

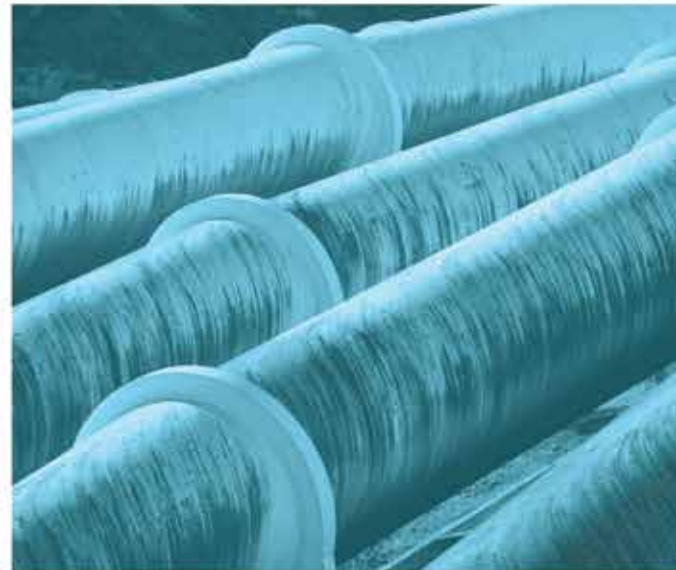


# Dubbo Quarry Extension Project

## Scoping Report

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Prepared for Holcim (Australia) Pty Limited  
December 2019





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# Dubbo Quarry Extension Project

## Scoping Report

### Report Number

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J180313 RP#1

### Client

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Holcim (Australia) Pty Limited

### Date

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19 December 2019

### Version

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v1.2

### Prepared by

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#### Claire Burnes

Associate – Environment, Community, Approvals and Delivery  
19 December 2019

### Approved by

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#### Phil Towler

Associate Director  
19 December 2019

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# 1 Introduction

## 1.1 Project overview

Holcim (Australia) Pty Limited (Holcim) are the owners and operators of Dubbo Quarry (the quarry) located on Sheraton Road, Dubbo (refer Figure 1.1). The quarry has operated since 1980 under a development consent granted by Dubbo Regional Council (Council). Accessible basalt resources within the existing quarry boundary (refer Figure 1.2) are close to exhaustion and planning approval is required to allow the quarry to continue operating. Holcim is, therefore, seeking approval for the Dubbo Quarry Continuation Project (henceforth referred to as ‘the project’) which involves the continued operation of the quarry through the development of two new resource areas to the south and west of the existing quarry boundary (refer Figure 1.2).

The project is classified as State significant development (SSD) under Part 4, Division 4.1 of the NSW *Environmental Planning Assessment Act 1979* (EP&A Act). A development application (DA) for SSD must be accompanied by an environmental impact statement (EIS). The purpose of this scoping report is to request, and inform the content of, the Secretary’s Environmental Assessment Requirements (SEARs). The SEARs will identify the requirements and level of environmental assessment required to accompany the DA and associated EIS.

## 1.2 Proponent details

Holcim is the proponent for the project with the relevant details provided in Table 1.1.

**Table 1.1** Proponent details

Requirement	Detail
Proponent	Holcim (Australia) Pty Limited
Postal address	Level 8 799 Pacific Highway Chatswood NSW 2067
ACN	87 099 732 297
Contact	Luke Edminson (Planning and Environment Manager NSW)
Contact details	Level 8 799 Pacific Highway Chatswood NSW 2067 13 1188 or 02 9412 6600 Luke.edminson@lafargeholcim.com

### 1.3 Structure of report

This scoping report has been prepared in accordance with NSW Department of Planning, Infrastructure and Environment's (DPIE's) Scoping an Environmental Impact Statement - Draft Environmental Impact Assessment Guidance Series June 2017 (DPE 2017a) (the scoping guideline). The report contains the following information:

- Chapter 1 Introduction – provides a brief project overview, proponent details and details the report structure and content;
- Chapter 2 Existing environment – details the existing quarry operations and baseline technical information;
- Chapter 3 Project description – provides an overview of the proposed project including justification and consideration of alternatives;
- Chapter 4 Strategic and statutory context – details the relevant legislative framework for the project;
- Chapter 5 Scoping of key issues – identifies the relevant environmental issues for the project that require assessment in the EIS;
- Chapter 6 Stakeholder consultation – details the stakeholder engagement undertaken during the EIS scoping phase and proposed engagement during the EIS preparation phase; and
- Chapter 7 Application process – describes the EIS application process for the project and the proposed EIS structure.

This scoping report has been prepared by EMM Consulting Pty Limited (EMM) on behalf of Holcim. Specifically, the report was prepared by Eden Miles (BEng (Env) (Hons I), BEng (Civil) (Hons II)) and Claire Burnes (BEng (Env) (Hons I)) and reviewed by Dr Phil Towler (BSc (Hons), PhD).

























Project site

KEY

- |  |  |  |
|--|--|--|
|  Current site boundary/<br>infrastructure and stockpile |  Cadastral boundary   |  R2 Low density residential |
|  Current site access                                    |  Waterbody            |  R5 Large lot residential   |
|  Proposed future site access                            | Land zoning  |  RE1 Public recreation      |
|  Southern extension area                                |  B7 Business park     |  RE2 Private recreation     |
|  Western extension area                                 |  IN2 Light industrial |  RU1 Primary production     |
|  Local road   |  IN3 Heavy industrial |  RU2 Rural landscape        |
|  Watercourse/drainage line                              |  |  |

Dubbo Quarry Continuation Project  
Scoping report  
Figure 1.2



## 2 Existing environment

### 2.1 Site details

The project relates to the following land as shown on Figure 1.2:

- Lot 222 DP 1247780, owned by Holcim; and
- Part Lot 100 DP 628628, for which Holcim propose to enter into an Access Licence with the landowners.

The application is for all operations including the existing quarry. The old council consent will be surrendered.

The site is within Dubbo Regional Local Government Area (LGA).

Under the Dubbo Local Environmental Plan 2011 (Dubbo LEP), Lot 222 DP 1247780 is zoned part RE2 Private Recreation and part IN3 Heavy Industrial; Lot 100 DP 628628 is zoned RU1 Primary Production (refer Figure 1.2).

### 2.2 Existing quarry

Development consent for Dubbo Quarry was originally granted by Talbragar Shire Council on 18 March 1980 under SPR79/22. This consent related to the establishment of a basalt quarry on former Portions 208 and 211, Parish Dubbo and contains eight conditions with no restrictions on production rates or operating hours. Holcim also holds Environment Protection Licence (EPL) No. 2212 for the quarry land-based extraction activities between 100,000 and 500,000 tonnes per annum (tpa).

The quarry currently employs approximately 15 quarry staff, two contactors and a number of truck drivers.

The quarry produces high quality aggregates for use in the construction industry such as concrete and asphalt production and for use as road base. Precoated sealing aggregates from crushed basalt are produced at the quarry. The quarry produces many types of road base, both specification and non-specification, such as the premium road base product Heavy Duty DGB20 which is frequently used by local councils and Roads and Maritime Services (RMS) for the construction and upgrade of roads.

The quarry also sells construction materials to civil construction projects, engineering projects, subdivision work, industrial projects, commercial and domestic customers.

### 2.3 Surrounding environment

The quarry is located approximately 1.9 km west of the township of Dubbo (refer Figure 2.1). The quarry is accessed via Sheraton Road which connects to the Mitchell Highway approximately 2 km north-west of the quarry. The Mitchell Highway extends westwards Dubbo to Narromine and south-east of the quarry through Orange and Bathurst.

The site lies within the Brigalow Belt South Bioregion, and predominantly falls within the Talbragar Basalts ecosystem and Dubbo Basalts landscape unit. The topography of the Dubbo Basalts landscape unit is characterised by slightly elevated plains and low hills on flat lying Tertiary volcanics (basalt and trachyte). General elevation across this landscape ranges from 300–330 m Australian Height Datum (AHD) with a local relief of 10 m. Topography surrounding the site features undulating slopes and plains ranging in elevation from 280–310 m AHD predominantly on a westerly aspect, with local relief along Eulomogo Creek.

The geology of the project area is dominated by basalt deposits and outcropping, with areas of sandstone outcrops. Soils are characterised by friable surface soils with moderate to high susceptibility to erosion. Undisturbed soils typically comprise strongly structured reddish-brown friable or cracking clay loams and light clay topsoils, with a dark reddish-brown clay subsoil at 40 cm.

The project area is within the catchment system of the Macquarie River which is located approximately 2.7 km east of the project area. The project area is transected by Eulomogo Creek and features associated second and first order ephemeral drainage lines. The site and surrounding land is generally cleared with some sparse remnant vegetation mostly along Eulomogo Creek.

The climate of Dubbo is classified as warm temperate. Summers are hot with an average maximum temperature of 31.9–33.0°C. Winters are cold with an average minimum temperature of 2.6–4.1°C. Long-term annual average rainfall in Dubbo ranges from 42.7–60.7 mm.

Historical land use within the site has resulted in extensive vegetation clearance and cultivation which has increased susceptibility to sheet and gully erosion. The site is currently used for quarrying activities, pasture and cultivation.

Land-use practices surrounding the site include the South Keswick Quarry to the immediate north, Neoen Energy's South Keswick Solar Farm further north, and rural residential properties. More distant land uses include low-density housing approximately 1.5 km to the west; a school precinct on Sheraton Road; a commercial precinct at the intersection of Sheraton Road and the Mitchell Highway; and an aged care facility further west.

To the west of the site, a residential subdivision (Southlakes Estate) is under development by Maas Group. This is approved to extend to within approximately 1.4 km west of Sheraton Road. In addition, a 51 lot low-density residential subdivision of Lot 1 DP 880413 was approved by Council (DA ref: D2016-363) in July 2019. This is located immediately west of the South Keswick Solar Farm, approximately 350 m north-west of the proposed quarry access road off Sheraton Road.





Source: EMM (2019); DFSI (2017); GA (2011)

## KEY

- Current site boundary/ infrastructure and stockpile
- Current site access
- Southern extension area
- Western extension area
- Proposed future site access
- Rail line
- Main road
- Local road
- Watercourse/drainage line
- Waterbody

Surrounding environment

Dubbo Quarry Continuation Project  
Scoping report  
Figure 2.1



## 3 Project description

### 3.1 Project rationale – why is it important?

Minimal resource remains within the existing quarry boundary, which would allow only 2–3 years of production from the easily accessible resource. Development of additional resource areas would allow continued employment for quarry staff and contractors and continued supply of high quality aggregates and specialised road base products to local and regional projects.

The quarry's market is vast and extends to west of Cobar, north to the Queensland border, east to Orange and south to Parkes. The quarry's biggest customers are Council and RMS. Other shire councils that depend on the quarry for product supply such as Narromine, Gilgandra, Mid Western and Warrumbungle.

The quarry has supplied product to Council for well in excess of 20 years. Council use the quarry's pugmilled products (blended road bases) and Dubbo Quarry is the only quarry in the district with a pugmill. Council projects that the quarry has supplied include: Dubbo Airport turn-off, Dubbo Airport hotmix project, Golden Highway projects, Mendooran Road bridge, Capstan Drive, many rural road upgrades, and many town street upgrades.

Holcim are aware of several upcoming Council projects that are likely to require products from Dubbo Quarry such as the Old Mendooran Road and Purvis Lane upgrades. The quarry also currently holds two Council quarry supply contracts for general quarry supply and for bitumen emulsion and sealing aggregate supply. Dubbo Quarry is the only quarry in the district that supplies bitumen emulsion and its council jetpatcher/pavement truck loading facility is unique to Dubbo Quarry. This innovation was built specifically for Council.

