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Cooma Road Quarry
Air Quality Management Plan
September 2019

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Table 1 Document Control

Version No.	Review Date	Reviewed By	Reviewer Position	Changes Made	Approved
1	27/03/2014	Holcim Australia	N/A	Development of Plan	Holcim Australia
2	30/07/2019	Shilpa Shashi	Planning and Environment Coordinator NSW / ACT	General update in accordance with Development Consent	Submitted to DPIE
3	24/09/2019	Shilpa Shashi	Planning and Environment Coordinator NSW / ACT	Update with Department comments	Submitted to DPIE

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 expired in October 2015. To enable continued quarrying operations, Cooma Road 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 until 31 October 2035. The Cooma Road Quarry Development Consent (SSD_5109) (Development Consent) was granted on 27 September 2013 by the NSW Minister for Planning and Infrastructure. Modification 1 was approved by the Department of Planning, Industry and Environment (DPIE) in August 2016 and included the addition of the importation of Virgin Excavated Natural Material (VENM) to be utilised for backfilling and progressive rehabilitation of the terminal quarry faces. Modification 2 was approved in April 2019 and included the addition of the importation of Excavated Natural Material (ENM).

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 Air Quality Management Plan (AQMP) has been prepared in accordance with Condition 16 of Schedule 3 of the Development Consent.

1.2 Project Description

The 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;
- allowance to receive VENM and ENM products to be used for back filling and progressive rehabilitation of terminal quarry faces in accordance with the Development Consent and quarry rehabilitation objectives;
- 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.

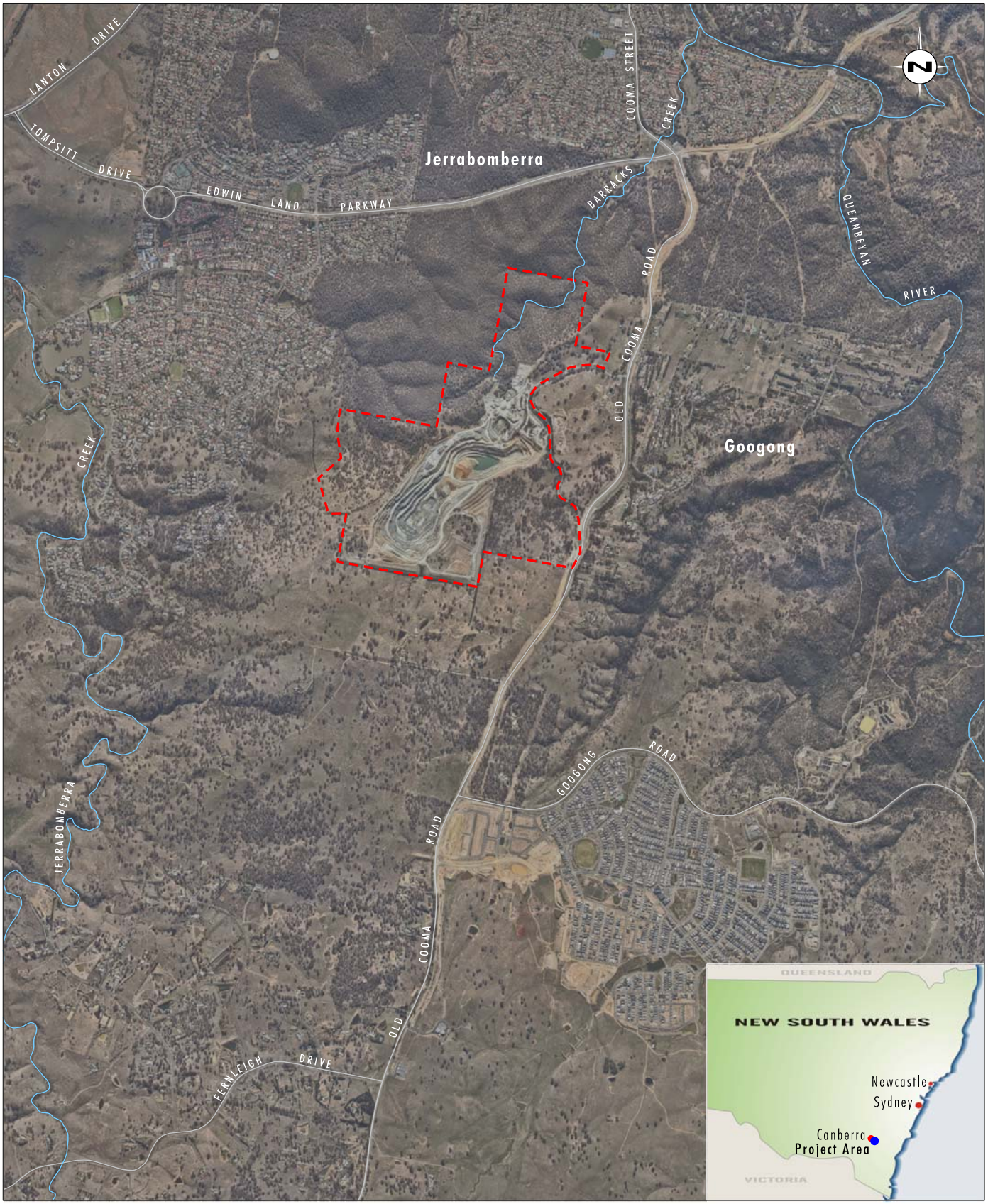

Image Source: Nearmap (May 2019)
Data Source: Holcim (2019)

