Holcim

Strength. Performance. Passion

Cooma Road Quarry
Rehabilitation Management Plan
September 2019

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TABLES

FIGURES

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	10/09/2019	Shilpa Shashi	Planning and Environment Coordinator NSW / ACT	Update following DPIE comments	Submitted to DPIE

1.0 Introduction

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 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 and enables 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 Rehabilitation Management Plan (RMP) has been prepared in accordance with Condition 24 of Schedule 3 of the Development Consent (SSD_5109).

1.1 Project Description

The revised Cooma Road 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.

1.2 Purpose and Scope

The purpose of this RMP is to describe the rehabilitation and biodiversity management strategies, procedures, controls and monitoring programs that are to be implemented as a result of quarrying related disturbance impacts and rehabilitation requirements as described in the Cooma Road Continued Operations Project Environmental Impact Statement (EIS, Umwelt, 2012), Modification 1 to Development Consent (EMM 2016) and Modification 2 to Development Consent (EMM 2019). The area covered by this plan is the approved project boundary as shown on **Figure 1-2**. The approved quarrying plan has been designed to include a number of biodiversity impact mitigation factors and rehabilitation design factors. These measures are further described in **Section 5.0**.

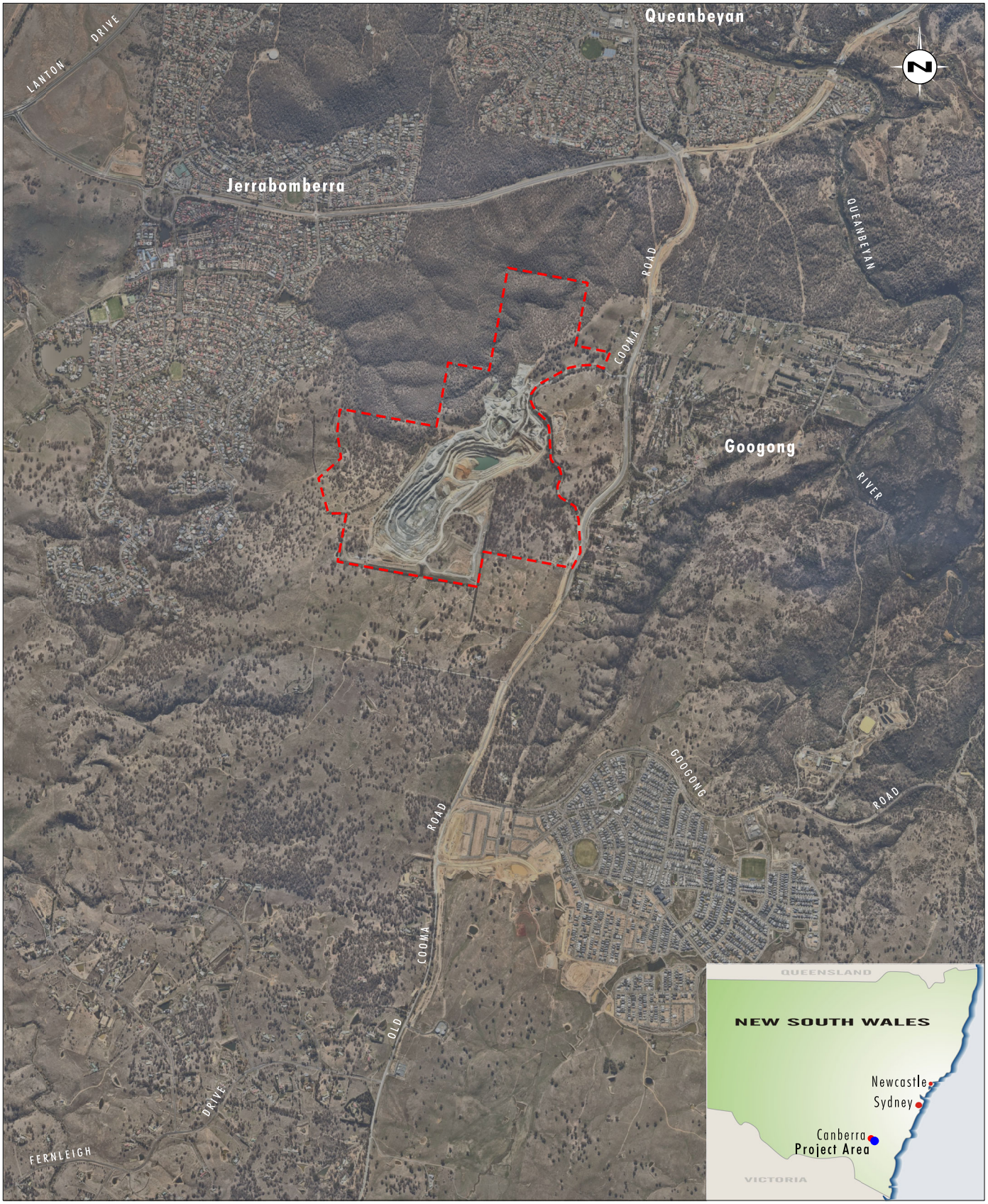

Image Source: Nearmap (May 2019)
Data Source: Holcim (2012), NSW LPI (2019)

0 0.5 1.0 1.5km
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Legend

Approved Project Area

FIGURE 1.1

Locality Map

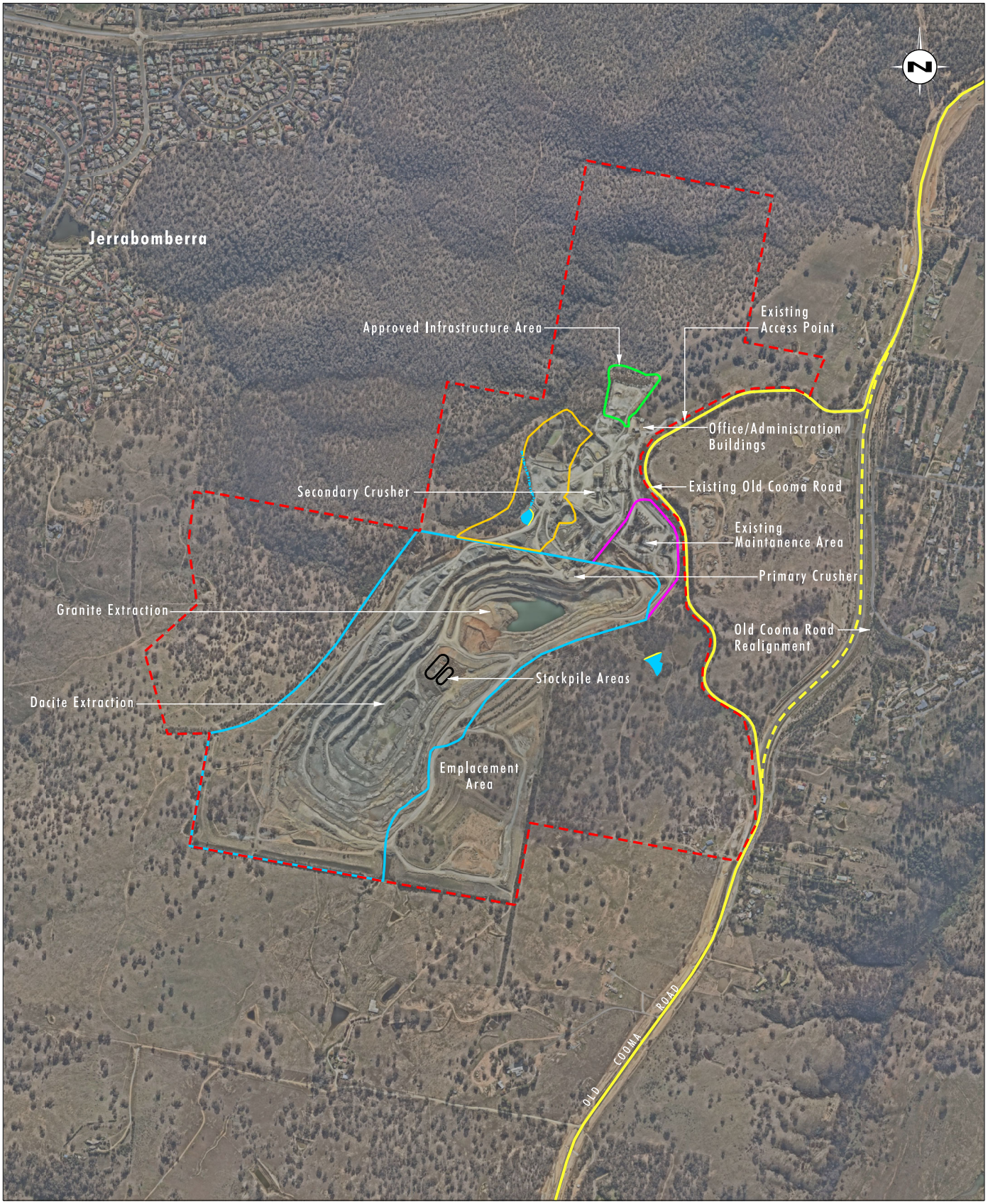

Image Source: Holcim (2012), Nearmap (May 2019)
Data Source: Holcim (2012)

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

FIGURE 1.2

Cooma Road Quarry
Continued Operations Project

File Name (A4): R02/4649_016.dgn
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This RMP also addresses the requirements detailed in the Development Consent. A brief outline of the Development Consent conditions relevant to this plan is provided in **Section 2.1**, including a checklist of where each condition 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 impacts on biodiversity as a result of quarrying activities and to minimise risks associated with unsuccessful post-quarrying rehabilitation of the site.

