Holcim (Australia) Pty Limited

Cooma Road Quarry Continued Operations

Preliminary Environmental Assessment

December 2011

Umwelt
Environmental Consultants

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Prepared by

Umwelt (Australia) Pty Limited

on behalf of

Holcim (Australia) Pty Limited

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1.0 Introduction

Holcim (Australia) Pty Ltd (Holcim Australia) currently operates a hard rock quarry, known as Cooma Road Quarry, located approximately 11 kilometres south-east of Canberra and 6 kilometres south of Queanbeyan in New South Wales (refer to **Figure 1.1**). The quarry has been in operation since 1959 and is considered a significant local supplier of granite and dacite hard rock aggregates to the region.

The current development consent (DA371/94), granted in 1995 by Queanbeyan City Council, will expire in 2015, however, there will still be rock resources available for quarrying at the site. Holcim Australia proposes to extend the life of the quarry and extend the approved extraction boundary to allow for extraction of the remaining resources at the site. The proposed Project will also aim to increase the annual maximum extraction limit from 1 million tonnes per annum (Mtpa) to 1.5 Mtpa. The proposed Project will provide important construction resources to support the planned future growth and development of the Canberra and Queanbeyan regions.

The proposed Project is a State significant development as defined under the *State Environmental Planning Policy (State and Regional Development) 2011* and will require development consent under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

1.1 The Proponent

Holcim Australia is one of the country's leading producers and suppliers of construction materials such as concrete and quarry products.

Holcim Ltd acquired CEMEX's Australian operations in October 2009. Cooma Road Quarry was initially owned by Readymix Holdings Pty Limited, a member of the Rinker Group. CEMEX acquired Rinker Group Limited and its Australian business, Readymix Holdings Pty Limited, in 2007. To avoid confusion, Holcim Australia will be used to describe ownership of the Quarry and any associated approvals irrespective of timing, throughout this document.

Holcim Australia has been providing products to the Australian construction industry since 1901, originally under the well-known brands Readymix and Humes. Holcim has a network of over 200 concrete plants and 88 quarry operations in Australia, which provide high quality concrete and quarry products to a diverse range of customers. Quarry products include rail ballast, aggregates, gravels, road pavement materials, manufactured and natural sands. These basic materials are essential construction products that go into making concrete and help to build community infrastructure.

1.2 Purpose of the Document

This Preliminary Environmental Assessment (PEA) has been prepared by Umwelt (Australia) Pty Limited (Umwelt) on behalf of Holcim Australia in order to brief relevant government agencies, the community and other stakeholders about the proposed Project. This PEA also introduces the environmental studies to be undertaken as part of the Environmental Impact Statement for the proposed Project. This document will be provided to each of the relevant agencies in order to assist them in providing input to the Department of Planning and Infrastructure (DP&I) to inform the Director-General of Planning and Infrastructure in determining the requirements for the EIS.

Source: Google Earth (2010) and Queanbeyan City Council (2006)

0 0.5 1.0 1.5km
1:35 000

Legend

Proposed Project Area

FIGURE 1.1

Locality Map

2.0 Proposed Project

Cooma Road Quarry has been in operation since 1959 and is a significant local supplier of granite and dacite hard rock aggregates to the region. An approval for the current Cooma Road Quarry operations was granted in 1995 by Queanbeyan City Council for a period of 20 years and will expire in 2015. The existing quarry operations are shown on **Figure 2.1**. The proposed Project will involve extending the life of the quarry to allow for extraction of these remaining resources.

In order to extract the remaining resources, Holcim Australia is proposing to extend the currently approved extraction boundary. The proposed extraction area extension includes resources beneath part of the existing quarry infrastructure area, refer to **Figure 2.1**. In order to accommodate the proposed extraction boundary increase, it is proposed to relocate the existing workshop, truck parking area and temporary stockpiles to a new infrastructure area on the eastern side of the present alignment of Old Cooma Road. Old Cooma Road is currently in the process of being relocated further east. The existing section of Old Cooma Road will remain as the direct access road to the quarry site and extraction area, as well as providing access to the proposed new infrastructure area. The proposed site of the new infrastructure area has previously been disturbed by quarrying activities. The proposed Project will also seek to increase the maximum annual extraction limit to 1.5 Mtpa from the presently approved 1 Mtpa.

Holcim Australia also propose to introduce a mobile pug mill and mobile asphalt plant as part of the proposed Project to assist in meeting customer demands for these products.

Table 2.1 provides a comparison of the currently approved Cooma Road Quarry to the proposed Project.

