supporting plans, documents, policies, strategies and procedures.

The Environmental Consultant

The Environmental Consultant is responsible for:

- Liasing with the Director and the Quarry Manager, in order to be aware of the effectiveness of monitoring and implementation of environmental controls,
- Attending meetings called to discuss environment aspects,
- Identifying and documenting any improvement opportunities for the system,
- Assisting with the updating of the EMS,
- Performing environment inspections as requested by the Gunlake Quarries Director, and,
- Identifying and reporting environmental non-conformance and notifying the Gunlake Quarries Director of the suspected non-conformance.

2.2 Managing Environmental Aspects

Gunlake manage the environmental aspects of the operations by ensuring that appropriate management plans have been prepared in accordance with statutory requirements and that these plans are effectively implemented.

2.3 Management Plans

Environmental management plans have been prepared and updated as required for each aspect of environmental management, namely air quality, noise and vibration, surface and groundwater, heritage, traffic, ecology and rehabilitation. The Annual Review prepared for the Quarry provides a summary of environmental monitoring data and outcomes of the management process, and is provided to the Department of Planning and Environment (DPE) and made available on the Gunlake website.

The Annual Review describes the overall management systems for the Quarry and specifically reports on the progress made in implementing any specific initiatives noted in the various Environmental Management Plans, previous Annual Reviews or matters raised by government agencies. The Annual Review also sets out the program for the coming reporting period, results of environmental monitoring undertaken and assesses the environmental performance of the operation.

2.4 Environmental Audits

Two Independent Environmental Audits have been undertaken to date in accordance with Schedule 5, Condition 7 of the Project Approval, with the first being undertaken in 2010, and the second in 2013. The Approval requires that subsequent Independent Environmental Audits of the project are to be carried out every 3 years, unless the Secretary directs otherwise. The Independent Environmental Audits are undertaken by an external qualified consultant who is approved by the DPE.

2.5 Industry Initiative and Benchmarks

The Project Approval requires Gunlake to seek to implement current best practice management. This EMS requires key Gunlake management personal to remain fully informed of industry trends in environmental issues and where necessary, these will be incorporated into the EMS and relevant component Environmental Management Plans. Gunlake is actively involved in industry forums, conferences, and organisations and maintains an understanding of other hardrock quarry operations in NSW.

2.6 Environmental Training

The Gunlake Quarries Director ensures that resources are available to implement this EMS and to train employees and contractors.

The EMS requires that all employees and contractors at Gunlake receive an appropriate level of environmental awareness training. This training is tailored to suite the Quarry and the specific jobs being undertaken.

General surface workforce are trained in specific site procedures and management of pollution control systems while all employees are made aware of the Gunlake's environmental obligations and statutory requirements.

3. Environmental Issues Management

3.1 Project Overview

Gunlake Quarry is a hard rock quarry operated by Gunlake Quarries Pty Ltd (Gunlake), which provides aggregates for Gunlake's operations in Sydney as well as other markets in the region. The Quarry produces material suitable for use in a full range of quarry products including concrete and sealing aggregates, rail ballast and road base, and provides these markets with secure, long-term supplies of aggregates and manufactured sand. All product is transported from site by road.

The quarry development was staged in order to accommodate the construction of various road improvements and construction activities. The construction phase used a large proportion of the initial quarry product output. The Stage 2 quarry operation involved an increase in production as a result of the completion of the required road improvements. In April 2015, the DPE approved Modification 2 to the Project Approval, which allows for:

- Increased saleable product from 500 Ktpa to 750 Ktpa;
- Increased truck movements to an average of 82 laden truck movements per day;
- Altered approved operating hours to allow for tertiary crusher and associated equipment to operate continuously from 6:00am Monday to 7:00pm Saturday;
- Extension of the Quarry footprint to the south and southeast; and
- Increase in the size of the overburden emplacement area.

This latest modification defines the current approved quarry operation and is the primary subject of this EMS. Further approvals are planned to enable the remaining resource to be extracted and to make provisions for additional overburden emplacements. Once approved, this EMS will be updated accordingly.

3.2 Environmental Management System Components

The key environmental issues for the Gunlake Quarry Project are:

- Traffic Management,
- Erosion and Sedimentation Management,
- Stormwater and Waste Water Discharge,
- Groundwater Management,
- Air Quality and Dust Control,
- Noise Control,
- Blasting;
- Flora and Fauna
- Archaeological and Heritage
- Waste Management and Minimisation,
- Community, and,
- Site Inductions and Training

These key environmental issues have been the subject of separate and specific environmental management plans covering both the initial Stage 1 project and the current

Stage 2 operation. Although the requirements of the initial construction based environmental management plans have been completed, the principles of managing these issues are still relevant to the ongoing operation, as outlined in the following sections.

3.2.1 Erosion and Sedimentation Management

Erosion control structures have been installed around the site with the principle aim of containing sediment at its source in line with current best practice. All runoff is contained in the main pollution control ponds. The erosion control measures are to increase batter and bench stability prior to establishment of permanent rehabilitation measures. Erosion control structures are inspected regularly, particularly after heavy rainfall, and upgraded or repaired where necessary.

Erosion and sedimentation management for the Gunlake Quarry Project was initially undertaken in accordance with the Soil and Water Management Plan (SWMP) prepared by SEEC Morse McVey. This plan was updated as part of the Water Management Plan and will continue to be revised during the life of the quarry.

3.2.2 Air Quality and Dust Management

Gunlake Quarry operates in accordance with an Air Quality Management Plan which commits the operation to:

- Employ all necessary dust controls on fixed and mobile plant as deemed necessary;
- Verify achievement of the stated criteria through effective monitoring; and
- Identify areas of non-compliance and effective measures to achieve continual improvement in line with current best practice.

The AQMP details the adopted assessment criteria for the project contained in the Project Approval and Environment Protection Licence and specific measures to be undertaken to achieve these criteria. Monitoring locations, procedures, reporting protocol and a process for identifying and correcting non-compliance are also documented.

3.2.3 Noise and Blasting Management

An updated Noise and Blasting Management Plan (NBMP) is currently in operation at the quarry. This plan provides updated procedures and management initiatives as a result of monitoring data since the quarry commenced. The current plan also takes into account the move into Stage 2 following the completion of the road construction works. The current NBMP commits Gunlake Quarry to:

- Implement best practice management to minimise the operational and road transportation noise of the project;
- Minimise the noise impacts from the Quarry;
- Carry out regular monitoring to determine whether the Quarry is complying with the relevant conditions of the Project Approval;
- Regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of the Project Approval; and

- Ensure all reasonable and feasible measures are employed to reduce noise from the tertiary crusher at night.

The NBMP details the adopted assessment criteria for the project contained in the Project Approval and Environment Protection Licence and specific measures to be undertaken to achieve these criteria. Monitoring locations, procedures, reporting protocol and a process for identifying and correcting non-compliance are also documented.