1.3 Objectives

The objectives of this RMP include the following:

- detail the controls to be implemented to minimise impacts to biodiversity as a result of clearance activities for approved disturbance areas, remnant vegetation and fauna habitat features;
- address the relevant conditions of the Development Consent (refer to **Section 2.1**);
- establish management techniques associated with the clearance of vegetation for the approved infrastructure area and the quarry pit extension area;
- establish general management requirements for the rehabilitation of the quarry pit and overburden areas;
- establish rehabilitation monitoring requirements; and
- detail the requirement for reporting any biodiversity related incidents to the relevant stakeholders.

2.0 Regulatory Requirements

2.1 Development Consent

The Development Consent for the Cooma Road Continued Operations Project was assessed under the *Environmental Planning and Assessment Act 1979* (EP&A Act). The requirement for this RMP arises from Condition 24 of Schedule 3 of the Cooma Road Quarry Development Consent. A table detailing the RMP and other rehabilitation related requirements from the Development Consent, and where these requirements are addressed within this document is provided in **Table 2**.

Table 2 Development Consent Conditions

<table>
<tr><th>Development Consent Condition</th><th>Section Addressed</th></tr>
<tr><td colspan="2">Schedule 3 Environmental Performance Conditions</td></tr>
<tr><td>Rehabilitation Objectives
22. The Applicant must rehabilitate the site to the satisfaction of the Secretary. This rehabilitation must be generally consistent with the proposed rehabilitation strategy in the EIS and Appendix 7 and comply with the objectives in Table 7.

<table>
<tr><td>Feature</td><td>Objective</td></tr>
<tr><td>Site (as a whole)</td><td>Safe, stable and non-polluting.</td></tr>
<tr><td>Surface Infrastructure</td><td>To be decommissioned and removed (unless otherwise agreed with the Secretary)</td></tr>
<tr><td>Benched Quarry Walls</td><td>Landscaped and revegetated utilising native tree and understorey species, ensuring that tree canopy is restored and integrated with the surrounding canopy to minimise visual impacts.</td></tr>
<tr><td>Quarry Pit Floors</td><td>Landscaped and revegetated using native flora species, above the anticipated final void water level</td></tr>
</table>
</td><td>Section 4.1</td></tr>
</table>

Development Consent Condition		Section Addressed
Other land affected by the Development	Restore ecosystem function, including maintaining or establishing self sustaining ecosystems compromised of: Native endemic species; and A landform consistent with Appendix 7 (of the Development Consent) and the surrounding environment.	
Community	Ensure public safety Minimise the adverse socio-economic effects associated with the closure of the development	
Progressive Rehabilitation 23. The Applicant must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.		**Sections 5.0** and **6.0**
24. The Applicant must prepare and implement a Rehabilitation Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with DRG, DPI, DoI-Water and Council;		**Section 2.2**
(b) be submitted to the Secretary for approval within 12 months of the date of this consent;		**Entire plan**
(c) describe the short, medium and long term measures that would be implemented to: - manage remnant vegetation and habitat on site; - ensure compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;		**Sections 5.0** and **6.0**
(d) include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, including triggering remedial action (if necessary);		**Sections 4.0** and **8.0**
(e) include a detailed description of the measures that would be implemented over the next 3 years, including the procedures to be implemented for: - ensuring compliance with the rehabilitation objectives and progressive rehabilitation obligations in this consent;		**Sections 7.0** and **8.0**
- enhancing the quality of remnant vegetation and fauna habitat;		**Section 5.2.6**
- establishing vegetation screening to minimise the visual impacts of the site on surrounding receivers;		**Section 6.1.5**
- restoring native endemic vegetation and fauna habitat within the rehabilitation area;		**Sections 6.1.1, 6.1.3**
- maximising the salvage of environmental resources within the approved disturbance area – including tree hollows, vegetative and soil resources – for beneficial reuse in the enhancement of the biodiversity areas or rehabilitation area;		**Section 6.1.1**
- collecting and propagating seed;		**Section 6.1.3**
- minimising the impacts on native fauna on site;		**Sections 5.1.1, 5.2.3**
- controlling weeds and feral pests;		**Sections 5.2.1, 5.2.2**
- controlling erosion;		**Section 5.2.5**
- controlling access; and		**Section 6.1.4**
- bushfire management;		**Section 5.2.4**

Development Consent Condition	Section Addressed
(f) include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria;	**Section 8.0**
(g) include details of who would be responsible for monitoring, reviewing, and implementing the plan;	**Section 11.0**
(h) provide details of the conceptual final landform and associated land uses; and	**Section 6.2**
(i) provide details of water management requirements and details of the final void in relation to water storage. The Applicant must implement the approved management plan as approved from time to time by the Secretary.	

In addition, Condition 2 of Schedule 5 of the Development Consent provides an overview of Development Consent conditions applicable to all management plans. A table summarising where these conditions are addressed in the document are included in **Appendix 1**.

2.2 Stakeholder Consultation Regarding this Document

A copy of this document has been submitted concurrently to the NSW Division of Resources and Geoscience (DRG), DPI, DOI -Water and Council. Any comments from the agencies will be incorporated into the document and resubmitted to DPIE.

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.

3.0 Baseline Data

3.1 Existing Environment

A detailed summary of the findings of the previous ecological studies completed in the Project Area is provided in the Cooma Road Quarry EIS (Umwelt, 2012). In summary, these studies have identified that the two main vegetation types found in the Quarry Area are alliances and constituents of yellow box/Blakely's red gum community and red stringybark/scribbly gum community. As a result of a history of selective clearing the remnant trees perhaps constitute only part of what might have originally been box-gum woodland.

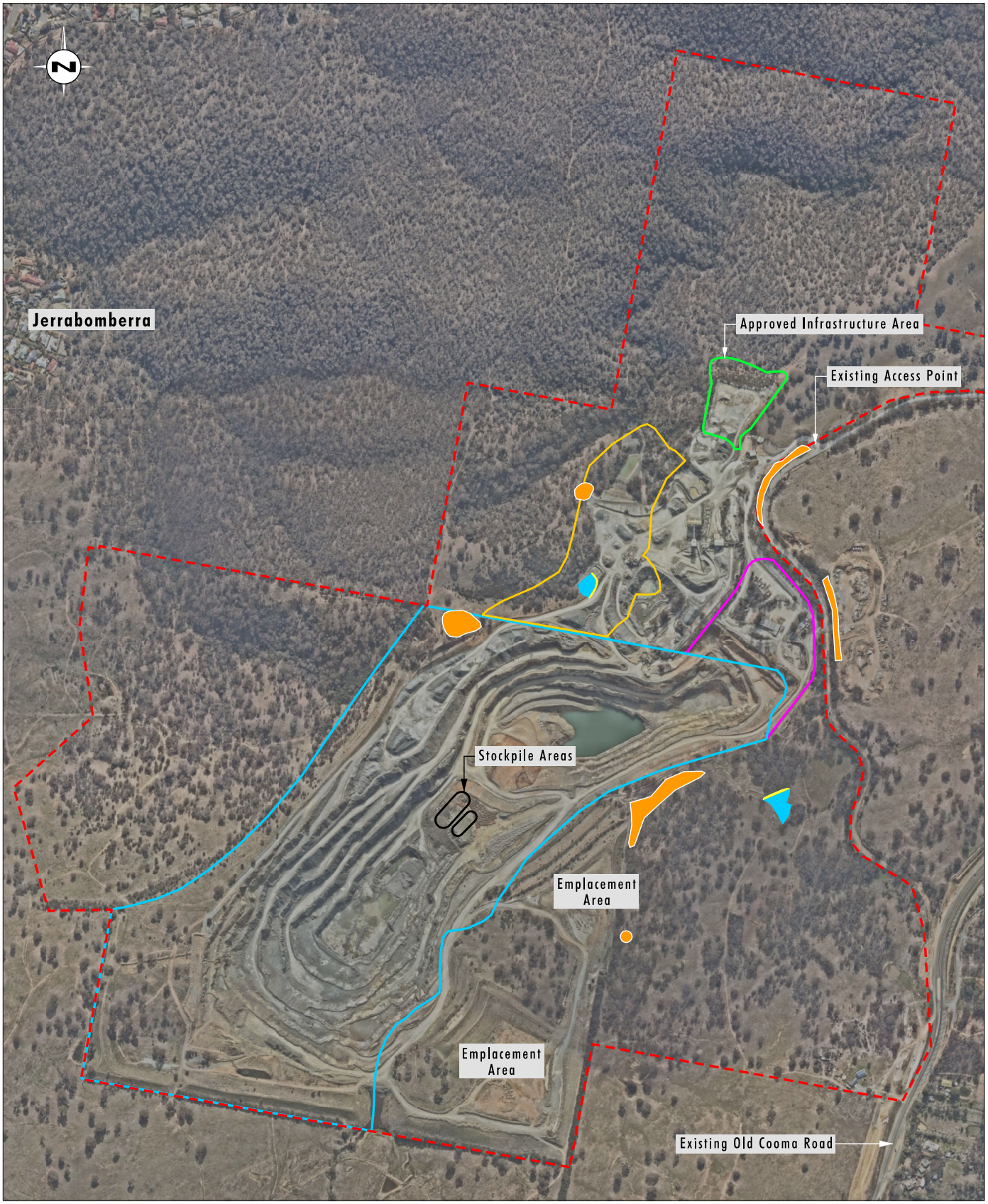
Studies of the site have identified four separate vegetation communities, including red box woodland, yellow box - red box woodland, inland scribbly gum - stringybark gully forest and apple box woodland. The remnant yellow box/red gum woodland community is described as dominated by yellow box and red box along with scribbly gum and apple box. The community broadly conforms to the white box - yellow box - Blakely's red gum woodland (EEC) listed under the TSC Act and some areas may also conform to the white box - yellow box - Blakely's red gum grassy woodland and derived native grassland (CEEC) listed under the EPBC Act' (Eco Logical Australia 2011).