The quarry is within an existing quarry precinct, adjacent to South Keswick Quarry operated by Regional Hardrock Pty Ltd and Boral's Eulomogo quarry (currently non-operational) and is consistent with existing surrounding land uses. The precinct is ideally located in the vicinity of Dubbo, which minimises haulage distances and costs for local projects.

The quarry has been in operation for approximately 40 years, during which time it has operated responsibly under the current consent, with minimal community complaints over this period. Five sensitive residential receptors are located within 1 km of the project area boundary, and continued use and expansion of the established site avoids the need for development of an alternate greenfield site.

The proposed expansion will be assessed under the NSW legislative framework, requiring consideration of contemporary impact assessment methodologies, criteria and ongoing environmental management requirements. This will provide opportunity for stakeholder involvement in the assessment process, and community confidence in the rigour applied in consideration of potential impacts and adopted mitigation and management measures.

### 3.2 Capital investment value

The estimated capital investment value of the project is \$6 million. This includes anticipated civil works - access road relocation, power and phone line relocation; road and creek crossing construction to the southern extension area; and biodiversity offset obligations.

### 3.3 Project planning and design

The project involves continued operations within the current site boundary and into two new resource areas as described below (refer Figure 3.1):

- the existing quarry area within Lot 222 DP 1247780 (formerly Lot 1 DP 623367) is approximately 41.2 ha in size and contains approximately 960,000 t of remaining resource;
- the Western Extension Area (WEA) is west and north-west of the existing quarry boundary, located within Lot 222 DP 1247780 (formerly part Lot 22 DP 793541) (north and south of Sheraton Road), is approximately 10.3 ha in size and contains approximately 2.7 Million tonnes (Mt) of resource; and
- the Southern Extension Area (SEA) is south of the existing quarry boundary on the southern side of Eulomongo Creek, located within part Lot 100 DP 628628, is approximately 88.1 ha in size and contains approximately 7.5 Mt of resource.

The current consent for quarry operations places no restriction on production, with the existing infrastructure having the capacity to produce a maximum of 500,000 tpa. At a production rate of 500,000 tpa, consistent with the existing operations, the two proposed extension areas provide sufficient resource for quarry operation to continue for approximately 20–25 years.

On 16 August 2018, Council approved a development application (D2017-640) for a boundary adjustment to Lot 1 DP 623367 and Lot 22 DP 793541, along with associated relocation of the internal quarry access road and intersection off Sheraton Road. The consent allowed for consolidation of the separate land parcels located north of Eulomongo Creek on which future quarrying is proposed as shown on Figure 1.2.

### 3.4 Construction requirements

#### 3.4.1 Summary

Construction activities will consist of the following:

- a new (realigned) private access road off Sheraton Road along the northern boundary of the WEA, connecting to the existing access road that extends to the processing facilities within the existing quarry area;
- a new haul road from the existing quarry area to the SEA across Eulomongo Creek;
- realignment of power and telecommunications lines in the vicinity of the new access road and WEA; and
- modification/installation of water management infrastructure within the existing and extension areas.

Preliminary environmental constraints identification, in particular vegetation survey and mapping, along with initial consultation with the DPIE–Water have been considered in developing preliminary alignment and design options for the proposed watercourse crossing.

Consideration of each of these elements will continue through the assessment process and design requirements will be confirmed as part of ongoing design work for the project.

### 3.4.2 Methods and equipment

Construction of the new access and haul roads will be undertaken using standard road building equipment, including excavators, loaders, graders and dump trucks.

Similar equipment is likely to be utilised for trenching and pole installation required in realigning the phone/telecommunication lines and for construction of water management infrastructure, including water storage/treatment ponds and pipelines.

The watercourse crossing design is to be confirmed, but is likely to also utilise similar equipment, along with cranes and piling equipment for installation of culverts or support structures.

### 3.4.3 Hours and workforce

Construction activities would be undertaken during standard construction hours between:

- 7 am – 6 pm Monday to Friday; and
- 8 am – 1 pm Saturdays.

Construction work will be undertaken utilising the quarry's workforce, likely supported by additional contractors as required.

## 3.5 Operational requirements

### 3.5.1 Sequencing

Extraction within the existing quarry area will continue in accordance with the existing consent. Over the next two to three years, extraction will be focussed predominantly within the south-eastern portion of this area, which will include relocation of some infrastructure and material stockpiles to facilitate access to the remaining resource. It is anticipated the remaining resource will be exhausted by approximately 2022 dependent on future production rates.

Extraction within the WEA would commence on receipt of development consent (year 1) and would continue to exhaustion of available resource within this area, which is estimated within approximately 7–8 years. Construction of the new access road and associated intersection, relocation of utilities, and modification/construction of new water management system components would be undertaken concurrently with staged extraction within this area.

Construction of the new haul road and watercourse crossing to provide access to the SEA would also commence in year 1, with extraction from the SEA anticipated to commence in year 2 and continue for up to 25 years.

Extraction would be undertaken within one area at any time, with drill and blasting undertaken concurrently with extraction.

Processing infrastructure, maintenance and administrative facilities, are proposed to remain within the area of current extraction activities.

### 3.5.2 Extraction rate

As outlined above, the current consent for quarry operations places no restriction on production, with the existing infrastructure having the ability to produce a maximum of 500,000 tpa. Consistent with current operations, a peak production rate of 500,000 tpa is proposed, with average production rate of 350,000 tpa.



Based on the average production rate of 350,000 tpa, the quarry generates an estimated 46 truck movements, ie the dispatch of 23 loads of product, per day. At peak production, this increases to approximately 65 movements per day.

### 3.5.3 Hours of operation

Hours of operation during peak periods would remain as per current operations:

- 5 am – 9 pm, Monday to Saturday for production (two shifts);
- 4 am – 9 pm, Monday to Saturday for transport (Sundays or public holidays for emergencies); and
- maintenance activities 24 hrs, 7 days per week.

Similarly, hours of operation during average periods would be in accordance with current operations:

- 7 am – 5 pm, Monday to Friday for production (one shift);
- 4 am – 6 pm, Monday to Saturday for transport (Sundays or public holidays for emergencies); and
- maintenance activities 24 hrs, 7 days per week.

Blasting would be undertaken between 7 am – 5 pm, Monday to Friday, weather permitting.

### 3.5.4 Workforce

Average production workforce would consist of a maximum of 12 full time equivalent (FTE) employees, with up to two contractors (including truck drivers). During peak production, this may increase to 14 FTE employees, with up to four contractors (including truck drivers).

### 3.5.5 Parking

The current parking area allows for up to 20 light vehicles and six trucks, which can be extended under a peak production scenario through relocation of earth bunding used for segregation.



Source: EMM (2019); DFSI (2017); GA (2011)

## KEY

- |  |   |
|--|---|
| <span style="border: 2px solid green; padding: 2px;"> </span> Current site boundary/<br>infrastructure and stockpile   | <span style="background-color: #f0e6ff; border: 1px solid black; padding: 2px;"> </span> Processing, maintenance and<br>administration facilities |
| <span style="color: orange;">●</span> Current site access  | <span style="color: black;">✂</span> New watercourse crossing (location TBC)  |
| <span style="border: 2px solid blue; padding: 2px;"> </span> Southern extension area                                   | <span style="color: red;">---</span> New access road  |
| <span style="border: 2px solid yellow; padding: 2px;"> </span> Western extension area                                  | <span style="color: gray;">---</span> Local road  |
| <span style="background-color: #ffe4b5; border: 1px solid black; padding: 2px;"> </span> Southern extraction area      | <span style="color: blue;">---</span> Watercourse/drainage line   |
| <span style="background-color: #ffb6c1; border: 1px solid black; padding: 2px;"> </span> Western extraction area       | <span style="border: 1px solid gray; padding: 2px;"> </span> Cadastral boundary   |
| <span style="background-color: #add8e6; border: 1px solid black; padding: 2px;"> </span> New haul road (alignment TBC) | <span style="background-color: #add8e6; border: 1px solid black; padding: 2px;"> </span> Waterbody  |

## Preliminary project layout

Dubbo Quarry Continuation Project  
Scoping report  
Figure 3.1



## 3.6 End of project requirements

Following completion of proposed extraction, project infrastructure would be decommissioned, buildings and other structures demolished, plant and equipment would be removed from the site, and groundwater monitoring bores capped. Dismantled and decommissioned infrastructure and equipment would be recycled where possible, or disposed of at an approved waste management facility.

Progressive rehabilitation will be undertaken concurrently with extraction, with batters blasted and shaped at an approximate 3:1 slope. Rehabilitation requirements will be identified as part of the assessment process, and a rehabilitation management plan will be prepared for the site.

Future land use for the site would be identified prior to decommissioning, and would be consistent with the land zoning and strategic planning context at that time.

## 3.7 Alternatives considered

### 3.7.1 Project history and design process

Holcim has been considering potential expansion options for a number of years, noting that the currently accessible basalt resource within the existing quarry boundary is nearing exhaustion and a planning approval is required to allow the quarry to continue operating.

Initial options focussed on expansion to the north-west into the adjacent Lot 22 DP 793541 (now referred to as the WEA), which is owned by Holcim. This provides a cost effective and efficient expansion to the existing operation, that would allow the quarry to continue to operate for a further 7–8 years. Holcim held a pre-lodgement meeting with Council in December 2018 to discuss the proposed expansion, associated issues and impacts, and the appropriate approval pathway, including potential for modification of the existing consent or through a new development application. At this meeting, Council advised that unless otherwise justified, a new development application was the most appropriate approval mechanism, and due to the size of the expansion and potential increase in environmental impacts (predominantly biodiversity related) that it would also be considered Designated Development pursuant to Schedule 3 of the EP&A Act.

Subsequently, Holcim continued investigation of the geology and resource characteristics, identified potential for expansion to the south of the existing quarry into part Lot 100 DP 628628, and has entered into an access licence agreement with the landowners of this lot (now referred to as the SEA). Expansion into this area provides access to a substantially larger quantity of resource (approximately 7.5 Mt) that would facilitate ongoing operation of the quarry for in excess of 25 years.

EMM has undertaken environmental investigations across the identified land parcels during 2018–2019, including desktop constraints identification and analysis, preliminary biodiversity surveys, Aboriginal due diligence, and engagement with stakeholders. During this period, Holcim has also undertaken further geological investigation, including resource drilling, and design refinement in response to identified environmental constraints in order to identify a preliminary extraction plan and infrastructure layout that avoids and minimises potential environmental impacts as much as possible (refer Figure 5.1).

It is anticipated that further design refinement will be undertaken during the environmental assessment process in consideration of other constraints that may be identified through technical assessments and ongoing stakeholder engagement.

### 3.7.2 Alternatives not proposed

A number of alternatives have been considered to date that have been excluded from further consideration, as follows:

1. A number of other locations surrounding the site have been explored but were unable to be progressed for various operational or commercial reasons.
2. Expansion to the north of the existing quarry – the basalt resource extends north of the current extraction area and Holcim were originally considering expansion into this area, however the site under consideration was purchased by the Maas Group and now forms part of their South Keswick Quarry.
3. A quantity of resource exists under the footprint of the plant, workshop and office facilities within the existing quarry. Holcim has explored design options for relocation of these facilities to allow extraction of this material, however the costs of relocating infrastructure is very high and would cause constraints for internal access roads/movements.
4. Holcim considered an alternate option to the current proposed extent of the SEA, which extended into the adjacent property west of the SEA's western boundary, however this was dismissed on consideration of topography and potential for visual impacts for receptors generally west of the quarry.
5. The depth and extent of proposed extraction has been reduced in response to environmental constraints identified during preliminary investigations, including:
  - a) extraction plans will be designed to avoid interaction with groundwater – as outlined in Section 5.3.1, Holcim has installed a network of groundwater monitoring bores across the site, monitoring data from which will inform final design that will avoid interaction with groundwater; and
  - b) a number of plant community types (PCTs) have been identified within the preliminary investigation area that are listed as threatened ecological communities (TECs). Holcim has undertaken a number of design refinements to relocate and reduce the pit extent within the SEA in response, in order to reduce potential impacts to these TECs as far as practical (refer Figure 5.1).

