

Holcim (Australia) Pty Ltd

**Jandra Quarry
Clarification of Production and
Transportation Limits
Environmental Assessment**

December 2011



Jandra Quarry
Clarification of Production and Transportation
Limits
Environmental Assessment

Prepared by
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on behalf of
Holcim (Australia) Pty Ltd

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Executive Summary

Holcim (Australia) Pty Ltd (Holcim Australia) is seeking to modify the Jandra Quarry development consent (DA231-10-99) to provide for the continuation of the existing quarry operations with a maximum annual production and transportation limit of 250,000 tonnes of finished quarry products.. Holcim Australia is seeking a modification of DA231-10-99 under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to clarify the production and transportation limit of finished quarry products which is currently stated in DA231-10-99 as an average of 250,000 tonnes per annum. All other aspects of the approved quarry will remain unchanged.

Jandra Quarry is a hard rock quarry located approximately 18 kilometres south of Taree in the Greater Taree Local Government Area.

Development consent was originally granted for the operation of Jandra Quarry by the Land and Environment Court in 1986. The original development consent was replaced by DA231-10-99 in 2000. DA231-10-99 provides for an average production of 250,000 tonnes per annum of hard rock materials. Holcim Australia (formerly Readymix and Cemex) purchased Jandra Quarry from CSR in early 2007.

Proposed Modification

In 2010 Holcim Australia received clarification from the Department of Planning and Infrastructure (DP&I) regarding the method for calculating the average production limit stipulated in the terms of approval for DA231-10-99. The average production limit is to be calculated as a 'rolling' average of 250,000 tonnes of hard rock material per annum over the life of the quarry's operation since DA231-10-99 was granted. To provide for the continuation of quarry operations at an economically viable production level and to ensure that Holcim Australia is achieving compliance with the terms of its approval, Holcim Australia is seeking to modify DA231-10-99 to provide for a maximum annual production and transportation limit of finished quarry products of 250,000 tonnes.

Impact Assessment

This EA has been prepared to assess the potential environmental and social impacts associated with the proposed modification.

The proposed modification will not result in any changes to the approved project disturbance area or the quarry operations which were assessed by the 1999 EIS. As a result, no further assessment of air quality, noise, traffic, ecology, Aboriginal archaeology, groundwater, surface water, visual amenity, rehabilitation and closure is required.

An environmental impact statement (EIS) was prepared in 1999 by ERM (1999 EIS) to support the development application (DA231-10-99) for the increase in production and expansion of the Jandra Quarry disturbance footprint. The 1999 EIS was based on the assessment of an average annual production and transportation limit of 250,000 tonnes. As there is no change to the nature of the approved development under the proposed modification the impact of operations at the site will remain consistent with those already approved and continue to be managed in accordance with existing site practices.

Mitigation Measures

Holcim will continue to manage quarry operations in accordance with the conditions of DA231-10-99 (and supporting documents), the existing Environment Protection Licence and the existing environmental management plan.

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1	Statement of Authorship
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1.0 Introduction

Holcim (Australia) Pty Ltd (Holcim Australia) is seeking to modify the Jandra Quarry development consent (DA231-10-99) to provide for the continuation of existing quarry operations with a maximum annual production and transportation limit of 250,000 tonnes of finished quarry products. Holcim Australia is seeking a modification of DA231-10-99 under Section 75W of the *Environmental Planning and Assessment Act 1979* (EP&A Act) to clarify the production and transportation limit for finished quarry products which is currently stated in DA231-10-99 as an average of 250,000 tonnes per annum. All other aspects of the approved quarry will remain unchanged.

Jandra Quarry is a hard rock quarry located approximately 18 kilometres south of Taree in the Greater Taree Local Government Area (LGA), refer to **Figure 1.1**.

Umwelt (Australia) Pty Limited (Umwelt) has prepared this Environmental Assessment (EA) on behalf of Holcim Australia to assess the potential environmental and social impacts of the proposed modification to the production and transportation limit.

