



**COOMA ROAD QUARRY
ENVIRONMENTAL MANAGEMENT
STRATEGY**

March 2014



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Prepared by
Umwelt (Australia) Pty Limited

on behalf of
Holcim (Australia) Pty Ltd

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1.0 Introduction

1.1 Background

Holcim (Australia) Pty Ltd (Holcim Australia) operates Cooma Road Quarry, an existing hard rock quarry located approximately 6 kilometres south of Queanbeyan, New South Wales (NSW) (refer to **Figure 1.1**). Cooma Road Quarry has been operating at the site since 1959. The previous development consent for Cooma Road Quarry was granted on 26 October 1995 and was due to expire in October 2015. To enable continued quarrying operations, Holcim Australia sought a Development Consent under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) for an extension of the approved quarry life for an additional 20 years. The Cooma Road Quarry Development Consent (SSD_5109) (Development Consent) was granted on 27 September 2013 by the NSW Minister for Planning and Infrastructure.

The Development Consent allows for continued operations of the existing Cooma Road Quarry which will enable the extraction of additional hard rock resources within the approved extraction area (refer to **Figure 1.2**).

Holcim Australia is committed to implementing continued quarrying operations in the context of updated and contemporary environmental management requirements. This Environmental Management Strategy has been prepared in accordance with Condition 1 of Schedule 5 of the Development Consent.

1.2 Project Description

The Cooma Road Quarry Development Consent provides for the following:

- extraction of the remaining resources within the existing approved quarry pit area;
- extension of the approved extraction boundary to the north covering an area of approximately 3.5 hectares;
- increasing the maximum annual production limit from 1 Mtpa to 1.5 Mtpa;
- allowance to receive quarry materials from other sites for crushing and screening (as required) and then sale. Total product (including from both material quarried from the site and from materials imported to the site) will be maintained within the total production limit of 1.5 Mtpa;
- relocation of the existing workshop, truck parking and temporary stockpiles;
- addition of a mobile pug mill; and
- recycling of clean concrete on site for re-use as product.

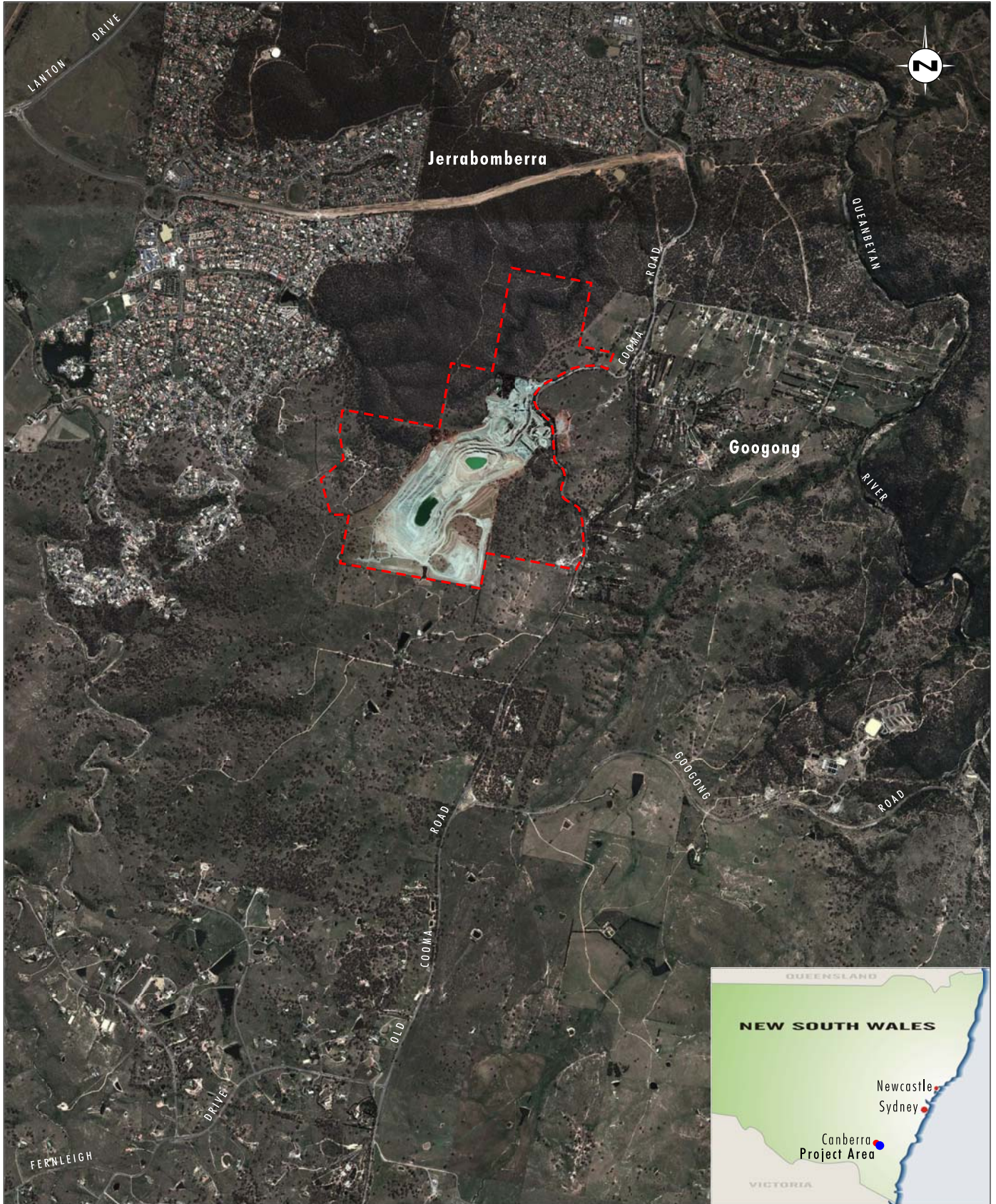


Image Source: Holcim (2012), Google Earth (2011)
 Data Source: Holcim (2012), Queanbeyan City Council (2006)

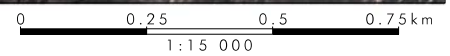
Legend

 Approved Project Area

FIGURE 1.1
Locality Map



Image Source: Holcim (2012), Google Earth (2011)
 Data Source: Holcim (2012)



Legend

- - - Approved Project Area
- Approved Extraction Area
- Approved Additional Extraction Area
- Approved Disturbance Area - Workshop
- Approved Disturbance Area - Overburden Emplacement
- Approved Dam
- - - Clean Drain

FIGURE 1.2
Cooma Road Quarry
Continued Operations Project

1.3 Purpose and Scope

This Environmental Management Strategy (the 'Strategy') provides the strategic context for the environmental management of Cooma Road Quarry and the framework from which the Cooma Road Quarry Environmental Management System will be implemented. The Cooma Road Environmental Management System incorporates the Cooma Road Environmental Management Strategy and Environmental Management Plan as required by the Development Consent (refer to **Section 3.4.2**).

This Strategy describes the function of the Cooma Road Quarry Environmental Management System which has been developed to identify, address and manage the environmental aspects and impacts related to Cooma Road Quarry. The Strategy has been developed generally in accordance with ISO 14001, the international standard for environmental management systems and is consistent with the Holcim Australia Environmental Management System. The Strategy applies to all components of the Cooma Road Quarry operations as detailed in **Section 1.2** above.