## 4 Strategic and statutory context

### 4.1 Strategic context and need for the project

The Central West and Orana Regional Plan 2036 (DPE 2017b) is a 20-year blueprint for the future of the Central West and Orana region. The plan's vision is to create a leading diverse regional economy in NSW, with a vibrant network of centres leveraging the opportunities of being at the heart of NSW. This is to be delivered through four goals:

1. the most diverse regional economy in NSW;
2. a stronger, healthier environment and diverse heritage;
3. quality freight, transport and infrastructure networks; and
4. dynamic, vibrant and healthy communities.

In support of the achievement of these goals, the project will supply locally sourced and financially competitive quarry products that will be required for forecast growth and development across the region. Being an established quarry site, located in an existing quarry precinct, and with a long history of operation within the community, the quarry is consistent with existing surrounding land uses and its proposed expansion avoids potential land use conflicts and amenity impacts associated with establishment of new quarry sites to respond to local market demands. The quarry is ideally located in proximity to Dubbo, a major centre within the region, with forecast growth and ongoing demand for materials for Council and other planned projects, thereby minimising haulage distances and costs for materials for these local projects.

### 4.2 NSW planning framework

#### 4.2.1 Overview

The EP&A Act and NSW Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) form the statutory framework for planning approval and environmental assessment in NSW.

The identification of approval pathways and assessment requirements are set out in environmental planning instruments (EPIs) that may be made under Division 3.3 (State environmental planning policies) or Division 3.4 (local environmental plans) of the EP&A Act.

#### 4.2.2 State significant development (SSD)

Part 4, Division 4.7 of the EP&A Act relates to SSD. Under Section 4.36(2) a State environmental planning policy may declare any development to be SSD.

The State Environmental Planning Policy (State and Regional Development) 2011 (the SRD SEPP) declares development to be SSD under Clause 8 which states:

- (1) Development is declared to be State significant development for the purposes of the Act if:
  - (a) the development on the land concerned is, by the operation of an environmental planning instrument, not permissible without development consent under Part 4 of the Act, and
  - (b) the development is specified in Schedule 1 or 2.

As detailed below in Section 4.2.4, the project is permissible with development consent under Part 4 of the EP&A Act.

Schedule 1 of the SRD SEPP specifies the following development category relevant to the project:

#### **7 Extractive industries**

(1) Development for the purpose of extractive industry that:

- (a) extracts more than 500,000 tonnes of extractive materials per year, or
- (b) extracts from a total resource (the subject of the development application) of more than 5 million tonnes, or
- (c) extracts from an environmentally sensitive area of State significance.

The project is for the purpose of an extractive industry that would extract from a total resource of more than 5 million tonnes. Parts of the project area are also an environmentally sensitive area of State significance as it is mapped under the Dubbo Local Environmental Plan 2011 (Dubbo LEP) as having terrestrial biodiversity values. Therefore, the project is declared to be SSD.

#### **4.2.3 State policies and plans**

Other State policies and plans that are, or are potentially, relevant to the project and that would be considered in the EIS include:

- State Environmental Planning Policy No 33 – Hazardous and Offensive Development;
- State Environmental Planning Policy No 55 – Remediation of Land; and
- State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (the Mining SEPP).

#### **4.2.4 Local instrument**

The project area is zoned IN3 Heavy Industrial, RE2 Private Recreation, and RU1 Primary Production under the Dubbo LEP. Extractive industries are permissible with consent within the IN3 and RU1 zones. Extractive industries are prohibited within the RE2 zone. However, Section 4.38(3) of the EP&A Act states, in relation to SSD, that:

- (3) Development consent may be granted despite the development being partly prohibited by an environmental planning instrument.

### **4.3 Other NSW legislation**

Under sections 4.41 and 4.42 of the EP&A Act, certain separate environmental approvals would not be required for the project or would be required to be issued consistent with the planning approval granted the project. Each of these separate environmental approvals is considered in Table 4.1. Further environmental and other approvals may be required in addition to those referred to under sections 4.41 and 4.42 of the EP&A Act, and these would be considered and outlined where relevant to the assessment of the project as part of the EIS.



**Table 4.1 Other State approvals and licenses**

Approval	Relevance to project	Comment
Approvals not required under section 4.41		
A permit under section 201, 205 or 219 of the NSW Fisheries Management Act 1994 (FM Act)	Relevant but not required	Consistent with section 4.41 of the EP&A Act, these approvals are not required for SSD or any investigative or other activities that are required to be carried out for the purpose of complying with any environmental assessment requirements in connection with an application for approval.
An approval under Part 4 or an excavation permit under section 139 of the NSW Heritage Act 1977	Not relevant	
An Aboriginal heritage impact permit under section 90 of the NSW National Parks and Wildlife Act 1974	Relevant but not required	
A bushfire safety authority under section 100B of the NSW Rural Fires Act 1997	Relevant but not required	
A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than a groundwater interference approval) under section 91 of the NSW Water Management Act 2000	Relevant but not required	
Approvals required to be issued consistently under section 4.42		
An aquaculture permit under section 114 of the NSW Fisheries Management Act 1994	No	The project does not involve aquaculture.
Approval under section 15 of the NSW Mine Subsidence Compensation Act 1961	No	The project is not within a mine subsidence district.
A mining lease under the NSW Mining Act 1992	No	The project does not involve mining.
A production lease under the NSW Petroleum (Onshore) Act 1991	No	The project does not involve petroleum production.
An environment protection licence (EPL) under Chapter 3 of the NSW Protection of the Environment Operations Act 1997	Yes	A variation to the quarry’s existing EPL may be required.  Under section 5.24(1) of the EP&A Act, an EPL cannot be refused if it is necessary for carrying out approved SSD and is to be substantially consistent with the EP&A Act approval.
A consent under section 138 of the NSW Roads Act 1993	No	The project will involve relocation of the site access and intersection with Sheraton Road, and an approval under the NSW Roads Act 1993 may be required.  Under section 138 of the NSW Roads Act 1993, any works that impact on a road requires approval of the relevant road authority, however it cannot be refused if it is necessary for carrying out an approved SSD.
A licence under the NSW Pipelines Act 1967	No	The project does not involve the construction and operation of pipelines.

#### 4.4 Commonwealth legislation

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) aims to protect matters deemed to be of national environmental significance (MNES).

One MNES has been identified within the project area, namely *Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland*, listed as a critically endangered ecological community. A referral of the project is currently being prepared for submission to Department of the Environment and Energy (DoEE).

# 5 Scoping of key issues

## 5.1 Issues identification

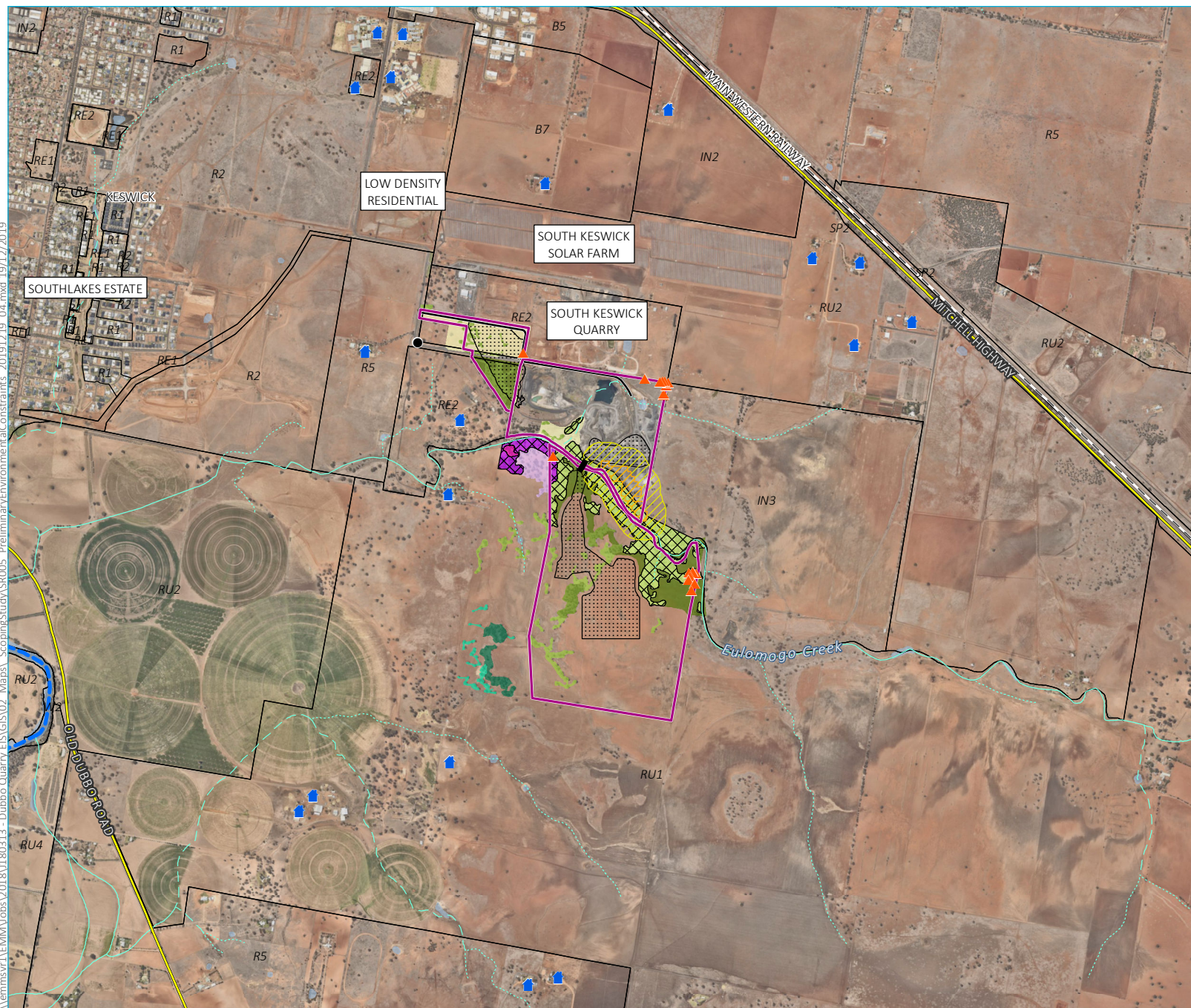
The environmental, social and economic matters relevant to the construction and operation of the proposed quarry expansion have been reviewed. Key issues and the proposed level and scope of assessments have been identified using the scoping guideline (DPE 2017a) and the supporting scoping tool (refer Appendix A). Matters have been characterised and allocated to one of the following categories:

- key issues – these have been identified as requiring detailed assessment, for example, detailed field surveys and/or quantified modelling techniques to fully understand the impacts and identify project-specific mitigation and/or alternatives; and
- other issues –potential for a material impact on a matter; however, measures to manage the impact are well understood and routinely used on similar projects.

Preliminary environmental features and constraints identified in proximity of the proposed quarry expansion areas are identified on Figure 5.1.