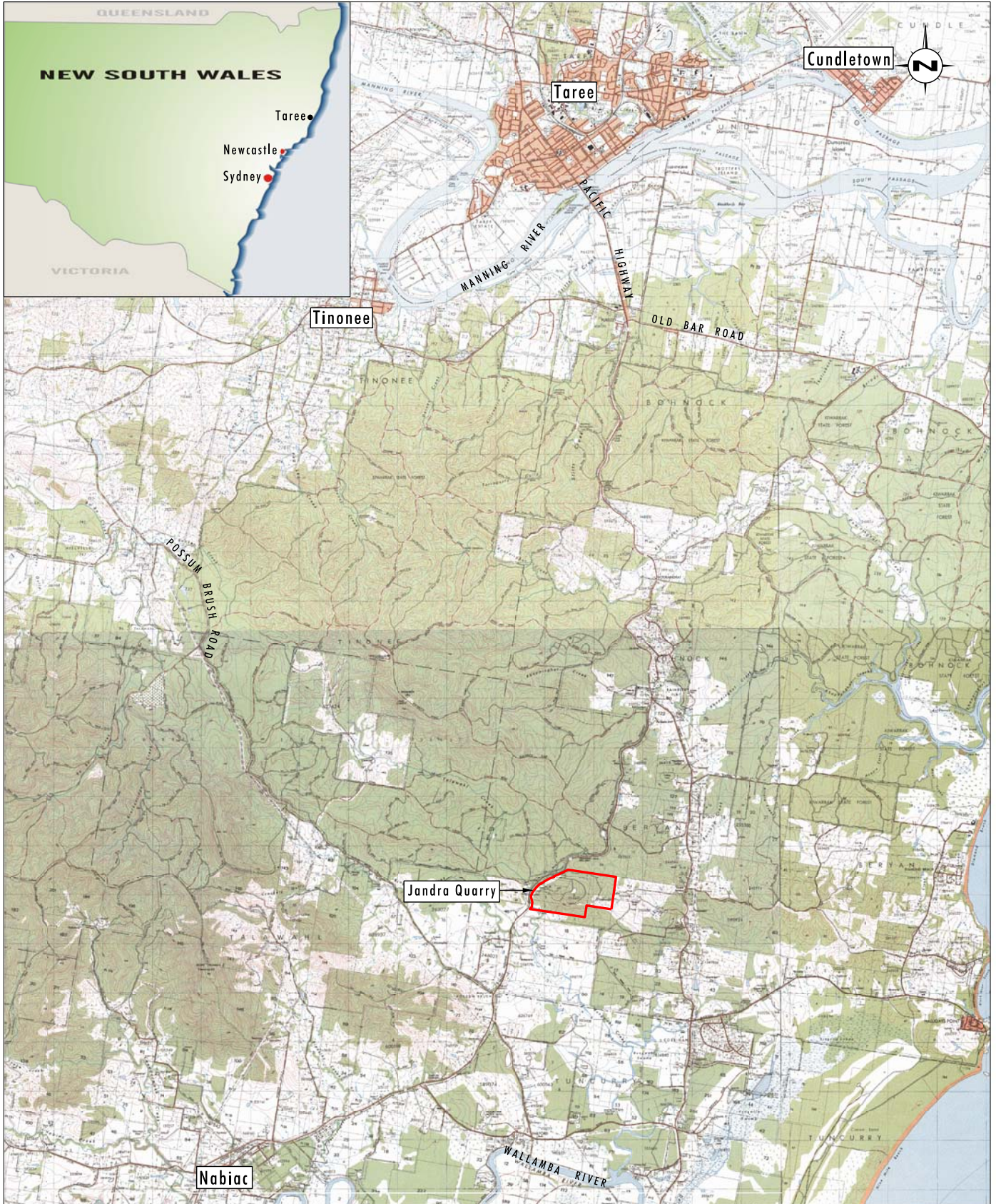
1.1 Overview of Proposed Modifications

Development consent was originally granted for the operation of Jandra Quarry by the Land and Environment Court in 1986. The original development consent was replaced by DA231-10-99 which was granted by the Minister for Urban Affairs and Planning in 2000. DA231-10-99 provides for an average production of 250,000 tonnes per annum of hard rock materials over an increased extraction area. Holcim Australia (previously Readymix and Cemex) purchased Jandra Quarry from CSR in early 2007.

Holcim Australia recently received clarification from the Department of Planning and Infrastructure (DP&I) regarding the method for calculating the average production figures. The average production limit per annum as set out in Schedule 2, Condition 5 of DA231-10-99 is to be calculated as a 'rolling' average of 250,000 tonnes of hard rock material per annum over the life of the quarry's operation since DA231-10-99 was granted. To provide for the continuation of quarry operations at an economically viable production level and to ensure that Holcim Australia is achieving compliance with Schedule 2, Condition 5 of DA231-10-99, Holcim Australia is seeking to modify DA231-10-99 to provide for a maximum annual production and transportation limit of 250,000 tonnes of finished quarry products.

An environmental impact statement (EIS) was prepared in 1999 by ERM (1999 EIS) to support the development application (DA231-10-99) for the increase in production and expansion of the Jandra Quarry disturbance footprint. The 1999 EIS was based on the assessment of an average annual production and transportation limit of 250,000 tonnes. As there is no change to the nature of the approved development under the proposed modification the impact of operations at the site will remain consistent with those already approved and continue to be managed in accordance with existing site practices.

This EA has been prepared to provide an assessment of the potential environmental and social impacts of the proposed modification to Schedule 2, Condition 5 of DA231-10-99.



Source: LPMA (2006), Holcim (2011)

0 1 2 5km
1:110 000

Legend

Development Consent Boundary

FIGURE 1.1
Locality Plan

1.2 The Applicant

The applicant for the proposed modification is Holcim (Australia) Pty Ltd.

Holcim Australia is one of the country's leading producers and suppliers of construction materials such as concrete and quarry products. In Australia, Holcim has a network of over 200 concrete plants and 88 quarry operations, which provide high quality concrete and quarry products to a diverse range of customers. Quarry products include rail ballast, aggregates, gravels, road pavement materials, manufactured and natural sands. These basic materials are essential construction products that go into making concrete and help build schools, hospitals, roads, bridges, airports and other infrastructure - all necessary for communities to function.

1.3 Approval Process

Holcim Australia seeks to modify the Jandra Quarry development consent, DA231-10-99 pursuant to Section 75W of the EP&A Act. The Minister for Planning and Infrastructure is the consent authority for the proposed modification.

1.4 Environmental Assessment Structure

The purpose of this EA is to identify and assess the environmental impacts associated with the proposed modification. This EA has been prepared in accordance with the requirements of the EP&A Act and the *Environmental Planning and Assessment Regulation 2000* (refer to the EA Statement of Authorship in **Appendix 1**). An overview of the structure of this EA is provided below.

The **Executive Summary** provides a brief overview of the proposed modification and the major outcomes of the EA.

Section 1.0 provides background and context for the proposed modification, the approval process and the EA structure.

Section 2.0 contains a description of the existing operations and approvals at Jandra Quarry.

Section 3.0 contains a description of the proposed modification.

Section 4.0 describes the planning context for the proposed modification, including the applicability of Commonwealth and State legislation.

Section 5.0 contains an assessment of the environmental impacts of the proposed modification, including the project specific and cumulative impacts as a result of the proposed modification.

Section 6.0 provides a conclusion of the proposed modifications and impact assessment.

Section 7.0 provides a list of references cited in the EA and a list of abbreviations and a glossary of technical terms.

2.0 Existing Environment and Quarry Operations

2.1 Approved and Existing Operations

Development consent (DA10512/1985) was originally granted for Jandra Quarry in 1986 by the Land and Environment Court. A subsequent development consent (DA91/391) was granted by Taree City Council in 1992. DA91/391 provided for an increase in production at the quarry from 50,000 tonnes to 150,000 tonnes per annum.