3.2.4 Water Management Plan

The original Water Management Plan was prepared by SEEC Morse McVey in 2008 while an updated water impact assessment was undertaken by Cardno in 2014. The latest assessment includes an updated Water Balance, Water Cycle Management Plan, Soil and Water Management Plan and Groundwater Management Plan. An assessment of water quality impacts was also contained in the 2014 Environmental Assessment associated with Modification 2. Gunlake is in the process of amalgamating all the existing water based management plans into a single Water Management Plan. This updated Water Management Plan commits Gunlake to:

- Comply with Section 120 of the Protection of the Environment Operations Act 1997 in relation to any discharges from the site should this be considered necessary;
- 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 event.
- Ensure that the quarry has sufficient water for all stages of the project, and if necessary, adjust the scale of quarrying operations to match its water supply.
- Ensure that operation only irrigates excess water from Water Quality Control Ponds 1 and 6 in the irrigation areas identified in the Water Cycle Management Plan.
- Ensure that the design and implementation of erosion and sediment controls are integral components of any new areas of disturbance associated with the ongoing quarry operation.
- Ensure that the Site Water Balance is verified as part of ongoing operations.
- Ensure that adequate surface and groundwater monitoring is conducted in order to verify the impact predictions made in the various environmental assessments associated with the quarry operation.

An overriding consideration in the ongoing management of water on site is that the site has been designed as nil discharge. Water management consists predominantly of containing and recycling of water on site within existing water storages. The existing Cardno Water Balance model requires ongoing monitoring and verification in order to achieve the objectives of maximising water reuse while minimising the need for irrigation of excess water. Changes to the Water Management Plan will occur in light of this ongoing monitoring and verification process.

3.2.5 Traffic Management

An updated Traffic Management Plan (TMP) has been prepared in light of the transition into Stage 2 product transportation as a result of the completion of the Stage 1 roadwork

upgrades. Gunlake has completed the construction of a purpose built Bypass Road that connects Brayton Road to Red Hills Road as well as the upgrading of several intersections in order to alleviate transport impacts on the local road network. The current TMP commits Gunlake to:

- minimise the potential for traffic conflict resulting from product transport;
- minimise the potential noise impacts associated with product transport;
- promotion of employee and community road safety awareness to ensure a road environment where all road users feel safe from traffic movements associated with the ongoing operations of the site;
- compliance with Project Approval conditions and undertakings;
- compliance with traffic management policies in accordance with requirements of Roads and Maritime Services (RMS) and Goulburn Mulwaree Council;
- compliance with occupational health and safety standards in accordance with the Work Health & Safety Act 2011 (the WHS Act); and
- establish, maintain and ensure compliance with a Driver Code of Conduct.

Traffic and transport is a key environmental issue for the ongoing operation and therefore Gunlake has is committed to ensuring that the objectives of the TMP are implemented, monitored and communicated to community stakeholders.

3.2.6 Flora and Fauna Management

Gunlake Quarry has made a commitment to manage the existing vegetation resources of the property in the following manner:

- Minimise land disturbance to only that necessary to operate the quarry.
- Progressively rehabilitate the out of pit overburden emplacement.
- Dedicate vegetation offset areas to compensate for the temporary vegetation clearing.
- Enhance offset areas on site to improve habitat value, riparian zones and vegetation community function.
- Maintain agricultural resources in areas suitable for ongoing agricultural activities during and after quarry activities are completed.

The primary mechanism used to compensate for the initial loss of disturbed woodland has been the dedication of biodiversity offset areas on site. This mechanism may be modified in future and therefore Gunlake will continue to actively engage with government in order to adequately assess the existing biodiversity values on site, provide suitable offsetting arrangements and manage these as part of the ongoing operation. The current Rehabilitation and Biodiversity Offset Management Plan will be reviewed in light of the outcomes of the future SSD project approval.

3.2.7 Aboriginal Heritage Management

The original Aboriginal Heritage Management Plan (AHMP) prepared in 2008 covered the initial quarry development and Bypass Road construction and included the salvage and relocation of 5 identified Archaeological sites. This work was subsequently completed prior

to the development of the quarry and Bypass Road. A further Aboriginal Cultural Heritage Survey was undertaken as part of the Modification 2 which extended the quarry and overburden emplacement. This assessment was further updated as part of the Response to Submissions Report. Although this survey did not detect any additional archaeological sites which would be impacted by the extended quarry operation, the resultant project approval required that the original AHMP be updated. In addition, there has been more recent surveys associated with the life of quarry SSD project which is the subject of a future EIS.

Gunlake seeks to meet all its statutory obligations in relation to cultural heritage and to maintain ongoing consultation activities with the local registered Aboriginal community stakeholders. The key aim is to ensure that existing and future archaeological sites identified on site are effectively managed.

4. Stakeholder Communication

Effective communication with government agencies, the workforce and the community are important features of the overall Environmental Management Strategy for Gunlake Quarry and a key component of each Environmental Management Plan.

Project reporting requirements are defined in Conditions 3 and 4 of Schedule 5 in the Project Approval. Each separate management plan under this EMS discusses specific communication and reporting requirements. The follow sections summaries these.

4.1 Community Consultation

The primary form of communication with the community is through the Community Consultative Committee (CCC). The CCC includes a representative of the Goulburn Mulwaree Shire Council which represents the wider community. Information is regularly provided to the CCC including monitoring data and discussion of environmental issues relating to the ongoing quarry operation. Feedback from the CCC is then used as necessary to improve the management provisions of environmental aspects of the operation.

4.2 Community Complaints

Gunlake maintains a community complaints register that identifies actions required to resolve community issues. The main phone line is listed in the white pages, the property sign at the main entrance, as well the company website. The complaints register records the following details:

- Complainant name and contact details;
- Nature of the complaint (noise, dust, traffic etc);
- Time and date of the complaint; and
- Specifics of the complaint.

4.3 Government Liaison

Government authority consultation has formed an integral component of the original EA studies as well as the successive modifications. The consultation process has include the following stakeholders:

- Department of Planning and Environment;
- National Parks and Wildlife Service
- Office of Environment and Heritage;
- Goulburn Mulwaree Shire Council;
- NSW Water (Sydney Catchment Authority);
- NSW Department of Primary Industries and
- NSW Water (Office of Water).

The consultation process has included on site meetings and correspondence which has included input into to the various environmental management plans as required.

4.4 Public Access to Information

Gunlake provide updated environmental monitoring data on the company's web page as required by the Project Approval Condition 9, Schedule 5. Information provided includes dust monitoring data in accordance with the Environment Protection Licence.

4.4.1 Notification of Landowners

Should monitoring results identify an exceedence of any relevant impact assessment criteria detailed in this Plan, Gunlake will promptly notify the Secretary and the affected landowners and/ or tenants accordingly. As per Schedule 4, Condition 1, Gunlake would subsequently provide quarterly monitoring results to each of these parties until results show that the project is complying with the relevant criteria.

4.4.2 Independent Review

If an owner of privately-owned land considers the project to be exceeding the relevant impact assessment criteria detailed in this Plan, he or she may ask the Director-General in writing for an independent review of the impacts of the project on his/her land, as per Condition 2 of Schedule 4. If the Secretary advises that an independent review is warranted, within three months Gunlake will:

(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.

Gunlake will comply with the outcomes of any Independent Review.