Two populations of hoary sunray (*Leucochrysum albicans* var. *tricolor*) were also observed by Eco Logical, with hoary sunray also being recorded by Umwelt during surveys in 2012 (refer to **Figure 3-1**).

Two threatened woodland birds have previously been recorded on the site, namely diamond firetail and hooded robin. Potential habitat exists for a number of other threatened species.

As identified in the EIS (Umwelt, 2012) and as a result of this project, only an additional 0.2 ha area of clearance was required as a result of the construction of the eastern dam. In regard to the eastern dam footprint, the Umwelt surveys identified that it is largely previously disturbed, containing no trees and a ground layer of mostly exotic grasses. Small patches of degraded native pasture are also present and support several native species including purple wiregrass (*Aristida ramosa*), wallaby grasses (*Austrodanthonia* spp.), spear grasses (*Austrostipa* spp.) and redleg grass (*Bothriochloa macra*). The vegetation present within the additional disturbance footprint is not consistent with any listed Threatened Ecological Community (TEC) and supports only marginal habitat opportunities for fauna.

Rehabilitation activities to date at the site have included rehabilitation of an area of overburden emplacement in the northern part of the quarry. The area included approximately 2.12 hectares of rehabilitated land. The slopes of the overburden emplacement were battered to an average of 10 degrees, covered with topsoil and planted with native tree species. Further rehabilitation has occurred in the south eastern part of the quarry, including approximately 5.48 hectares of rehabilitated land. A tree screen consisting of native tree species has been planted to assist in screening future views of quarry infrastructure (refer to **Section 6.1.5**).



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

0 100 250 500m
1:10 000

Legend

- Approved Project Area
- Approved Extraction Area
- Approved Additional Extraction Area
- Approved Disturbance Area - Workshop
- Approved Disturbance Area - Overburden Emplacement
- Dam
- Hoary Sunray Locations

FIGURE 3.1

Hoary Sunray Locations

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4.0 Rehabilitation Objectives and Criteria

4.1 Rehabilitation Objectives

Rehabilitation of the existing quarry pit and pit extension area, as described in Umwelt, 2012, will be undertaken in accordance with the objectives provided in Table 7 of the Development Consent, and is replicated as **Table 3** below.

Table 3 Rehabilitation Objectives

Feature	Objective	Section Addressed
Site (as a whole)	Safe, stable and non-polluting	**Section 6.1** and **Section 6.2**
Surface Infrastructure	To be decommissioned and removed (unless otherwise agreed with the Secretary)	**Section 6.2.3**
Benched Quarry Walls	Landscaped and revegetated utilising native tree and understorey species, ensuring that the tree canopy is restored and integrated with the surrounding canopy to minimise visual impacts	**Section 6.2.1**
Quarry Pit Floors	Landscaped and revegetated utilising native flora species, above the anticipated final void level	**Section 6.1.3** and **Section 6.2.1**
Other Land Affected by the Development	Restore ecosystem function, including maintaining or establishing self-sustaining ecosystems comprised of: - Native endemic species; and - A landform consistent with Appendix 7 of the Development Consent and the surrounding environment	**Section 6.1** and **Section 6.2**
Community	Ensure public safety. Minimise the adverse socio-economic effects associated with the closure of the development.	**Sections 6.1.4** and **6.2.1**

4.2 Preliminary Rehabilitation and Closure Criteria

Rehabilitation and closure criteria will be utilised to demonstrate achievement of rehabilitation objectives and have been developed as part of the Cooma Road Quarry Project EIS (Umwelt, 2012). The preliminary closure and rehabilitation criteria for the Quarry are outlined in **Table 4**.

Table 4 Preliminary Rehabilitation and Closure Criteria

Aspect	Preliminary Rehabilitation and Closure Criteria
Decommissioning	• All surface infrastructure will be decommissioned and removed. • Services: removal of all services (power, water, communications).
Landform	• Rehabilitated slopes on overburden dumps are stable. • No significant erosion is present that would constitute a safety hazard or compromise the capability of supporting the end land use. • Terminal face rehabilitated landform has been assessed by a qualified geotechnical engineer to validate that it is stable and does not pose a safety risk, following completion of landform works. An indicative profile is shown in **Figure 4-1**. • Contour banks are stable and there is no evidence of overtopping or significant scouring as a result of runoff. • Surface layer is free of any hazardous materials. • Any contamination will be appropriately remediated so that appropriate guidelines for land use are met in accordance with the requirements of the *Contaminated Land Management Act 1997* and underlying guidelines.

Aspect	Preliminary Rehabilitation and Closure Criteria
Soil and Water	• Topsoil or a suitable alternative has been spread uniformly over the rehabilitation surface. • Soil pH to be in the range of analogue sites. • Monitoring demonstrates soil profile development in rehabilitated areas (e.g. development of organic layer, litter layer). • Runoff water quality from the site does not pose a threat to downstream water quality.
Native Vegetation	• Revegetation areas contain flora species assemblages characteristic of the desired native vegetation communities. • Second generation tree seedlings are present or likely to be, based on monitoring in comparable older rehabilitation sites (i.e. evidence of fruiting of native species observed). • More than 75 per cent of trees are healthy and growing as indicated by Long Term Monitoring. • There is no significant weed infestation such that weeds do not comprise a significant proportion of species in any stratum.
Bushfire Hazard	• Appropriate bushfire hazard controls have been implemented.
Ongoing Public Safety	• Appropriate mechanisms are established to control access and manage public safety post closure.