\\lemmsvr1\EMM\Jobs\2018\180313 - Dubbo Quarry EIS\GIS\02 Maps\ ScopingStudy\SR005 PreliminaryEnvironmentalConstraints 20191219 04.mxd 19/12/2019



- KEY**
- Project area
  - Current site access
  - New watercourse crossing (location TBC)
  - New access road
  - Indicative project disturbance area
- Existing environment**
- Rail line
  - Main road
  - Waterbody
- Strahler stream order**
- 1st order
  - 2nd order
  - 3rd order
  - 9th order
- Receptor
  - ▲ Aboriginal heritage site
  - Exotic grassland
  - EPBC listed CEEC
- Plant community type**
- 81 - Western Grey Box - cypress pine shrub grass shrub tall woodland in the Brigalow Belt South Bioregion
    - Moderate (medium)
    - Moderate (poor)
  - 201 - Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion
    - Moderate (medium)
  - 435 - White Box - White Cypress Pine shrub grass hills woodland in the Brigalow Belt South Bioregion and Nandewar Bioregion
    - Moderate (medium)
    - Moderate (poor)
    - Moderate (other)
    - Moderate (DNG)
- Bushfire prone land**
- Vegetation category 1
  - Vegetation category 2
- Land zoning**
- |                              |                                     |
|------------------------------|-------------------------------------|
| B5 - Business Development    | RE2 - Private Recreation            |
| B7 - Business Park           | RU1 - Primary Production            |
| IN2 - Light Industrial       | RU2 - Rural Landscape               |
| IN3 - Heavy Industrial       | RU4 - Primary Production Small Lots |
| R1 - General Residential     | SP2 - Infrastructure                |
| R2 - Low Density Residential | W2 - Recreational Waterways         |
| R5 - Large Lot Residential   |                                     |
| RE1 - Public Recreation      |                                     |

## Preliminary environmental constraints

Dubbo Quarry Continuation Project  
Scoping report  
Figure 5.1



## 5.2 Key issues

### 5.2.1 Noise and vibration

#### i Existing environment

The ambient noise environment in the vicinity of the proposed quarry expansion is likely to be characterised by the land use in the area, comprising of the South Keswick Quarry to the immediate north, the South Keswick Solar Farm further north, with further surrounds predominantly being pastoral and cultivation. More distant land uses include low-density housing approximately 1.5 km to the west; a school precinct on Sheraton Road; a commercial precinct at the intersection of Sheraton Road and the Mitchell Highway; and an aged care facility further west.

Key stakeholders in terms of the assessment of noise and vibration impacts include:

- the nearest noise-sensitive receptors to the site, including privately owned residences, particularly those situated approximately 215 to 250 m from the boundary of the proposed WEA. Given their proximity to the project boundary, a potential risk of noise exceedance has been identified at these nearest residences; and
- DPIE and the NSW EPA, as these two organisations will review and assess the noise and vibration impact assessment to ensure it has been prepared in accordance with the relevant guidelines.

#### ii Assessment approach

A detailed construction and operations noise and vibration assessment will be prepared in accordance with the following relevant documents:

- NSW Interim Construction Noise Guideline (ICNG) (DECC 2009);
- NSW Noise Policy for Industry (NPfI) (EPA 2017); and
- technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration.

There is potential for noise impacts during construction and operation of the proposed quarry expansion areas. The primary noise impacts will be due to the use of large machinery and processing equipment. Construction activities will be undertaken during standard construction hours, and the quarry is proposed to continue to operate consistent with current operational hours (refer Section 3.5.3).

Extraction rates and associated vehicle movements are proposed to remain as per existing operations. Road traffic noise associated with project related vehicle movements along the local road network will be quantified as part of the assessment.

The results of the operational noise assessment will be used to inform the detailed quarry design.

### 5.2.2 Air quality and greenhouse gas

#### i Existing environment

Air quality in the vicinity of the proposed quarry expansion is likely to be influenced by the existing Holcim quarry, the adjacent quarry and agricultural activity sources. Emission sources in the local context of the project, based on a search of the National Pollutant Inventory database, include the Dubbo Airport, Mirambee Feedlot, Boral Talbragar Quarry and South Keswick Quarry.

There are 5 sensitive residential receivers within 1 km of the site, with the nearest privately owned residences situated approximately 215 to 250 m from the boundary of the proposed WEA.

#### ii Assessment approach

The key air quality issue for the project will be emissions of particulate matter and the potential for these emissions to cause adverse impacts at nearby sensitive receptors. A detailed assessment of potential impacts to air quality will be undertaken in accordance with the assessment guidelines from the EPA, namely, the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA 2016).

Air dispersion modelling will be used to predict the off-site dust concentrations and deposition levels due to estimated emissions from the existing and proposed operations. Model predictions will be compared with EPA air quality assessment criteria, and the potential for adverse impacts will be assessed based on the level of compliance with the criteria. Potential cumulative impacts with the adjacent quarry will also be addressed.

### 5.2.3 Biodiversity

#### i Existing environment

Biodiversity surveys have been completed in the project area to date have included:

- vegetation mapping, including mapping of plant community types and vegetation zones;
- 23 plots using the Biodiversity Assessment Methodology (OEH 2017) (BAM) plots;
- targeted flora surveys for *Commersonia procumbens*, Bluegrass (*Dichanthium setosum*), Scant Pomaderris (*Pomaderris queenslandica*), *Tylophora linearis*, Silky Swainson-pea (*Swainsona sericea*), Pine Donkey Orchid (*Diuris tricolor*), and Ausfeld's Wattle (*Acacia ausfeldii*);
- spotlighting surveys for Bush Stone-curlew (*Burhinus grallarius*), Eastern Pygmy-possum (*Cercartetus nanus*), Squirrel Glider (*Petaurus norfolcensis*), Koala and Pale-headed Snake;
- targeted fauna surveys for Glossy Black-cockatoo, Superb Parrot (*Polytelis swainsonii*), Major Mitchell's Cockatoo (*Lophochroa leadbeateri*), Little Eagle (*Hieraaetus morphnoides*), Square-tailed Kite (*Lophoictinia isura*), Sloane's Froglet (*Crinia sloanei*), Masked Owl (*Tyto novaehollandiae*), and Barking Owl (*Ninox connivens*);
- five searches using the Koala Spot Assessment Technique (SAT) searches for Koala;
- camera trap surveys for arboreal mammals;
- arboreal trapping for Squirrel Glider; and
- targeted fauna survey for Pink-tailed Worm Lizard.

No threatened fauna species have been detected to date.

The following plant community types (PCTs) were identified within the project area (refer Figure 5.1):

- PCT 599 - White Box, Yellow Box, and Blakely's Red Gum Woodland;
- PCT 81 - Grey Box (*Eucalyptus macrocarpa*), Grassy Woodlands, and Derived Native Grasslands of South-Eastern Australia endangered ecological community (EEC); and
- Exotic grassland.

In the case of PCT 599, these communities are listed as threatened ecological communities (TECs) which means that they are candidates for the serious and irreversible impacts (SAII) classification. The NSW Biodiversity Assessment Method (BAM) Calculator will be utilised to determine offset requirements of the final project design.

#### ii Assessment approach

A detailed biodiversity development assessment report (BDAR) will be prepared and will include an assessment of the biodiversity values; the likely biodiversity impacts of the project; a detailed description of the proposed regime for minimising, managing and reporting on the biodiversity impacts of the project; and a strategy to offset any residual impacts of the project in accordance with the BC Act and the BAM.

An EPBC referral to the Commonwealth Minister for the Environment will be prepared for consideration of potential impacts to threatened flora species.

### 5.2.4 Aboriginal heritage

#### i Existing environment

The potential for Aboriginal heritage items to occur in the preliminary study area, covering a total area of 146 ha, including Lot 222 DP 1247780 and part Lot 100 DP 628628, was reviewed.

The majority of the area has been modified through historical land use practices and past disturbances associated with land clearing, manual and machine rock-picking, cropping and intensive livestock grazing, which has increased susceptibility to sheet and gully erosion. Although widespread clearing has occurred, there are a number of mature trees that have survived for use as shade for livestock. Areas with significant outcropping bedrock have also been historically cleared of vegetation. However, depending on the nature and extent of bedrock, these areas are not likely to have been cropped due to inaccessibility by farming machinery.

There are no AHIMS sites recorded within the project area, however there are 13 sites within 1 km of the site boundary. The absence of sites on the AHIMS database does not necessarily correlate with a low frequency of sites being present, rather it is often a reflection of the archaeological survey effort in the area.

EMM conducted an archaeological field survey of the survey area with the assistance of registered Aboriginal party (RAP) site officers over three days from 16–18 July 2019 (inclusive). Aboriginal sites identified and recorded during the survey comprised of open stone artefact sites and a potential archaeological deposit (PAD) (refer Figure 5.1).

#### ii Assessment approach

Potential impacts associated with the quarry expansion may include disturbance of objects with Aboriginal cultural heritage significance.



A detailed Aboriginal Cultural Heritage Assessment (ACHA) will be undertaken, addressing the requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a), *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (DECCW 2010b) and *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH 2011).

The ACHA will document the Aboriginal cultural significance of the project area (and any areas of specific cultural value or archaeological sites that it contains) as provided by the RAPs; identify and assess the scientific/archaeological significance of the project area and identify and assess sites/objects/PADs; assess the likely harm to areas of Aboriginal cultural value, archaeological sites/objects/PADs from the project; and provide management strategies to avoid harm, and where it cannot be avoided, to minimise or mitigate/manage harm.

### 5.2.5 Surface water

#### i Existing environment

The project area is transected by Eulomogo Creek and features associated second and first order ephemeral drainage lines. Eulomogo Creek is an intermittent watercourse and a tributary of the Macquarie River.

Ground elevations range between approximately 277 to 421 mAHD. Typical catchment slopes range between 1.1% to 2.6%.

An ephemeral drainage line, which flows infrequently, collects runoff from a catchment to the east of Holcim's Dubbo Quarry. From the site boundary, runoff from this drainage line is collected within a formalised flow path that directs runoff to the east quarry pit.

Separate to the SSD application process for the project, Holcim has been in consultation with the EPA during 2019 regarding surface water management requirements associated with the existing operation, including amended conditions within EPL 2212 issued and associated requirements for modification and upgrade to the existing settling pond and discharge system that currently operates on the site. Holcim will continue to engage with the EPA regarding these matters, and progress implementation of the new management and monitoring requirements concurrently with the assessment process for the SSD project, with the new management regime considered as part of the impact assessment for the project.

#### ii Assessment approach

Potential impacts to water resources as a result of the quarry expansion include quality of runoff and management of water used.

A detailed water resources impact assessment will be prepared as part of the EIS and will include:

- desktop characterisation of the existing geomorphology and aquatic ecology of waterways that may be impacted by the project;
- assessment of potential impacts to surface water quality, quantity, water and salt balance, geomorphology and aquatic ecology of Eulomogo Creek downstream of the quarry; and
- assessment of potential impacts to downstream water users, including licensed water users and basic landholder rights.

Cumulative impacts of the project on surface water resources will also be considered in the context of other operations in the region.

## 5.2.6 Land

### i Existing environment

The quarry is located approximately 1.9 km west of the township of Dubbo. The site is currently used for quarrying activities, pastoralism and cultivation. Existing land-use practices surrounding the site include the South Keswick Quarry to the immediate north, Neoen Energy's South Keswick Solar Farm further north, and rural residential properties. More distant land uses include low-density housing approximately 1.5 km to the west; a school precinct on Sheraton Road; a commercial precinct at the intersection of Sheraton Road and the Mitchell Highway; and an aged care facility further west.

### ii Assessment approach

The EIS will include a qualitative assessment of impacts to land resources (including geology and soils, land use and potential contamination) and proposed mitigation, management and remediation measures as required.

Erosion and sediment control (ESC) requirements will be considered in reference to *Managing Urban Stormwater: Soils and Construction – Volume 2E Mines and quarries* (DECC 2008) which will likely form part of an environmental management plan or similar that will be implemented during construction and operation.

Rehabilitation objectives and performance standards will be identified having regard for the key principles in the *Strategy Framework for Mine Closure* (ANZMEC & MCA 2000), along with nominated final land use in consideration of any relevant strategic land use plans or resource management plans or policies. A rehabilitation strategy will likely form part of an environmental management plan or similar, to be implemented during operation.

## 5.2.7 Transport and access

### i Existing environment

The quarry is located approximately 1.9 km west of the township of Dubbo. The quarry is accessed via Sheraton Road, which connects to the Mitchell Highway approximately 2 km north-west. The Mitchell Highway extends westwards through the township of Dubbo to Narromine and south-east through Orange and Bathurst.