Implementation of this Strategy will assist in minimising the environmental impacts of Cooma Road Quarry by facilitating continual improvement in environmental performance. The Strategy promotes proactive environmental management, which will facilitate ongoing compliance with environmental commitments and legislative requirements. It also identifies how Holcim Australia will seek to maintain and build on its good relationship with the local community and other key stakeholders.

This document has been prepared to satisfy Condition 1 of Schedule 5 of the Development Consent. A list of the requirements of this condition and where they are addressed within this document are provided in **Table 1.1** below.

It is noted that a range of additional general environmental management plan requirements are provided in Condition 3 of Schedule 5 of the Development Consent. The relevant information has been included within this Environmental Management Strategy. All sub-plans to this Environmental Management Strategy address the general environmental management requirements provided in Condition 3 of Schedule 5 of the Development Consent in full.

Table 1.1 – Development Consent Conditions

Development Consent Condition	Section of Document
Environmental Management Strategy	Entire Document
1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must:	
a) be submitted to the Director-General for approval within 6 months of this consent;	Entire Document
b) provide the strategic framework for environmental management of the project;	2.0
c) identify the statutory approvals that apply to the development;	3.2
d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management to the development;	4.1
e) describe the procedures that would be implemented to:	4.3.2
• keep the local community and relevant agencies informed about the operation and environmental performance of the project;	
• receive, handle, respond to, and record complaints;	4.4
• resolve any disputes that may arise during the course of the project;	4.4.2
• respond to any non-compliance; and	5.2
• respond to emergencies;	4.8

Table 1.1 – Development Consent Conditions (cont.)

Development Consent Condition	Section of Document
f) include: <ul style="list-style-type: none">• copies of any strategies, plans and programs approved under the conditions of this consent; and	3.4
<ul style="list-style-type: none">• a clear plan depicting all the monitoring required to be carried out under the conditions of this consent.	Appendix 1

1.4 Objectives

The objectives of the Strategy are to:

- provide the overall framework for environmental management at Cooma Road Quarry, utilising the principles of ISO14001;
- ensure compliance with the Cooma Road Quarry Development Consent, other project specific environmental licences and permits, the commitments in the Cooma Road Quarry EIS (Umwelt 2012) and other relevant legal requirements (refer to **Section 3.2**);
- effectively integrate the requirements of the Holcim Australia Environmental Management System and relevant legal and other requirements into a site-specific document, detailing environmental management objectives and responsibilities at Cooma Road Quarry;
- show the relationship and interactions between various operational and environmental components of the Cooma Road Quarry;
- provide effective mechanisms for external communications, in particular development of ongoing relationships with the local community; and
- assist Cooma Road Quarry staff and contractors effectively implementing the requirements of the Cooma Road Development Consent, EMS and supporting environmental management plans.

2.0 Environmental Management Framework

2.1 Structure of the Strategy

This Strategy provides the context for environmental management at Cooma Road Quarry. The Strategy outlines Holcim Australia's commitment to proactive community and environmental management and demonstrates Holcim Australia's commitment to reducing environmental and community impacts.

The structure of this Strategy is based generally on the structure of the ISO 14001 framework, which follows the 'Plan-Do-Check-Act' process. A description of this process and how it relates to this Strategy is provided in **Table 2.1**.

Table 2.1 – Structure of the Cooma Road Quarry Environmental Management Strategy

Feature	Requirements	Strategy Section Reference
Plan	Maintain a register of legal and other requirements. Maintain a register of environmental aspects and impacts. Set environmental objectives and targets. Develop environmental programs and management plans.	Section 3.0 Planning
Do	Responsibilities for environmental management. Provision of environmental awareness training and assessment of competence. Internal communications and document control. External communications with regulators, members of the public and other stakeholders. Management of complaints. Operating procedures. Incident management. Emergency preparedness and response.	Section 4.0 Implementation and Operation
Check	Review of compliance with environmental statutory requirements during preparation of the Annual Review. Ongoing Environmental Monitoring. Non-compliance and corrective/preventive action Audits.	Section 5.0 Environmental Monitoring, Corrective Action and Audits
Act	Periodic review and revision of the EMS by senior management. Non-compliance and corrective/preventive action.	Section 6.0 Review Section 5.0 Environmental Monitoring, Corrective Action and Audits

2.2 Environmental Policy and Commitment

Cooma Road Quarry will operate in accordance with the Holcim Australia Environmental Policy. All activities at Cooma Road Quarry will be undertaken in accordance with the principles of the Holcim Australia Environmental Policy (Environmental Policy) (refer to **Appendix 2**).

2.2.1 Holcim Australia Environmental Policy

The Environmental Policy applies to all Holcim Australia operations and defines the overall direction for environmental management at Cooma Road Quarry. The Environmental Policy provides for:

- continuous improvement of Holcim Australia’s environmental performance and provide positive contributions to Holcim Australia’s business and to society; and
- sustainable development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

The Environmental Policy is based on four main pillars:

- Management Systems – Holcim Australia apply internationally recognised standards, and seek to comply with environmental laws, regulations and standards applicable to their products and operations. Holcim Australia assess the environmental policies and practices of suppliers and sub-contractors as part of their selection process. Holcim Australia also translate environmental commitments into actions by setting objectives and targets and monitoring progress against these targets;
- Resources Utilisation – Holcim Australia promote reuse, recycling and conservation over their entire value chain, and invest in research for innovative and sustainable products and processes;
- Environmental Impacts – Holcim Australia assess and measure environmental impacts, continuously improve processes and promote best practice. Holcim Australia seek to develop management controls on their sites to monitor, prevent and minimise the release of pollutants to the environment; and
- Stakeholder Relations – Holcim Australia engage stakeholders and report publicly on compliance, performance and progress where appropriate.

The Policy has the support and commitment of Holcim Australia senior management and is reviewed every three years.

2.3 Environmental Management System

2.3.1 Cooma Road Quarry Environmental Management System

The Cooma Road Quarry Environmental Management System has been developed in accordance with Holcim Australia Environmental Management System, which describes environmental management requirements as they relate to the operational control of significant environmental aspects (hazards or risks). For each environmental hazard, a set of minimum environmental standards have been developed. These standards, coupled with sustainability indicators, are used to measure environmental performance over time.

This Strategy forms a part of the Cooma Road Quarry Environmental Management System and provides an overview of the key strategies in place, to effectively manage environmental and community issues at Cooma Road Quarry. Compliance with the Environmental Management System will be ensured by training, inspections, audits and regular review, with the overall implementation objective being the continual improvement of Cooma Road Quarry's environmental performance.

3.0 Planning

3.1 Identification of Environmental Aspects and Impacts

Ongoing identification of environmental aspects and impacts, also known as environmental risk assessment, is a key tool that will be used by Holcim Australia to ensure potential environmental impacts are identified, assessed and appropriately managed at Cooma Road Quarry.

The Cooma Road Quarry Manager and Holcim Australia Environmental Personnel will be responsible for ensuring that site environmental and community risks are considered during the development of objectives and targets, environmental programs and management plans, development of operational procedures and during training. In addition, environmental and community risks are considered as part of the change management process which is implemented by Holcim Australia. The change management process is utilised to manage any potential environmental and community impacts which may result from changes to operations at Cooma Road Quarry.

3.2 Statutory Requirements

In order for Holcim Australia to maintain compliance with statutory requirements applying to Cooma Road Quarry, it is necessary that these requirements are identified and that performance against these requirements is regularly reviewed. The Cooma Road Quarry Manager is responsible for maintaining a register containing a summary of all environmental statutory requirements, such that:

- all environmental legislative requirements are suitably identified and stored;
- all documents are easily located, retrieved and available when required; and
- all legislative required are updated as required, with obsolete documents removed from service.