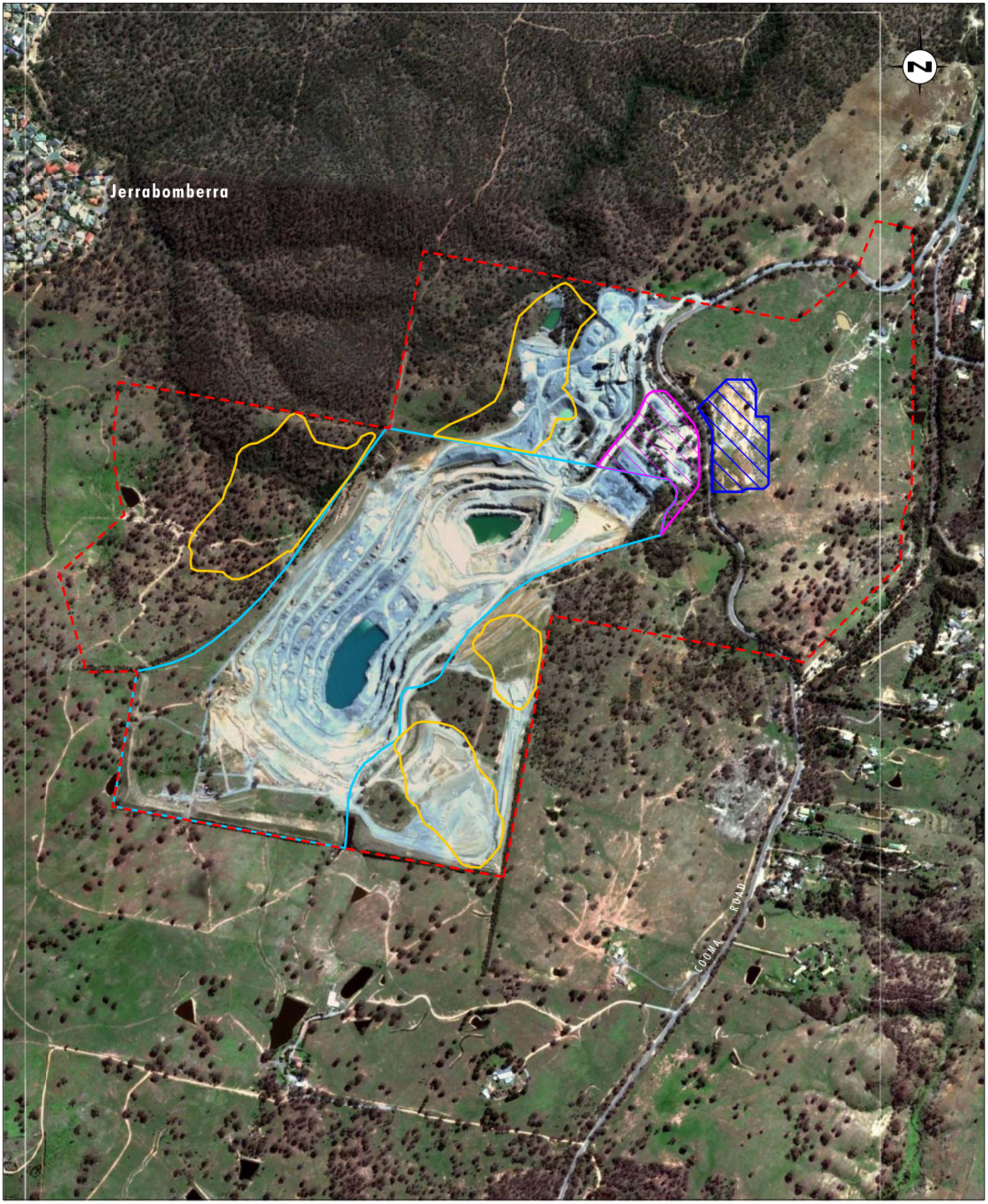
Table 2.1 - Comparison of Currently Approved Cooma Road Quarry and the Proposed Project

Major Project Components/Aspects	Currently Approved Cooma Road Quarry	Proposed Project
Quarry Life	Quarry operations to cease October 2015	Additional 15 years of quarry life until 2030
Limits on Production	1 Mtpa	1.5 Mtpa
Quarry Footprint	As shown on **Figure 2.1**	Extension of quarry pit within the existing disturbed quarry infrastructure area as shown on **Figure 2.1**.
Overburden Emplacement Areas	As shown on **Figure 2.1**	No change. Existing overburden emplacement areas contain sufficient capacity for continued operations.
Hours of Operation	Current operating hours are 6am to 6pm Monday to Saturday.	Increase the hours of operation to 6am to 10pm Monday to Friday and continue existing hours of 6am to 6pm Saturday. Increased hours are to allow for increased flexibility to supply material for certain projects and to accommodate the increased extraction rate.
Transport	16 light vehicles per day, 28 rigid trucks per day, and 135 articulated trucks per day	Increase in truck movement numbers associated with proposed increase in production rate.