DA231-10-99 was granted by the Minister for Urban Affairs and Planning in 2000. DA231-10-99 required that both previous development consents be surrendered. DA10512/1985 and DA91/391 have been surrendered and no longer apply to the operations at Jandra Quarry.

An overview of the quarry operations approved under DA231-10-99 is provided below.

2.1.1 DA231-10-99 – Current Development Consent

Jandra Quarry currently operates pursuant to DA231-10-99. As outlined in **Section 1.1**, DA231-10-99 provides for an average production and transportation limit of 250,000 tonnes of finished quarry products per annum. The approved project disturbance area comprises 17.3 hectares for the quarry pit, 0.9 hectares for overburden emplacement and associated disturbance areas for site facilities, equipment and stockpiles. The consent provides for the continuation of quarrying operations until 2 September 2025.

DA231-10-99 also allowed for the extension of the product stockpile storage areas, the installation of a pug mill and asphalt plant, the relocation of the weighbridge and the location of road transport vehicles to the site.

Jandra Quarry is approved to operate from 6.00am to 6.00pm Monday to Friday, and 6.00am to 3.00pm on Saturdays. Ancillary operations such as refuelling, servicing and maintaining plant is undertaken between 6.00am and 9.00pm Monday to Saturday.

The existing quarry operations and site facilities are shown on **Figure 2.1**.

2.1.1.1 2002 Modification

In 2002, Holcim Australia was granted a modification to DA231-10-99 to provide for the removal of an additional 2.2 hectares of vegetation to allow the enlargement of the existing overburden emplacement area from the existing 0.9 hectares to 3.1 hectares. The approved project disturbance boundary resulting from the modification is shown on **Figure 2.2**.

2.1.1.2 2007 Modification

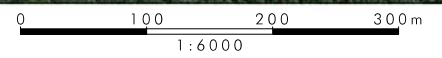
In 2007, Holcim Australia was granted a modification to DA231-10-99 to provide for air quality and noise monitoring to be undertaken on a three yearly basis.

2.1.2 Environment Protection Licence

Holcim Australia holds an Environment Protection Licence (EPL) – EPL 2796 for the quarry operations. EPL 2796 provides water discharge and blast monitoring criteria along with requirements for annual reporting.



Source: Holcim (2011), Google Earth (Aug 2009)



Legend

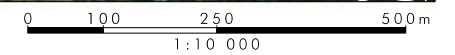
- ▭ Development Consent Boundary
- ▭ Approved Extraction Limit

FIGURE 2.1

Existing Quarry Operations



Source: Holcim (2011), Google Earth (Aug 2009)



- Legend**
- Development Consent Boundary
 - Approved Extraction Limit

FIGURE 2.2
Approved Disturbance Areas

2.2 Land Ownership

All land located within the development consent boundary is owned by Holcim Australia (refer to **Figure 2.3**). Holcim Australia also owns Lot 10, DP790056 which is located immediately south of the development consent boundary. The remaining surrounding land is primarily privately owned, with a State Forest located to the northwest of the quarry on the opposite side of the Pacific Highway (refer to **Figure 2.3**).

Table 2.1 – Jandra Quarry Property Details

Lot	DP
2	255621
10	790056
11	790056
12	790056
13	790056
14	790056
15	790056

2.3 Existing Environment

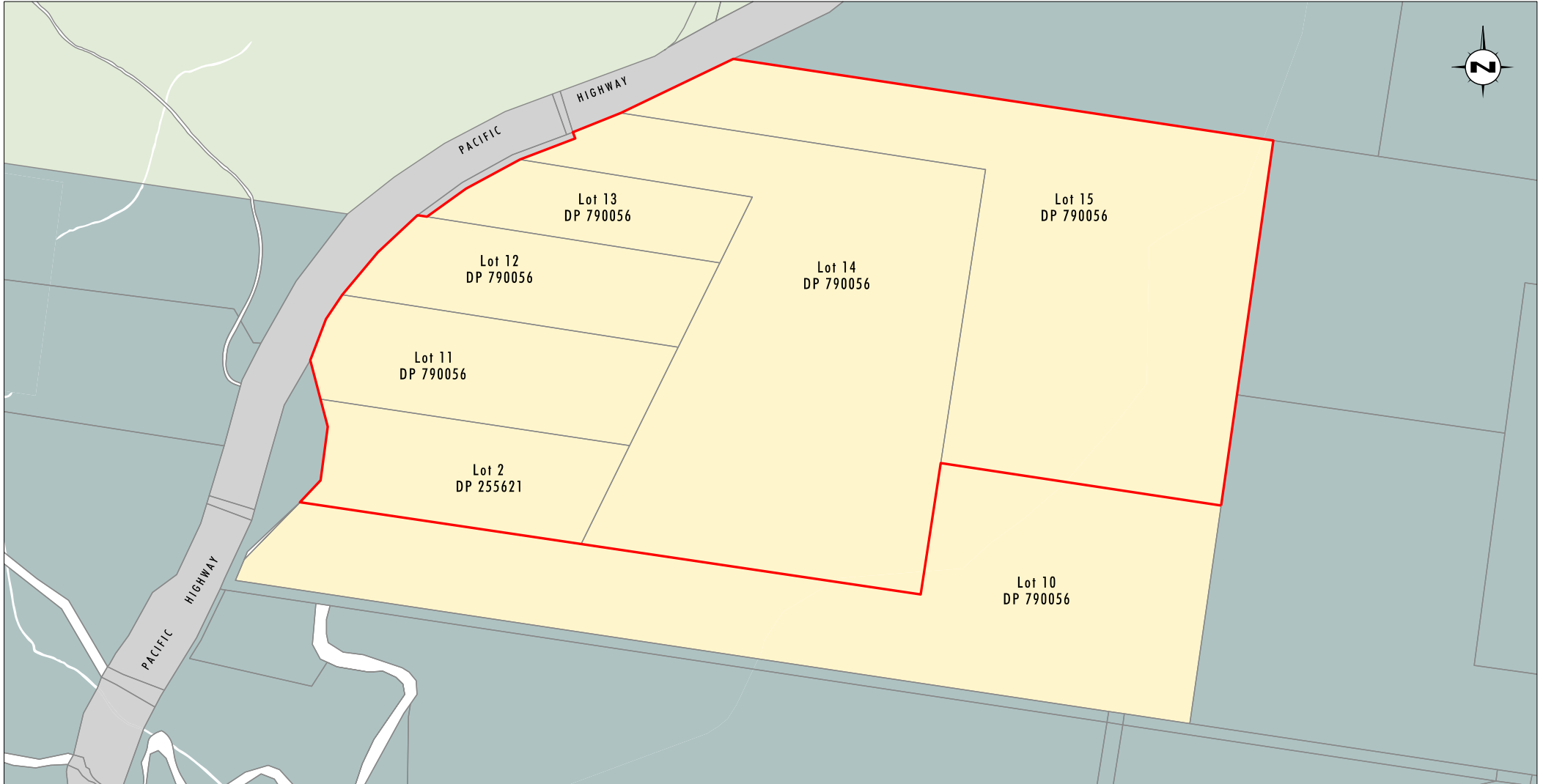
Jandra Quarry is located on the Pacific Highway at Possum Brush, NSW. The Pacific Highway provides access to the site. The closest village to the site is Nabiac, located approximately 8 kilometres to the south-west of the site (refer to **Figure 1.1**).