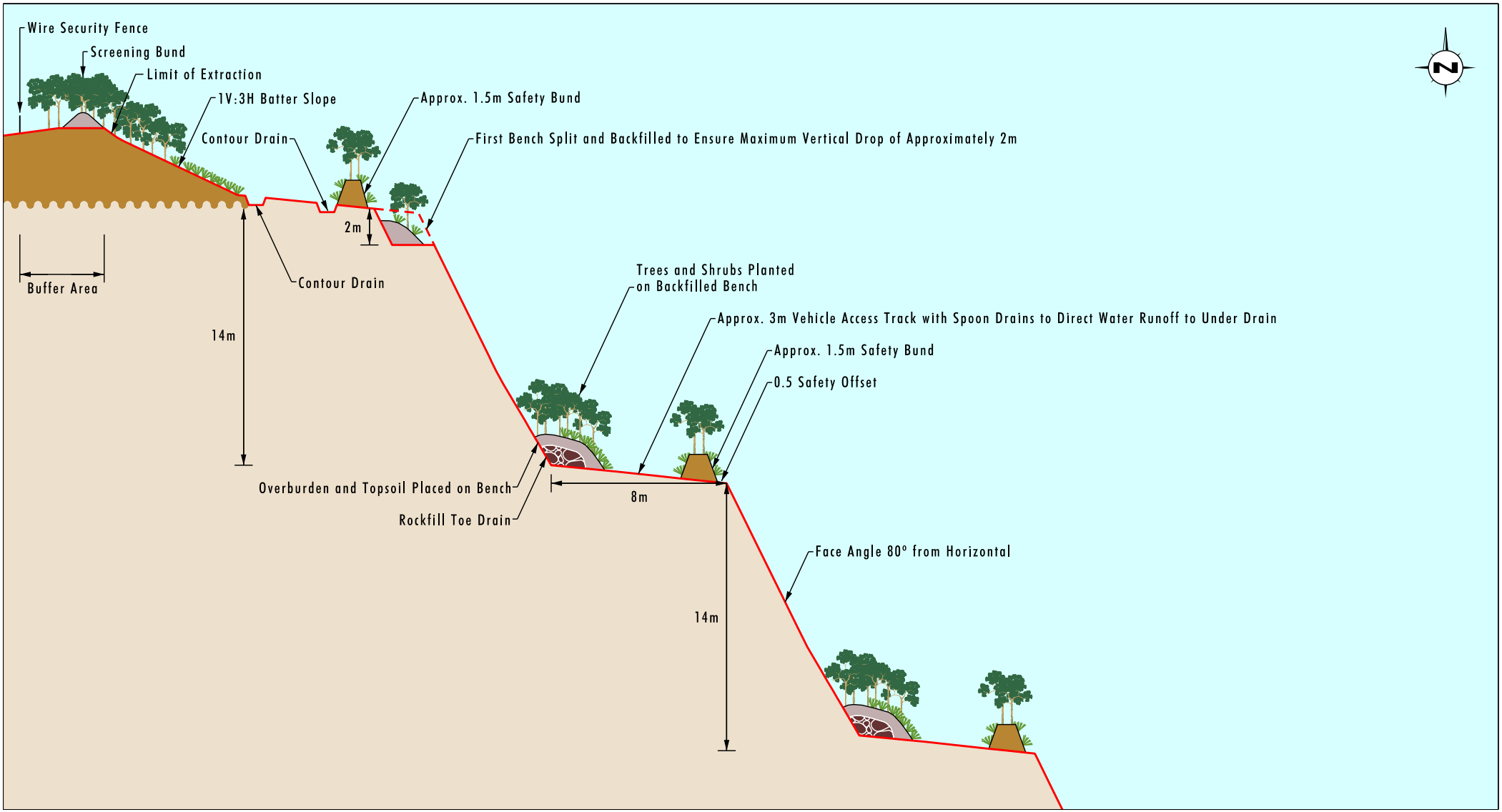
The preliminary rehabilitation and closure criteria will be reviewed and revised throughout the life of the quarry and used as the basis for further refinement following the commencement of rehabilitation activities; consideration of the results of rehabilitation monitoring programs; and consideration of any stakeholder feedback.

4.3 Proposed Final Land Use

At the completion of extraction and rehabilitation works within the existing pit, Holcim Australia propose to primarily establish a native ecosystem throughout the pit, overburden and surface infrastructure areas, which is in keeping with the surrounding landscape. This also provides the opportunity to link the rehabilitation of the quarry with the vegetation offset area situated on the southern and western boundaries of the extraction area. This vegetation offset area has been designated by Council for the proposed Old Cooma Road duplication.

It is also noted that there is the potential for the pit and infrastructure area to provide for ongoing light industrial use subject to a suitable zoning and development approvals. Any such future use would require future environmental assessment and planning approval. It is predicted that the balance of the site would be established as native ecosystem. However, as part of the development of the detailed Quarry Closure Plan to be completed approximately three years prior to closure, Holcim Australia will investigate the potential for other sustainable and economically productive post-closure land uses in consideration of the local and regional land use strategies that may have further evolved towards the end of the quarry life.

Holcim Australia will consult with relevant stakeholders including Council in regards to the suitability of the proposed final land use as part of the development of the Quarry Closure Plan. Further information on the proposed final landform works to be undertaken across the site is outlined in **Section 6.2**.



Source: Holcim (2009)
Note: Not to Scale

Legend

- Cross-section Location
- Safety Bund
- Overburden
- Rockfill Toe Drain
- Trees
- Grass

FIGURE 4.1

Indicative Cross-section of Rehabilitated Quarry Benches

5.0 Remnant Vegetation and Habitat Disturbance Management Controls

Holcim Australia is committed to implementing reasonable and feasible rehabilitation and biodiversity measures. A range of management controls will be implemented throughout the life of the operation to achieve ongoing mitigation of potential impacts on remnant vegetation and habitat disturbance. These specific management controls are detailed further in this section with the conceptual revegetation plan for Cooma Road Quarry shown on **Figure 5-1**.

In the first instance, to mitigate impacts to potential sensitive areas such as EECs, where practicable, impacts on these areas will be avoided. Impacts will be avoided through the use of existing access tracks and planning of disturbance activities to avoid treed areas and identified threatened species where practicable. However, where impacts cannot be avoided, the following sections detail the process to be implemented to manage potential impacts to identified ecological values.

With regard to clearance activities, vegetation clearing works will be required as a result of the continued operations at Cooma Road Quarry. All clearing activities will be undertaken in accordance with the procedure identified in **Section 5.0.** The approved western overburden emplacement area (refer to **Figure 1-2**) will not be utilised by Holcim Australia for overburden emplacement as per commitments made in the Development Consent. No vegetation clearance will therefore be undertaken in this area.

Short, medium and long-term measures to be implemented to achieve rehabilitation goals and objectives for the site are detailed in **Sections 5.1, 5.2** and **6.1**.

5.1 Short-term Measures

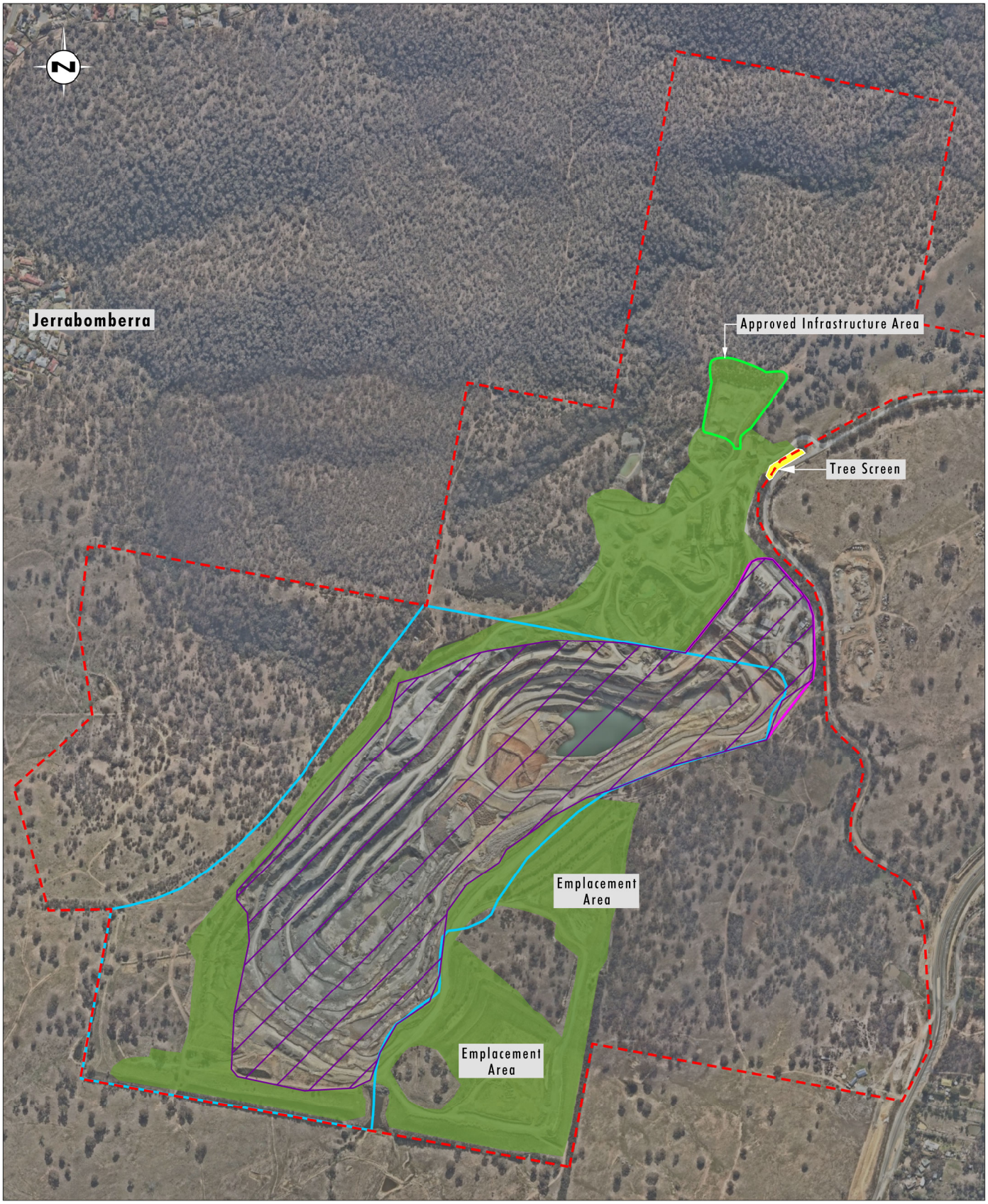
5.1.1 Pre-Clearance Surveys / Tree Felling

Where it is necessary to disturb areas of native vegetation, a pre-clearance survey will be undertaken as outlined in this section. Where felling of habitat trees is required the tree felling procedure outlined in this section will be implemented.