0 0.5 1.0 1.5km
1:35 000

Legend

Approved Project Area

FIGURE 1.1

Locality Map

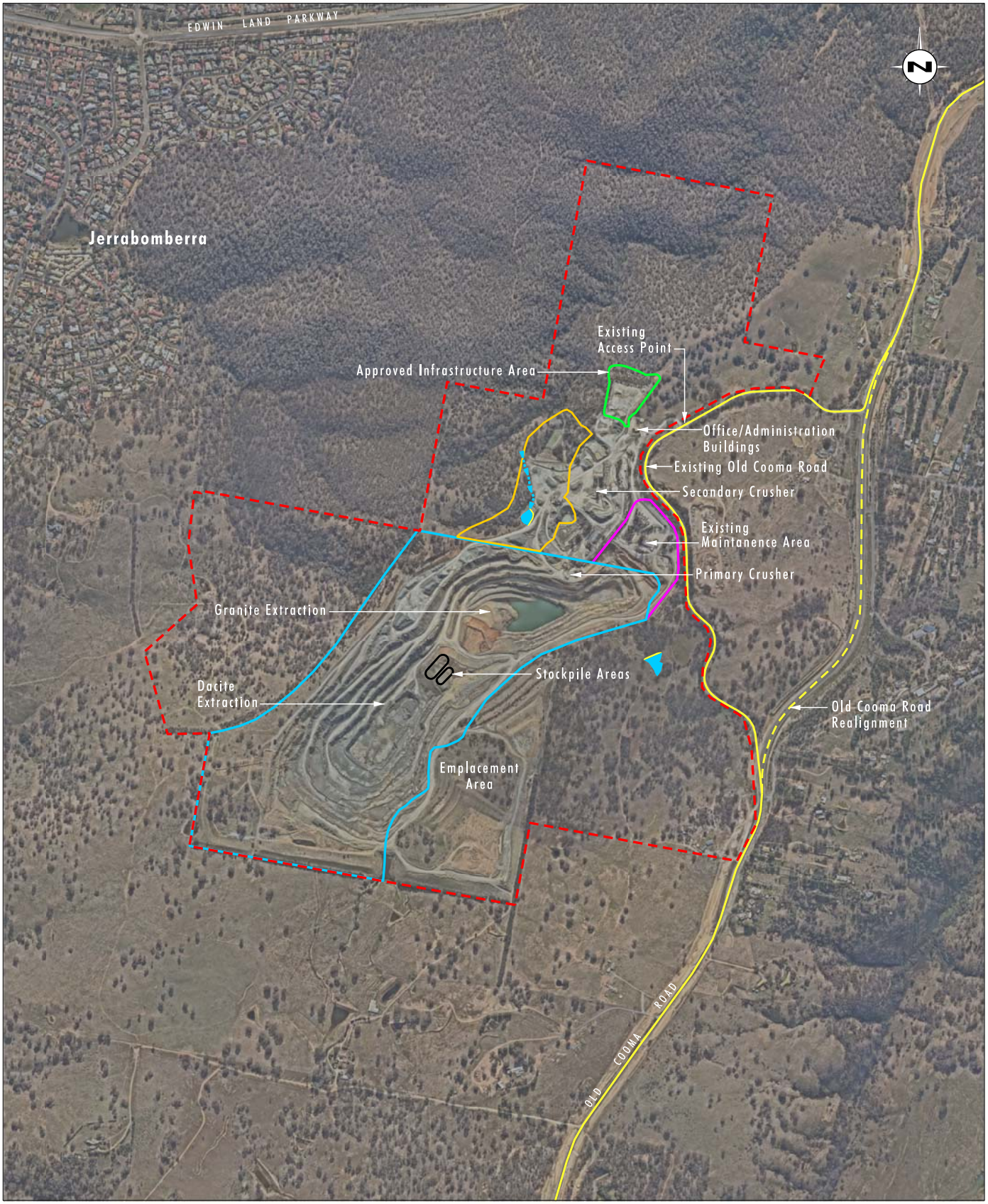

Image Source: Nearmap (May 2019)
Data Source: Holcim (2019)

0 0.25 0.5 0.75km
1:15 000

Legend

- Approved Project Area
- Approved Extraction Area
- Approved Additional Extraction Area
- Approved Disturbance Area - Workshop
- Approved Disturbance Area - Overburden Emplacement
- Approved Dam
- Clean Drain
- Old Cooma Road
- Old Cooma Road Realignment

FIGURE 1.2

Cooma Road Quarry
Continued Operations Project

File Name (A4): R05/4649_005.dgn
20190708 15.29

1.3 Purpose and Scope

The purpose of this AQMP is to provide a description of the measures to be implemented by Holcim Australia to manage air quality at Cooma Road Quarry and to detail the air quality monitoring requirements associated with the operation. This AQMP also provides a mechanism for assessing air quality monitoring results against the relevant air quality impact assessment criteria and operating conditions.

This AQMP also addresses the requirements detailed in Schedule 3 of the Development Consent. The Development Consent conditions and Statement of Commitments relevant to this plan are provided in **Sections 2.1** and **2.2** respectively, including a checklist of where each condition and commitment has been addressed within this document.

The plan outlines the control measures to be implemented as part of the continued operations at Cooma Road Quarry to minimise the potential air quality impacts on the local community.

1.4 Objectives

The objectives of this plan in relation to air quality management are to:

- detail the controls to be implemented to minimise dust generation from operations;
- establish an air quality monitoring system to assess the air quality impact on surrounding receivers and performance against the specific air quality impact assessment criteria;
- provide a mechanism to assess monitoring results against air quality impact assessment criteria;
- provide an air quality protocol for determining exceedances of the relevant criteria;
- manage air quality related community complaints in a timely and effective manner;
- to detail the requirement for reporting air quality criteria exceedances to the relevant stakeholders;
- provide management commitments and strategies for dealing with air quality related issues; and
- to detail the review process for reporting exceedances of air quality criteria to relevant stakeholders.

2.0 Regulatory Requirements

2.1 Development Consent

The Development Consent was assessed under the *Environmental Planning and Assessment Act 1979* (EP&A Act). Approval for the project was granted on 27 September 2013. The requirement for this AQMP arises from Condition 16 of Schedule 3 of the Development Consent. A table detailing the AQMP requirements from the Development Consent and where these requirements are addressed within this document is provided in **Table 2**.