The register of statutory requirements legislation relevant to the operations will also include the following active documents as a minimum:

- Cooma Road Quarry Environmental Impact Statement (EIS, Umwelt 2012);
- Development Consent (SSD_5109);
- Environment Protection Licence (no. 1453);
- Part 2 and Part 5 licences (*Water Act 1912*) for interception and extraction of groundwater and surface water;
- construction certificates; and
- other relevant approvals.

All employees at Cooma Road Quarry will be responsible for maintaining ongoing compliance with the above legal requirements. In addition, the Cooma Road Quarry Manager will be responsible for ensuring all licences, approvals and other site specific environmental permits are current. The Quarry Manager and Holcim Australia Environmental Personnel will also be responsible for ensuring that relevant information about legal requirements are incorporated into site training packages and management plans.

3.3 Environmental Objectives and Targets

Environmental objectives and targets will be set annually to meet the commitments contained within the Holcim Australia Environmental Policy and to measure the performance of the Cooma Road Quarry Environmental Management System. These targets will be developed in consideration of the requirements of the Environmental Policy, Holcim Australia EMS and legislative requirements.

Cooma Road Quarry objectives and targets will be progressively achieved through implementation of environmental management programs and procedures (refer to **Sections 3.4** and **4.6**). Relevant objectives and targets and progress in achieving them will be discussed in the Annual Review (refer to **Section 4.3.2**).

3.4 Environmental Management Programs and Plans

Environmental management programs and plans will be developed to assist in the management of specific environmental impacts and to ensure compliance with statutory requirements (refer to **Section 3.2**). In addition, monitoring programs have also been developed and will be implemented as outlined in **Section 5.1**.

3.4.1 Environmental Management Programs

Environmental management programs will be developed to assist in achieving the commitments made in the Holcim Australia Environmental Policy. These environmental programs will:

- identify specific actions to facilitate compliance with the Holcim Australia Environmental Policy;
- designate responsibility for completion of the actions;
- outline resource allocation;
- specify timeframes for target achievement; and
- detail the review period for actions and the effectiveness of the action.

Environmental management programs may be developed to:

- implement actions required to address improvement opportunities identified through audits;
- implement actions required to address any issues identified during audits, incident investigations or inspections or in response to community complaints;
- achieve objectives and targets; or
- drive implementation of training or other performance improvement mechanisms.

Environmental management programs will be developed for Cooma Road Quarry as required and a register of programs will be maintained by the Cooma Road Quarry Manager.

3.4.2 Environmental Management Plans

Environmental management plans provide an overview of a specific environmental aspect or activity and the controls, which are to be implemented to effectively manage the aspect or activity. The Development Consent requires a number of management plans to be developed, including:

- a Transport Management Plan;
- a Noise Management Plan;

-
- a Blast Management Plan;
 - an Air Quality Management Plan;
 - a Water Management Plan which includes:
 - a Water Balance;
 - a Surface Water Management Plan (including erosion and sediment controls);
 - a Ground Water Monitoring Program; and
 - a Surface and Groundwater Response Plan to address any potential adverse impacts associated with the development;
 - a Heritage Management Plan; and
 - a Rehabilitation Management Plan.

The implementation of these management plans will assist Holcim Australia in ensuring effective environmental performance of Cooma Road Quarry. The implementation of these management plans will be the responsibility of all employees at Cooma Road Quarry and will be overseen by the Cooma Road Quarry Manager. In addition, these plans outline specific roles and responsibilities for key personnel.

Additional management plans may be prepared for the project to address specific issues as the need arises.

4.0 Implementation and Operation

4.1 Structure and Responsibility

Environmental management at Cooma Road Quarry will be the responsibility of all employees and contractors, with the Cooma Road Quarry Manager having overall responsibility for environmental management of Cooma Road Quarry. Environmental roles and responsibilities for project personnel are outlined below, with additional responsibilities contained within the Cooma Road Quarry environmental management plans as they relate to specific activities. Environmental responsibilities are included in the position descriptions of all employees at Cooma Road Quarry and achievement of these responsibilities assessed as part of regular performance appraisals.

General environmental responsibilities for key personnel at Cooma Road Quarry are outlined in **Table 4.1**.

Table 4.1 – General Environmental Responsibilities at Cooma Road Quarry

Personnel	Responsibilities
Cooma Road Quarry Manager	<ul style="list-style-type: none"> • Be aware of the environmental legislative requirements associated with Cooma Road Quarry and take measures to ensure compliance. • Undertake operations in accordance with the objectives defined within the Environmental Policy. • Ensure appropriate training is provided to all employees and contractors regarding their environmental responsibilities. • Provide adequate resources to allow the development, implementation and operation of the Cooma Road Quarry Environmental Management System. • Liaise with the Holcim Australia Environmental Personnel regarding the preparation of annual environmental programs and their implementation. • Ensure all operations are undertaken in accordance with the Cooma Road Quarry Environmental Management System. • Undertake liaison (as required) with regulatory authorities and the community in relation to environmental matters.
Holcim Australia Environmental Personnel	<ul style="list-style-type: none"> • Provide advice to the Cooma Road Quarry Manager regarding the investigation of environmental incidents and the development of corrective actions. • Assist the Cooma Road Quarry Manager with statutory reporting including the development of the Cooma Road Quarry Annual Review and EPL Annual Return. • Review environmental monitoring data obtained from Cooma Road Quarry and ensure the data is placed on the Holcim Australia website. • Provide advice to the Cooma Road Quarry Manager as required regarding ongoing operations and compliance with Cooma Road Quarry statutory approvals and legislative requirements.
All employees and contractors	<ul style="list-style-type: none"> • Undertake all work in accordance with this strategy, the Environmental Policy and the Cooma Road Environmental Management System. • Be responsible and accountable for the environmental impact of the work they perform. • Immediately report any environmental incidents to the Cooma Road Quarry Manager.

4.2 Training, Awareness and Competence

Holcim Australia has developed a comprehensive environmental training and induction program for all employees, contractors and visitors at Cooma Road Quarry. The training and induction program consists of:

- induction training;
- environmental awareness training (may be undertaken as part of induction training); and
- toolbox talks.

The training packages are designed to ensure that personnel gain a sound understanding of relevant environmental issues and management strategies, environmental incident and emergency response procedures, and their role and responsibilities in developing, implementing and operating the Cooma Road Quarry Environmental Management System. Training packages cover the following components:

- the environmental and community context of the operation;
- relevant legal and other requirements;
- the function and importance of the Environmental Management System to Cooma Road Quarry's operations;
- the consequences of non-compliance with the Environmental Policy and Environmental Management System;
- environmental operating practices;
- the potential environmental impacts and associated controls for their work activities;
- incident and emergency response and reporting; and
- roles and responsibilities in achieving conformance with the Holcim Australia environmental policy and the requirements of the Environmental Management System.

Training consists of inductions for all new staff and contractors. Permanent staff will be retrained in general environmental awareness as required (may be undertaken as part of a re-induction process). Key issues to be addressed include dust and noise minimisation, vegetation clearing procedures, archaeological awareness and water and energy management.

A specific induction training package will be delivered to all Holcim Australia road haulage personnel and contract haulage operators, regarding good driving practice and minimisation of environmental impacts, including dust and noise. It is noted that these requirements are detailed in the Cooma Road Quarry Transport Management Plan. Induction and environmental awareness training will be competency based to ensure that all personnel have knowledge of the relevant roles and responsibilities, which relate to their activities.