Table 2.1 - Comparison of Currently Approved Cooma Road Quarry and the Proposed Project

Major Project Components/Aspects	Currently Approved Cooma Road Quarry	Proposed Project
Employment	Employment at maximum production of approximately 115 people (including road transport drivers). Currently 20 employees (not including transport).	Proposed number of employees is 24-26 (not including transport employees).
Infrastructure	As shown on **Figure 2.1**	Proposed relocation of part of the infrastructure area to access remaining resources beneath the workshop and truck parking area. Access to the relocated facilities will be via the existing section of Old Cooma Road. Addition of mobile pug mill and mobile asphalt plant.
Site Access	Existing access as approved	Continued use of existing access and new access point for proposed site infrastructure area.
Concrete Recycling for re-use as Product	Not currently undertaken.	As part of Holcim's commitment to improving sustainable development, approval will also be sought to enable the site to carry out concrete recycling for re-use as product. Strict control conditions will apply to the concrete recycling process including: • the receipt of clean concrete from approved suppliers only; • proof of origin of the concrete; and • validation of returned concrete material to confirm it is free of general waste materials, wood, paper and metals. The validated clean concrete material will be stored on site and recycled through the current onsite processing plant in accordance with all appropriate environmental management controls.

The proposed Project will support the planned future growth for the ACT region, maintain local employment and local supply of quarry materials close to markets. The proposed Project will allow the Cooma Road quarry to continue to support the rapid growth and development of the area and assist in achieving the aims and objectives of the various strategic and regional planning policies, including the Queanbeyan Residential and Economic Strategy 2031, Sydney-Canberra Corridor Regional Strategy 2006-2031, the Canberra Plan and the Memorandum of Understanding on settlement between the Commonwealth, NSW and ACT governments.



Source: Google Earth (2010)

0 100 300 600m
1:12 500

Legend

- Proposed Project Area
- Approved Extraction Area
- Proposed Extraction Area
- Emplacement Areas
- Proposed Infrastructure Area

FIGURE 2.1

Cooma Road Quarry Continued Operations

3.0 Stakeholder Consultation

Holcim Australia has an established relationship with the surrounding community and other stakeholders and has implemented a process for ongoing engagement regarding its operations. The existing engagement program includes a community complaints telephone line and community open days. As part of the proposed Project, Holcim Australia is committed to working with the community to develop a Project that can coexist with the local community and has built on the existing engagement program to implement a detailed stakeholder engagement process for the Project. The detailed engagement process will enable the community to be involved in project planning by providing comments and feedback to help identify community needs and concerns. This will assist Holcim Australia to target specific areas of community interest during project considerations throughout the environmental impact assessment and approval process.

Agency and Government Consultation

Consultation with the relevant government agencies will be undertaken throughout the preparation of the EIS to ensure key issues are identified and appropriately assessed and addressed in the EIS.

An initial briefing will be provided to Queanbeyan City Council introducing the proposed Project and outlining the key aspects of the Project including the project design, stakeholder engagement program, key potential environmental impacts and the approach to the environmental assessments. Further meetings will be held throughout the process as required to inform the environmental assessment process.

Community and Other Stakeholder Engagement

A community information sheet will be distributed shortly to residences within the vicinity of the Cooma Road Quarry. The newsletter provides details of the proposed Project, consultation process and how the community can be involved in the environmental assessment and approvals process. The newsletter also includes a feedback form and an enclosed reply paid envelope so that community members can provide any feedback directly to Holcim, as well as contact details should they wish to speak directly with the Holcim Australia Project Manager to discuss the proposed Project in further detail.

Further opportunities for the community to remain informed and involved are planned throughout the environmental assessment and approval process.

4.0 Planning Considerations

Following commencement of the *Environmental Planning and Assessment Amendment (Part 3A Repeal) Act 2011*, the proposed Project will require development consent under Part 4 of the EP&A Act. The quarry currently has approval and is proposed to continue to produce in excess of 500,000 tonnes per annum and is therefore considered a State Significant Development under the provisions of the State Environmental Planning Policy (State and Regional Development) 2011. The Minister for Planning and Infrastructure, or their delegate, will be the consent authority for the development.