Table 2 Development Consent Conditions

Approval Condition - Schedule 3 – Environmental Performance Conditions	Section Addressed
Air Quality Operating Conditions 15. The Applicant must: (a) take all reasonable steps to: • minimise odour, fume, greenhouse gas and dust (including PM10 and PM2.5) emissions • generated by the development; • minimise any visible off-site air pollution generated by the development; and • minimise the extent of potential dust generating surfaces exposed on the site at any given point in time;	**Sections 5.0 and 6.0**
(b) operate an air quality management system to guide the day to day planning of quarrying operations and implementation of both proactive and reactive air quality mitigation measures to ensure compliance with the relevant conditions of this consent;	**Section 5.0**
(c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events[1]; Note[1] 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.	**Section 5.0**
(d) carry out regular air quality monitoring to determine whether the development is complying with the relevant conditions in this consent; and	**Section 6.0**
(e) regularly assess meteorological and air quality monitoring data and relocate, modify or stop operations on the site to ensure compliance with the relevant conditions of this consent.	**Sections 5.0 and 6.4**
Air Quality Management Plan 16. Within 3 months of determination of Modification 2, the Applicant must prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared by a suitably qualified and experienced person/s whose appointment has been endorsed by the Planning Secretary;	**Section 2.3**
(b) be prepared in consultation with the EPA	**Section 2.3**
(c) describe the measures to be implemented to ensure: • compliance with the air quality criteria and operating conditions in this consent; • best practice management is being employed; and • air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;	**Sections 4.0, 5.0 and 6.0**
(d) describe the air quality management system; and	**Section 5.0**
(e) include an air quality monitoring program that: • is capable of evaluating the performance of the development against the air quality criteria; • adequately supports the air quality management system; and • includes a protocol for identifying any air quality-related exceedance, incident or noncompliance and for notifying DPIE and relevant stakeholders of these events.	**Section 6.0 and 7.0**

Management controls for potential air quality impacts associated with quarrying and ancillary activities are provided in **Section 5.0**. Air quality monitoring is outlined in **Section 6.0** and a description of the air quality monitoring reporting requirements is provided in **Section 7.0** of this AQMP.

Additional general requirements of all Environmental Management Plans are included in Condition 2 of Schedule 5 of the Development Consent and are provided in **Appendix 1**.

2.2 Statement of Commitments

Appendix 8 of the Development Consent outlines the Statement of Commitments relevant to the AQMP, and where they are addressed in this document, is detailed in **Table 3.**

Table 3 Statement of Commitments

Commitment	Section Addressed
14. The existing dust control measures will continue to be implemented on site, including: • minimisations of the total disturbed/working areas at any one time • dust collection during drilling operations • enclosure of primary and secondary crushing plants and screening transfer points • watering of unsealed roads, working areas and stockpiles • water sprays on the conveyors • dust extraction system within the secondary crushing plant • truck wheel wash facility.	**Section 5.0**

2.3 Stakeholder Consultation Regarding this Document

Copies of this AQMP were provided to Queanbeyan City Council and the EPA for comment on 14 March 2014. EPA provided a letter stating that the AQMP appeared adequate and that the EPA had no specific comments to make regarding the AQMP. Queanbeyan City Council provided comment on 25 March 2014 indicating that the AQMP was considered to have been developed in accordance with the requirements of the Development Consent, refer to **Appendix 2**.

DPIE advised on 7 August 2019 that the update of this management plan could occur without the need to consult with nominated agencies in the Development Consent.

Holcim Australia have submitted a request for DPIE approval of a suitably qualified and experienced person to prepare the plan. DPIE approved Luke Bettridge to prepare this AQMP on 7 August 2019, see **Appendix 2**.

3.0 Baseline Data

3.1 Existing Environment

3.1.1 Dust Concentration

As detailed within the Cooma Road Continued Operations Project EIS (EIS, Umwelt 2012), background dust concentration data was analysed from the closest air quality monitoring station located at Monash, approximately 12 kilometres south of the Project Area. The Monash site is operated by the ACT Environmental Protection Authority and is surrounded by rural and residential land uses. No exceedance of the 24 hour average PM_{10} criteria of 50 µg/m^3 was experienced at this station during 2010, the most recent year for which data was available at the time of developing the EIS.

From the available monitoring data, the following background concentrations were applied to the Project during the development of the EIS:

- annual average TSP of 30 $\mu g/m^3$;
- 24-hour average PM_{10} of 24 $\mu g/m^3$;
- annual average PM_{10} of 15 $\mu g/m^3$; and
- annual average dust deposition of 3.5 g/m^2/month.

The results of the air quality modelling as undertaken for the EIS (Umwelt 2012) have identified that Cooma Road Quarry would comply with the relevant air quality criteria at all nearby sensitive receiver locations under worst case operating conditions.

4.0 Air Quality Assessment Criteria

4.1 Dust Concentration

Goals for dust concentration are referred to as long term (annual average) and short term (24 hour maximum) goals. Condition 14 of Schedule 3 of the Development Consent specifies the air quality criteria for Cooma Road Quarry. The Development Consent criterion for particulate matter is outlined in **Tables 4** and **5**.

Table 4 Long Term Criteria for Particulate Matter

Pollutant	Averaging Period	[d]Criterion
Total suspended particulate (TSP) matter	Annual	[a]90 $\mu g/m^3$
Particulate matter < 10 µm (PM_{10})	Annual	[a]30 $\mu g/m^3$

Notes to **Tables 3 – 5 inclusive**
[a] Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources);
[b] Incremental impact (i.e. incremental increases in concentrations due to the development on its own);
[c] Deposited dust is to be assessed as insoluble solids as defined by AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air – Determination of Particulate Matter – Deposited Matter – Gravimetric Method
[d] Excluded extraordinary events such as bush fires, prescribed burning, dust storms, sea fog, fire incidents, illegal activities or any other activity agreed by the Secretary in consultation with the EPA.