Tool-box talks will be held on an as-needs basis to address specific environmental issues, such as findings from incident or complaint investigations, or improvement initiatives.

4.3 Communication

Effective communication between Cooma Road Quarry management, employees and contractors and communication between Cooma Road Quarry and external stakeholders is important for the successful implementation and operation of the Cooma Road Quarry Environmental Management System. Specific communication mechanisms are outlined below.

4.3.1 Internal Communication

Internal communication incorporates communication between Cooma Road Quarry personnel (including contractors) and between Cooma Road Quarry and Holcim Australia. Key internal communication mechanisms will include email, internal newsletters, meetings and internal reporting. It will be the responsibility of the Cooma Road Quarry Manager to

manage the communication of environmental issues. Information regarding significant environmental aspects of the operation will be communicated internally through training and other mechanisms.

4.3.2 External Communication

External communication includes communication made between Cooma Road Quarry and a range of external stakeholders including the community, government agencies and businesses. All external communications relating to environmental and community aspects of the Cooma Road Quarry operations will be undertaken in accordance with the Cooma Road Quarry Environmental Management System. The Cooma Road Quarry Manager, in consultation with the Holcim Australia Environmental Personnel will be responsible for the management of external communication of environmental issues.

Holcim Australia will maintain open external communication channels throughout the life of the project. These communication channels will include periodic community newsletters, which will provide information about the quarry operations, community involvement programs and environmental performance. A feedback mechanism will be provided with these newsletters. The Holcim Australia website is a key mechanism for external dissemination of information, with copies of approved environmental management plans and this Strategy, plus other project information, to be made available on the website. Other key communication mechanisms will include the Community Consultative Committee (refer to **Section 4.3.2.1**) and annual statutory reporting (refer to **Section 4.3.2.2**).

4.3.2.1 Community Consultative Committee

Cooma Road Quarry will establish a Community Consultative Committee (CCC), with the first CCC meeting to be held in 2014. The CCC will be formed in accordance with Condition 6 of Schedule 5 of the Development Consent. The CCC will provide the local community with a mechanism through which to provide feedback, raise any concerns regarding the ongoing operations of the quarry. The CCC will also provide a mechanism through which Holcim Australia can provide information about the operation, including environmental performance information, to the local community. The CCC will meet at least twice a year with minutes of CCC meetings to be published on the Holcim Australia website. A community complaints process has also been established and is included within **Section 4.4.1**.

4.3.2.2 Annual Reporting

An Annual Review will be prepared for Cooma Road Quarry and submitted to the Director-General P&I and relevant agencies, in accordance with Condition 4, Schedule 5 of the Cooma Road Quarry Development Consent. The report will:

- describe the development (including rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
- include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, which includes a comparison of these results against:
 - the relevant statutory requirements, limits or performance measures/criteria;
 - the monitoring results of the previous years; and
 - the relevant predictions in the EIS;

-
- identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
 - identify any trends in monitoring data over the life of the development;
 - identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - describe what measures will be implemented over the current year to improve environmental performance of the development.

The Annual Review will be made available to the public through the CCC and the Holcim Australia website. Other statutory reporting (e.g. EPL Annual Return) will be completed in accordance with relevant statutory requirements.

4.4 Complaints Management and Dispute Resolution

4.4.1 Complaints Management

Holcim Australia prides itself on fostering a positive relationship with the community and considers that it is critical component of Holcim Australia's business that complaints or enquiries are responded to in a professional manner. Wherever possible, a proactive approach will be taken to engage the community in discussing proposed activities that may affect them. Any complaints that are received relating to Cooma Road Quarry's operations will be recorded in a standard format and responded to in a timely manner by the Quarry Manager or their delegate.

Community complaints can be provided in person at Cooma Road Quarry or can be submitted via the Cooma Road Quarry telephone line (65 97 22 11). This contact point will provide the community with a mechanism by which to raise any concerns that they have with operations at Cooma Road Quarry. The Cooma Road Quarry Manager will be responsible for the implementation of the complaints management process and will ensure a timely initial response to any complaints received and then, as appropriate, will provide a more detailed response outlining any complaint investigation findings and corrective actions implemented.

Records of complaints will be kept for a minimum of four years in a register to be maintained by the Cooma Road Quarry Manager, with the complaints register to be made available on the Holcim Australia website. The community complaints will also be reported on an annual basis in the Annual Review.

The CCC also plays a role in complaints management, reviewing community concerns or complaints about the quarry's operations, assessing the effectiveness of Cooma Road Quarry's response to complaints and providing general comments on the complaints handling process.

4.4.2 Dispute Resolution

Holcim Australia strive to maintain good relations with all external stakeholder groups through effective communication. It is Holcim Australia's desire to avoid disputes arising through consultation with relevant external stakeholders and through addressing any concerns in a timely manner. Should any disputes arise that cannot be resolved through direct consultation, the dispute resolution processes discussed below will be implemented.

Condition 2, of Schedule 4 of the Development Consent outlines an independent review process that can be initiated if a landowner considers that the operations of the quarry are exceeding the impact assessment criteria outlined in Schedule 3 of the Development Consent. In accordance with these requirements, the landowner may ask Cooma Road Quarry in writing for an independent review of the impacts of the project on their land. If the independent review determines that the quarrying operations are not complying with the relevant criteria, then the measures that could be implemented to ensure compliance with the relevant criteria, with the results of the investigation to be identified and reported to P&I.

4.5 Document Control

Holcim Australia will establish and maintain procedures for controlling all environmental documents to ensure that:

- they can be located;
- they are periodically reviewed, revised as necessary and approved for adequacy by authorised personnel or government agencies where required;
- the current versions of relevant documents are available at all locations where operations essential to the effective functioning of the environmental management system are performed;
- obsolete documents are promptly removed from all points of issue and points of use, or otherwise assured against unintended use; and
- any obsolete documents retained for legal and/or knowledge preservation purposes are suitably identified.

Environmental documentation will be legible, dated (with dates of revision) and readily identifiable, maintained in an orderly manner and retained for a specified period. It will be the responsibility of the Cooma Road Quarry Manager to ensure that document control of environmental records is working efficiently.

4.6 Operational Control

To ensure the objectives and targets of Cooma Road Quarry are met, operational controls are required to be implemented where activities are identified as potentially having environmental impacts. Required environmental management controls were identified in the EIS (Umwelt 2012) prepared for the project. Environmental controls are also identified in the various environmental management plans prepared for the project (refer to **Section 3.4**). Cooma Road Quarry Environmental Management Plans (refer to **Section 3.4.2**) have been developed to manage the environmental risks identified during the development of the Cooma Road Quarry EIS (Umwelt 2012).

Specific environmental operating procedures will be tailored for implementation at Cooma Road Quarry to ensure that any project specific issues are addressed, where necessary. The effectiveness of operating procedures will be reviewed on a regular basis and revised as appropriate, with new procedures developed on an as-needs basis. Specific operating procedures may be developed for targeted site activities such as completion of specific activities or for utilisation of specific quarry equipment.

To ensure effective implementation of operating procedures the environmental performance of Cooma Road Quarry will be reviewed during monthly environmental inspections (refer to **Section 5.4**). Procedures will also be developed to provide for the management of risks that may result from changes to a process, equipment or substances utilised at site.