As State significant development, the proposed Project is permissible provided it is not wholly prohibited by an environmental planning instrument. The proposed Project area is zoned 1(a) Rural A under the provisions of the Queanbeyan Local Environmental Plan (LEP) 1998. Quarrying is not permissible within this zone. However, under the provisions of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007, extractive industries are permissible on land which development for the purposes of agriculture or industry may be carried out. Under the Queanbeyan LEP, development for the purposes for agriculture is permissible with development consent. Accordingly, quarrying activities are permissible within the site.

Other approvals or variations to existing licences and approvals under the *Protection of the Environment Operations Act 1997*, *Water Management Act 2000* and *Roads Act 1993* are likely to be required for various components of the proposed Project if approved. All relevant legislative requirements will be discussed in further detail in the EIS.

5.0 Key Environmental and Community Issues

To assist in identifying the key environmental and community issues that require detailed assessment as part of the EIS, a preliminary environmental risk analysis has been completed for the proposed Project.

The key environmental and community issues for the proposed Project are considered to be:

- noise and blasting;
- air quality;
- traffic;
- water resources; and
- socio-economic impacts.

These key issues are discussed in **Section 5.1**, including a brief description of the proposed assessment methodology. Other relevant environmental and community issues and assessment approaches are discussed in **Section 5.2**. The detailed assessment of these issues will be included in the EIS prepared for the proposed Project.

5.1 Key issues

5.1.1 Noise and Blasting

The proposed Project has the potential to impact on amenity as a result of noise from quarrying activities and the construction of the proposed infrastructure area, however, as the nature of the quarry operations will remain substantially the same, the potential for significant changes in noise and blasting impacts are considered minimal. A comprehensive noise and blasting impact assessment will be undertaken for the proposed Project in accordance with the requirements of the NSW *Industrial Noise Policy* (EPA 2000).

The comprehensive assessment will include:

- analysis and discussion of the existing noise environment in the proposed Project area and surrounds;
- prediction of the noise emissions for the proposed Project;
- assessment of the impact of the proposed Project on surrounding sensitive receivers in accordance with the NSW Industrial Noise Policy;
- assessment of any cumulative impacts associated with the proposed Project and other significant local noise sources;
- assessment of predicted blasting overpressure and vibration levels at potentially affected receivers; and
- recommendations relating to noise and blasting monitoring and management.

The noise impact assessment will consider noise associated with all construction and operational activities associated with the quarry, including associated road traffic noise.

5.1.2 Air Quality

As the nature of the quarry operations will remain substantially the same, the potential for significant changes in air quality impacts as a result of the proposed project are considered minimal. A detailed air quality assessment will be undertaken as part of the EIS in accordance with the OEH's *Approved Methods of the Modelling and Assessment of Air Pollutants in New South Wales* (DEC 2005), which specifies how assessments based on the use of air dispersion models should be undertaken.

The air quality assessment will use a non steady-state 'puff' model known as CALPUFF. The CALPUFF model, through the CALMET meteorological processor, simulates complex meteorological patterns that exist in a particular region. The effects of local topography and changes in land surface characteristics are accounted for by this model.

Model predictions for proposed Project and cumulative emissions of TSP, PM_{10}, and depositional dust will be compared to OEH assessment criteria to provide an assessment of the predicted air quality impacts of the proposed Project.

5.1.3 Traffic

The proposed increase production will result in an increase of heavy vehicle movements. A number of changes to the local road network have been implemented or are approved within the surrounding areas, such as the Old Cooma Road realignment. A detailed traffic impact assessment will be completed as part of the EIS to assess the impact of the proposed Project on the local traffic network. The traffic impact assessment will involve the following:

- an assessment of the existing road transport systems including the identification of any transport constraints or issues;
- an assessment of traffic generation due to the proposed Project and the likely impacts of this traffic on the existing transport networks. The assessment will also identify any transport infrastructure upgrade or maintenance works required as a result of the proposed Project;
- documenting potential road transport issues for the proposed Project including:
    - level of service on the road network;
    - physical condition of the roads related to the proposed Project including capacity of the networks;
    - road safety issues; and
- consideration of the cumulative transport impacts associated with this proposed Project and other existing developments.

5.1.4 Water Resources

There will be minimal changes required to the existing water management system for the quarry operations, with some minor changes associated with the extension of the quarry pit and relocation of the infrastructure area. The maximum depth of the pit will not change and although the quarry footprint will expand, it is unlikely to result in a substantial change in groundwater impacts. Despite the limited potential for significant impact changes resulting

from the proposed Project, water resources impacts are still considered a key issue and a water resources assessment will be completed for the proposed Project.