Table 5 Short Term Criteria for Particulate Matter

Pollutant	Averaging Period	[d]Criterion
Particulate matter < 10 µm (PM_{10})	24 hour	[a]50 $\mu g/m^3$

4.2 Dust Deposition

Dust deposition levels refer to the quantity of dust particles which settle out of the air as measured in grams per square metre per month (g/m^2/month) at a particular location.

Condition 14 of Schedule 3 outlines maximum allowable limits in terms of an acceptable increase in dust deposition over the existing background levels (refer to **Table 6**).

Table 6 Development Consent Air Quality Criteria for Dust Deposition

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

5.0 Air Quality Management Controls

Holcim Australia is committed to implementing all reasonable and feasible air quality mitigation measures, to reduce the potential impact of the operation on sensitive receivers. In order to mitigate any potential air quality impacts from the operation, a number of air quality management controls will be implemented throughout the life of the operation. These are intended to minimise odour, fume, greenhouse gas and dust emissions, any visible off-site air pollution and the extent of potential dust generating surfaces exposed on the site.

The dust control measures available for quarry operations are generally a combination of engineering controls, operational controls, and planning controls with existing dust control measures in place continuing to be implemented as part of the Project. These dust control measures include:

Proactive Measures

- minimisation of the total disturbed/working areas at any one time;
- dust collection during drilling operations;
- enclosure of the primary and secondary crushing plants and screening transfer points;
- watering of unsealed roads, working areas and stockpiles;
- water sprays on the conveyors;
- dust extraction system within the secondary crushing plant;
- truck wheel wash facility;
- confining Cooma Road Quarry truck traffic to identified haul routes;
- reviewing meteorological conditions prior to blasting to avoid adverse conditions and minimise blast emissions. Blasting will be undertaken in accordance with the Cooma Road Blast Management Plan;
- conducting regular inspections for odours, fumes, and visible dust (both on-site and off-site) and implementing appropriate controls if excessive odour, fumes or dust are observed;
- rehabilitating exposed areas in a timely manner, including the temporary rehabilitation of exposed areas;
- ongoing assessment of meteorological conditions to identify specific conditions that are conducive to excessive dust generation and modifying operations if required to ensure compliance with the conditions of the Development Consent; and
- providing dust minimisation training as part of the Cooma Road Quarry induction.

Reactive Measures

- ceasing or restricting as necessary dust generating activities during periods of adverse meteorological conditions or extraordinary events as defined in the Development Consent.

The effectiveness of the dust management controls utilised at Cooma Road Quarry will be reported within the Annual Review. The Annual Review will also identify whether any additional dust management controls are required to be implemented at Cooma Road Quarry, or whether there are any technological advancements in dust control which are suitable for implementation at the quarry.

5.1 Greenhouse Gas Emissions

Cooma Road Quarry is committed to ensuring that all reasonable and feasible measures are taken to minimise the release of greenhouse gas emissions from the site. The Statement of Commitments outlined in Appendix 8 of the Development Consent states that Holcim Australia will monitor diesel usage and seek opportunities for further efficiency, including building consideration of fuel efficiency in equipment selection.

Holcim Australia and Cooma Road Quarry will implement the following controls to minimise their overall carbon footprint:

- Holcim Australia Commitments include:
  - ensure energy efficiency, optimum use of raw materials and the reduction of waste in all operations; and
  - proactively identify opportunities to reduce the carbon footprint of the quarry.

- Cooma Road Quarry Commitments:
  - use fuel-efficient equipment where possible;
  - use fuel efficient haulage truck; and
  - confine haulage trucks to identified haul routes.

6.0 Air Quality Monitoring

The Cooma Road Quarry air quality monitoring requirements for the operation are provided in Condition 15(d) of Schedule 3 of the Development Consent. This air quality monitoring program evaluates the performance of the Cooma Road Quarry against the air quality criteria outlined in **Section 4.0**. This section details the monitoring program and requirements for Cooma Road Quarry.

6.1 Monitoring Locations

To assess compliance against dust deposition and dust concentration criteria for Cooma Road Quarry, depositional dust, TSP (inferred from PM_{10}) and PM_{10} are monitored at the locations shown on **Figure 6-1**.

Monitoring involves the utilisation of Cooma Road Quarry's existing Air Quality Monitoring Network. In addition to the existing network of dust deposition gauges, Holcim Australia monitors PM_{10} and TSP in order to demonstrate compliance against the air quality assessment criteria for Cooma Road Quarry contained in Condition 14 of Schedule 3. Cooma Road installed a High Volume Air Sampling (HVAS) unit as part of their continued operations in a location representative of the nearest sensitive receiver (see **Figure 6-1**). The air quality monitoring undertaken at Cooma Road Quarry is detailed in **Table 7** below.

Table 7 Cooma Road Quarry Air Quality Monitoring Program

Site No.	Parameters Monitored	Units of Measure	Averaging Period	Frequency
DD1	Deposited dust	g/m^2/month	Month, annual	Monthly
DD2	Deposited dust	g/m^2/month	Month, annual	Monthly
DD3	Deposited dust	g/m^2/month	Month, annual	Monthly
DD4	Deposited dust	g/m^2/month	Month, annual	Monthly
DD5	Deposited dust	g/m^2/month	Month, annual	Monthly
HVAS1	PM_{10}/TSP(Inferred from PM_{10})	$\mu g/m^3$	24 hour, annual	24 hours – every 6 days

In addition to the regular monitoring outlined in **Table 7**, if Cooma Road Quarry receives complaints regarding air quality at a particular receiver location, specific monitoring may be undertaken to demonstrate compliance with air quality criteria.