4.7 Incident Management and Reporting

All employees and contractors undertaking work for Holcim Australia at Cooma Road Quarry will be required to report any non-conformances with the EMS or environmental incidents to their supervisor. The supervisor is responsible for utilising the Holcim Australia incident management system, which provides alerts to relevant personnel based on the incidents outcome and potential consequence. The Cooma Road Quarry Manager (or delegate), in consultation with the Holcim Australia Environmental personnel, is responsible for responding to complaints and incidents, and determining the appropriate corrective action, as outlined in **Section 5.2**.

All employees and contractors will receive training on incident notification. This training will be held at induction and repeated at least every two years. The training will be designed to outline an individual's responsibility to report any environmental incidents and how to identify an incident.

In accordance with Condition 7 Schedule 5 of the Development Consent, Holcim Australia shall notify, at the earliest opportunity, the Director-General of P&I and any other relevant agencies of any incident that has caused, or threatens to cause, material harm to the environment.

For any other incident associated with the development, the Applicant shall notify the Director-General of P&I and any other relevant agencies as soon as practicable after the Applicant becomes aware of the incident. Within 7 days of the date of the incident, the Applicant shall provide the Director-General of P&I and any relevant agencies with a detailed report on the incident, and such further reports as may be requested. Incidents are also to be reported in accordance with the requirements of the *Protection of the Environment Operations Act 1997*, EPL 1453 and the Cooma Road Quarry Pollution Incident Response Management Plan (PIRMP).

4.8 Emergency Preparedness and Response

Response plans have been developed to manage environmental emergencies should they occur. These emergency response procedures are detailed within the Cooma Road Quarry PIRMP. This PIRMP outlines the processes to be followed in the event of an emergency, as well as internal and external communication procedures to be followed.

The identification of potential emergency situations will be facilitated through the completion of risk reviews (refer to **Section 4.6**). If a potential emergency situation is identified, an appropriate emergency response will be determined and incorporated into the risk review. Following the risk review, all relevant emergency procedures will be updated with changes to the emergency procedure communicated to all relevant staff. All employees will be trained in emergency preparedness and response as part of the site induction and ongoing training.

5.0 Environmental Monitoring, Corrective Action and Audits

5.1 Environmental Monitoring

Environmental monitoring will be undertaken to measure Cooma Road Quarry's performance against and ensure compliance with, statutory limits. Environmental monitoring will be coordinated by the Cooma Road Quarry Manager or their delegate, in accordance with relevant licence and Development Consent conditions. To assist in the implementation of monitoring programs, and in compliance with Development Consent conditions, Cooma Road Quarry has developed environmental monitoring programs in consultation with relevant government agencies. These programs include the following:

- a Noise Monitoring Program;
- a Blast Monitoring Program;
- an Air Quality Monitoring Program;
- a Surface Water Monitoring Program;
- a Groundwater Monitoring Program; and
- an Environmental Monitoring Program which consolidates the requirements of each of the above programs into a single document (refer to **Appendix 2**).

All environmental monitoring will be undertaken by trained personnel using appropriately calibrated equipment, in accordance with relevant Australian Standards and EPA approved methods. Equipment calibration will be undertaken in accordance with Australian Standards and the manufacturers' specifications.

Monitoring results will be reviewed against relevant statutory limits to ensure compliance with statutory requirements. All monitoring results and calibration records will be kept for at least four years, in accordance with statutory requirements.

Monitoring results will be reported externally on an annual basis as part of the Annual Review and Environment Protection Licence annual return and will also be regularly communicated to the CCC. Environmental monitoring data will also be available on the Holcim Australia website in accordance with Schedule 5, Condition 11 of the Development Consent.

5.2 Non-Compliances

Non-compliances at Cooma Road Quarry may be identified by a range of mechanisms including:

- review of monitoring results;
- complaints;
- site inspections including those by government agencies;
- audits; and/or
- incident reports.

If a non-compliance is identified, the Cooma Road Quarry Manager will be responsible for implementing an appropriate investigation and determining appropriate corrective and preventative actions (refer to **Section 5.3**), as well as recording the non-compliance within the Holcim Australia incident management system.

5.3 Corrective and Preventative Action

Any actions required as an outcome of the non-compliance will be entered by the Cooma Road Quarry Manager into Holcim Australia incident management system, to allow tracking. The corrective and/or preventative actions implemented following non-compliance will be reviewed monthly.

Should the non-compliance relate to a statutory limit, appropriate statutory reporting processes will be followed in accordance with Condition 7 of Schedule 5 of the Development Consent and the conditions of any other relevant approvals. This will include the reporting of the incident to the relevant government agencies as outlined in the Development Consent and the EPL.

In accordance with Condition 2 of Schedule 5 of the Development Consent, following exceedance of the relevant environmental criteria outlined in Schedule 3 of the Development Consent, Holcim Australia shall:

- take all reasonable and feasible measures to ensure that the exceedance ceases and does not recur;
- consider all reasonable and feasible options for remediation (where relevant) and submit a report to P&I describing those options and any preferred remediation measures or other course of action; and
- implement remediation measures as directed by the Director-General of the P&I (as required).

5.4 Audits

Cooma Road Quarry personnel will undertake regular formal inspections of environmental management controls. A formal site inspection of the operation will be undertaken on a monthly basis by the Quarry Manager (or delegate). Checklists will be developed to guide these inspections. Any issues arising from these inspections will be reported as non-conformances and will be managed in accordance with site incident procedures and actioned as necessary to resolve the non-conformance.

An internal Holcim Australia audit of the Cooma Road Quarry against the Holcim Environmental Management System, and site specific approvals, will be undertaken every 4 years, including a 2-yearly review and site inspection. Corrective actions and improvement plans will be recorded and tracked by Holcim Australia.

An external Independent Environmental Audit is required within three years of the date of consent, and every five years thereafter (unless the Director-General directs otherwise), in accordance with Condition 9, Schedule 5 of the Development Consent. This audit will be undertaken by a suitably qualified, experienced, and independent person whose appointment has been endorsed by the Director-General of the P&I. The Independent Environmental Audit will be undertaken in general accordance with *ISO 19011:2002 - Guidelines for Quality and/or Environmental Systems Auditing*. Actions arising from these audits will be managed in accordance with **Sections 5.2 and 5.3**.

In accordance with Condition 11 of Schedule 5, any independent environmental audit, and Holcim Australia's response to the recommendations in any audit also need to be made available on the Holcim Australia website.

6.0 Review

Periodic review and revision of the Cooma Road Environmental Management System, of which this Strategy forms part, will be undertaken by Cooma Road Quarry management. The Environmental Management System review will include:

- results from audits;
- the extent to which the objectives and targets have been met;
- the continuing suitability of the EMS in relation to changing conditions and information; and
- feedback from external stakeholders, including the review of any complaints received by Cooma Road Quarry.

These reviews will be undertaken annually, with the review documented and incorporated into the EMS. Regular review of the EMS will allow opportunities for improvement to be identified and implemented, achieving the overall aim of continual improvement in environmental management performance.