The land immediately surrounding Jandra Quarry is well vegetated. The site is bound by privately owned land to the south, north and east (refer to **Figure 2.4**). Residences are located to the north (approximately 700 metres), north east (approximately 1.56 kilometres), east (approximately 1.24 kilometres) and west (approximately 800 metres) of the site. The surrounding region is characterised by cleared agricultural land on the lower slopes and moderate to heavily vegetated land on the steeper areas of land. The lower slopes to the south and east of the site have been extensively cleared and are predominately used for cattle grazing.

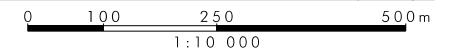
The topography of the site and surrounding area is generally undulating with rolling hills and valleys. The existing quarry is cut into the northern face of the hillside and extends from the ridgeline in a north-easterly direction (refer to **Figure 2.1**). The existing working face is visible from the north, however, the quarry plant is not visible from surrounding areas.

The site is located within the headwaters of Talawahl Creek. Talawahl Creek joins with Bungwahl Creek which subsequently joins the Wallamba River, approximately 5.5 kilometres to the south of the site.

The area is underlain by an undifferentiated sequence of Devonian sediments that are approximately 345 to 395 million years old. The sequence consists of interbedded mudstone, sandstone, conglomerate, tuff and chert with local greywacke beds. A major greywacke bed is present within the site and is the target of the quarry operations.



Source: Holcim (2011)