4.4.3 Dispute Resolution

To date there have been no unresolved disputes against Gunlake Quarry. The primary mechanism for dispute resolution is the Community Complaints procedure. This involves documenting the nature of the complaint and actions taken to resolve the complaint as well as confirmation that the complaint has been resolved. As the quarry continues to operate, there may from time to time be issues raised by community members which are not readily resolved within the complaints register system.

Gunlake's approach to resolving more difficult disputes should they arise is to first gather the facts. This may include discussions with the relevant parties, environmental data or circumstances surrounding the issue. The second is to agree on a process of dispute resolution, which may involve additional investigations and seeking expert advice. Should the dispute still not be resolved and relates to the environmental compliance of the quarry, the matter will be raised with the Department of Planning and Environment or other relevant government agencies.

All disputes will be handled sensitively and where appropriate resolved in a confidential context in order to minimise the effect on the disputing party. The process will however be transparent so that the disputing party understands the process and resolution procedures.

5. Verification and Corrective Action

An essential component of this EMS is verification and implementation of corrective actions as required to achieve compliance with the requirements of the Project Approval and Environment Protection Licence.

5.1 Environmental Monitoring

Gunlake Quarry has established and documented procedures to monitor and measure on a regular basis the environmental impact of its operations. Records of all environmental monitoring and results are kept on site and made readily available. Environmental monitoring is used to check the performance of the operation with regulatory standards and planning initiatives.

The type, location and frequency of monitoring is determined largely by the statutory monitoring required under the Environment Protection Licence and Project Approval, however additional monitoring is undertaken as part of specific projects or as part of compliance auditing. Details of the environmental monitoring program are provided in component Environmental Management Plans. An important consideration in the environmental monitoring program is to manage cumulative impacts. This will be achieved by determining the contribution of the quarry operation within the ambient levels measured as well as maintaining the measured impacts to within the assessment criteria established for the operation.

5.2 Reporting Procedures

Gunlake collects a range of environmental data as required by the component Environmental Management Plans. This data is collated in the Annual Review which is provided to the Department of Planning and Environment each year. The Annual Review is also submitted to the Community Consultative Committee and relevant agencies.

The Annual Review must:

- 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;
- 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;
- identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
- identify any trends in the monitoring data over the life of the project;

- identify any discrepancies between the predicted and actual impacts of the project, and analyse the potential cause of any significant discrepancies; and
- describe what measures will be implemented over the current calendar year to improve the environmental performance of the project.

The Project Approval also requires Gunlake to report any exceedance of the goals/limits/performance criteria or an incident causing (or threatening to cause) material harm to the environment. This report has to be submitted with the Department of Planning and Environment within 7 days of the exceedances or incident.

5.3 Non-Conformance, Corrective Action and Adaptive Management

Responsibility for identifying non-conformances rests with a number of personnel on site to ensure that any non-conformances are identified as soon as possible. Primary responsibility rests with the Quarry Manager. All non-conformances are reported to the Quarry Manager in the first instance who then directs other key personnel as required.

Corrective actions are implemented as soon as practicable on identification of any non-conformances, and records of such are to be maintained. Corrective actions form part of the adaptive management process where any exceedance of the criteria and/or performance measures has occurred.

5.4 Preventative Action Procedures

Preventative action procedures operating at Gunlake Quarry include:

- Regular inspections of the site undertaken by the Quarry Manager and Environmental Consultant. These inspections are to include actions listed in individual Environmental Management Plans.
- Each management plan is to be reviewed each year at the time of the Annual Review.

5.5 Record Keeping

Records are kept of all environmental monitoring, audits and actions taken under the EMS. Records must be legible and stored and maintained so that they are readily retrievable and protected against damage, deterioration or loss.

5.6 Auditing Procedures

As required by the Project Approval, within 12 months of the date of the commencement of the project, and every 3 years thereafter, unless the Secretary directs otherwise, Gunlake Quarries shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit shall:

- be conducted by a suitably qualified, experienced, and independent team of experts whose appointment has been approved by the Secretary;

- include consultation with the relevant agencies;
- 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);
- review the adequacy of any strategy/plan/program required under these approvals, and
- recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under these approvals.

The Project Approval notes that the audit team must be led by a suitably qualified auditor and may include additional experts in any field specified by the Secretary of the Department of Planning and Environment. Within 6 weeks of the completion of this audit, unless the Secretary agrees otherwise, Gunlake Quarry shall submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

5.7 Management Review

The purpose of management review of the EMS is to identify any weaknesses or out of date procedures. The aim is to maintain the EMS in line with current industry and Australian standards and changes to environmental legislation.

Management review the EMS on an annual basis. The management review process ensures that the necessary information is collected to allow management to carry out this evaluation and the review document.

The management review addresses the possible need for changes to policy, objectives and other elements of the environmental management system, in light of environmental management system audit results, changing circumstances and the commitment to continual improvement.

5.8 Continuous Improvements

A key component of the environmental management of Gunlake Quarry is the commitment to continuous improvement. This is measured by formal and informal criteria. Formal measures include monitoring data, internal and external inspection and action plans. This information is used to establish trends in non-compliance and environmental performance. The level of non-compliance with both statutory and company standards is then summarised in the Annual Review.

5.9 Emergency Procedures

Gunlake has prepared and implemented a Pollution Incident Response Management Plan (PIRMP) which details the notification procedures in the event of an environmental incident on site. The plan includes a list of authorities to be notified and relevant contact details and the type of information to be provided. This information includes:

- Time, date, nature, duration and location of the incident;
- Location of the place where pollution is occurring or is likely to occur;
- Nature and estimated quantity and quality of any pollutants;
- Action being taken or proposed to be taken to deal with the incident and any resultant pollution or threatened pollution.

The PIRMP will be tested and revised on a regular basis in accordance with the requirements of the Pollution of the Environment Operations Act Regulations.