The primary access point to the quarry for heavy and light vehicles, will continue to be via Sheraton Road. As outlined in Section 3.3, Holcim has consent for the relocation of the internal quarry access road and intersection off Sheraton Road approximately 175 m north of the current access point (refer Figure 3.1), and would act on this consent as part of future proposed staged quarry activities.

Existing users along Sheraton Road include Dubbo Christian School, St Johns Primary School, St Johns College, and businesses including a Bunnings hardware, KFC restaurant and Pet Barn retail outlet. As part of scoping phase stakeholder consultation, concerns were raised regarding heavy vehicle movements generated by the quarry, which is discussed further in Section 6.

As outlined above, the current consent for quarry operations places no restriction on production, with the existing infrastructure having the capacity to produce a maximum of 500,000 tpa. Consistent with current operations, a peak production rate of 500,000 tpa is proposed, with average production rate of 350,000 tpa, and therefore vehicle movements could remain as per existing operations.

### ii Assessment approach

A detailed traffic impact assessment (TIA) will be prepared to assess the project's potential impacts to road and intersection capacity, traffic safety and accessibility including consideration of the Austroads intersection design standards.

The TIA will be undertaken in accordance with the *Guide to Traffic Generating Developments* (RTA 2002) and will identify light and heavy vehicle access routes, and consider parking requirements and any other transport related matters of relevance.

### 5.2.8 Social

A social impact assessment (SIA) scoping report has been prepared by EMM (Appendix C) in accordance with the SIA guideline for *State significant mining, petroleum production and extractive industry development* (DPE 2017d).

#### i Existing environment

The area comprising Dubbo city and the broader Dubbo region (incorporating the former Dubbo and Wellington local government areas (LGAs) which were amalgamated in 2016 to form the Dubbo Regional Council) was mapped utilising Australian Bureau of Statistics (ABS) demographic and economic data. Based on this data and existing project information provided by Holcim, this area was defined as the area of social influence for the project, within which potentially affected communities and key stakeholders have been identified, including businesses and schools who may have an interest in the project and who would potentially be impacted.

People who may be directly impacted by the proposed quarry operations include:

- the nearest residential dwellings;
- potential future residential dwellings within approved residential subdivisions;
- nearby non-residential uses, for example, the South Keswick Quarry and South Keswick Solar Farm to the north, school students attending the schools along Sheraton Road to the north-west; and
- farmers, including dairy farmers, surrounding the site.

#### ii Assessment approach

Stakeholder engagement meetings and workshops have been undertaken by Holcim and EMM as part of the scoping phase, including:

- meeting with Dubbo Regional Council on 17 July 2019;
- Dubbo Quarry Workshop, held at the Dubbo RSL on 17 July 2019; and
- meeting at the Maas Sales Office on 17 July 2019.

A summary of the outcomes of these meetings are provided in Chapter 6.

An SIA will be prepared as part of the EIS and will include:

- the demographic profile of the locality;
- impacts on access to, and demand for, local services and infrastructure and community services; and
- potential social impacts arising from noise, air quality and other impacts.



For the purpose of the EIS and SIA, the area of social influence is proposed to incorporate the following:

- the Dubbo city, for consideration of those likely to be directly impacted by the project; and
- Dubbo Regional Council LGA, for those with potential to be indirectly impacted.

The community within the south-east of Dubbo city have the potential to experience change during the proposed construction and ongoing operation of the quarry. Identification of potential issues and impacts will therefore focus on landholders and nearby neighbours within an approximate 2 km radius from the proposed extension areas. This includes about 18 residences; the adjacent quarry and solar farm to the north; and three schools; along with a residential subdivision and associated potential future dwellings along Sheraton Road.

The extended social area of influence includes residences along the transport route beyond Sheraton Road (ie the Mitchell Highway). It is anticipated that impacts to the extended social area of influence will only be primarily transport-related (ie truck related noise and dust) rather than operational related (quarry noise and dust).

A preliminary set of potential impacts (negative and positive) has been identified based on the scoping assessment, including the outcomes of stakeholder meetings and workshop, and observations on site. The purpose of identifying potential impacts at this preliminary stage is to ensure that the appropriate range of stakeholders is engaged and that no affected group or individual is excluded from the engagement. This is detailed further in Chapter 6.

An assessment of potential negative impacts requiring further assessment and likelihood of potential positive social impacts is detailed in Table 5.1 below.

**Table 5.1 Identified potential positive and negative impacts**

Potential social impacts	Negative related to:	Positive related to:
Way of life Surroundings	Reduction in air quality Increased noise	Extraction areas will be progressively rehabilitated with the planting of native species.
Personal and property rights Livelihood Way of life Fears and aspirations	Land use conflict Reduction in house prices and sales	The continued operation of the quarry will provide ongoing employment and supply valuable resources to construction and road projects in the local area.  Extraction areas will be progressively rehabilitated with the planting of native species. The quarry activities proposed for the WEA will be completed within 7-8 years and the land will be rehabilitated.
Public safety Access to infrastructure, services and facilities	Additional truck movements: Impact on existing dilapidated roads; Road safety relating to inadequate road formation/width; Child safety at nearby schools; and Truck/vehicle safety on local roads.	The project will not result in additional truck movements  Holcim is planning an information session to be held at the schools on Sheraton Road to educate students, parents and teachers on road safety.
Expectations Reactions to the project	Previous consultation with the community regarding changes to the Holcim Quarry have been reported as being suboptimal by landholders and nearby neighbours.  Unfulfilled expectations/lack of knowledge and resulting frustration and anger	Feedback on potential positive impacts and their management  Fulfilment of commitments and promises

## 5.3 Other issues

### 5.3.1 Groundwater

Interaction with groundwater will be avoided through project design. As outlined in Section 5.3.1, Holcim has installed a network of groundwater monitoring bores across the site, monitoring data from which will inform final design that will avoid interaction with groundwater, therefore minimal groundwater assessment will be required.

A qualitative groundwater assessment will be prepared as part of the EIS and will include a:

- desktop assessment and characterisation of groundwater profiles utilising Holcim's groundwater monitoring data; and
- desktop assessment of any potential impacts upon groundwater by the project.

### 5.3.2 Bushfire

A small portion of the project area is mapped as bushfire prone land (refer Figure 5.1). This includes the processing infrastructure and parts of the current quarry pit. Whilst no habitable buildings are within the bushfire prone land, a qualitative assessment of the project against *Planning for Bushfire Protection* (RFS 2011) will be provided in the main body of the EIS. A bushfire management plan will likely form part of an environmental management plan or similar, to be implemented during construction and operation.

### 5.3.3 Historical heritage

There are no listed historical heritage items that would be directly impacted by the project. Consideration of indirect impacts to listed historical heritage items in the local area will be given in the EIS. However, the closest items are sufficiently distant from the project, such that impacts are expected to be negligible.

The presence of non-listed historical heritage items within the project area is unlikely as there are no existing structures that would be disturbed. Survey of the project area will be undertaken by suitably qualified archaeologists to identify the presence of any non-listed historic heritage items with the results summarised in the main body of the EIS.

### 5.3.4 Hazards

Hazards and risks associated with the project will be minimal. A preliminary screening test of proposed quantities of hazardous goods stored on, and transported to, the site would be undertaken against the thresholds identified in the *Applying State Environmental Planning Policy No 33 – Hazardous and Offensive Development* (SEPP 33 guideline).

A detailed hazards and risks assessment will not be prepared as part of the EIS. However, hazard and risk controls will be incorporated into the project's environmental management plans as required.

### 5.3.5 Visual

Proposed project infrastructure and changes in landform have potential to impact views from nearby viewpoints.

The EIS will include an assessment of potential visual amenity impacts from the construction and operation of the quarry expansion on surrounding residences, scenic or significant vistas, or road corridors in the public domain. A viewshed analysis considering local topography, sight inspections and stakeholder engagement outcomes will be performed to identify locations that may experience views of the project. Where relevant, the visual impact assessment and EIS will include mitigation measures to help reduce the project's impacts on visual amenity.

## 5.4 Cumulative impacts

An assessment of any cumulative impacts of the project and existing or proposed developments will be undertaken.

Potential cumulative impacts that will be considered as part of the EIS, are:

- traffic;
- air quality;
- noise; and
- socio-economic.



# 6 Stakeholder engagement

## 6.1 Introduction

Expectations from both regulators and community for meaningful stakeholder engagement have increased in recent years, and consultation requirements are likely to be a key feature of the SEARs for the project. The Community and Stakeholder Engagement guidelines (DPE 2017d), describes how DPIE expects proponents to engage with the community and other stakeholders during the environmental impact assessment process for state significant projects.

The guidelines emphasise the importance of early engagement, commencing during the scoping stage of a project, as well as improved participation throughout the environmental impact assessment process. As part of the scoping stage of the project, Holcim has engaged with a number of key stakeholders including regulatory, community and industry stakeholders. This chapter outlines the stakeholder identification process undertaken by Holcim and outcomes of engagement to date.

## 6.2 Stakeholder identification

To identify the relevant community, regulatory and other stakeholders, the guidelines encourage proponents to consider the following questions:

- What is the nature of the project and the extent of its environmental impacts?
- Who will be interested in the outcomes of the project?
- Who may have information that could be of value to the project?
- Who is directly affected by the project or might think they are affected by the project, and in what way?
- Who is likely to be upset if they are not informed or invited to participate?
- Who might be a person that others will look to for their opinions?

Preliminary identification of relevant stakeholders, consultation objectives and methods, has been undertaken in consideration of the above.

## 6.3 Scoping phase stakeholder engagement outcomes

### 6.3.1 Overview

As part of project scoping, Holcim and EMM have engaged with DPIE, Council representatives, community stakeholders, and the Maas Group as the operators of the adjacent South Keswick Quarry and developers of a residential area to the west. This consultation has focused on introducing the project, discussing the assessment pathway and, where relevant, discussing each stakeholder's preliminary concerns about the project.

Initial consultation with registered Aboriginal parties (RAPs) has been undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW 2010a), with RAPs involved in archaeological field survey undertaken for the project in July 2019 as outlined in Section 5.2.4. In accordance with the guidelines, consultation with RAPs will continue during the next phase of the project during which the ACHA will be prepared.

### 6.3.2 Scoping meeting with DPIE

A scoping meeting was held with EMM, Holcim and DPIE representatives on 2 July 2019, which identified the key issues for consideration in the assessment of potential impacts, project design and timing, and approach to stakeholder engagement. A copy of the meeting notes is included in 0.

### 6.3.3 Meeting with Dubbo Regional Council

The meeting with Council on 17 July 2019 outlined the following issues as key considerations for the project:

- potential land use conflict of extraction operations within the WEA with potential future development of residential zoned land to the west of the site, noting that consideration of this potential in developing staged quarry plans may be able to avoid/reduce potential conflicts;
- at the time of the meeting, Council was undertaking a gateway assessment of a planning proposal for reduction of the minimum lot size for land in zone R5 to create 284 residential lots, representing a potential land use conflict with the proposed quarry operations;
- proposed extraction within the proposed SEA is likely to be more favourable, compared to the WEA, from a potential land use conflict and amenity impact perspective;
- potential public safety concern due to the potential interaction with school-related traffic and the single inbound/outbound site access route via Sheraton Road;
- the *Dubbo City Planning and Transportation Strategy 2036* (Stapleton Transportation and Planning 2009) identifies potential future roads and road extensions, which require consideration as part of the impact assessment;
- confirmation of potential groundwater issues/impacts;
- a Planning Agreement is currently in place between Council and Regional Hardrock Pty Ltd, as the developer of the South Keswick Quarry, for ongoing maintenance of Sheraton Road, which is linked to annual throughput tonnage from the quarry; and
- Council would likely seek consent conditions relating to staging of proposed extraction to reduce potential land use conflicts and amenity impacts on future residential areas proposed to the west.