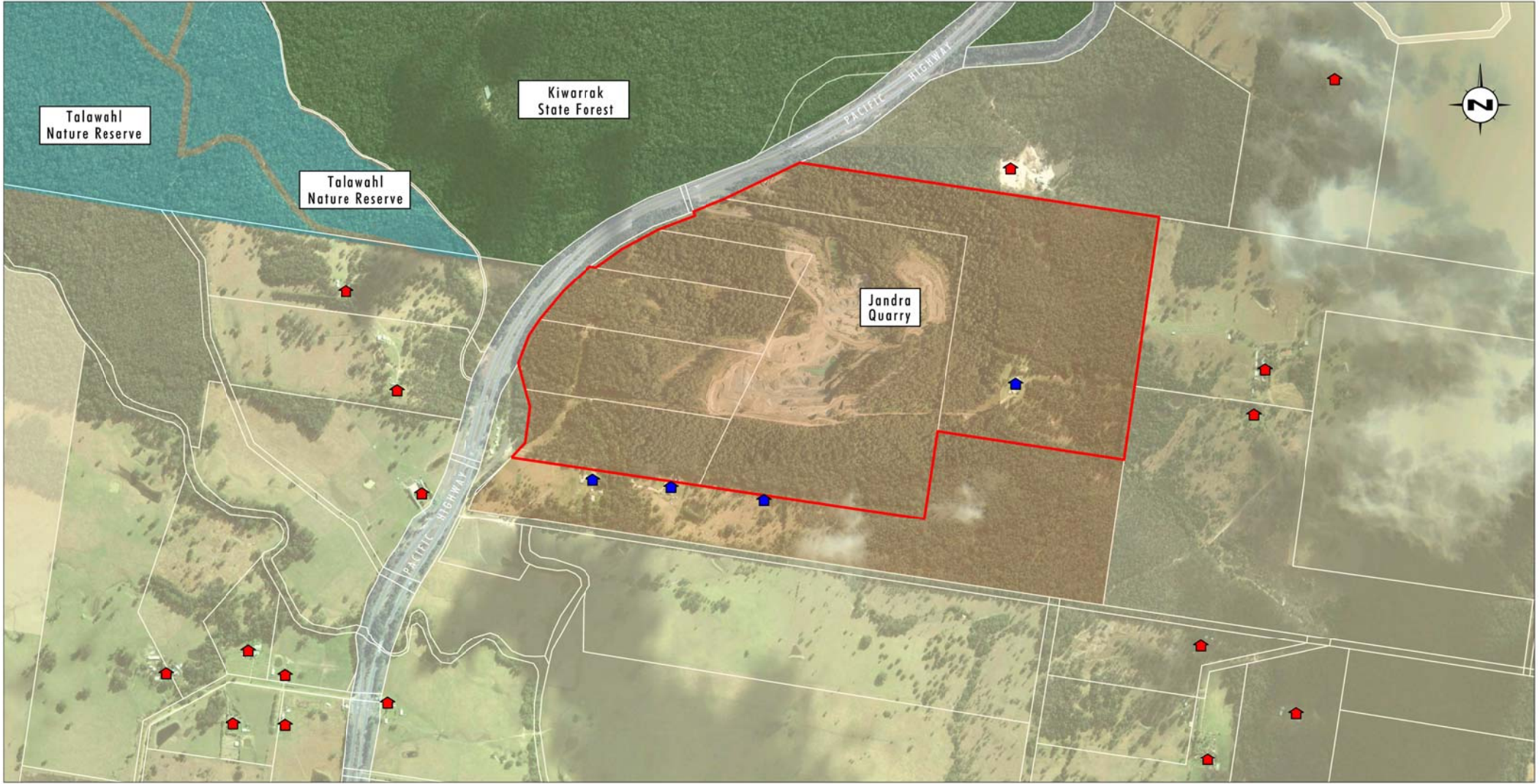


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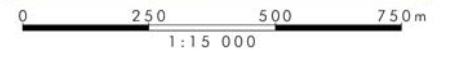
- ▭ Development Consent Boundary
- ▭ Holcim Australia Land Holdings
- ▭ NSW Forestry Commission
- ▭ Private

FIGURE 2.3

Land Ownership



Source: Holcim (2011), Google Earth (Aug 2009), LPMA (2006)



- Legend**
- Development Consent Boundary
 - Quarry
 - Residence
 - Holcim owned Residence
 - Nature Reserve
 - State Forest
 - Agricultural / Forested

FIGURE 2.4

Surrounding Land Use and Residence Locations

3.0 Description of Proposed Modifications

Schedule 2, condition 5 of DA231-10-99 provides for the following:

'The production and transportation of finished quarry products is limited to an average of 250,000 per annum'

As outlined in **Section 1.0**, in August 2010 Holcim Australia received clarification from DP&I regarding the method for calculating the average production limit stipulated in the current approval (DA231-10-99). DP&I advised that it considers that the condition relies on the calculation of the average annual production as a 'rolling' average since the commencement of DA231-10-99. That is, the maximum production over the n years since commencement of production is $250,000 \times n$ tonnes.

It has been acknowledged by DP&I (letter dated 30 September 2010) that the wording of condition 5 DA231-10-99 is open to interpretation. The method for calculating the average production figures employed by DP&I was different to the methodology employed by Holcim Australia. Following discussions with DP&I, Holcim agreed to take the following action:

- Holcim Australia to restrict its production and transportation rates to a maximum of 250,000 tonne per annum beginning 27 August 2010 until a revised development consent is approved; and
- Holcim Australia will seek to modify DA231-10-99 to provide for a maximum annual production and transported limit which will reflect the forecast market conditions.

The proposed modification is being sought in order to comply with the agreed actions following discussions with DP&I and seeks to limit the production and transportation limits for finished quarry products to a maximum of 250,000 tonnes per annum, with the annual period ending in March each year.

The proposed modification will not result in any changes to the approved project disturbance area or any other approved activity.

3.1 Alternatives to the Proposed Modification

In undertaking consultation with DP&I, Holcim Australia has explored a number of alternatives to the proposed modification. The primary alternative to the proposed modification is to not proceed with a modification to the production and transportation limit for the quarry.

Holcim Australia has determined that it is desirable for production certainty and to provide full compliance with DA231-10-99 to seek an amendment to condition 5 of DA231-10-99. Holcim Australia has also determined that a dramatic reduction in the production rate of Jandra Quarry would be required in order to comply with a rolling average of 250,000 tonnes per annum of finished quarry products if calculated from the commencement of DA231-10-99. A reduction in the production rates would result in the operation becoming economically unviable, potential loss of employment and significantly reduce the supply of hard rock materials to the region.

Holcim Australia also investigated seeking a new approval for an increased annual tonnage limit, however, it was determined that this was not supported by the predicted future market demand at this time.

3.2 Justification for the Proposed Modification

Holcim Australia's operations provide substantial economic benefits at Federal, State and local levels whilst being committed to maintaining a good working relationship with the community and implementing best practice environmental management across all sites.

The continuation of operations at Jandra Quarry will provide the following key benefits:

- effective use of a regionally significant resource;
- uninterrupted supply of essential construction materials to local and regional development projects;
- employment of approximately eight fulltime staff plus six truck drivers, with more indirect jobs created through flow-on effects;
- economic recovery of quarry materials; and
- economic benefits to the local community through local employment, purchase of goods and services, and local expenditure both directly and through employee wages.

Holcim Australia has demonstrated its commitment to effective environmental management in its existing operations. This management approach will continue under the proposed modification.

3.3 Consultation

Discussions between Holcim Australia and DP&I concerning the interpretation of the existing approval condition relating to production limits has been undertaken since mid 2010 through a series of meetings and written correspondence.

Discussions between DP&I and Holcim Australia resulted in an agreed set of actions to address the production rates. As outlined in **Section 3.0**, the proposed modification is being sought to comply with the agreed actions.

4.0 Planning Considerations

The following section identifies the applicable local and regional planning instruments, and the relevant State and Commonwealth environment and planning legislation, including the relevant planning approval process applicable to the proposed modification.

4.1 Regional and Local Environmental Planning Instruments

Mid North Coast Regional Strategy

The Mid North Coast Regional Strategy has been developed by DP&I to ensure that adequate land is available and appropriately located to accommodate the projected housing and employment needs of the regions population over the next 25 years. While it is clear that expected growth can be accommodated in the Region, the Strategy places limits on growth in some areas where the value of environmental/cultural assets and natural resources is high. The importance of providing for employment land to provide increased capacity for new jobs is also addressed within the Strategy.