Appendix A - Plans

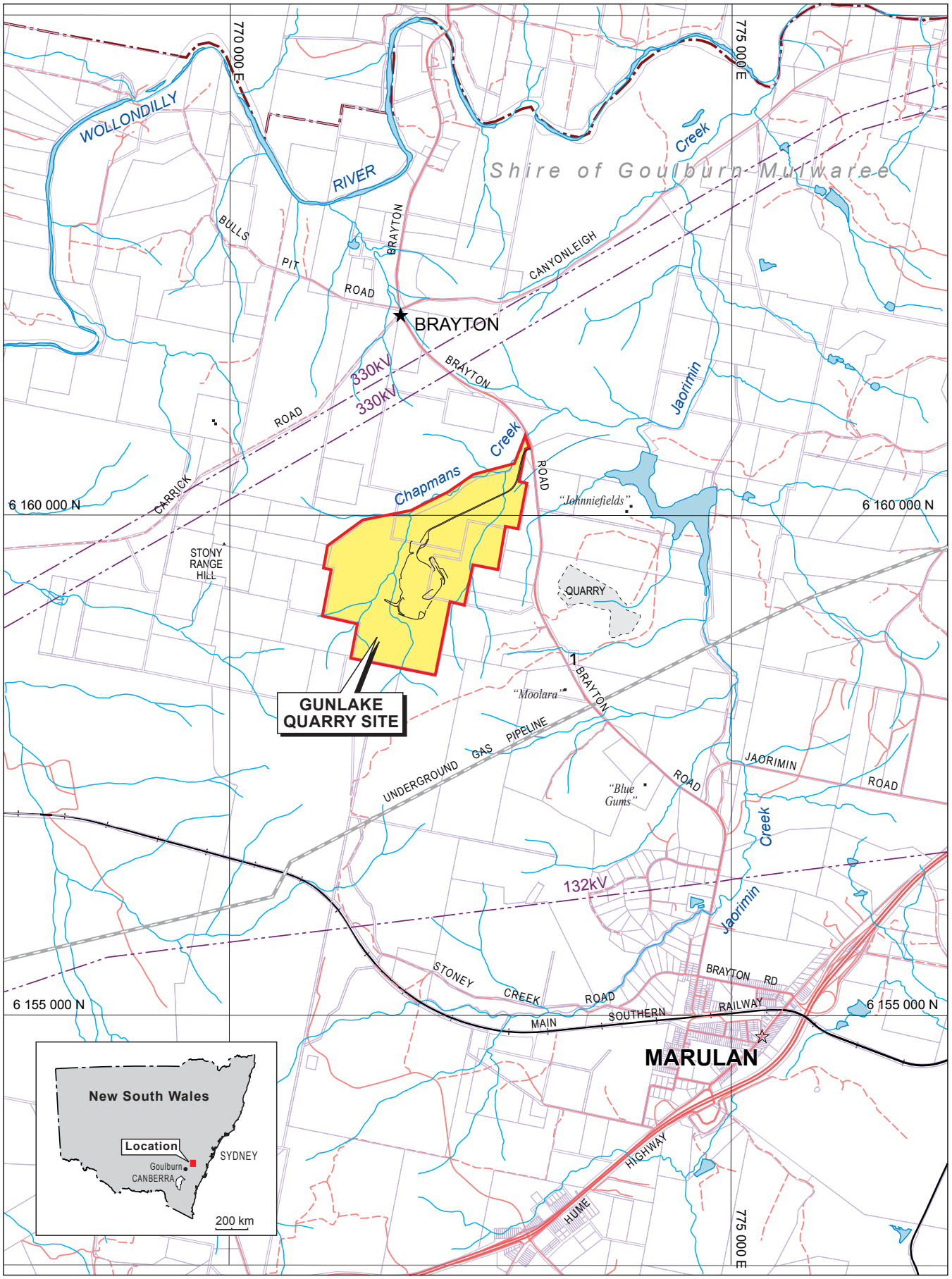


FIGURE 1
Gunlake Quarry
Regional Location

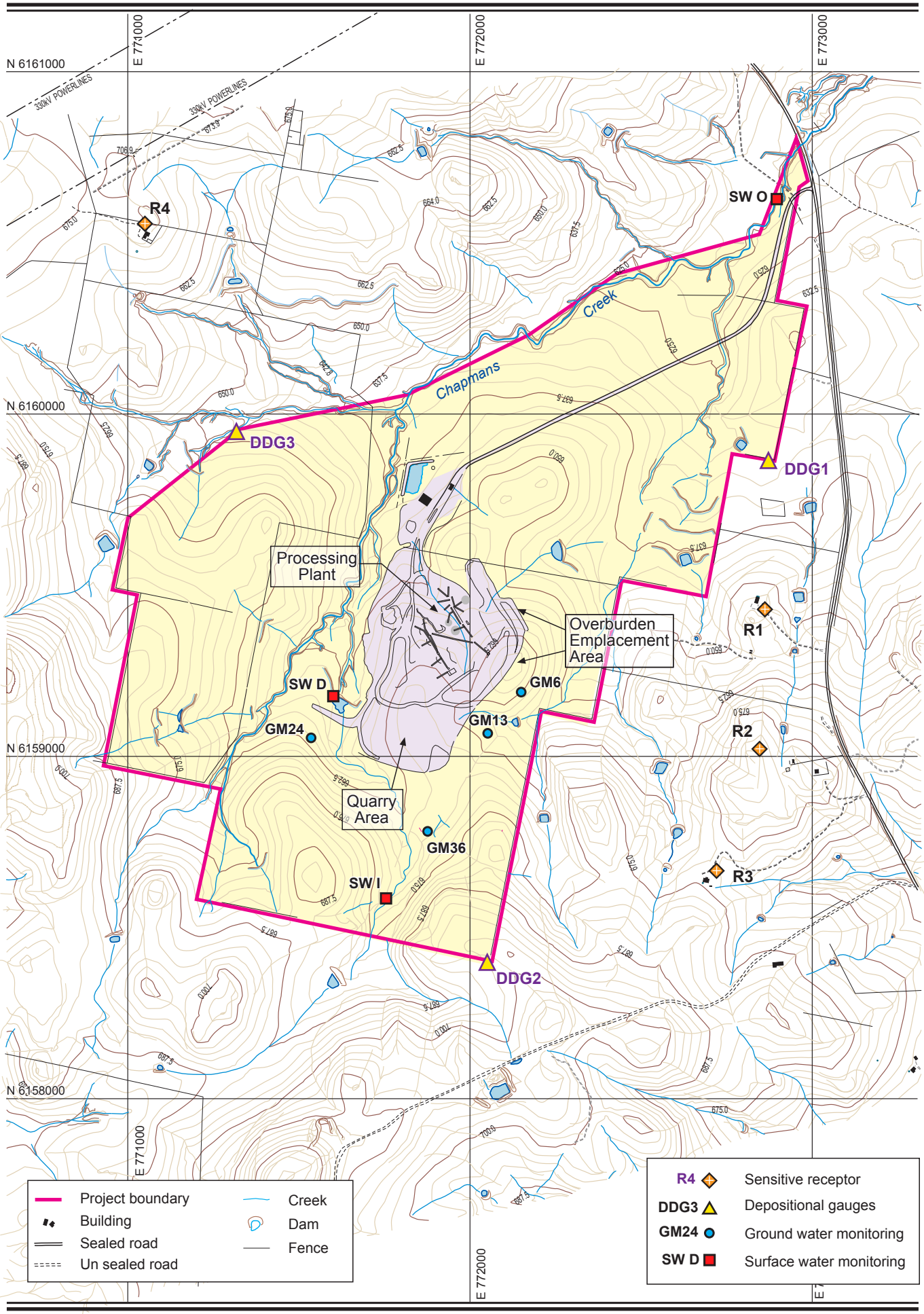


FIGURE 2
Gunlake Quarry
Environmental Monitoring Sites

Appendix B – Project Approval

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

TABLE OF CONTENTS

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 *Protection of the Environment Operations Act 1997*, 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 *Gunlake Quarries Gunlake Quarry Project Environmental Assessment Report and, Appendices* (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	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPL	Environment Protection Licence issued under the *Protection of the Environment Operations Act 1997*
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 *Proposed Modification of Development Consent Gunlake Quarries*, 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 *Modification of Project Approval 07-0074*, 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 *Proposed Modification to Condition 6(b) Schedule 2 of Project Approval*, 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:
   (a) 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

   (b) co-ordinate blasting on site with blasting at the adjoining Johnniefelds 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:
   (a) 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;
   (b) develop a joint notification process with Johnniefelds quarry and Lynwood quarry to alert residents at least 24 hours before any blast;
   (c) 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
   (d) 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:
   (a) 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

14. 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

15. 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

16. 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

17. 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

18. 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.