To comply with monitoring and recording conditions included in EPL 1453 for Cooma Road Quarry, all monitoring records required to be kept by the licence will be:

- in a legible form, or in a form that can readily be reduced to a legible form;
- kept for at least four years; and

- produced in a legible form to any authorised officer of EPA who asks to see them.

The following records will also be kept in respect of air quality monitoring undertaken:

- the dates on which the monitoring was undertaken;
- the times at which the monitoring was undertaken;
- the point at which the monitoring was undertaken; and
- the name of the person who undertook the monitoring.

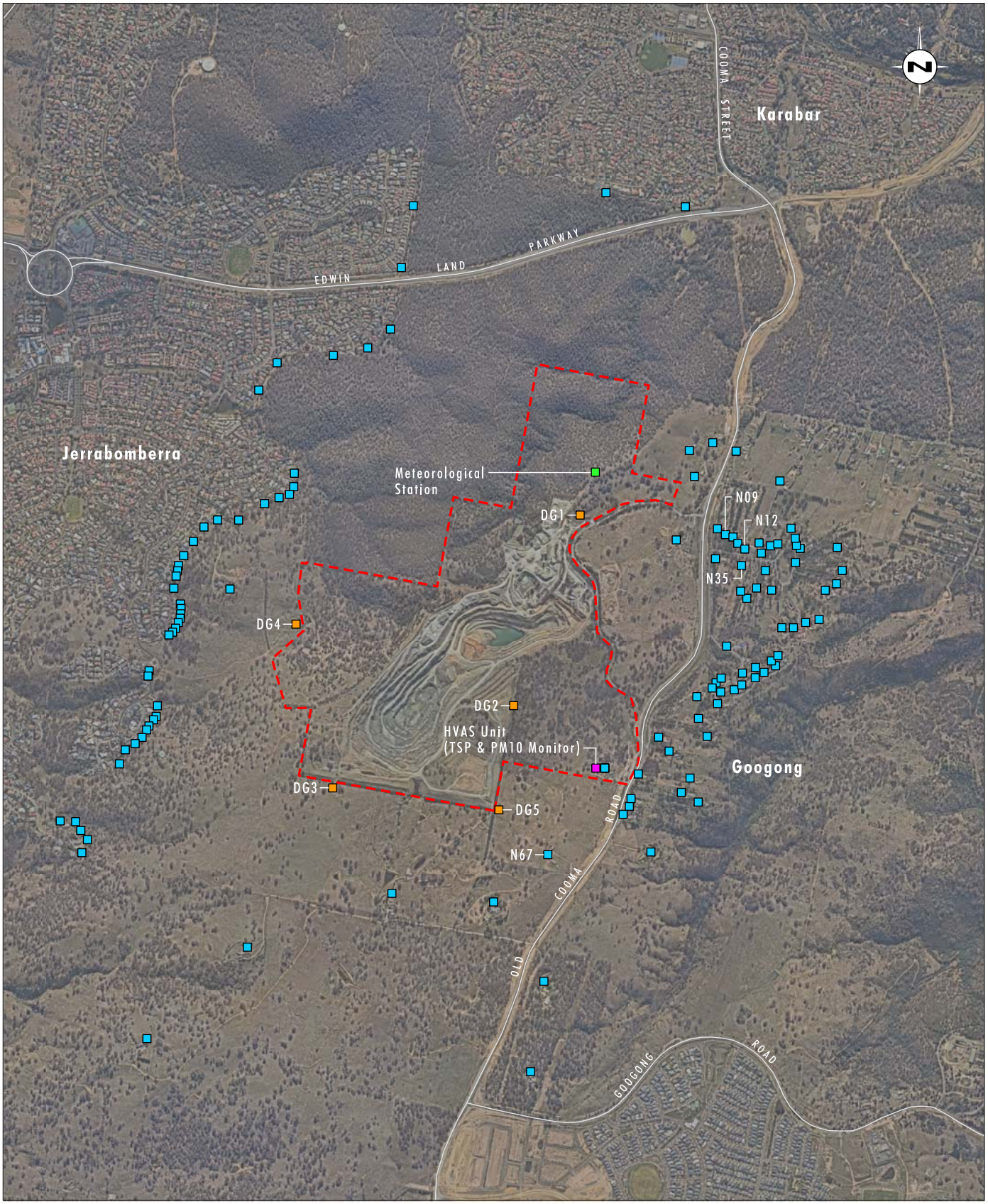

Image Source: Nearmap (May 2019)
Data Source: Holcim (2019)

0 0.5 1.0 1.25km
1:25 000

Legend

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

FIGURE 6.1

Air Quality Monitoring Locations

6.2 Monitoring Standards

Air quality monitoring at Cooma Road Quarry is to be undertaken in accordance with all relevant Australian Standards, legislation and EPA requirements. The Australian Standards and EPA approved methods relevant to the Air Quality Monitoring Program are listed below:

- All sampling and analysis will be undertaken in accordance with the Protection of the Environment Operations (Clean Air) Regulation 2010 and the guidelines specified in the EPA publication 'Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (2007)'.
- The dust deposition gauges will be operated in accordance with AS/NZS 3580.10.1:2016 Methods for sampling and analysis of ambient air Determination of particulate matter - Deposited matter - Gravimetric method.
- The High Volume Air Sampler (HVAS) will be operated in accordance with AS/NZS 3580.9.3:2015 Methods for sampling and analysis of ambient air Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method. The HVAS will be sited in accordance with AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air Guide to siting air monitoring equipment.