The Jandra Quarry is recognised as being a Regionally Significant Extractive Resource by the Strategy. The Strategy recognises the importance of the Regions natural resources and aims to protect the existing resources which includes farmland, extractive resources, energy resources and timber from urban and rural residential development, by requiring appropriate buffers to be provided when development occurs near the resource locations.

Greater Taree Local Environmental Plan 2010

The land which is the subject of the proposed modification is located wholly within the Greater Taree LGA. Under the Greater Taree Local Environmental Plan 2010, the land is zoned RU1 – Rural Production. Extractive industries are permitted, with development consent within the RU1 zone.

4.2 State Legislation

4.2.1 EP&A Act

As discussed in **Section 1.0**, it is proposed to modify DA231-10-99 under Section 75W of the EP&A Act. Further details of this approval path are provided below.

The *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) clause 8J(8) prescribes how, in certain circumstances, a development consent can be modified under Section 75W of the EP&A Act. Clause 8J(8) states that:

(8) For the purposes only of modification, the following development consents are taken to be approvals under Part 3A of the Act and section 75W of the Act applies to any modification of such a consent:

(a) a development consent granted by the Minister under section 100A or 101 of the Act,

(b) a development consent granted by the Minister under *State Environmental Planning Policy No 34—Major Employment-Generating Industrial Development*,

(c) a development consent granted by the Minister under Part 4 of the Act (relating to State significant development) before 1 August 2005 or under clause 89 of Schedule 6 to the Act,

(d) a development consent granted by the Land and Environment Court, if the original consent authority was the Minister and the consent was of a kind referred to in paragraph (c).

The development consent, if so modified, does not become an approval under Part 3A of the Act.

DA231-10-99 was granted under Part 4 of the EP&A Act in 2000. The development approved was classified as State Significant Development. Clause C of Section 8J(8) of the EP&A Regulation therefore applies to DA231-10-99.

Part 3A of the EP&A Act has recently been repealed, however Schedule 6A, Clause 12 of the EP&A Act provides for the continued use of Section 75W to modify the development consents referred to in Clause 8J(8) of the EP&A Regulation. Schedule 6A, Clause 12 of the EP&A Act states:

12 Continuing application of Part 3A to modifications of certain development consents

Section 75W of Part 3A continues to apply to modifications of the development consents referred to in clause 8J (8) of the *Environmental Planning and Assessment Regulation 2000*, and so applies whether an application for modification is made before or after the commencement of this clause.

It is therefore considered that Section 75W is the appropriate approval pathway for the proposed modification.

4.2.2 Other State Legislation and Environmental Planning Instruments

A summary of the other state environment and planning legislation potentially relevant to the proposed modification is provided in **Table 4.1**.

Table 4.1 – Summary of State Legislation and Relevance to the Proposed Modifications to DA231-10-99

Planning Provision	Comments	Further Approval Required
NSW Legislation – State Environmental Planning Policies		
<i>Protection of Environment Operations Act 1997</i>	The POEO Act is administered by OEH and requires licences for environmental protection including waste, air, water and noise pollution control. The EPL2796 provides for extractive activity with a production rate of between 100,000 and 500,000 tonnes per annum. No changes to the EPL are required as a result of the proposed modification.	No

**Table 4.1 – Summary of State Legislation and Relevance to the Proposed
Modifications to DA231-10-99 (cont)**

Planning Provision	Comments	Further Approval Required
<i>Crown Lands Act 1989</i> (Crown Lands Act)	The Crown Lands Act provides for the administration and management of Crown land in the eastern and central divisions of NSW. Crown land may not be occupied, used, sold, leased, dedicated, reserved or otherwise dealt with unless authorised by this Act or the <i>Crown Land (Continued Tenures) Act 1989</i> . A Crown Road Reserve adjoins the southern boundary of the site, however the proposed modifications will not affect this parcel of land. No further approvals are required.	No
<i>Water Management Act 2000</i> (WM Act)	Jandra Quarry does not currently extract any water from a surface water body which is the subject of a Water Sharing Plan. There will be no changes to impacts on water as a result of the proposed modification. The provisions of the WM Act do not apply to the proposed modification.	No
<i>Water Act 1912</i> (Water Act)	Some of the licensing provisions of the Water Act still apply. The Water Act is administered by the NSW Office of Water (OEH). Under the Act, a permit and/or licence must be obtained to extract groundwater not covered by a water sharing plan under the Water Management Act 2000 (Part 5 of the Act). Jandra Quarry does not currently hold any approvals under the Water Act. The proposed modification will not result in any changes to groundwater impacts.	No
<i>National Parks and Wildlife Act 1974</i> (NPW Act)	Under the NPW Act, impacts on Aboriginal sites require approval. It is noted that an existing approval to impact Aboriginal sites is held for the quarry (refer to Section 5.7). The proposed modification will not result in any change to the approved project disturbance boundary and will therefore not change impacts on Aboriginal sites. No further approvals are required.	No
<i>Threatened Species Conservation Act 1995</i> (TSC Act)	Under the EP&A Act, impacts on threatened species listed under the TSC Act are required to be assessed. The proposed modification will not result in any change to the approved project disturbance boundary. No further assessment under the TSC Act is required.	No
<i>Dams Safety Act 1978</i> (Dams Safety Act)	This Act requires that the NSW Dams Safety Committee (DSC) periodically review large dams that may constitute a hazard to human life and property. These dams are known as prescribed dams and are listed in Schedule 1 of the Dams Safety Act. Any new prescribed dams are to be designed to the satisfaction of the DSC. The proposed modification does not require the construction of any dams which would require approval under the Dams Safety Act.	No
<i>Heritage Act 1977</i>	This Act provides provisions relating to the protection and management of heritage items (non-Aboriginal heritage). The proposed modification will not result in any change to the approved project disturbance boundary and will not impact on any heritage sites. No further approvals are required.	No

Table 4.2 outlines the relevant State Environmental Planning Policies (SEPP) which need to be considered in relation to the proposed modification.