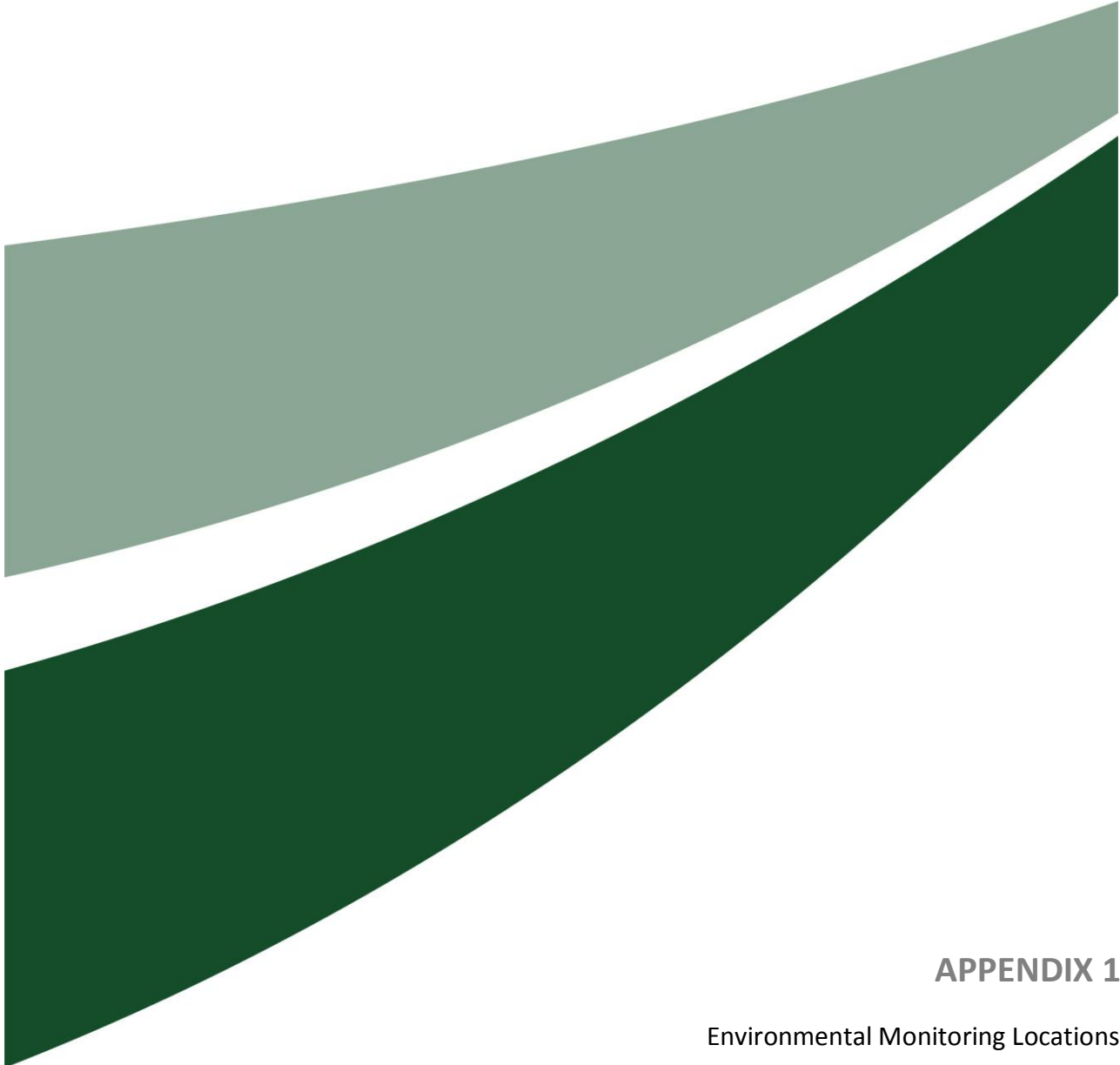
6.1 Strategy Review

This Strategy will be reviewed, and revised as necessary, within three months of submitting a copy of the Independent Environmental Audit report (required under consent condition 10 Schedule 5) to the Director-General of P&I. If any significant changes are made to the Strategy as part of these reviews, the revised Strategy will be provided to the P&I for approval prior to implementation. This Strategy will also be reviewed following any major changes to proposed or existing operations.

In accordance with Condition 5 of Schedule 5 of the development consent, within 3 months of a modification to this consent or following the submission of an Annual Review or Incident report under Schedule 5, Condition 7 of the Development Consent, Holcim Australia shall review, and if necessary revise this strategy to the satisfaction of the Director-General of P&I.

7.0 References

Umwelt (Australia) Pty Limited 2012. *Environmental Impact Statement Cooma Road Quarry Continued Operations Project*, prepared for Holcim (Australia) Pty Ltd.



APPENDIX 1

Environmental Monitoring Locations

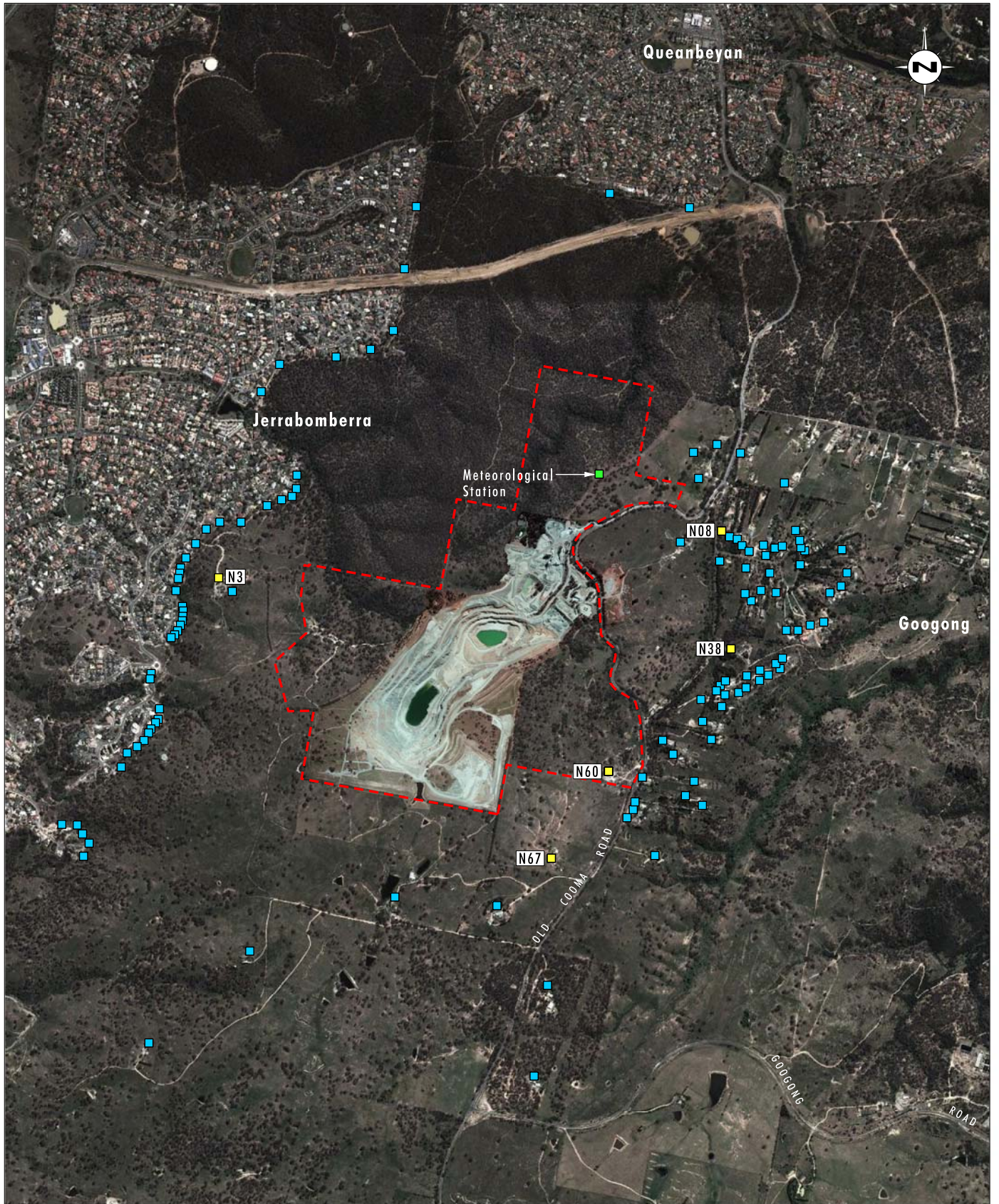


Image Source: Holcim (2012), Google Earth (2011)
 Data Source: Holcim (2012)