### 6.3.4 Community workshop

A summary of the issues and topics raised by the nine community participants at the 17 July 2019 community workshop is presented in Table 6.1.

**Table 6.1**      **Issues and questions raised by workshop participants**

Issue	Sub-issue as perceived by potentially affected population	Questions/comments from stakeholders
Road safety within school precinct to the north	<p>The project will result in additional truck movements, speeding through school zones during drop off and pick up times. This will result in pedestrian/vehicle conflicts.</p> <p>Conditions of approval issued to another local quarry pertaining to truck movements through the school zone are not adhered to.</p>	<p>What safety measures will be put in place?</p> <p>Child safety around the schools needs to be considered.</p>
Additional truck movements will result in further deterioration of existing roads	Sheraton Road is already in disrepair and is dangerous whilst large trucks are travelling at high speed.	Will any local roads be upgraded?
The quarry is moving closer to the school precinct as well as residential zoned land	This will result in greater environmental impacts for those communities, such as dust and noise (from blasting).	Will there be additional dust and noise from the project?
Potential decrease in house prices for existing and future residential dwellings	The proximity of the extended quarry to residential homes will affect house sales.	Why does the quarry need to extend to the north-west?

### 6.3.5 Meeting with the Maas Group

The issues raised by the Maas Group in the meeting of 18 July 2019 are summarised below:

- blasting and related vibration impacts on nearby properties;
- truck movements and driver behaviour in and around school zones;
- ability of local roads to accommodate traffic;
- the cumulative impacts of the proposal need to be considered within the existing context;
- groundwater, contamination and flood impacts on surrounding dairy farmers;
- potential visual impacts especially for properties to the south, along Angel Park Road; and
- need for consideration of the creek and potential salinity issues.

## 6.4 Future stakeholder engagement

Holcim and EMM will continue to undertake stakeholder engagement in accordance with the community and stakeholder engagement guidelines during the subsequent phase of the project, in which the EIS will be prepared. This will include further engagement with DPIE, Council, regulators, industry stakeholders, Aboriginal stakeholders and the local community, and will respond to the issues identified during the consultation process.

The EIS will include details of feedback received and actions taken to address feedback during project design and impact assessment.



## 7 Application process

The purpose of this Scoping Report is to request and inform the content of the SEARs for the project. The SEARs will specify the requirements for the EIS that will be prepared to accompany the application for the project. Once the Scoping Report is received, DPIE will prepare the SEARs in consultation with the relevant government agencies.

Once the EIS is prepared it is required to be publicly exhibited for a minimum of 28 days. A Response to Submissions report is required to be prepared which addresses any submissions received during exhibition from the community and/or government agencies. The application would then be determined by the Minister for Planning, or under delegation.

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Appendix A

# Scoping worksheet

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Project :								
MATTERS		IMPACTS		ASSESSMENT LEVEL	CUMULATIVE IMPACTS	COMMUNITY ISSUES	ASSESSMENT APPROACH	SCOPING REPORT
Potential matters that could be affected by the project		Is the project (without mitigation) likely to cause an impact?	Are the impacts (without mitigation) likely to be significant based on the magnitude of the impacts and/or sensitivity of receivers?	What level of assessment is required to assess impacts and determine mitigation measures?	Will cumulative assessment be required?	Did the community raise any concerns about the impacts?	Indicative approach to assessment in EIS	Where was this addressed in the Scoping Report?
Group	Specific	Impact?	Significant Impact?	Assessment Level	Cumulative Impact?	Concerns?	Category	Section
ACCESS	access to property	N						
	port / airport facilities	N/A						
	road and rail network	Unknown	Unlikely	Detailed	Yes	Yes	Detailed Assessment + CIA+ focussed engagement	Section 5.2.7
	offsite parking	N						
	other - please specify	N						
AIR	particulate matter	Y	Unknown	Detailed	Yes	Yes	Detailed Assessment + CIA+ focussed engagement	Section 5.2.2
	gases	N						
	atmospheric emissions	Y	Unlikely	Standard	Yes			Section 5.2.2
	other - please specify	N/A						
AMENITY	noise	Y	Unknown	Detailed	Yes	Yes	Detailed Assessment + CIA+ focussed engagement	Section 5.2.1
	vibration	Y	Unknown	Detailed	No		Standard Assessment	Section 5.2.1
	visual	Unknown	Unlikely	Standard	No	No		Section 5.3.5
	odour	N						
	other - please specify	N/A						
BIODIVERSITY	conservation areas	N						
	native vegetation	Y	Unknown	Detailed	No		Standard Assessment	Section 5.2.3
	native fauna	Y	Unknown	Detailed	No		Standard Assessment	Section 5.2.3
	aquatic ecology (creek crossing)	Unknown	Unknown	Standard	No		Standard Assessment	Section 5.2.3
BUILT ENVIRONMENT	public domain	N						
	public infrastructure	N						
	private property	N						
	other - please specify	N/A						
CLIMATE	macroclimate	N						
	microclimate	N						
	other - please specify	N/A						
ECONOMIC	natural resource use	Y	Unknown	Standard	No		Standard Assessment	Section 5.2.8
	livelihood	N						
	opportunity cost	N						
	other - please specify	N/A						
HERITAGE	natural	N						
	historic	N						
	Aboriginal cultural	Unknown	Unknown	Detailed	No		Standard Assessment	Section 5.2.4
	other - please specify	N/A						
LAND	stability / structure	Unknown	Unlikely	Detailed	No			Section 5.2.6
	soil chemistry	N						
	land capability	Unknown	Unknown					
	topography	Y	Unlikely	Standard	No			Section 5.2.6
	other - please specify	N/A						
RISKS	effects of climate change	N						
	coastal hazards	N/A						
	effects of flood waters	Unknown	Unlikely	Standard	No			Section 5.2.5
	bushfire	Y	Unlikely	Standard	No			Section 5.3.2
	effects of subsidence	N						
	steep slopes	N						
	other - please specify	N/A						
SOCIAL	health	N						
	safety	N						
	community services / facilities	N						
	housing availability	N						
	social cohesion	N						
	land use conflict	Unknown	Unknown	Standard	No	Yes	Standard Assessment + focussed engagement	Section 5.2.6, 5.2.8
WATER	hydrological flows (incl. flooding)	Y	Unknown	Detailed	No		Standard Assessment	Section 5.2.5
	surface water quality	Y	Unknown	Detailed	No		Standard Assessment	Section 5.2.5
	ground water quality	Unknown	Unlikely	Detailed	No			Section 5.3.1
	water availability	Y	Unknown	Detailed	No		Standard Assessment	Section 5.2.5
	other - please specify	N/A						



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Appendix B

# Scoping meeting minutes

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# Meeting Notes



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**Date/time:** 2 July 2019, 10:30 – 11:30

**Location:** NSW DPE Office, Pitt Street, Sydney

**Subject:** J180313 – Dubbo quarry continuation project – scoping meeting

## Attendees:

### EMM

Phil Towler, Claire Burnes, Rachael Thelwell (via telecon)

### Holcim

Luke Edminson, Alasdair Webb (via telecon)

### DPE

Howard Reed, Melissa Anderson, Lauren Evans

Item No.	Discussion	Follow-up action	Responsibility
1	<p>Delivery schedule:</p> <ul style="list-style-type: none"> <li>HR noted concern that delivery timeframe for preparation and lodgement of the EIS is unrealistic (current target lodgement October 2019).</li> <li>EMM acknowledged current timeframe is ambitious and noted that progression into scoping phase has been delayed by ability to go public based on finalisation of landowner agreements and this isn't reflected in the schedule presented to DPE. EMM also noted that some work on key issues has already commenced.</li> <li>In particular, DPE believe bilateral/EPBC process appears very tight (current target lodgement September 2019), with supplementary SEARs unlikely to be issued until immediately prior to EIS exhibition period.</li> </ul>	<p>EMM/Holcim to update project delivery schedule with current anticipated timing</p> <p>EMM to confirm preferred approach to EPBC referral lodgement based on current project information</p> <p>EMM to advise DPE of revised delivery program</p>	<p>CB/LE</p> <p>CB</p> <p>CB</p>
2	<p>SIA:</p> <ul style="list-style-type: none"> <li>HR noted policy changes in SIA will be reflected in SEARs</li> <li>EMM confirmed that stakeholder engagement strategy has been drafted in accordance with the SIA guidelines, and the SIA work scope has also been developed in accordance with these guidelines.</li> <li>LE noted that SIA scoping report, and separate SIA scoping spreadsheet will be required to accompany the scoping report/PEA.</li> <li>HR made note of the local residents, land uses</li> </ul>	<p>CB to confirm assumed approach with EMM social team</p>	<p>CB</p>

	surrounding the quarry (ie schools) with potential land use conflicts		
3	<p>Quarry operations:</p> <ul style="list-style-type: none"> <li>• AW provided summary of historic/current quarry operations, noting: <ul style="list-style-type: none"> <li>– Production volume increase in recent years;</li> <li>– 2018 record production year (365,000t)</li> <li>– 2-3yrs available resource remaining, which will require temp satellite quarry pit to be opened up next year</li> <li>– Urgency for proposed DA on basis of limited remaining available resource</li> </ul> </li> </ul>	N/A	
4	<p>DA process:</p> <ul style="list-style-type: none"> <li>– Holcim/EMM provided brief summary of historic expansion considerations and consultation with Dubbo Council</li> <li>– PT outlined RE2-aquaculture-agriculture-Extractive Industries SEPP argument, but started that this was a moot point for SSD</li> <li>– Potential for Council objection to the SSD noted</li> <li>– Similarly, potential for MAAS to rally community objections</li> <li>– Likely for Independent Planning Commission (IPC) process to be triggered</li> <li>– HR noted associated need for thorough and high quality EIS and associated technical studies to achieve best outcomes through DPE and IPC assessment phases</li> <li>– HR noted that the lodged DA needs to have resolved <u>all</u> its issues, as the IPC will be thorough with their assessment.</li> </ul>	Noted for consideration	EMM/Holcim
5	<p>Groundwater impact assessment:</p> <ul style="list-style-type: none"> <li>– Monitoring bores being installed this month (July)</li> <li>– HR noted requirement for thorough assessment (with sufficient dataset)</li> <li>– PT noted extraction will not extend below the groundwater table</li> </ul>	CB to discuss approach and required monitoring dataset with LW given DPE focus. Schedule to be updated accordingly.	CB
6	<p>Watercourse crossing:</p> <ul style="list-style-type: none"> <li>– Noted current plan for a low-level flood prone crossing design</li> <li>– CB noted crossing design is subject to flooding assessment and decisions around risk tolerance of Holcim to operational interruptions from flooding. Crossing will be designed in accordance with the relevant DPI watercourse crossing guidelines.</li> <li>– HR noted associated implication for retaining processing plant/infrastructure within the existing/northern pit area rather than ability to relocate into the proposed southern pit. Suggested Holcim consider the long-term approach/quarrying strategy to maximise</li> </ul>	LE and AW to discuss this matter with the business. Commence plan to upgrade and relocate all infrastructure to the pit area.	Holcim

	available resource and flexibility (ie operational/commercial considerations for relocating existing infrastructure to southern pit)		
7	<p>Extraction period:</p> <ul style="list-style-type: none"> <li>– HR noted DPE would generally limit consent to 25-30yr extraction period.</li> </ul>	Holcim to consider as part of mine planning/design	LE/AW
8	<p>Project description:</p> <ul style="list-style-type: none"> <li>– HR noted importance of project description in providing flexibility for future operations (eg leave open option to extract resource from area under existing infrastructure)</li> <li>– HR noted that there may be noise/air quality advantages of locating infrastructure in the base of the pit over the longer-term (3-5 years).</li> <li>– HR suggested life of existing processing infrastructure should be considered in developing staged plans and associated impact assessment</li> </ul>	Noted for consideration.	Holcim/EMM
9	<p>Proposed extraction timing/staging:</p> <ul style="list-style-type: none"> <li>– Noted potential land use conflict with potential residential subdivision to the west of the site, in particular the Cameron land.</li> <li>– AW noted approx. 5-7yr resource within this land portion</li> <li>– Holcim to consider Cameron land as first stage extraction and potential timing/production rate scenarios</li> <li>– HR highlighted potential opportunity to present improved community outcomes through staged relocation of processing infrastructure to the bottom of the pit to reduce amenity impacts.</li> </ul>	Noted for consideration.	Holcim/EMM
10	<p>Miscellaneous</p> <ul style="list-style-type: none"> <li>– HR noted that solar farm likely to be concerned by two quarry neighbours.</li> </ul>	Noted for consideration.	Holcim/EMM



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Appendix C

## SIA scoping report

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# Scoping Report - social impact assessment

Dubbo Quarry Continuation Project

Prepared for Holcim (Australia) Pty Ltd  
November 2019

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# Scoping Report - social impact assessment

## Dubbo Quarry Continuation Project

### Report Number

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J180313 RP1

### Client

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Holcim (Australia) Pty Ltd

### Date

---

18 November 2019

### Version

---

v1 Final

### Prepared by

---



#### **Andrea Kanaris**

Associate, SIA National Technical Lead

18 November 2019

### Approved by

---



#### **Claire Burnes**

Associate - Environment, Community, Assessment, Delivery

18 November 2019

This report has been prepared in accordance with the brief provided by the client and has relied upon the information collected at the time and under the conditions specified in the report. All findings, conclusions or recommendations contained in the report are based on the aforementioned circumstances. The report is for the use of the client and no responsibility will be taken for its use by other parties. The client may, at its discretion, use the report to inform regulators and the public.