Table 4.2 – Relevant SEPPs for Consideration in Relation to the Proposed Modification

SEPP	Comment
State Environmental Planning Policy 33 – Hazardous and Offensive Development (SEPP No. 33)	SEPP No. 33 requires the consent authority to consider whether an industrial proposal is a potentially hazardous industry or a potentially offensive industry. Jandra Quarry is not classified as hazardous or offensive under SEPP33. No further assessment under SEPP33 is required.
State Environmental Planning Policy 44 – Koala Habitat Protection (SEPP No. 44)	SEPP No. 44 restricts a Council from granting development consent for proposals on land identified as core koala habitat without preparation of a plan of management. The proposed modification will not result in any changes to the approved project disturbance boundary. No further assessment under SEPP44 is required.
State Environmental Planning Policy 55 - Remediation of Land (SEPP No. 55)	SEPP No. 55 – Remediation of Land aims to provide a state-wide planning approach to the remediation of contaminated land and to reduce the risk of harm to human health and the environment by consideration of contaminated land as part of the planning process. Under SEPP No. 55, a consent authority must not consent to the carrying out of development on land unless it has considered potential contamination issues. The proposed modification will not result in any changes to the approved project disturbance area. No further assessment of contaminated land/remediation requirements is required.
<i>State Environmental Planning Policy (Mining, Petroleum Production & Extractive Industries) 2007</i>	This SEPP regulates the permissibility of mining, extractive industries and related development and specifies matters that must be considered in assessing extractive industry developments requiring consent under Part 4 of the EP&A Act. The proposed modification is not considered exempt or complying development under the SEPP and therefore requires consent.
<i>State Environmental Planning Policy (State & Regional Development) 2011</i>	This SEPP identified State Significant Development. The original approval was considered State Significant Development under provision predating this SEPP and granted approval under Part 4 of the EP&A Act prior to 1 August 2005. Therefore the proposed modification is to be considered under Section 75W of the EP&A Act.

4.3 Commonwealth Legislation

Table 4.3 provides a review of the current Commonwealth legislation that is relevant to the Project.

Table 4.3 – Summary of Commonwealth Legislation and Relevance to the Proposed Modifications to DA231-10-99

Planning Provision	Comments	Further Approval Required
Commonwealth Legislation		
<i>Environment Protection and Biodiversity Conservation Act 1999</i> (EPBC Act)	<p>Under the EPBC Act 1999, approval from the Minister for Sustainability, Environment, Water, Population and Communities is required for any action that would result in a significant impact to Matters of National Environmental Significance (MNES). MNES are defined in the following categories: World Heritage property, National Heritage place, Wetlands of international importance (Ramsar wetland), threatened species and communities listed under the EPBC Act, migratory species listed under the EPBC Act, nuclear actions, marine areas or reserves and Commonwealth land and protection of water resources from mining operations and some extractive industries.</p> <p>The proposed modification will not result in any change to the approved project disturbance area for the existing quarry operations.</p> <p>The proposed modification is not considered to be a controlled action, requiring approval under the EPBC Act.</p>	No
<i>Native Title Act 1993</i> (Native Title Act)	<p>The <i>Native Title Act 1993</i> (NT Act) is administered by the National Native Title Tribunal. The Tribunal is responsible for maintaining a register of native title claimants and bodies to whom native title rights have been granted. The NT Act prescribes that native title can be extinguished under certain circumstances, including the granting of freehold land.</p> <p>There is no Crown land located within the approved project disturbance boundary. Native Title has been extinguished.</p>	No

5.0 Environmental Assessment

5.1 Identification of Potential Environmental Impact

As discussed in **Section 3.0**, the proposed modification will not result in any change to the approved quarry operations. **Table 5.1** provides a summary of the environmental and social issues identified through these processes and provides reference to the section of the EA in which these issues have been addressed.

Table 5.1 – Environmental and Community Issues

Issue	EA Reference
Air Quality	Section 5.2
Noise and Blasting	Section 5.3
Visual Impacts	Section 5.4
Surface Water	Section 5.5
Traffic and Transport	Section 5.6
Heritage and Aboriginal Archaeology	Section 5.7
Ecology	Section 5.8
Rehabilitation and Closure	Section 5.9
Greenhouse Gas and Energy	Section 5.10
Groundwater	Section 5.11
Socio-Economic Impact	Section 5.12

5.2 Air Quality

Dust levels are a key community concern associated with quarrying activities. The existing air quality in the area immediately surrounding the site is influenced by a number of factors, including prevailing meteorological conditions, traffic, topography and agricultural activities.

Emissions from the quarry operations consist mainly of particulate emissions. Emissions of pollutants from vehicle exhaust are of an insignificant nature.

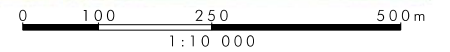
In 2007, Holcim Australia was granted a modification to DA231-10-99 to reduce the monitoring of total suspended (TSP) matter in ambient air from every year to every three years. The current air quality monitoring network is shown on **Figure 5.1**. Holcim also monitor dust deposition concentrations in accordance with DA231-10-99. Based on the current management of dust emissions at the site, air quality monitoring results have been consistently below the relevant OEH air quality criteria.

5.2.1 Impact Assessment

An air quality impact assessment was prepared as part of the 1999 EIS. The air quality model developed for the assessment used an average annual production rate of 250,000 tonnes to undertake the assessment. With the proposed modification, Jandra Quarry will be limited to a maximum of 250,000 tonnes per annum of finished quarry products, which is consistent with the production levels assessed in the EIS. Therefore the impacts with the modification will remain consistent with those of the already approved development.