0 0.5 1.0 1.25 km
 1:25 000

Legend

- - - Approved Project Area
- Indicative Dwelling Location
- Attended Noise Monitoring Location
- Meteorological Station

FIGURE 1

Noise Receiver and Monitoring Locations



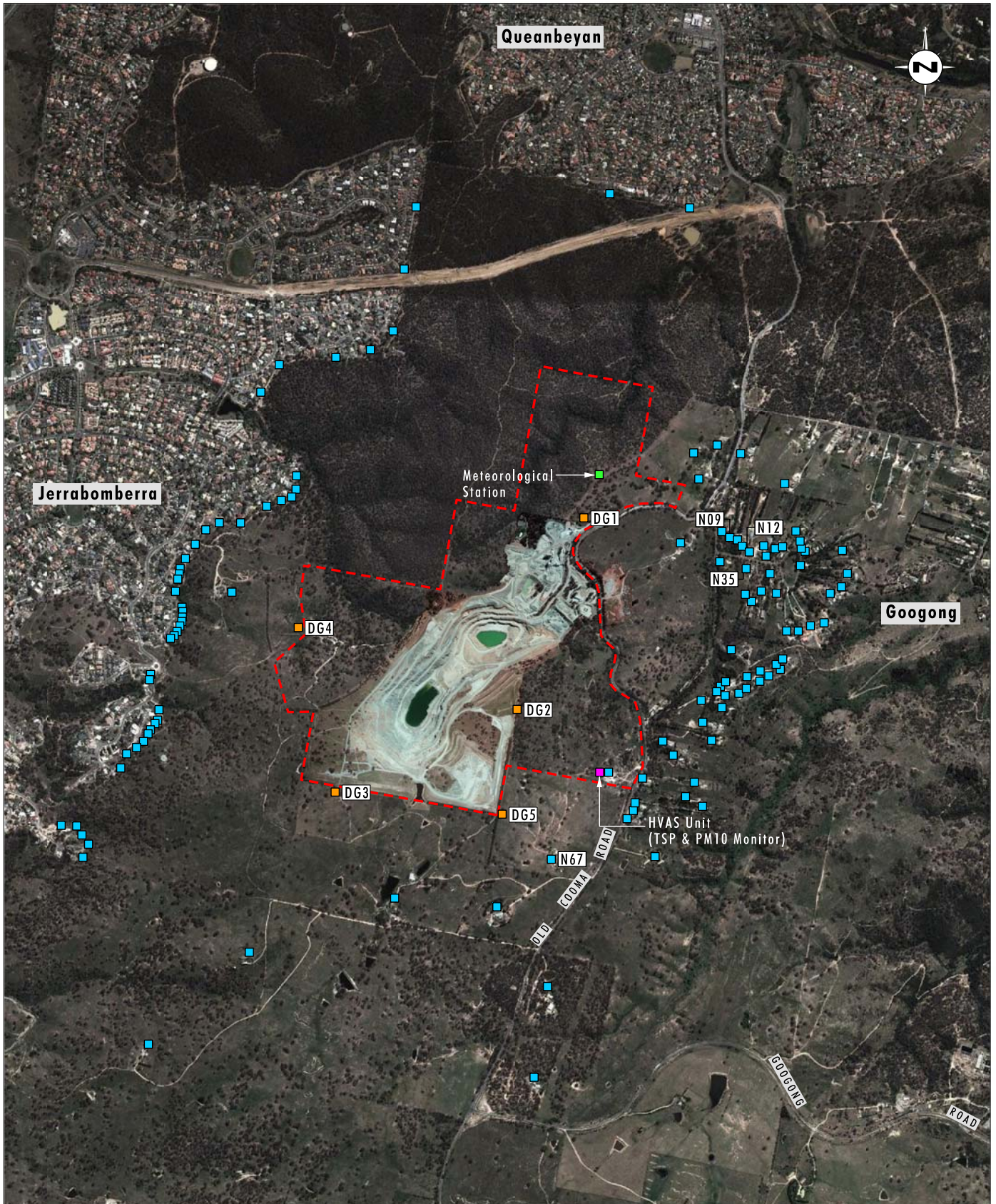
Image Source: Holcim (2012), Google Earth (2011)
 Data Source: Holcim (2012)

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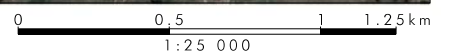
Legend

- - - Approved Project Area
- Blast Monitoring Location
- Indicative Dwelling Location
- Meteorological Station

FIGURE 2
Blast Monitoring Locations



Source: Holcim (2012), Google Earth (2011) and Queanbeyan City Council (2006)