6.3 Air Quality Compliance Assessment

Air quality data will be reviewed and checked against the relevant criteria on a monthly basis. In the event of a non-compliance with the impact assessment criteria provided in **Tables 4**, **5** and **6**, Cooma Road Quarry will investigate and report the non-compliance in accordance with **Section 7.2**. The investigation undertaken by Cooma Road Quarry will involve an assessment of the likely contribution made by the operation to any identified exceedances of air quality criteria. External reporting regarding air quality related environmental incidents will be undertaken in accordance with the process outlined in **Section 7.2.1**.

6.4 Meteorological Monitoring

A meteorological station has been installed at Cooma Road Quarry as detailed on **Figure 6-1**. The meteorological monitoring data is obtained from the station in accordance with the requirements of Condition 17 of Schedule 3 of the Development Consent.

6.5 Independent Review

In the event that a landowner considers that Cooma Road Quarry is exceeding air quality criteria at his or her property, the landowner may request an independent review of the air quality impacts at the property. The Independent Review will be conducted in accordance with the procedure described in Condition 2 of Schedule 4 of the Development Consent.

6.6 Contingency Plan

In accordance with Condition 2e) of Schedule 5, Holcim Australia will implement a Trigger Action Response Plan (TARP) in order to manage any unpredicted impacts and their consequences as they may arise. These TARPs are designed to ensure that dust related impacts are minimised at surrounding sensitive receptors as conditions change onsite. The TARP includes a set of triggers that are based on site observations and monitoring data, refer to **Table 8** below. Exceedances will be managed in accordance with **Section 7.2**.

Table 8 Air Quality Trigger Action Response Plan (TARP)

Trigger Level	Trigger Detail	Response
Complaint Received	• Dust generated onsite results in community complaint.	• Review operations to reduce dust emissions. • Modify operations where possible. • Report complaint as necessary.
Elevated Dust Levels – Identified by Quarry Manager	• Day to day observations by Quarry Manager indicate elevated dust levels being generated by site.	• Review operations to reduce dust emissions. • Modify operations to reduce likelihood of dust impact. • Implement dust mitigation measures if necessary.
Dust Levels Exceed Criteria – During Monitoring	• Dust levels exceed criteria identified in **Section 4.0.**	• Complete incident investigation to determine cause of exceedance. • Review effectiveness of current dust mitigation measures. • Modify operations. • Exceedances to be managed in accordance with **Section 7.2.**
Extraordinary events (bushfires etc as detailed in footnote contained in Schedule 3, Condition 14 of Development Consent)	• Extraordinary events present which lead to elevated background air quality readings.	Action to be undertaken may include but is not limited to: • Turning off or limiting operation of mobile equipment or fixed plant, • Redirecting operations to more sheltered areas within the extraction area, and/or • Utilising spray systems and dust mitigating measures. • Ceasing operations as necessary.

In accordance with Conditions 9e) of Schedule 5 of the Development Consent, any discrepancies between the predicted and actual impacts of the development will be analysed during the Annual Review process and on a monthly basis. Monthly environmental monitoring data can be found on the Holcim Australia website (https://www.holcim.com.au/sustainability/environment/pollution-monitoring-data). Adaptive management will be implemented in accordance with **Section 7.2.3**.

7.0 Reporting

7.1 External Reporting

A summary of air quality monitoring results will be provided in the Cooma Road Quarry Annual Review. The following information will be reported in the Annual Review in accordance with Condition 9 of Schedule 5 of the Development Consent:

> By the end of March each year, the applicant (Holcim Australia) shall review of the environmental performance of the development to the satisfaction of the Secretary. This review must:

- 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;
    - requirements of any plan or program required under this consent;
    - the monitoring results of previous years; and
    - the relevant predictions in the documents listed in condition 2(a) of Schedule 2.
- 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 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 calendar year to improve the environmental performance of the development.

In addition, in accordance with *Protection of the Environment Legislation Amendment Act 2011 (*Amendment Act) and Condition 12 of Schedule 5 of the Development Consent, Holcim Australia will also publish air quality monitoring results on the Holcim Australia website (http://www.holcim.com.au). Performance monitoring, which includes an assessment of the effectiveness of air quality monitoring and compliance with the relevant Development Consent and EPL conditions, may be discussed at Community Consultative Committee (CCC) meetings.

7.2 Air Quality Criteria Exceedance Reporting Protocol

Exceedances of air quality criteria will be classified as non-compliances and will be managed in accordance with the requirements of the Cooma Road Quarry Environmental Management Strategy (EMS), which includes a procedure for the management of non-compliances. In accordance with the EMS all non-compliances will be investigated by the Cooma Road Quarry Manager in consultation with Holcim Australia environmental personnel. Additional controls will be implemented where required, based on the outcomes of the investigation. All non-compliances will be reported annually in the Annual Review.

Additionally, in accordance with Schedule 4, Condition 1 of the Development Consent, in the event an exceedance of the air quality impact assessment criteria is identified, Holcim Australia will notify DPIE and any affected landowner(s) in writing and provide regular monitoring results to each of these parties until the results show that the operation is complying with the relevant criteria (refer to **Section 4.0**). Holcim Australia will also provide a copy of the NSW Health fact sheet entitled 'Mine Dust and You' to the affected landowners and/or existing tenants of the land, in accordance with the requirements of the Development Consent.

7.2.1 Incident Notification

An incident is an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance. In accordance with Condition 7 Schedule 5 of the Development Consent, Holcim Australia shall notify DPIE and any other relevant agencies immediately after it becomes aware of an incident.

The notification must be in writing to compliance@planning.nsw.gov.au and identify Cooma Road Quarry, the Development Consent number, the location and nature of the incident.

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).

7.2.2 Non-Compliance Notification

A non-compliance is an occurrence, set of circumstances or development that is a breach of the Development Consent. Within seven days of becoming aware of non-compliances, Holcim Australia must also notify DPIE of the non-compliance and identify:

- the condition the development is noncompliant with;
- the way in which it does not comply and the reasons for the non-compliance (if known); and
- what actions have or will be undertaken to address the non-compliance.