19. 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

20. The Proponent shall prepare and implement an updated Water Management Plan for the project to the satisfaction of the Secretary. This plan shall:
    (a) be submitted to the Secretary for approval by 31 August 2015;
    (b) be prepared in consultation with NOW, Water NSW and EPA; and
    (c) include a:
        - Site Water Balance;
        - Erosion and Sediment Control Plan;
        - Pasture Irrigation Monitoring Program;
        - Surface Water Monitoring Program; and
        - Groundwater Monitoring Program.

21. The Site Water Balance shall:
    (a) 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
    (b) investigate and describe measures to minimise water use by the project.

22. The Erosion and Sediment Control Plan shall:
    (a1) be prepared by suitably qualified person(s) whose appointment has been approved by the Secretary;
    (a) be consistent with the requirements of *Managing Urban Stormwater: Soils and Construction, Volume 1, 4th Edition, 2004* (Landcom);
    (b) identify activities that could cause soil erosion and generate sediment;
    (c) 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) 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;

(b) performance and completion criteria for the rehabilitation of the site and implementation of the biodiversity offset strategy;

(c) 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:
    (a) 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;
    (b) deleted;
    (c) construct the new bypass road between Brayton Road and Red Hills Road to the satisfaction of the Council; and
    (d) 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:
    (a) 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;
    (b) 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;
    (c) 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;
    (d) describe the measures that would be implemented to ensure compliance with the transport operating conditions under this approval; and
    (e) 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:
    (a) all loaded vehicles entering or leaving the site are covered; and
    (b) 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:
    (a) 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

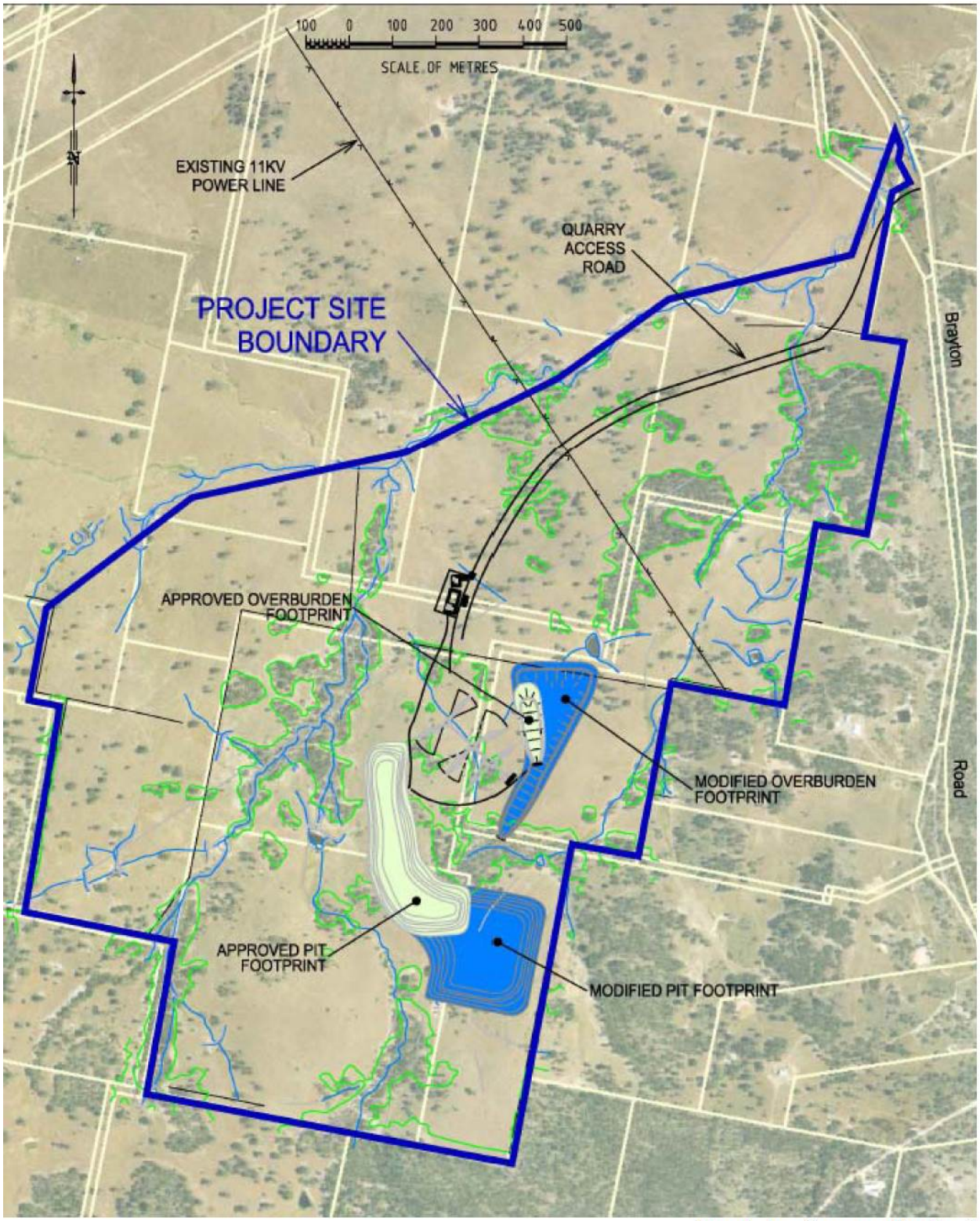
   (b) keep this information up-to-date,

   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 Johnniefelds 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 1000m^2 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 Johnniefelds 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:

    - Noise monitoring on site and within the community.

    - Prompt response to any community issues of concern.

    - Refinement of on site noise mitigation measures and quarry operating procedures, where practical.

    - Discussions with relevant property holders to assess concerns.

    - Consideration of acoustical mitigation at the receivers.

    - Consideration of negotiated agreements with property holders.

    - Blasthole drilling operations being restricted to daytime only.

    - 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:

    - Water spraying in excess of 2L/m^2/application applied to internal haul roads;

    - 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);

    - Stabilisation and/or revegetation of the overburden emplacement;

    - Installation of water sprays at the tipping point to the apron feeder and at the primary crusher input;

    - 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
    - Minimising of exposed surfaces where possible.

- The dust deposition monitoring currently undertaken at the site will be continued.