Pre-clearing requirements involve the completion of a pre-clearing survey by a suitably qualified person (e.g. an ecologist). Any recommendations or mitigation measures suggested as a result of preclearance surveys will be implemented as necessary to minimise impacts to habitat. This survey will identify any key fauna habitat features (e.g. tree hollows, hollow logs etc.) that need to be managed as part of the clearing process. Such features will be marked and the clearing procedure outlined below followed. Where no such key features are identified, clearing can proceed without the need to implement this procedure.

The clearing of vegetation will be undertaken in accordance with the following procedure:

- All non-habitat trees will be cleared first, taking care to avoid all marked habitat trees.
- Within one to two days following the clearing of non-habitat trees, habitat trees will be cleared in the presence of a suitably qualified person. Before clearing, the trunk of the hollow-bearing tree will be shaken vigorously with heavy machinery then shaking will be paused for 30 seconds to allow any fauna present to escape, prior to felling of the tree. The machinery operator will then push the tree over as slowly as possible, so as to minimise the intensity of impact when hitting the ground.
- Once the tree has been felled, the qualified person will inspect the tree (particularly tree hollows) for signs of any trapped or injured fauna. Where necessary, a spotlight will be used to inspect deep hollows.
- Any injured fauna will be carefully captured by the qualified and experienced person, and taken to a wildlife carer or veterinary clinic.
- Cleared vegetation is proposed to be either mulched or placed on rehabilitation areas to assist in habitat re-establishment.



Source: Holcim (2012), Nearmap (May 2019)

0 100 250 500m
1:10 000

Legend

- Approved Project Area
- Approved Extraction Area
- Approved Additional Extraction Area
- Approved Disturbance Area - Workshop
- Quarry Pit Revegetation (Refer to Figure 5.25)
- Native Revegetation
- Tree Screen of Yellow Box/Red Box Tree Species

FIGURE 5.1

Conceptual Revegetation Areas

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5.2 Medium-term Measures

5.2.1 Weed Control

Weed species could inadvertently be brought into Cooma Road Quarry with imported materials, machinery, or stock movement, or allowed to invade naturally through removal of native vegetation.

A weed control program has been implemented to limit the spread and colonisation of noxious and environmental weeds at the Cooma Road Quarry, and includes:

- regular inspections of the Quarry area to clarify any potential weed infestations;
- the implementation of weed management measures as required including hand removal, mechanical removal and application of approved herbicides (in accordance with the *Pesticides Act 1999*) in authorised areas when favourable conditions prevail;
- control of noxious weeds in accordance with the relevant legislation;
- monitoring and inspections of areas to assess the effectiveness of the weed control program and to understand any requirement for further work; and
- ongoing consultation with the relevant authorities, as required, regarding weed listings, weed occurrence and management technologies.

Chemicals to be used on site for the purposes of weed control will be evaluated by review of their Material Safety Data Sheet and chemical label to determine their registration for control of target species, as well as the safety and environmental requirements during their use. Chemical spraying will be undertaken in accordance with the *Pesticides Act 1999* with records of use maintained for a period of three years. A summary of the weed management activities undertaken on site will be reported in the Annual Review.

5.2.2 Pest Management

Feral fauna at Cooma Road Quarry may impact on the native fauna species through predation and competition for resources such as food, shelter, and breeding sites. Feral animals can also have a detrimental effect on regenerating areas as well as soil stability. Ongoing feral animal control program will include inspections for the presence of significant populations of feral fauna species.

Feral animal control programs will be completed as required. These programs typically consist of feral animal baiting. The details of feral animal sightings, control actions and the effectiveness of these control strategies will be reported in the Annual Review.

5.2.3 Habitat Reinstatement

The quarry plan for Cooma Road Quarry has been designed, as far as possible, to reduce impacts on threatened flora and fauna species by utilising existing approved disturbance areas as far as possible.

Where feasible, the salvage and relocation of hollow logs, fallen timber and boulders will be undertaken to augment habitat complexity within any areas to be rehabilitated or deemed (through monitoring results) to have low occurrences of such habitat resources. The purpose of this will be to increase habitat complexity in these areas, to make them more habitable for native species.

5.2.4 Bushfire Management

Water for use in firefighting is provided for by the site water management system, to ensure that there is sufficient water available on site for bushfire fighting purposes. Firefighting equipment including fire hydrants, extinguishers and hose reels will continue to be provided at all infrastructure areas and mobile equipment maintained in accordance with Australian Standards and relevant industry standards.

Holcim Australia has a long history of safe operation of Cooma Road Quarry and implementation of appropriate measures on site for managing bushfire risk. Holcim Australia will continue to implement the appropriate measures to reduce the risk of fire ignition and the spread of bushfire across the site in consultation with the NSW Rural Fire Service (RFS).

5.2.5 Erosion and Sediment Control

Appropriate erosion and sediment control works will be undertaken by Holcim Australia in the vicinity of the eastern dam construction area and for the new infrastructure area. Erosion and sediment controls will also be installed, where necessary, on rehabilitated areas.

The erosion and sediment control measures that will be implemented to minimise risks associated with potential erosion and sediment impacts will be undertaken in accordance with the Cooma Road Quarry Water Management Plan, which provides detail of the erosion and sediment control management measures to be utilised at the site.

5.2.6 Remnant Vegetation Area Works

Outside of the approved disturbance areas, within buffer lands for the site. The following works are proposed:

- use and maintenance of existing tracks. Where possible, the construction of new tracks will be minimised;
- ongoing monitoring activities in accordance with the site's rehabilitation monitoring program;
- continued exclusion of stock;
- fencing repair / installation (where required);
- erosion and sediment control works (where required);
- visual tree screening activities (refer to **Section 6.1.5**);
- bushfire load monitoring and reduction works in consultation with the NSW RFS (refer to **Section 5.2.4**); and
- routine weed and feral animal control works (refer to **Section 5.2.1 and 5.2.2**).

Periodic inspections of the buffer lands will identify any maintenance actions required in order to assist in the enhancement of these areas. Inspections will identify issues such as fence condition, progression of regenerating native vegetation and the need for targeted weeding and feral animal programs.

6.0 Rehabilitation Management Controls

Wherever possible, rehabilitation will be completed progressively as part of the ongoing development of the quarry. In regard to the quarry pit, terminal quarry pit walls will be progressively rehabilitated once they are available. It is noted, however, that opportunities for progressive rehabilitation within the pit are limited as there are few benches shaped to final profile during the staged quarry development. This is due to the fact that the benches have the potential to be altered by subsequent quarrying activities. However, opportunities for progressive rehabilitation within the pit and surrounding land will be sought and implemented where practical throughout the staged quarry development. Interim measures to obtain short term vegetation cover and dust control measures such as watering of exposed areas in accordance with the Air Quality

Management Plan, will be implemented to control dust in disturbed areas that are no longer active but that are not yet ready for final rehabilitation.

The construction of visual and acoustic bunds proposed as part of the currently approved quarry (including western edge of Cooma Road, east of the Quarry road, along ridgelines, east of the current workshop, and south of the extraction operations) has been completed including revegetation of the bund.

6.1 Long-term Measures

6.1.1 Salvage of Beneficial Resources

6.1.1.1 Vegetation

An assessment of the applicability of any vegetation salvage will be undertaken prior to clearance activities as part of the preclearance survey undertaken in accordance with **Section 5.1.1**.

The salvage of hollow bearing trees, hollow logs, fallen timber and boulders will be undertaken where practical during the clearing process. The relocation of such habitat resources into rehabilitation areas (where deemed to be appropriate) is aimed at increasing habitat complexity in these areas, in order to make them more habitable for native and potentially threatened species.