The water resources impact assessment will:

- assess the potential impacts on surface water and groundwater;
- investigate the management of process water;
- assess the interaction of surface water and groundwater with the quarry water management system; and
- include a predicted water balance.

5.1.5 Socio-Economic Impacts

Socio-economic assessment is concerned with assessing and predicting the likely consequences of a project in both social and economic terms. While economic assessment emphasises the monetary effects of a proposal, social impact assessment is concerned with assessing benefits and costs in non-monetary terms.

The methodology to be employed for the SIA will largely centre on secondary data review. Engagement with local landholders and key community stakeholders is a critical component of the SIA program.

5.2 Other Issues

The scope of assessment required for other relevant environmental and community issues as part of the EIS is presented in **Table 5.1**.

Table 5.1 – Other Environmental and Community Issues

Environmental Issue	Potential Impact	Assessment Requirements
Greenhouse Gas and Energy	Potential GHG and energy impacts due to the proposed extension and increased extraction rate.	The potential Greenhouse Gas and Energy impacts of the proposed Project will be evaluated in accordance with DP&I expectations and relevant guidelines. The assessment will develop greenhouse gas (GHG) projections for the life of the quarry and quantify how the proposed Project will impact national and international greenhouse targets. The Greenhouse Gas an Energy assessment will include: • a comprehensive projection of GHG emissions that have been calculated using the National Greenhouse Account (NGA) Factors; • a breakdown of GHG emissions by: - direct emissions (Scope 1 emissions); - indirect emissions from electricity (Scope 2 emissions); - upstream and downstream emissions (Scope 3 emissions); • an evaluation of potential measures to reduce GHG emissions; and • an assessment of the proposed Project's contribution to national and international targets.
Ecology	Potential loss of ecological values through extension of the disturbance footprint.	The proposed extension footprint incorporates two areas - the proposed extraction area and proposed infrastructure area. Both areas have previously been disturbed and as such, it is anticipated that no additional disturbance, outside areas that have previously been disturbed will result from the proposed Project. There is some limited vegetation within the proposed disturbance footprint and assessment of the impact of the proposed Project will be completed.
Aboriginal Archaeology	Potential disturbance to Aboriginal sites or objects or cultural heritage values.	No sites have been previously identified within the proposed Project area and as noted above, the proposed extension footprint has been previously disturbed. On this basis, a diligence assessment for Aboriginal archaeology will be undertaken in accordance with OEH's Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales (2010).

Table 5.1 – Other Environmental and Community Issues (cont)

Environmental Issue	Potential Impact	Assessment Requirements
European Heritage	Potential disturbance to known or unknown sites of European heritage significance.	Immediately east of the quarry and adjacent to Old Cooma Road are the remains of a lime kiln of substantial stone construction and two associated stone buildings. Existing management and mitigation measures are in place for the remains. The blasting assessment will consider potential impacts on this site. As discussed above the proposed extension footprint has been previously disturbed. A review of relevant databases will be undertaken to confirm no other sites need to be assessed for potential impacts by the proposed Project.
Visual Amenity	Potential visual amenity impacts to nearby residents and the community through extension of operations – including relocation of infrastructure area.	A Visual assessment will be undertaken for the proposed Project to assess potential impacts to visual amenity associated with the proposed Project and to compare the additional impacts, if any, to those outlined in the 1994 EIS for the Cooma Road Quarry. The visual analysis will include assessing potentially affected surrounding residences and viewing locations, including public roads. The assessment will include the preparation of radial analysis and transects to confirm the proposed Project visibility. Based on the available information, it is anticipated that visual impacts are not likely to be a significant issue from surrounding residential locations due to topography.
Agricultural and Land Capability	Assessment of agricultural and land capability of the proposed disturbance areas and potential for impacts on agricultural values.	Since the proposed disturbance areas (proposed extraction area and proposed infrastructure area) have previously been disturbed and are not currently used for agricultural land uses, there is limited potential for the proposed Project to impact on agricultural values. Despite this, an assessment will be undertaken as part of the EIS to verify that agricultural values will not be impacted by the proposed Project.
Rehabilitation and Decommissioning	Potential impacts to future land use opportunities once quarrying activities cease and potential for ongoing environmental impacts due to inadequate closure.	The EIS will include an outline of the approach to rehabilitating and closing the quarry once quarry operations have ceased. It will also identify opportunities for ongoing rehabilitation during the operation of the quarry, along with the proposed approach to final landform and land use.

6.0 Project Schedule

Based on current project timing, Holcim Australia intends to lodge the development application for the proposed Project in the first quarter of 2012. Approval for the proposed Project is sought by the end of 2012, allowing the commencement of project related development in 2013.

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