- Monitoring of 24-hour concentrations of PM_{10} 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 PM_{10} 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:
    - Areas of exposed soil will be limited to those areas being worked at any one time.
    - All areas of exposed soil will be stabilised as soon as possible, and progressively stabilised as work areas are completed.
    - All loads of soil or other potential dust generating materials transported by vehicles will be covered during transportation.
    - The tailgates of all vehicles will be kept securely closed during transportation.
    - Dust will be suppressed as necessary during construction by spraying exposed soil with water from a water cart which would be maintained on-site.
    - Specific dust suppression measures will be implemented around the works compound site as necessary if it is located close to any residence.
    - Dust producing activities will be avoided on high wind days.
    - Soil stockpiles will be kept covered or planted with cover crops until used.
    - Haul roads and site compounds will be topped with gravel or kept moist.
    - Cleared timber or other materials will not be burned.
    - Mud spilt or tracked by construction equipment onto the sealed section of road or other sealed roads will be cleaned up regularly.

- 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:
  - 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.
  - Where stream bed scour is currently occurring at culvert outlets, the need for scour protection will be investigated and installed if required.
  - Plant and equipment will be inspected regularly to ensure there are no leakages of fuel, oil or hydraulic fluid.
  - An environmental emergency plan for pollutant spillages will form part of the erosion and sediment controls in the Environmental Management Plan.
  - 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:
  - Work compounds, parking areas, equipment and material stockpiles will be located as far away from dwellings as possible.
  - If the works compound is located near a residence, strategies will be implemented in consultation with the residents to minimise construction noise and vibration.
  - 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.
  - 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.
  - A procedure for dealing with complaints will be developed and specified in the Environmental Management Plan for the road upgrade works.
  - Vibration from construction will be kept to the minimum practically achievable.
  - 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.

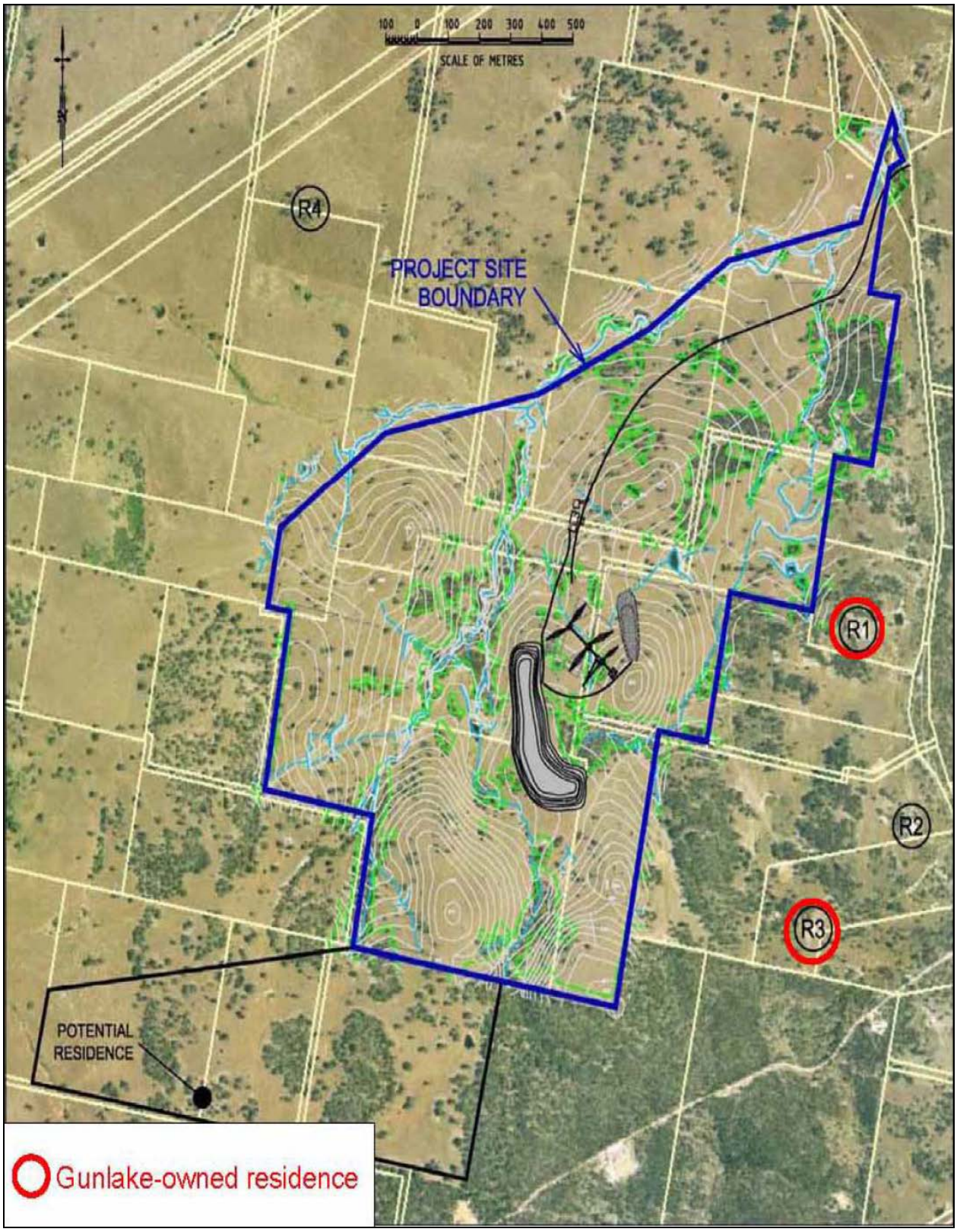
- To minimise or eliminate potential adverse impacts on flora and fauna and to ensure that the road upgrading project does not have a negative impact on biodiversity the following controls and measures will be implemented:
  - Soil disturbance shall not be more than is required to undertake the work. Vehicle, plant and stockpile impacts will be restricted to areas already devoid of vegetation.
  - An Environmental Management Plan (EMP) that incorporates erosion and sediment control measures for the site will be prepared prior to soil being disturbed.
  - 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.
  - Vegetation removal will be undertaken in a way that minimises impact to retained vegetation.
  - 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.
  - 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.
  - Topsoil that is stripped from the construction areas will be stockpiled and spread over