Habitat features suitable for salvage will have been identified and marked in the field as part of pre-clearing surveys. The procedure for salvaging and reinstating habitat features is as follows:

- salvage hollow bearing trees identified as part of the pre-clearing surveys, where practical and safe to do so;
- hollow bearing trees can be stockpiled in unused areas, if necessary, until able to be reinstated;
- identify suitable areas to reinstate hollow bearing trees (may be an area where resources have been identified as being scarce, or within rehabilitated areas to increase habitat complexity and to increase the quality of such areas for key threatened fauna species);
- carefully reinstate hollow bearing trees to identified area; and
- hollow bearing trees can be placed in small piles to increase habitat complexity, while others can be placed individually in post-mining rehabilitation areas.

6.1.1.2 Topsoil

Where there are opportunities to salvage topsoil-type material for rehabilitation purposes, the following measures will be adopted to protect its quality and enhance rehabilitation outcomes:

- where possible, topsoil will be stripped when moist to help maintain soil structure and to reduce dust generation;
- level or gently sloping areas will be selected as stockpile sites to minimise erosion and potential soil loss;
- appropriate sediment controls will be installed at the base of stockpiles to prevent soil loss;
- topsoil and subsoil stockpiles will be generally less than 2 and 3 metres high respectively. The stockpiles will be set out in windrows to maximise surface exposure and biological activity;
- stockpiles to be kept longer than three months will be sown with a suitable sterile cover crop to minimise erosion and invasion of weed species;
- weed growth will be monitored and subsequently controlled if necessary;
- prior to re-spreading, any weed growth will be scalped from the top of the stockpiles to minimise the transport of weeds into rehabilitated areas; and
- stockpiles will be appropriately sign-posted to identify the area and minimise the potential for unauthorised use or disturbance.

6.1.1.3 Use of VENM and ENM

Modifications received to the Cooma Road Development Consent enable the operation to receive VENM and ENM to allow Cooma Road to use the material for back filling and progressive rehabilitation of terminal quarry faces. The quantities of VENM and ENM received will not exceed the Quarry's production limit of 1.5 Mtpa.

The importation of VENM and ENM will have minimal bearing on the need for longer term stockpiling as the material will be positioned near required areas, such as quarry benches, over short time periods before the material is used for its intended purposes. Any soil and sediment runoff from the material during rainfall will be effectively captured by the Quarry's surface water management system, which includes a sediment basin at the base of the quarry pit.

6.1.2 Substrate Preparation

General surface preparation activities to be undertaken as part of rehabilitation activities include:

- prior to revegetation activities, soils (or suitable alternatives) will be characterised to determine the type and application rate that may be required for the addition of soil ameliorants (e.g. gypsum, lime, fertiliser, biosolids, etc.);
- appropriate soil ameliorants will be applied for incorporation into the final shaped surface;
- where direct tree seeding is planned, final shaped surfaces will be deep ripped parallel with the contour prior to the application of seed to provide an adequate seed bed;
- where grass seeding is planned the surface will be harrowed/tilled across the contour to provide for an adequate seed bed; and
- suitable erosion and sediment control measures (e.g. catch drains, sediment dams, silt fences, mulches, etc.) will be implemented to minimise soil loss from areas undergoing rehabilitation.

6.1.3 Collecting and Propagating Seed

Holcim Australia personnel will review the potential for seed collection to be undertaken within the Cooma Road Quarry buffer lands, and based on this review, seed collected will be propagated in rehabilitation areas, as ongoing rehabilitation is undertaken. Seed collection will focus on local native endemic species, such as those within white box – yellow box – Blakely's red gum woodland and derived native grassland community occurring in the Quarry Area.

Seed collected from site or local provenance seed will be utilised in the first instance for revegetation works on site, however, where adverse seasonal conditions (i.e. drought) affect the availability of local provenance seed, supplementation with non-local provenance seed may be required. Alternatively, rehabilitation works may be delayed until sufficient stocks of local provenance species are available.

6.1.4 Fencing / Access Control

As part of ongoing management of the site the following will be undertaken:

- the extraction area will be fenced and vehicular access to the extraction area will be restricted for appropriate vehicles only;
- existing quarry site boundary fencing will be maintained; and
- fencing around the Moses Morley Kiln site and associated buildings will be maintained (refer to Cooma Road Quarry Heritage Management Plan).

Any new or additional security measures such as additional or upgraded fence lines, appropriately designed safety berms and signage will be installed and maintained in consultation with the landholder in order to

prevent access. The appropriate mechanism/s to restrict access and manage ongoing public safety after the closure of the site will be developed as part of the Quarry Closure Plan.

6.1.5 Visual – Tree Screening

In accordance with Condition 27 of Schedule 3 of the Development Consent, a visual vegetation screen has been established in order to minimise visibility of the site infrastructure from outside the development area.

The vegetation screen involved planting of local native species consistent with the local landscape and are required to reach a height of between 5-15 metres. These species included the Yellow Box *(Eucalyptus melliodora)* and Red Box *(Eucalyptus polyanthemos)* species.

Monitoring of the growth and requirement for any maintenance of the screen are assessed as part of ongoing environmental inspections of the site.

6.2 Final Landform

An indicative cross-section of the rehabilitation quarry benches and conceptual final landform of the quarry are shown in **Figures 4-1** and **6-1**, respectively. Further details on the rehabilitation methodology to achieve the indicative landform design are outlined below.

6.2.1 Rehabilitation of Quarry Pit

Rehabilitation of the quarry pit will be achieved by backfilling (including use of VENM/ENM) and battering back the upper benches to achieve a more sloping landform. The battering will result in a stable sloping landform of approximately 1V:2H. It is considered that the proposed final landform gradient will result in a safe and stable landform. Notwithstanding, Holcim Australia will conduct ongoing stability monitoring as part of rehabilitation inspections throughout the Project.

Once the battering back of the benches is complete, the shaped areas will be covered with topsoil or a suitable alternative and seeded with a local shrub/tree species mix. To provide for initial stabilisation of the substrate prior to the natives becoming established, a suitable cover crop mix will be applied.

The first bench below will be split and backfilled to ensure a maximum vertical drop of approximately 2 metres. Rehabilitation of the remaining quarry benches will involve placing overburden, VENM/ENM material across the bench. A bund will be created on the outer edge of the quarry bench to act as a safety barrier rendering the bench internally draining, ensuring any rain captured will be retained and be available for vegetation. Overburden will then be covered with available topsoil (or suitable alternative), excluding an access track area which will be retained along the entire bench. Once topsoiled, the bench will be seeded with a local shrub/tree species mix as described above. The safety bund will be seeded with a grass species mix.

The quarry pit floor and lower benches within the hard rock may be partially filled with remaining overburden material. A detailed Quarry Closure Plan will be developed approximately three years prior to cessation of quarrying activities. It is noted that the quarry currently has a reasonably large upstream catchment which would contribute to the filling of the void, however, there are options to reduce this catchment as part of the final landform if this is considered desirable as part of the quarry closure process. The likelihood of the void overflowing is related to the final landform design and the contributing catchment area. Water management controls will form an integral part of the final landform and some of the proposed diversion drains, catch drains and site bunding will likely remain in place as part of the final landform, however, some changes may occur to manage upslope catchment contribution. Further information on the operational water management into the quarry pit is outlined in the Cooma Road Quarry Water Management Plan.

The approach to management of the final void will be a key consideration of the closure planning process and will require the completion of a final void recovery water balance to identify ongoing water licence commitments as part of the closure process. The closure strategy will be prepared in consultation with relevant government agencies.