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# 1 Introduction

## 1.1 Project overview

Holcim (Australia) Pty Limited (Holcim) are the owners and operators of Dubbo Quarry (the quarry) located on Sheraton Road, Dubbo (refer Figure 1.1). The quarry has operated since 1980 under a development consent granted by Dubbo Regional Council (Council). Accessible basalt resources within the existing quarry boundary (refer Figure 1.2) are close to exhaustion and planning approval is required to allow the quarry to continue operating. Holcim is therefore, seeking approval for the Dubbo Quarry Continuation Project (henceforth referred to as 'the project') which involves the continued operation of the quarry through the development of two new resource areas to the south and west of the existing quarry boundary (refer Figure 1.2).

The project is classified as State significant development (SSD) under Part 4, Division 4.1 of the NSW *Environmental Planning Assessment Act 1979* (EP&A Act). A development application (DA) for SSD must be accompanied by an environmental impact statement (EIS).

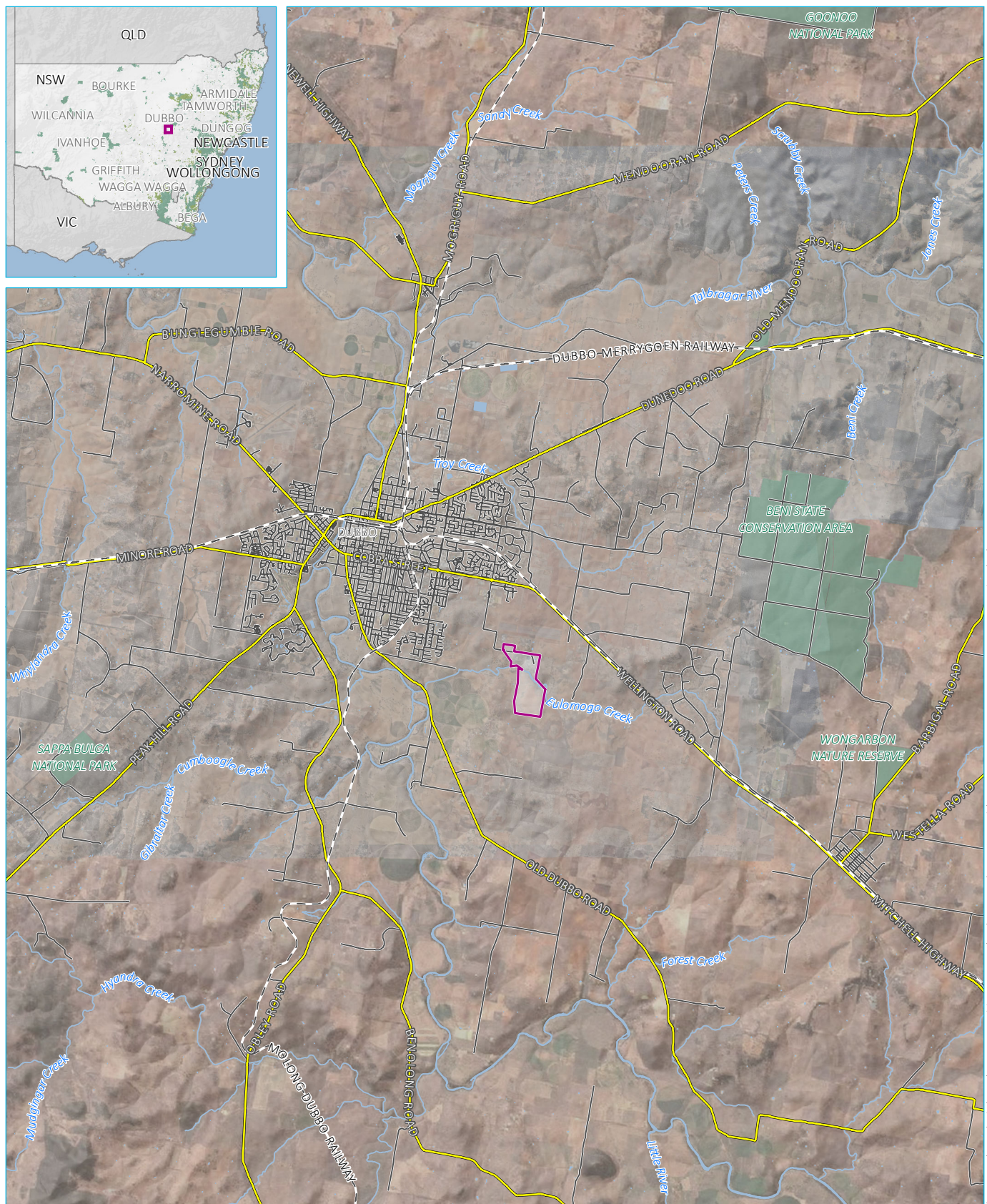
## 1.2 Purpose of the social impact assessment scoping report

The purpose of this social impact assessment (SIA) scoping report is to accompany the environmental impact assessment scoping report to request, and inform the content of, the Secretary's Environmental Assessment Requirements (SEARs). The SEARs will identify the requirements and level of environmental assessment required to accompany the DA and associated EIS.

This scoping study is an evaluative procedure and its primary objective is to define the scope of the SIA for the project to:

- identify potentially affected people;
- identify and understand the area of social influence;
- identify the potential, negative and positive, social impacts for further investigation as part of the EIS; and
- determine the level of assessment required for each potential social impact.

This report has been prepared by EMM Consulting Pty Limited (EMM) on behalf of Holcim in accordance with the social impact assessment guideline for State significant mining, petroleum production and extractive industry development (DPIE, 2017).



## KEY

- Project area
- Rail line
- Main road
- Local road
- Watercourse/drainage line
- NPWS reserve
- State forest
- Waterbody

Project location

Dubbo Quarry Continuation Project  
Scoping report  
Figure 1.1







## 2 Project description

### 2.1 Scale and nature of project

Dubbo Quarry (the site) was established and has been operating since 1980, currently employing approximately 15 quarry staff, 2 contactors and a number of truck drivers. In addition to supplying Dubbo Regional Council with pugmilled products (blended road bases), it supplies to markets as far away as Cobar to the west, north to the Queensland border, east to Orange and south to Parkes.

The quarry is within an existing quarry precinct, adjacent to South Keswick Quarry operated by Regional Hardrock Pty Ltd (Maas group) and Boral's Eulomogo quarry (currently non-operational) and is consistent with existing surrounding land uses.

The proposal involves expansion of existing quarry activities into two new resource areas:

1. the quarry Western Extension Area (WEA) located within part Lot 22 DP 793541, west and north-west of the existing quarry boundary; and
2. the Southern Extension Area (SEA) located within part Lot 100 DP 628628, to the south of the existing quarry boundary on the southern side of Eulomongo Creek.

The current consent for quarry operations places no restriction on production, with the existing infrastructure having the ability to produce a maximum of 500,000 tonnes per annum (tpa). At a maximum production rate of 500,000 tpa, consistent with the existing operations, the two proposed extension areas provide sufficient resource for the quarry to continue operations for approximately 20 – 25 years.

### 2.2 Surrounding development

The site is located approximately 1.9 kilometres (km) west of the city of Dubbo, and is accessed via Sheraton Road, which connects to the Mitchell Highway (Wellington Road) approximately 2 km north-west. The Mitchell Highway extends westwards Dubbo to Narromine and south-east of the quarry through Orange and Bathurst.

Existing land-use practices surrounding the site include the South Keswick Quarry to the immediate north, Neoen Energy's South Keswick Solar Farm further north, and rural residential properties. More distant land uses include low-density housing approximately 1.5 km to the west; a school precinct on Sheraton Road; a commercial precinct at the intersection Sheraton Road and the Mitchell Highway; and an aged care facility further west.

To the west of the site, a residential subdivision (Southlakes Estate) is under development by Maas Group, which is currently approved to extend to within approximately 1.4 km west of Sheraton Road. In addition, a 51 lot low density residential subdivision of Lot 1 DP 880413 was approved by Council (DA ref: D2016-363) in July 2019, located immediately west of the South Keswick Solar Farm, approximately 350 m north-west of the proposed quarry access road off Sheraton Road.

## 3 Dubbo social baseline

This section provides a brief snapshot of the social conditions of Dubbo and the broader region in which the project will operate. The area of social influence for the project has been identified as Dubbo city locally and the broader Dubbo region is made up of former Dubbo and Wellington local government areas (LGA) which were amalgamated in 2016 to form Dubbo Regional Council (DRC).

The summary below uses Australian Bureau of Statistics (ABS) census data using the following categories:

- Dubbo State suburb code (SSC): to describe the population of Dubbo city; and
- Dubbo region: a combination of Dubbo and Wellington LGAs.

### 3.1 Demographic profile

The Australian Bureau of Statistics (ABS) estimated resident population of Dubbo SSC in 2016 was 38,943 people, with a usual residence population of 50,075 in the Dubbo region. The population of Dubbo SSC was made up of 48.1% male and 51.9% female (ABS 2016) with a median age of 36 years, which is slightly younger than the median age of people in NSW (38 years). Children aged 0 – 14 constituted 21.2% of the population, while people aged 65 years and older comprised 15.8% of the population (ABS 2016).

The population of Dubbo region is projected to increase to 60,831 people in 2036 according to medium series projections (DRC 2016).

#### 3.1.1 Aboriginal and Torres Strait Islander peoples

Aboriginal and Torres Strait Islander peoples constituted 14.6% of the population of Dubbo SSC. This is similar to the Aboriginal and Torres Strait Islander population percentage for Dubbo region (15.1%), but much higher than the NSW average of 2.9% (ABS 2016).

The traditional owners in Dubbo are the Tubbagah People of the Wiradjuri Nation. Terramungamine Reserve, approximately 8.5 km north-west of Dubbo and approximately 18 km north-west of the quarry, is part of the traditional country of the Tubbagah people and represents a significant site for the preservation and continued existence of Aboriginal cultural heritage (Dubbo City 2019).