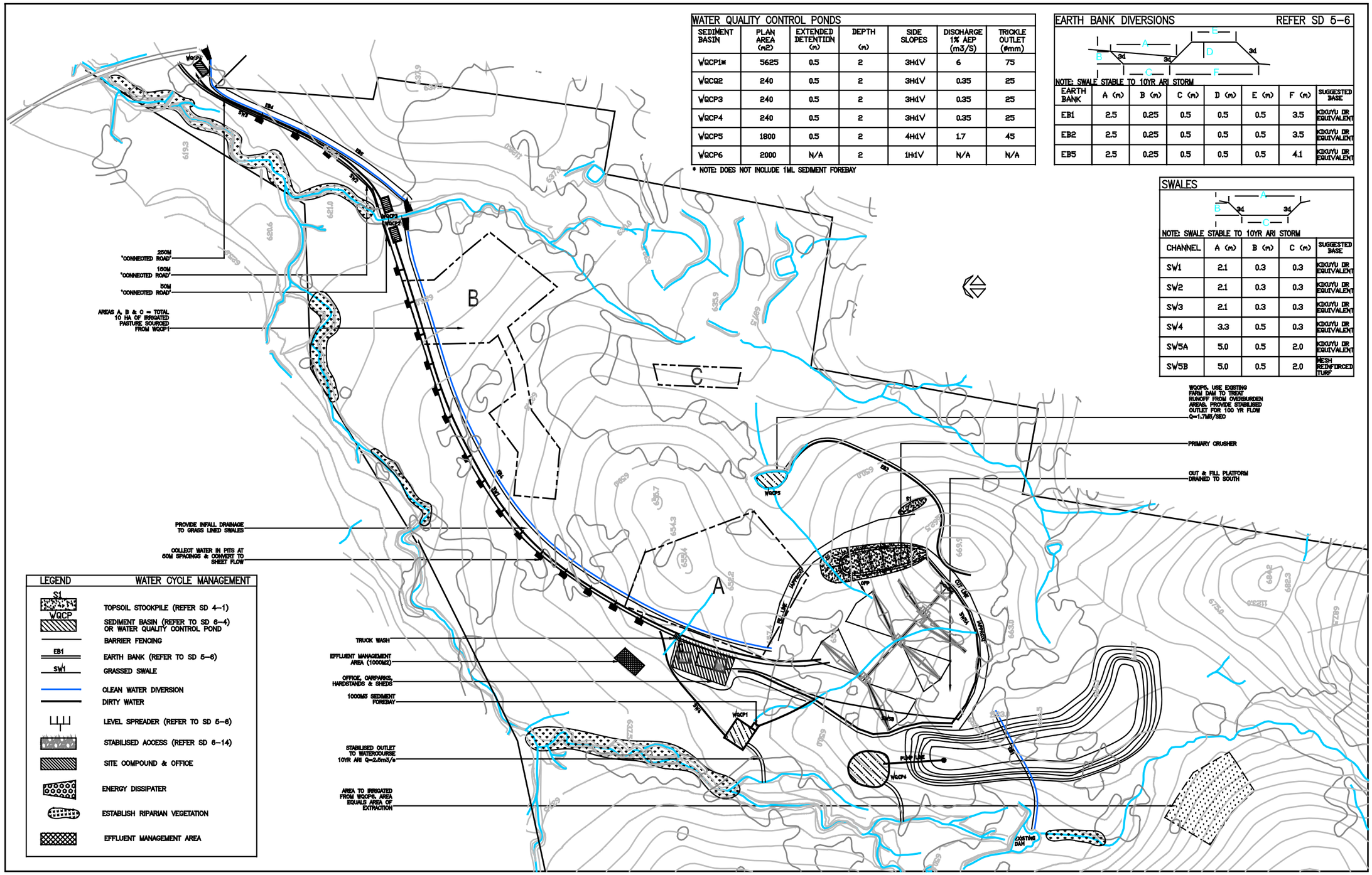
disturbed areas prior to seeding or planting of rehabilitation grasses and trees.

- Weeds will be removed and taken to an approved waste management facility.
- The area to be disturbed for construction will be kept to the minimum required for safe and efficient activity.
- Tree felling will be undertaken so that minimal damage occurs to trees intended for retention.
- 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.
- Chipped native vegetation will be used where available to protect exposed areas and excess sold as landscape supplies.
- Cleared vegetation or other materials will not be burned on site.
- 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:
  - 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.*
  - Waste produced on the road upgrade works will be minimised, reused or recycled wherever possible.
  - Unavoidable wastes would be disposed of in an appropriate manner at a licensed waste disposal facility, as addressed in the Waste Management Plan.
  - 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".*
  - Waste oil will be sent to approved recyclers.
  - Topsoil will be stockpiled and used in the stabilisation and rehabilitation of the works site.
  - 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.
  - 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.
  - 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.
  - Cleared vegetation or other materials will not be burned on site.
  - Secure rubbish bins with heavy lids will be provided within the site compound. These will be regularly emptied.
  - 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.
  - 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





WATER QUALITY CONTROL PONDS						
SEDIMENT BASIN	PLAN AREA (m2)	EXTENDED DETENTION (m)	DEPTH (m)	SIDE SLOPES	DISCHARGE 1% AEP (m3/S)	TRICKLE OUTLET (ømm)
WQCP1*	5625	0.5	2	3H:1V	6	75
WQCQ2	240	0.5	2	3H:1V	0.35	25
WQCP3	240	0.5	2	3H:1V	0.35	25
WQCP4	240	0.5	2	3H:1V	0.35	25
WQCP5	1800	0.5	2	4H:1V	1.7	45
WQCP6	2000	N/A	2	1H:1V	N/A	N/A

* NOTE: DOES NOT INCLUDE 1ML SEDIMENT FOREBAY

EARTH BANK DIVERSIONS — REFER SD 5–6

NOTE: SWALE STABLE TO 10YR ARI STORM

EARTH BANK	A (m)	B (m)	C (m)	D (m)	E (m)	F (m)	SUGGESTED BASE
EB1	2.5	0.25	0.5	0.5	0.5	3.5	KIKUYU OR EQUIVALENT
EB2	2.5	0.25	0.5	0.5	0.5	3.5	KIKUYU OR EQUIVALENT
EB5	2.5	0.25	0.5	0.5	0.5	4.1	KIKUYU OR EQUIVALENT