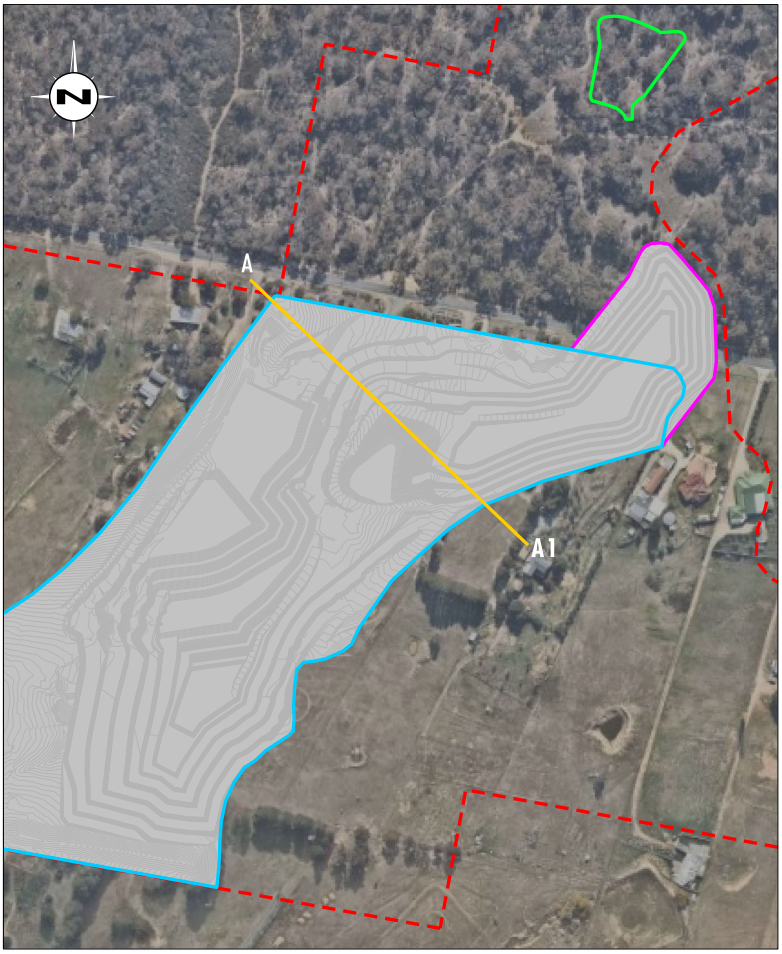
6.2.2 Overburden Areas

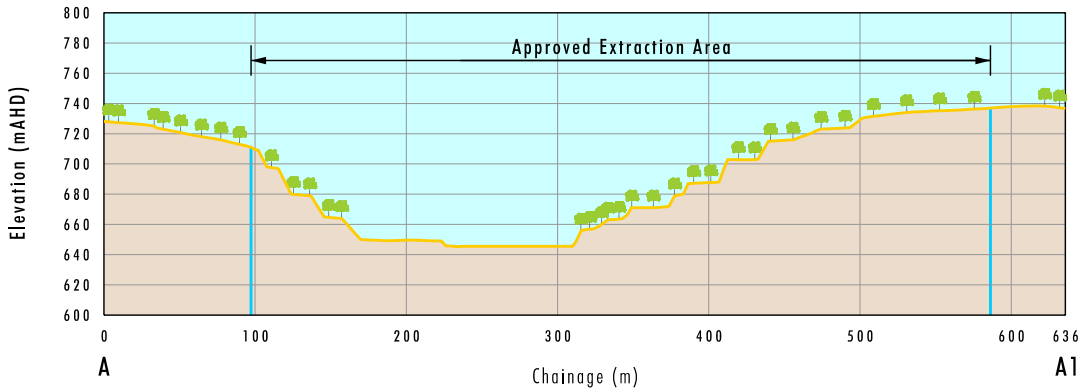
Key features and processes associated with the overburden emplacement areas are outlined below.

- all slopes will be battered to an average of 10 degrees to minimise erosion risk;
- the top surface of overburden dumps will be constructed to provide variability in local relief in order to prevent ponding of surface water as well as create a profile that is commensurate with the natural local topography;
- a surface drainage network will be established to divert the bulk of surface water away from the final pit so as to maximise replenishment of the local catchment areas; and
- shaped overburden areas will be covered with topsoil or a suitable alternative and seeded with a local shrub/tree species mix. To provide for initial stabilisation of the substrate prior to the natives becoming established, a suitable cover crop mix will be applied.

6.2.3 Surface Infrastructure Area

During the decommissioning process, the processing plant, workshop and other buildings no longer required will be removed. Where required, the product stockpile, processing plant, workshop, office and weighbridge areas would be re-profiled, deep ripped, topsoiled and revegetated. Further detail regarding works to be undertaken as part of the decommissioning and rehabilitation phase of the project will be included in the Quarry Closure Plan.





0 100 200 250m
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Legend

- Approved Project Area
- Approved Extraction Area
- Approved Additonal Extraction Area
- Approved Disturbance Area - Workshop

FIGURE 6.1

Conceptual Final Landform Cross-Section A-A1

Source: Nearmap (May 2019)

File Name (A4): R02/4649_020.dgn
20190719 15.12

7.0 Rehabilitation Strategy for Next Three Years (2019 – 2021)

During the next three years, the primary activity within the Cooma Road Quarry will involve ongoing development of quarrying areas. The objective will be to undertake pre-disturbance activities that aim to minimise the ecological impacts of the quarrying operation as well as commence rehabilitation as soon as practical behind the quarrying activities so as to minimise the extent of disturbance on site. Key rehabilitation and ecological management works to be undertaken during 2019 - 2021 include:

- continued maintenance of rehabilitation in the completed overburden dump in the south-western disturbance area including weed control and nest box monitoring;
- undertaking two-yearly rehabilitation monitoring as outlined in **Section 8.0**;
- implementing ongoing rehabilitation management controls as outlined in **Sections 5.0** and **6.0** in order to comply with rehabilitation objectives;
- undertaking ongoing remnant vegetation area works in accordance with **Section 5.2.6**;
- monitoring and maintaining vegetation screening outlined in **Section 6.1.5**;
- completing pre-clearance surveys ahead of the construction and quarrying operations in accordance with **Section 5.1.1**. Based on the outcomes of these surveys, undertake the following where required:
    - enhancing native endemic vegetation through seed collection and propagation as per the seed collection strategy outlined in **Section 6.1.3**;
    - restoring native fauna habitat within rehabilitation areas in accordance with **Section 6.1.1.1**;
    - implement specific tree felling procedures as outlined in **Section 5.1.1**, in order to minimise the impacts to flora and fauna from the quarrying operation;
    - undertake ongoing feral animal and weed monitoring and treatment works on site as required (refer to **Sections 5.2.1 and 5.2.2**);
    - undertake erosion and sediment control works as in accordance with the Cooma Road Quarry Water Management Plan;
    - maintaining appropriate access controls as outlined in **Section 6.1.4**; and
    - maintaining firefighting equipment in accordance with **Section 5.2.4**.

8.0 Ecological and Rehabilitation Monitoring

Ecological and rehabilitation monitoring is required by Condition 24(f) of Schedule 3 of the Development Consent. This section details the rehabilitation and analogue site monitoring program and requirements for Cooma Road Quarry.

8.1 Monitoring of Residual Vegetation (Analogue Sites)

The condition of residual vegetation within Cooma Road Quarry will be monitored to identify any deterioration or improvement in habitat quality during the life of the quarry as well as to provide a comparison when assessing the performance of rehabilitation sites. This monitoring will involve the establishment of permanent monitoring plots within the residual vegetation of the Cooma Road Quarry and will be preferentially established in Hoary Sunray (*Leucochrysum albicans* var. *tricolor*) and the white box – yellow box – Blakely's red gum woodland and derived native grassland community.

This monitoring will be undertaken every two years, however, where results are showing negligible change, the frequency of monitoring may be reduced in consultation with DPIE.

The monitoring approach will involve surveys at permanent monitoring plots of quadrats, which will be sampled in order to record species diversity and structural composition. Plots will be sampled using systematic, semi-quantitative, repeatable techniques, such as the Modified Braun-Blanquet Cover-

abundance method (Poore 1955, Austin *et al.* 2000), to ensure data are comparable over time with as little observer bias as possible. Photo monitoring points will also be established within each of the permanent monitoring plots, to enable a visual assessment of changes over time.

The monitoring surveys will typically assess and systematically record the following vegetation characteristics:

- floristic composition (including cover and abundance of species) and structure;
- general health of vegetation;
- evidence of natural regeneration;
- occurrence and abundance of weed species;
- presence of threatened or other significant species;
- signs of disturbance, either by stock, feral animals or humans; and
- any observable impacts of the Quarry, such as the effectiveness of fencing and weed control actions.

8.2 Annual Rehabilitation Inspection

Annual inspections of rehabilitated areas (or other frequency as agreed with DPIE) will be undertaken over the life of the quarrying operations to assess:

- soil conditions and erosion (i.e. stability);
- drainage and sediment control structures;
- runoff water quality;
- germination rates;
- plant health; and
- weed infestation.

Outcomes of the rehabilitation inspections will be recorded and any required reasonable and feasible management actions that are identified as part of the inspection, are to be implemented. The results of the rehabilitation inspection will be compared with the rehabilitation objectives and closure criteria as part of the Annual Review.

Dependent upon the outcomes of the rehabilitation inspection as outlined above, the scope of the rehabilitation care and maintenance phase may include the following:

- weed and feral animal control in rehabilitation areas;
- erosion control works;
- re-seeding/planting of rehabilitation areas that may have failed;
- maintenance fertilising; and
- repair of fence lines, access tracks and other general related land management activities.

It is envisaged that this program will be continued as required until it can be demonstrated that the rehabilitation of Cooma Road Quarry has satisfied the closure criteria.

Permanent plot based monitoring within rehabilitated areas will be established following the commencement of rehabilitation activities at Cooma Road Quarry. Permanent plot based monitoring locations will be outlined in future reviews of this management plan.