7.2.3 Adaptive Management

In accordance with Condition 5 of Schedule 5 of the Development Consent, Holcim Australia will assess and manage air quality related risks to ensure compliance with the criteria outlined in **Section 4.0**.

Where an exceedance relating to air quality impact has occurred, Holcim Australia will, to the satisfaction of the Secretary of DPIE:

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

Holcim Australia will also report on the effectiveness of the dust control measures implemented at the site within the Annual Review.

7.3 Complaint Response

Complaints relating to air quality at Cooma Road Quarry are to be managed in accordance with the complaints management procedure contained within the Cooma Road Quarry EMS.

This includes recording the complaint on an incident report form, which is completed by the Cooma Road Quarry Manager in consultation with Holcim Australia Environmental personnel to facilitate that corrective actions are implemented. A summary of complaints will published on the Holcim Australia website on a quarterly basis (http://www.holcim.com.au) and provided in the Annual Review.

8.0 Review and Improvement

Ongoing monitoring and review on the performance and implementation of this AQMP will be undertaken in accordance with Cooma Road Quarry Environmental Management Strategy.

In accordance with Conditions 3 and 4 of Schedule 5, Holcim Australia shall review, and if necessary revise, the strategies, plans, and programs required under Development Consent to the satisfaction of the Secretary. Reviews must occur within 3 months of the submission of:

- an annual review;
- an incident report;
- an audit report; and
- modifications to the consent.

Reviews should incorporate any appropriate mitigation measures to improve the environmental performance of the development. Holcim Australia may submit revised strategies, plans or programs to the

Secretary for approval at any time. This annual review will also be utilised to determine whether there have been any changes to legislative requirements or best practice air quality management measures utilised within the industry to manage air quality on site, including an assessment of the feasibility of implementing these best practice measures at Cooma Road Quarry.

The Cooma Road Quarry Manager in consultation with Holcim Australia Environmental personnel will review and if necessary, revise this AQMP and resubmit to DPIE every year or earlier if required. Any changes made to the AQMP as a result of the review will be made in consultation with EPA and Council. A copy of the revised AQMP will be supplied to the Secretary of DPIE for approval. The AQMP will reflect changes in environmental requirements, technology and operational procedures. Updated versions of the approved AQMP will be made publicly available on the Holcim Australia website (http://www.holcim.com.au/).

9.0 Definitions

The terminology utilised within this AQMP is defined in **Table 9** below.

Table 9 Terminology Utilised Within the AQMP

Term	Definition
Dust Deposition	Dust particles that settle out from the air - measured in grams per square metre per unit time (g/m^2/month).
HVAS	High Volume Air Sampler.
Incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits of performance measures/criteria in the Project Approval.
Non-compliance	Occurs when environmental monitoring results fall outside acceptable regulatory limits (i.e. Development Consent or EPL criteria).
PM_{10}	Particulate matter less than 10 micrometers (µm) in size.
$PM_{2.5}$	Particulate matter less than 2.5 micrometers (µm) in size.
TSP	Total Suspended Particulates ($\mu g/m^3$). The nominal size of this fraction has particles with a diameter of up to 50 micrometers (µm).
$\mu g/m^3$	Micrograms per cubic metre.

10.0 Roles and Responsibilities

Relevant roles and responsibilities associated with this AQMP are presented in **Table 10** below.

Table 10 Roles and Responsibilities

Role	Accountabilities for this document
Holcim Australia District Manager	• Approve appropriate resources for the effective implementation of this plan.
Cooma Road Quarry Manager	• Provide that sufficient resources are allocated for the implementation of this Plan. • Coordinate the implementation of air quality management controls and strategies in accordance with this Plan. • Coordinate the review of this plan in accordance with the requirements of the Development Consent.
Planning and Environment Coordinator NSW/ACT	• Coordinate the air quality monitoring requirements of this plan, and evaluate and report monitoring results as required. • Coordinate air quality related incident investigations and reporting as required by Legislation and internal standards and guidelines. • Assist with the review of this plan.

Role	Accountabilities for this document
All employees and contractors	• Comply with all requirements of this Plan. • Report all potential environmental incidents to their supervisor immediately. • Seek approval from the Quarry Manger prior to making changes to infrastructure/processes which may result in increased air emissions.

11.0 References

EMM Consulting 2016. Cooma Road Quarry*, Modification to Development Consent Environmental Assessment,* prepared for Holcim (Australia) Pty Ltd*.*

EMM Consulting 2019. Cooma Road Quarry*, Statement of Environmental Effects: Modification 2 to Development Consent,* prepared for Holcim (Australia) Pty Ltd*.*

NSW Environment Protection Authority (EPA) 2007. Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

Standards Australia, AS/NZS 3580.10.1:2016 Methods for sampling and analysis of ambient air Determination of particulate matter - Deposited matter - Gravimetric method

Standards Australia, AS/NZS 3580.9.3:2015 Methods for sampling and analysis of ambient air Determination of suspended particulate matter - Total suspended particulate matter (TSP) - High volume sampler gravimetric method.

Standards Australia, AS/NZS 3580.1.1:2016 Methods for sampling and analysis of ambient air Guide to siting air monitoring equipment.