SWALES

NOTE: SWALE STABLE TO 10YR ARI STORM

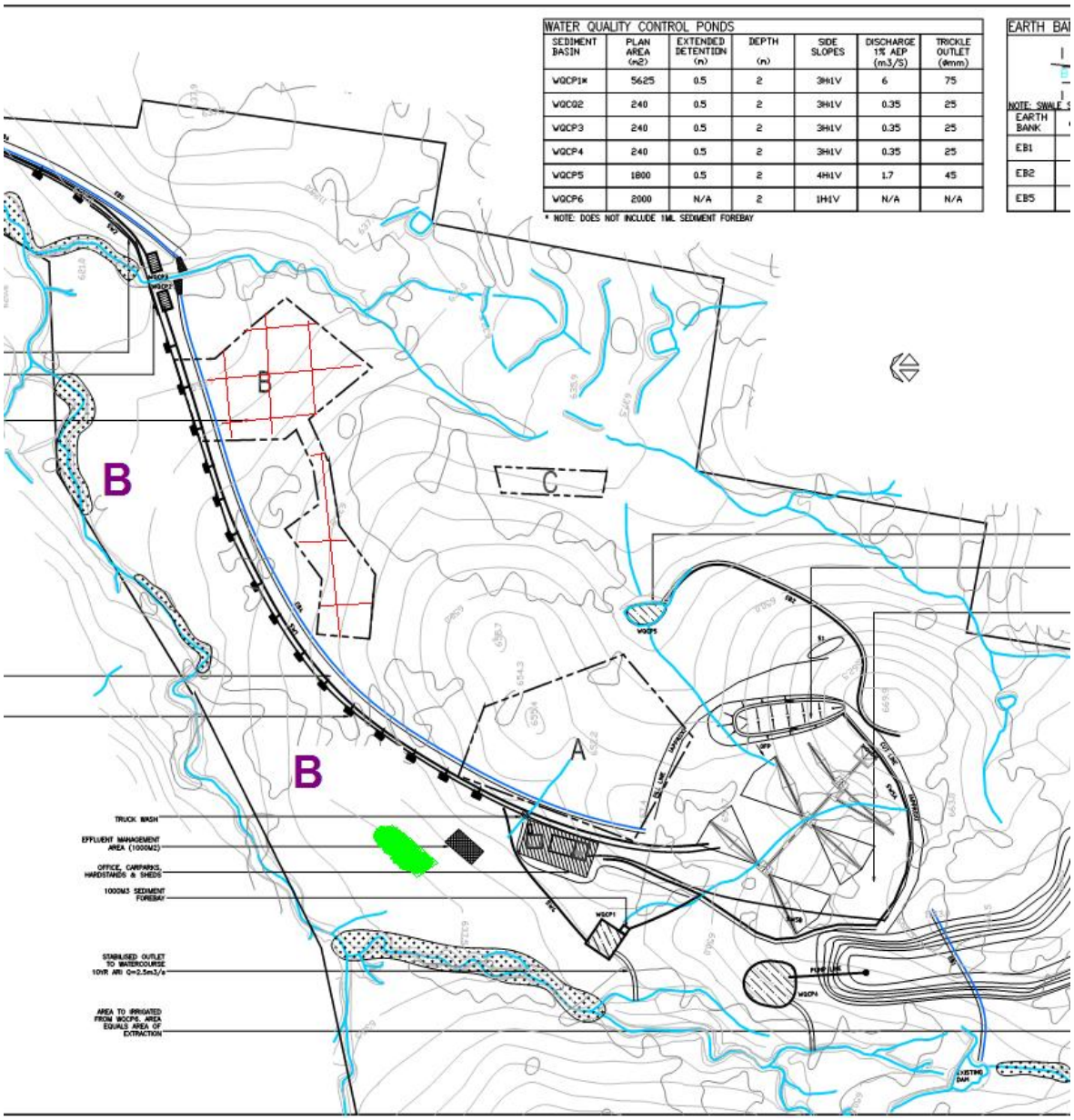
CHANNEL	A (m)	B (m)	C (m)	SUGGESTED BASE
SW1	2.1	0.3	0.3	KIKUYU OR EQUIVALENT
SW2	2.1	0.3	0.3	KIKUYU OR EQUIVALENT
SW3	2.1	0.3	0.3	KIKUYU OR EQUIVALENT
SW4	3.3	0.5	0.3	KIKUYU OR EQUIVALENT
SW5A	5.0	0.5	2.0	KIKUYU OR EQUIVALENT
SW5B	5.0	0.5	2.0	MESH REINFORCED TURF

LEGEND — WATER CYCLE MANAGEMENT

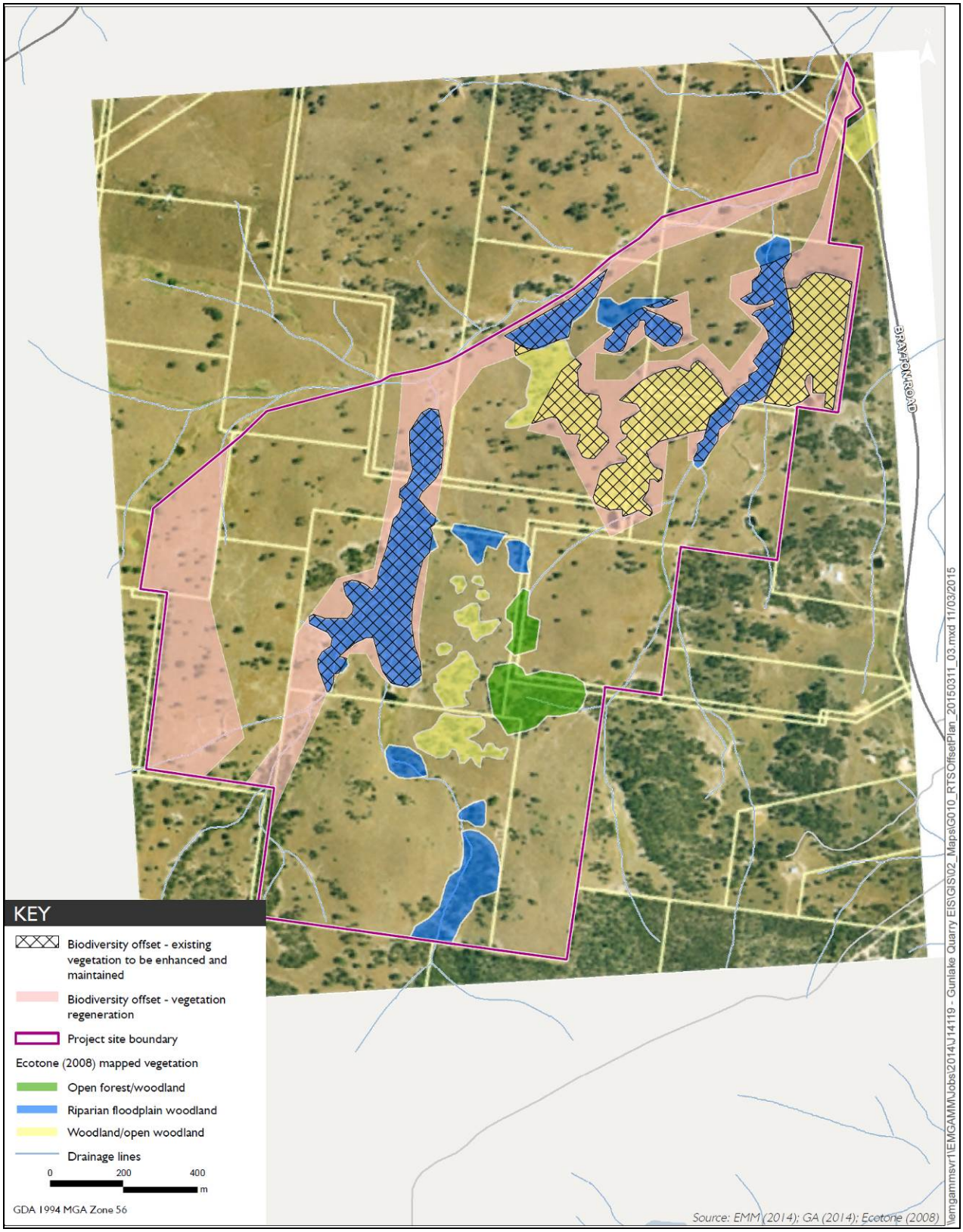
- S1 — TOPSOIL STOCKPILE (REFER SD 4–1)
- WQCP — SEDIMENT BASIN (REFER TO SD 6–4) OR WATER QUALITY CONTROL POND
- BARRIER FENCING
- EB1 — EARTH BANK (REFER TO SD 5–6)
- SW1 — GRASSED SWALE
- CLEAN WATER DIVERSION
- DIRTY WATER
- LEVEL SPREADER (REFER TO SD 5–6)
- STABILISED ACCESS (REFER SD 6–14)
- SITE COMPOUND & OFFICE
- ENERGY DISSIPATER
- ESTABLISH RIPARIAN VEGETATION
- EFFLUENT MANAGEMENT AREA

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



APPENDIX 7
PROPOSED RED HILLS ROAD AND HUME HIGHWAY INTERSECTION