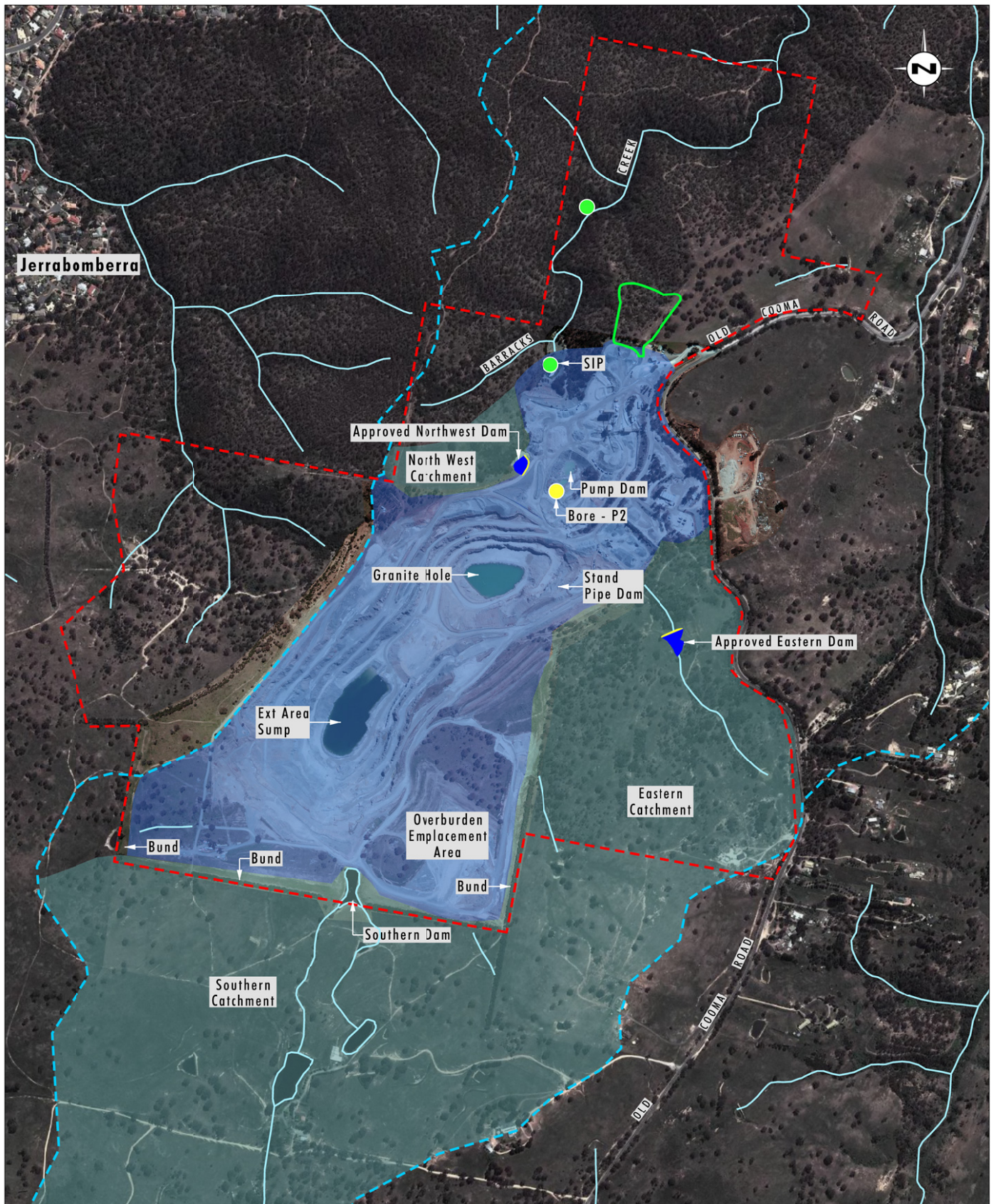


Legend

- - - Proposed Project Area
- Indicative Dwelling Location
- Existing Dust Deposition Gauges
- HVAS Unit (TSP & PM10 Monitor)
- Meteorological Station

FIGURE 3

Air Quality Monitoring Locations



Source: Folcim (2012), Google Earth (2011), LPI (2010)

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1:12 500

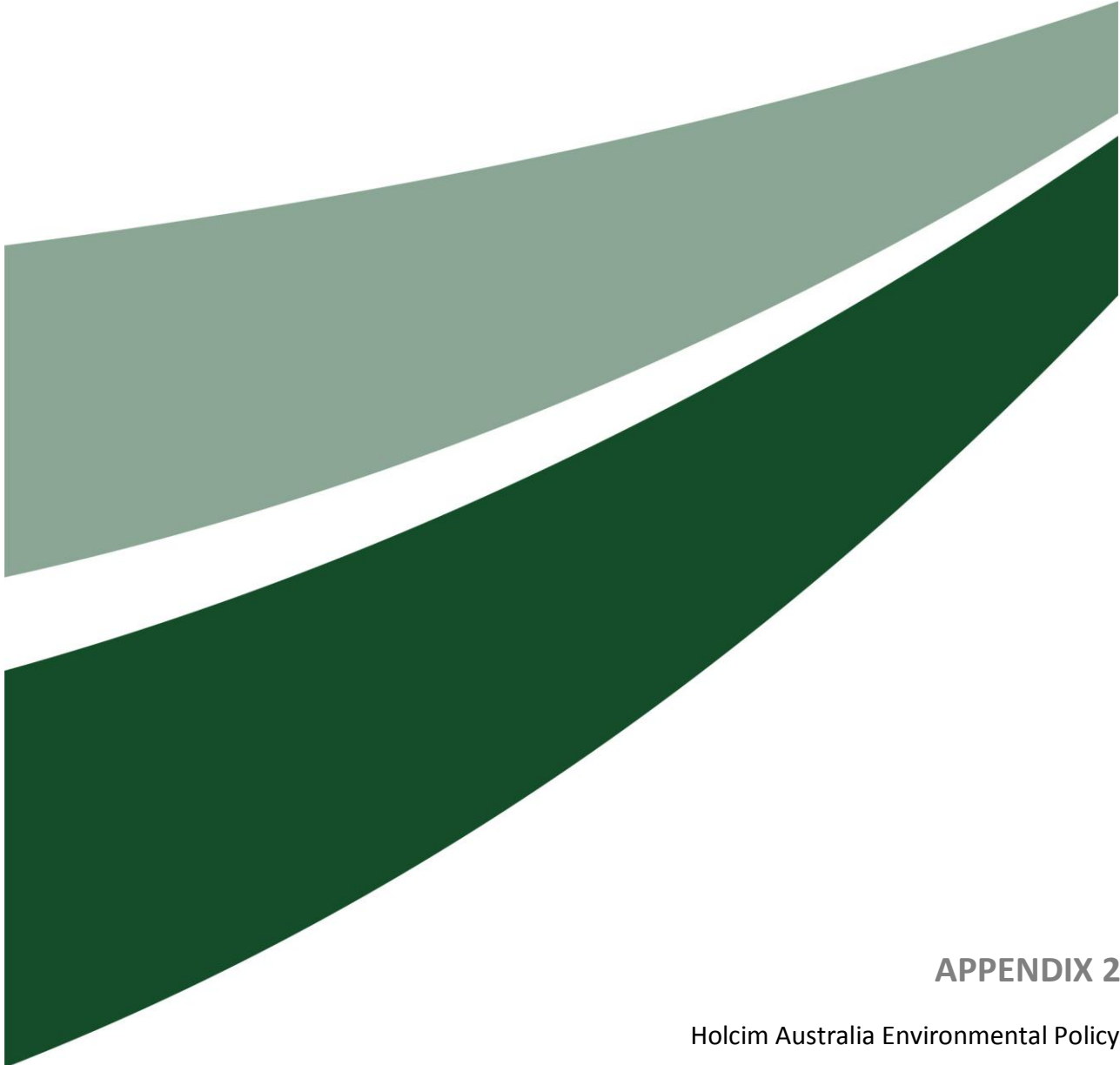
Legend

- - - Approved Project Area
- - - Catchment Boundary
- Approved Disturbance Area - Workshop
- Upslope Catchment Areas
- Water Management System Catchment Area
- Surface Water Monitoring Locations
- Groundwater Monitoring Locations

File Name (A4): R01/App1/3282_038.dgn
20140327 13.21

FIGURE 4

Cooma Road Quarry Surface and Groundwater Monitoring Locations



APPENDIX 2

Holcim Australia Environmental Policy

Environmental Policy

Holcim (Australia) Pty Ltd, 07/2010

Holcim Australia believes that protecting the environment is integral to sustainable development. The principles of sustainable development – value creation, sustainable environmental performance and corporate social responsibility – are integral to Holcim Australia's business strategy. There are four pillars of our Environmental Policy for which we have assigned actions to assist our progress towards sustainable development.

1. Management Systems

- Comply with all applicable environmental laws, regulations, codes of practice and voluntary agreements;
- Adopt and enforce internal standards and systems that ensure continuous environmental improvement;
- Set corporate objectives and targets and monitor progress;
- Promote environmental commitment through training and integration into business processes.

2. Resource Utilisation

- Ensure optimum use of raw materials, including energy efficiency, water efficiency and the reduction of waste in all operations;
- Development of innovative and sustainable products and processes.

3. Environmental and Social Impacts

- Operate as an environmentally and socially responsible business;
- Minimise the environmental impacts of our operations;
- Rehabilitate land that is impacted by our activities including identifying opportunities to protect and enhance cultural sites and biodiversity;
- Respond to the challenges presented by climate change by identifying opportunities to reduce our carbon footprint.

4. Stakeholder Relations

- Effectively engage and communicate with stakeholders in relation to environmental matters.



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