8.3 Fauna Monitoring

At each of the residual vegetation monitoring sites (refer to **Section 8.1**), a range of fauna survey techniques will be employed to assess ongoing fauna use of habitat, particularly focussing on the ongoing presence of threatened species. In the event that further threatened species are identified at Cooma Road Quarry, the monitoring program will incorporate surveys to adequately assess and monitor these species.

8.4 Rehabilitation and Revegetation Methodology Records

Holcim Australia will record the details of each rehabilitation and revegetation campaign so that they are available for later interpretation of rehabilitation monitoring results. This will allow the continual improvement of rehabilitation and revegetation standards on site. Amongst the key monitoring parameters to be included in the program are the following:

- landform design details;
- drainage design details;
- substrate characterisation;
- site preparation techniques (e.g. topsoil and source, time of sowing, soil ameliorants used, etc.);
- revegetation methodologies (e.g. rate and type of fertiliser, cover crop and rate, seed viability;
- weather conditions;
- photographic records; and
- initial follow-up care and maintenance works.

8.5 Monitoring Rehabilitation Progress against Closure Criteria

Preliminary rehabilitation and closure criteria for Cooma Road Quarry are provided in **Section 4.2**. Refinement of closure criteria will be undertaken through the development of a Quarry Closure Plan, which will be developed when the operation is within three years of planned closure. It is noted however that rehabilitation and management of the quarry is being undertaken such that the rehabilitation objectives as detailed in **Section 4.1** are achieved at the completion of rehabilitation. Monitoring rehabilitation progress against closure criteria provides a positive feedback loop whereby, based on the results of monitoring, specific actions can be implemented to assist in the progression of rehabilitation and achievement of rehabilitation goals and objectives.

8.5.1 Process for Review and Refinement of Criteria

The preliminary criteria will be reviewed and revised in consultation with DPIE throughout the life of quarrying operations and used as the basis for further refinement following:

- ecological management activities;
- consideration of the results of rehabilitation monitoring programs against the preliminary criteria; and
- consideration of stakeholder feedback.

It is envisaged that this process will occur as part of subsequent reviews of the RMP that are submitted to DPIE

The gradual achievement (or otherwise) of these completion criteria will be assessed and discussed in the annual documentation of monitoring results, and within the Annual Review, which will include the identification of instances where criteria is not met, and measures taken to address any such issue.

9.0 Reporting

A summary of rehabilitation monitoring results and rehabilitation works will be provided in the Cooma Road Quarry Annual Review in accordance with Condition 9 of Schedule 5 of the Development Consent.

9.1 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 application number, the location and nature of the incident.

9.2 Non-Compliance Notification

A non-compliance is an occurrence, set of circumstances or development that is a breach of the 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.

9.3 Adaptive Management

In accordance with Condition 5 of Schedule 5 of the Development Consent, Holcim Australia will assess and manage biodiversity and rehabilitation related risks to ensure compliance with the criteria outlined in **Section 4.0**. Where a non-compliance relating to biodiversity or rehabilitation exceedance 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 the 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.

9.4 Complaint Response

Complaints relating to biodiversity or rehabilitation from Cooma Road Quarry are to be managed in accordance with the requirements of the Cooma Road Quarry Environmental Management Strategy. A summary of complaints is published on the Holcim Australia website on a quarterly basis and provided in the Annual Review.

10.0 Review and Improvement

Ongoing monitoring and review on the performance and implementation of this RMP 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. The above reviews will be undertaken by the Cooma Road Quarry Manager in consultation with Holcim Australia environmental personnel. Any significant changes made to the RMP as a result of the review will be made in consultation with DRG, DPIE, DoI-Water and Council. The revised RMP will be supplied to the Secretary of DPIE for approval. The RMP will reflect changes in environmental requirements, technology and operational procedures. Updated versions of the approved RMP will be made publicly available on the Holcim Australia website (http://www.holcim.com.au/).

11.0 Roles and Responsibilities

Relevant roles and responsibilities associated with this RMP are presented in **Table 5** below.

Table 5 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 biodiversity and rehabilitation management controls and strategies in accordance with this Plan. • Coordinate the review of this plan in accordance with the requirements of the Development Consent.
Holcim Australia Environmental personnel	• Coordinate the rehabilitation monitoring requirements of this plan and evaluate and report monitoring results as required. • Coordinate biodiversity related incident investigations and reporting as required by legislation and internal standards and guidelines. • Assist with the review of this plan.
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 biodiversity and rehabilitation area impacts.

12.0 References

Austin et al (2000). Predicted Vegetation Cover in the Central Lachlan Region. Final report of the Natural Heritage Trust Project AA 1368.97. CSIRO Wildlife and Ecology, Canberra.

CMPS&F Environmental, 1994. *Cooma Road Quarry EIS*. Report prepared for the Readymix Group Pty limited.

Eco Logical 2011. *Preliminary Biodiversity Assessment*. Report prepared for Holcim (Australia) Pty Limited.

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.

Poore M, E, D, 1955. The use of phytosociological methods in ecological investigations. I. The Braun Blanquet system. Journal of Ecology 42:216-224.

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

Appendix 1 – General Management Plan Requirements from Development Consent

Schedule 5	**Section Number**
Management Plan Requirements 2. 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, 8.0**
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**
d) a program to monitor and report on the: • impacts and environmental performance of the project; • effectiveness of any management measures (see (c) above);	**8.0**
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;	**9.3**
f) a program to investigate and implement ways to improve the environmental performance of the project over time;	**8.5, 9.3, 10.0**
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; and	**9.1** **9.4** **9.2** **9.0**
h) a protocol for periodic review of the plan.	**10.0**

Appendix 2 – Stakeholder Consultation

Department of Primary Industries
Office of Water

Contact Tim Baker
Phone 02 6841 7403
Mobile 0428 162 097
Fax 02 6884 0096
Email Tim.Baker@water.nsw.gov.au

Our ref ER21756

cc: Caitlin Elliott, DP&E

Daniel Lidbetter
Holcim Australia Pty Ltd
Tower B, Level 8, 799 Pacific Highway
CHATSWOOD NSW 2067

Dear Daniel

COOMA RD QUARRY PROJECT (SSD 5109) –
REHABILITATION MANAGEMENT PLAN REVIEW

I refer to your email dated 26th September 2014 providing the NSW Office of Water an opportunity to review the Rehabilitation Management Plan related to the Cooma Rd Quarry. It is recognised this consultation is in accordance with Schedule 3, Condition 24 of Project Approval SSD 5109. The NSW Office of Water appreciates the opportunity to comment and provides the following comments to progress the project.

- Section 5.6 proposes sediment and erosion controls to be implemented. It is recommended this be consistent with the standards in the guideline, "*Managing Urban Stormwater: Soils and Construction* (Landcom 2004)".
- Section 6.6.1 indicates water management controls will be an integral part of the final landform and aspects of this are to be considered in the Water Management Plan (WMP) and the Closure Plan. The NSW Office of Water has previously been in consultation on development of the Water Management Plan via teleconference and email on the 26th May 2014. This consultation included requests by the NSW Office of Water for additional information to confirm the proposed water management system to enable final comments to be provided. To date this information has not been received, hence the NSW Office of Water has been unable to provide a final response to the WMP. Due to the linkages between the RMP and the WMP on water issues it is recommended the WMP be finalised. The following points were previously requested to aid in Office of Water's review of the WMP. A response to these would aid in confirming if any additional comments on the RMP are required.
    - Clearly define the existing and proposed clean water diversions and flow paths and which dams or watercourses they flow into. Details of the design criteria of these diversions and water storage sizes are also requested.
    - Provide general catchment areas within the dirty water management system and flow paths and which dams/sumps or watercourses they flow into. Locational detail of the proposed catch drains for the workshop and associated flow paths is also requested.
    - Confirm the eastern dam and the northwest dam are to be designed as detention basins which will not hold any permanent water, but rather will drain to empty shortly after a runoff event via a permanent design eg. tailpipe at bed level.
    - Confirm the size and operation of the Sediment Interception Pond and the Discharge Pond.

- Confirm licence details of Bore P2 under water legislation and if there is an understanding of what will happen to it after the 6 month period as detailed in Section 6.3. If construction/bore log details of this bore exist please advise. Confirm any proposal to install additional monitoring bore to replace P2 to monitor water levels/quality.
- Confirm area used for harvestable rights calculations.

- Section 6.6.1 proposes management of the final void to be considered as part of the closure planning process. Due to the significance of the final void in terms of the watercourse traversing the site it is recommended a conceptual final landform and associated water management requirements is included at this stage in the management plan process. This is consistent with development consent condition 24 (h and i) for the project.

Should you have any further queries in relation to this submission please do not hesitate to contact Tim Baker on (02) 6841 7403.

Yours sincerely

Mitchell Isaacs
Manager Strategic Stakeholder Liaison
22 October 2014