Appendix 1 – General Management Plan Requirements from Development Consent

Schedule 5	
Management Plan Requirements 1. The Proponent shall ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:	
a) detailed baseline data	3.0
b) a description of: • the relevant statutory requirements (including any relevant approval, licence or lease conditions); • any relevant limits or performance measures/criteria; • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the project or any management measures;	 2.0 4.0 4.0
c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;	5.0,6.0,7.0,8.0
d) a program to monitor and report on the: • impacts and environmental performance of the project; • effectiveness of any management measures (see (c) above);	 6.0,7.0
e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	6.6
f) a program to investigate and implement ways to improve the environmental performance of the project over time;	8.0
g) a protocol for managing and reporting any: • incidents; • complaints; • non-compliances with conditions of this approval and statutory requirements; and • exceedances of the impact assessment criteria and/or performance criteria	 7.2.1 7.3 7.2.2 7.2
h) a protocol for periodic review of the plan.	8.0

APPENDIX 2 - STAKEHOLDER CONSULTATION

NSW GOVERNMENT | Planning, Industry & Environment

Energy & Resources
Planning & Assessment
Contact: Colin Phillips
Telephone: 9274 6483
Email: colin.phillips@planning.nsw.gov.au

Ms Shilpa Shashi
Planning and Environment Coordinator NSW / ACT
Holicim (Australia) Pty Ltd
Level 8 Tower B - 799 Pacific Highway
CHATSWOOD NSW 2067

Dear Ms Shashi

Cooma Road Quarry Air Quality Expert (SSD 5109)

I refer to your letter of 30 July 2019 seeking the Secretary's approval of Mr Luke Bettridge of Umwelt as a suitably qualified person to update the quarry's Air Quality Management Plan, required by condition 16 of Schedule 3 of the quarry's consent.

The Secretary has approved the appointment of Mr Bettridge.

In accordance with condition 3 of Schedule 5, the Secretary has agreed that the company's revision of management plans, triggered by the approval of Modification 2, may occur without consulting the agencies nominated in the relevant conditions of consent. The exception is that the company must consult with Queanbeyan Council during the preparation of the Transport Management Plan.

Please contact Colin Phillips on the details above if you have any questions.

Yours sincerely

Howard Reed 7.8.19
Howard Reed
Director, Resource Assessments
Energy and Resource Assessments
As the Secretary's nominee

Our reference: EF13/3083: DOC13/69830-03
Contact: Kirsty Pearson 02 6229 7002

Mr Luke Bettridge
Senior Environmental Scientist
Umwelt (Australia) Pty Limited
75 York Street
TERALBA NSW 2284

24 March 2014

Dear Mr Bettridge

Re: Draft Environmental Management Plans for Cooma Road Quarry - Development Consent (SSD_5109) - Environment Protection Licence No. 1453

Thank you for your email 14 March 2014 inviting the Environmental Protection Authority's (EPA) comment on the draft Environmental Management Plans developed for the Cooma Road Quarry expansion project.

As you are aware, the Department of Planning and Infrastructure has issued an approval under Part 4 of the *Environmental Planning and Assessment Act* 1979 for the continued operation of the existing Cooma Road Quarry. The EPA understands the current development consent for Cooma Road Quarry will expire in October 2015 and the Project has been given approval to continue operation of the quarry for a further 20 years. The Project involves extending the approved extraction area and relocating some of the infrastructure components to allow for this extension. The revised Cooma Road Quarry Project Approval (SSD_5109) extends hours of operation for certain activities from 6pm to 10pm; increases production capacity from 1 to 1.5 million tonnes per annum; relocates the existing workshop, truck parking and temporary stockpiles; includes the addition of a mobile pug mill; incorporates recycling of clean concrete on site for re-use; and extends the approved extraction boundary to the north covering an additional area of about 3.5 ha.

As previously advised by the EPA, a variation to Environment Protection Licence (EPL) No. 1453 issued under the *Protection of the Environment Operations Act 1997* (POEO Act) will be required to accommodate the expansion project.

It is not the role of the EPA to approve or endorse such management plans. The EPA's role is to regulate compliance with the conditions of the EPL for the premises. Notwithstanding this, the EPA has conducted a brief review of the draft Environmental Management Plans including the Noise Management Plan, Blast Management Plan, Water Management Plan and Air Quality Management Plan prepared by Umwelt (Australia) Pty Ltd.

The plans appear adequate and the EPA has no specific comments to make at this stage. The installation of the meteorological station at the Cooma Road Quarry is a good tool for assisting in the management and mitigation of potential impacts related to operation as well as complaints investigation. The EPA supports this initiative.

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Tel: (02) 6229 7002 Fax: (02) 6229 7006
ABN 43 692 285 758
www.epa.nsw.gov.au

We remind the proponent, Holcim, of its responsibility to ensure the EPL is appropriately varied prior to the commencement of construction activities for the Quarry extension.

I trust this information is of assistance. Should you have any queries or wish to discuss the EPA's response, please contact me or Kirsty Pearson on Ph: 6229 7002.

Yours sincerely

JULIAN THOMPSON
Unit Head – South East Region
NSW Environment Protection Authority

PF990489
C1434774

25 March 2014

Luke Bettridge
Senior Environmental Scientist
Umwelt (Australia) Pty Limited
lbettridge@umwelt.com.au

Dear Luke

RE: Cooma Road Quarry – Environmental Management Plans - Review
Thank you for the opportunity to review Environmental Management Plans for the Cooma Road quarry prior to submitting them to the Department. The timeframe was short and as such not all of the plans were able to be reviewed in detail by your deadline of 25 March 2014. However, the following comments are provided for your consideration:

Heritage Management Plan
To ensure the long term protection of the lime kiln it is recommended that a Weed Management Program be provided to address 4.1.1 dot point 3 (p. 6). This would give further clarification of weed poisoning over a stipulated time period. This would then commit the applicant to this program. Our Parks & Recreation section are happy to provide some information on a weed management program, however, the time frame of 25 March is not achievable for them.

Noise Management Plan, Blast Management Plan and Air Quality Management Plan
These plans have been reviewed by our Environmental Health section and they are satisfied that they have complied with the condition of approval.

Transport Management Plan
Additional time is requested to review this plan in detail.

Council will take the opportunity to provide further comment on the Transport Management Plan during the time that NSW Planning and Infrastructure are reviewing the Plans.

Yours sincerely,

Lorena Blacklock

Lorena Blacklock
Manager Development Control
Sustainability and Better Living
02 6285 6244