#### 3.1.2 Cultural diversity

Most of the population of the Dubbo region was born in Australia (84.1%), with the other most common countries of birth being England (1.0%), India (0.8%) and New Zealand (0.8%). Of people in Dubbo SSC, 76.8% stated that both of their parents were born in Australia as well (ABS 2016) and 87.6% of people only spoke English at home, with 6.8% of households speaking a non-English language (ABS 2016). Diversity is much lower than the NSW average.

### 3.2 Workforce

The number of reported people in Dubbo SSC in the labour force was 19,154, of these people 62.7% worked full-time, 26.8% worked part-time and 5.5% were unemployed (ABS 2016).

The most common occupations in Dubbo SSC were professionals (18.2%), technicians and trades workers (14.5%), clerical and administrative workers (13.5%) and community and personal service workers (12.5%). Of the employed people in the study area, 11.44% were employed in retail trade, 15.75% worked in health care and social assistance, 9.37% were in education and training, 8.70% were in the construction industry, and 7.72% worked in accommodation and food services. Only 1.32% of employed persons reported working in mining, which includes quarries (ABS 2016).

### 3.3 Housing and accommodation

In Dubbo SSC, the median weekly rent was \$265, while the median monthly mortgage repayment was \$1,517 (ABS, 2016). These payments are substantially less than the NSW averages. The average household size was 2.5 persons, with most households being family households (70.9%). Most homes were owned with a mortgage (34.3%), but a similar percentage of occupied private dwellings were rented (32.7%) or owned outright (28.9%).

### 3.4 Local business

In the Dubbo LGA, 97.48% of businesses employ fewer than 20 people. Only 3 out of the 5,127 registered businesses in the area employ more than 200 employees, all of which are in the health care and social assistance industry (ABS 2018). The highest percentage of registered businesses in Dubbo Regional LGA were in the agriculture, forestry, and fishing industry (23.07%), followed by construction (17.69%); rental, hiring and real estate (8.44%); and professional, scientific, and technical services (6.18%). 9 of the registered businesses were in the mining industry (ABS 2018).

### 3.5 Income

The median total personal income at the time of the 2016 census was \$691/week, while the median total family income was \$1,602/week and the median total household income was \$1,341/week (ABS 2016).

### 3.6 Homelessness

The estimated homelessness in Dubbo LGA in the 2011 Census is 95 people. This represents 0.3% of the homelessness rate in NSW. There are no ABS recorded homelessness data for Dubbo LGA in the 2016 Census.

### 3.7 Mental health

Admission statistics of Dubbo Hospital indicate an increasing trend in mental health related conditions from 364 to 450 admissions between 2012 – 2017 (Australian Institute of Health and Welfare 2019).

There are several mental health care services that offer specialised care and treatment in Dubbo. These include National Mental Health Service Providers, such as Neami National, Headspace and Marathon Health (non-profit organisation).

## 4 SIA scoping methodology

### 4.1 Baseline review

Review of existing project information provided by Holcim, along with ABS demographic and economic data has been undertaken to define the project area of social influence and to identify potentially affected communities and key stakeholders.

### 4.2 Identification of area of social influence

The area of social influence was mapped to identify surrounding stakeholders who would potentially be directly or indirectly affected by the project. This includes identifying businesses and schools who may have an interest in the project; and who would potentially be impacted.

### 4.3 Stakeholder interviews

Holcim representative A. Webb and EMM representatives, A. Kanaris and S. May-Raynes met with Council's representative, S. Reynolds, Statutory Planning Services Team Lead, on 17 July 2019 to advise of the proposal, seek feedback on issues and concerns for consideration, and to provide a briefing on the preparation of the SIA. Engagement also took place on 18 July 2019 with two senior representatives of Maas Group at their land sales office in Southlakes Estate. The Maas Group have significant landholdings surrounding the site, including the South Keswick Quarry immediately north; the residential subdivision (Southlakes Estate) to the west; and land to the east and south. Maas Group advised that they are soon to purchase agricultural land to the west of the site and have plans for an industrial park to the east. EMM representatives also provided an overview of the SIA process and the requirements for engagement, along with a project briefing.

### 4.4 Stakeholder workshop

A selection of stakeholders were invited to attend a workshop on the evening of Wednesday 17 July 2019 at the Dubbo RSL. The workshop was facilitated by A. Kanaris a Social Scientist and S. May-Raynes, Social Planner. The workshop was also attended by A. Webb, Holcim's Quarry Manager, who provided an introduction of the scoping team, a summary of the project, and an outline of the purpose of the workshop.

A Project Summary Sheet was issued to all participants. Following this, a discussion was facilitated to enable the participants to ask specific questions about the project and share local knowledge. These discussions provided the project team with an understanding of the project's potential area of influence, potential social issues and impacts, and the required level of assessment in support of the SIA. In addition, this local knowledge provided a clear picture of the stakeholder's perceptions of the potential impacts of the project. Notes were taken of the discussions at the workshop and salient points were extracted for further analysis.

### 4.5 Site inspection

An inspection of the site and surrounding area, including the city of Dubbo and surrounding residential neighbourhoods, was conducted by EMM representatives on 17 and 18 July 2019 to scope the environmental and socio-economic conditions in which communities were located, for example topography, housing and infrastructure and livelihood (including places of employment) activities. The observations will inform the assessment of potential impacts related to visual amenity, noise, dust and traffic.

## 5 Scoping outcomes

### 5.1 Council feedback

In the meeting of 17 July 2019, Council's representative outlined the following issues as key considerations for the project:

- potential land use conflict of extraction operations within the WEA with potential future development of residential zoned land to the west of the site, noting that consideration of this potential in developing staged quarry plans may be able to avoid/reduce potential conflicts;
- at the time of the meeting, Council was undertaking a gateway assessment of a planning proposal for reduction of the minimum lot size for land in zone R5 to create 284 residential lots, representing a potential land use conflict with the proposed quarry operations;
- proposed extraction within the proposed SEA is likely to be more favourable, compared to the WEA, from a potential land use conflict and amenity impact perspective;
- potential public safety concern due to the potential interaction with school-related traffic and the single inbound/outbound site access route via Sheraton Road;
- the Dubbo City Planning and Transportation Strategy 2036 (Stapleton Transportation and Planning Pty Ltd 2009) identifies potential future roads and road extensions, which require consideration as part of the impact assessment;
- confirmation of potential groundwater issues/impacts;
- a Planning Agreement is currently in place between Council and Regional Hardrock Pty Ltd, as the developer of the South Keswick Quarry, for ongoing maintenance of Sheraton Road, which is linked to annual throughput tonnage from the quarry; and
- Council would likely seek consent conditions relating to staging of proposed extraction to reduce potential land use conflicts and amenity impacts on future residential areas proposed to the west.

### 5.2 Community workshop

A summary of the issues and topics raised by the nine participants at the 17 July 2019 community workshop is presented in Table 5.1.



**Table 5.1 Issues and questions raised by workshop participants**

Issue	Sub-issue as perceived by potentially affected population	Questions/comments from stakeholders
Road safety within school precinct to the north	The project will result in additional truck movements, speeding through school zones during drop off and pick up times. This will result in pedestrian/vehicle conflicts.  Conditions of approval issued to another local quarry pertaining to truck movements through the school zone are not adhered to.	What safety measures will be put in place?  Child safety around the schools needs to be considered.
Additional truck movements will result in further deterioration of existing roads	Sheraton Road is already in disrepair and is dangerous whilst large trucks are travelling at high speed.	Will any local roads be upgraded?
The quarry is moving closer to the school precinct as well as residential zoned land	This will result in greater environmental impacts for those communities, such as dust and noise (from blasting).	Will there be additional dust and noise from the project?
Potential decrease in house prices for existing and future residential dwellings	The proximity of the extended quarry to residential homes will affect house sales.	Why does the quarry need to extend to the north-west?

### 5.3 Meeting with Maas Group

The issues raised by Maas in the meeting of 18 July 2019 are summarised below:

- blasting and related vibration impacts on nearby properties;
- truck movements and driver behaviour in and around school zones;
- ability of local roads to accommodate traffic;
- the cumulative impacts of the proposal need to be considered within the existing context;
- groundwater, contamination and flood impacts on surrounding dairy farmers;
- potential visual impacts especially for properties to the south, along Angel Park Road; and
- need for consideration of the creek and potential salinity issues.

### 5.4 Proposed area of social influence

#### 5.4.1 Geographical

For the purpose of the EIS and SIA, the area of social influence is proposed to incorporate the following:

- the Dubbo city, for consideration of those likely to be directly impacted by the project; and
- Dubbo Regional Council LGA, for those with potential to be indirectly impacted.

On this basis, the ABS boundaries and data for Dubbo SSC and Dubbo LGA will be utilised to inform the assessment.

The community within the south-east of Dubbo city have the potential to experience change during the proposed construction and operation of the quarry. Within the Dubbo city, identification of potential issues and impacts will therefore be focussed on landholders and nearby neighbours within an approximate 2 km radius from the proposed WEA. This includes a number of existing residential dwellings; adjacent quarry and solar farm to the north; and a number of schools; along with a residential subdivision and associated potential future dwellings along the transport route (ie Sheraton Road).

An extended social area of influence includes residences along the transport route beyond Sheraton Road (ie the Mitchell Highway). However, it is anticipated that impacts to the extended social area of influence would be primarily transport-related (ie truck related noise and dust) rather than operational related (quarry noise and dust).

#### 5.4.2 Potentially affected people

There is potential for surrounding landowners and land users to be directly impacted by the proposed quarry operations, including:

- the nearest residential dwellings;
- potential future residential dwellings within approved residential subdivisions;
- nearby non-residential uses, for example, the South Keswick Quarry and South Keswick Solar Farm to the north, school students attending the schools along Sheraton Road to the north-west; and
- farmers, including dairy farmers, surrounding the site.

The SIA should consider the potential for health and emergency services to be indirectly impacted due to health and wellbeing related to stress from livelihood and public safety related issues.

The potential vulnerable groups that may be affected are primarily school children due to the public safety concerns around schools that was raised by community members. While there are no early indicators that other vulnerable groups would be directly impacted it would be good practice to consider the impacts on Indigenous, homeless and at risk of homeless, and disabled because they are vulnerable.

## 6 Anticipated social impacts

A preliminary set of potential impacts (negative and positive) has been identified based on the scoping assessment, including the outcomes of stakeholder meetings and workshop, and observations on site. The purpose of identifying potential impacts at this preliminary stage is to ensure that the appropriate range of stakeholders is engaged and that no affected group or individual is excluded from the engagement.

An assessment of negative impacts requiring further assessment and likelihood of potential positive social impacts is detailed in Table 6.1 below.

**Table 6.1 Identified potential positive and negative impacts**

Potential social impacts	Negative related to:	Positive related to:
Way of life Surroundings	Reduction in air quality Increased noise	Extraction areas will be progressively rehabilitated with the planting of native species.
Personal and property rights Livelihood Way of life Fears and aspirations	Land use conflict Reduction in house prices and sales	The continued operation of the quarry will provide ongoing employment and supply valuable resources to construction and road projects in the local area.  Extraction areas will be progressively rehabilitated with the planting of native species. The quarry activities proposed for the WEA will be completed within 7-8 years and the land will be rehabilitated.
Surrounding – public safety Access to infrastructure, services and facilities	Additional truck movements: Impact on existing dilapidated roads Road safety relating to inadequate road formation/width Child safety at nearby schools Truck/vehicle safety on local roads	The project will not result in additional truck movements  Holcim is planning an information session to be held at the schools on Sheraton Road to educate students, parents and teachers on road safety.
Expectations Reactions to the project	Previous consultation with the community regarding changes to the Holcim Quarry have been reported as being mishandled by landholders and nearby neighbours.  Unfulfilled expectations/lack of knowledge and resulting frustration and anger	Feedback on potential positive impacts and their management  Fulfilment of commitments and promises

## 7 References

DPIE, 2017 *Social impact assessment guideline for State significant mining, petroleum production and extractive industry development*

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