Source: Holcim (2011), Google Earth (Aug 2009), ERM (2000)



Legend

- Development Consent Boundary
- Residence
- Holcim owned Residence
- Noise Monitoring Locations
- Dust Deposition Monitoring Site
- TSP Monitoring Site
- Water Monitoring Site

FIGURE 5.1
Environmental Monitoring Network

The results of the air quality impact assessment prepared as part of the EIS are summarised as follows:

- Predictions concluded that dust deposition would not exceed the OEH criteria under the conditions modelled. All receptors will have a maximum increase of less than 1.1 g/m²/month, and when considering the background will remain well below the guideline criteria for air quality amenity of 4 g/m²/month;
- The highest annual average PM₁₀ concentration predicted at a sensitive receptor was 3 µg/m³;
- All 24 hour PM₁₀ concentrations predicted at sensitive receptors were less than 50 µg/m³; and
- The highest TSP concentration predicted at a sensitive receptor was 6.03 µg/m³.

As discussed above, the air quality monitoring results for the quarry support these impact assessment findings indicating that the quarry operations result in dust levels that readily comply with relevant air quality criteria.

5.2.2 Mitigation Measures

Holcim Australia will continue to undertake air quality management in accordance with the existing Jandra Quarry Environmental Management Plan required to be prepared to the satisfaction of the Director-General in accordance with Condition 12 of Schedule 2 of DA231-10-99. Air quality management controls implemented in accordance with the Environmental Management Plan include:

- regular watering of haul roads and stockpiles;
- limiting speeds of vehicles on unsealed surfaces to 40 kph;
- minimising vehicle kilometres travelled on unpaved roads;
- rehabilitating disturbed areas;
- where practical/possible conduct drilling and blasting during suitable meteorological conditions (i.e. not during high winds);
- drill holes capped with stemming to restrict the upward emission of dust;
- dust extraction units on drill rigs and crushing/screening plants to be well maintained;
- seals and mist sprays on crushing and screening plant to be well maintained; and
- dust displaced during silo filling to be controlled by an appropriate filter (i.e. a reverse pulse silo filling filter or equivalent).

Holcim Australia will continue to implement the existing air quality monitoring program which comprises:

- dust deposition gauges permanently placed along the four boundaries of the quarry property and continuously monitored at monthly sample intervals; and
- real-time monitors placed at the three closest sensitive receptors and monitored every three years.

5.3 Noise and Blasting

To ensure that quarry generated noise levels at privately owned residences do not exceed relevant amenity criteria, Holcim Australia maintains a program of regular noise monitoring at surrounding properties. Holcim Australia also monitors blasting to ensure that vibration and overpressure limits are met.

In 2007, Holcim Australia was granted a modification to DA231-10-99 to reduce the noise monitoring from every year to every three years. The current noise monitoring locations are shown on **Figure 5.1**.

Previous annual attended noise monitoring results and the most recent three-yearly results are consistently below the rating background level ($LA_{90\ 15\ \text{minute}}$) by more than 5dB(A) as required by OEH (Benbow Environmental 2010).

To manage noise impacts, Holcim Australia undertakes operations between 6.00 am to 6.00 pm Monday to Friday and 6.00 am to 3.00 pm on Saturdays. No works are undertaken on Sundays or public holidays. Ancillary operations such as refuelling, servicing and maintaining plant are undertaken between 6.00 am to 9.00 pm Monday to Saturday.

Holcim Australia undertakes blast monitoring in accordance with DA231-10-99. Blast monitoring results are also consistently below the overpressure level of 115 dB (linear peak) for more than 5 per cent of the total number of blasts; and peak velocity of 5 mm/s for more than 5 per cent of the total number of blasts.

To manage blasting impacts, blasting is undertaken between 9.00 am and 5.00 pm, Monday to Friday and 9.00 am to 3.00 pm Saturday. No blasting is undertaken on Sundays or public holidays.

5.3.1 Impact Assessment

A noise and blasting impact assessment was prepared as part of the 1999 EIS. As the proposed operations are consistent with the operations assessed in the 1999 EIS, the EIS assessment adequately assesses the potential impacts of operations at this capacity. The results of the noise and blasting impact assessment prepared as part of the 1999 EIS are summarised as follows:

- Noise levels for Stage 1 were all predicted within the relevant criteria;
- Noise levels for Stage 3 exceed the criteria level by two dBA at two residences located east of the site for the worst case scenario modelled. The primary contributor to the exceedances was determined to be a D8 dozer removing topsoil. CSR committed to cease the use of the dozer under worst case scenario weather conditions, to prevent noise exceedances. It is noted that Holcim Australia does not currently utilise a dozer at the site, however, management controls are in place for the current quarrying operations to ensure compliance with the noise limits; and
- All blasts will comply with the consent criteria.

As discussed above, the noise monitoring results for the quarry support these impact assessment findings indicating that the quarry operations result in noise levels that comply with relevant air quality criteria.

5.3.2 Mitigation Measures

Holcim Australia will continue to undertake noise and blast management in accordance with the Environmental Management Plan. Noise and blast management controls outlined in the Environmental Management Plan include.

Holcim Australia will continue to implement its ongoing noise and blasting management measures. Existing noise management measures employed at the site include:

- management restrict the operations within the specified hours in the existing approval and ensure staff are made aware of these hours as part of their training;
- use of effective mufflers on all relevant equipment to ensure the noise criteria is achieved at nearby residences;
- ensure all noise control equipment is maintained and in good working order;
- use of dozer on the eastern quarry rim to be coordinated with wind conditions to minimise the likelihood of excessive noise impacts as residences to the east;
- use of residential class mufflers during operation of the primary crusher at the overburden emplacement site; and
- overburden emplacement does not occur during operation of the primary crusher when the prevailing wind direction is between north-west and west.

Existing blast management measures employed at the site include:

- all blasting is undertaken in accordance with the relevant regulations;
- blast design, drilling and blasting is undertaken in accordance with Holcim's drilling and blasting procedures;
- no secondary blasting is undertaken; and
- blasting is limited between 9.00 am and 5.00 pm, Monday to Friday and 9.00 am to 3.00 pm Saturday, with no blasting on Sundays and public holidays.

Holcim Australia will continue to monitor compliance with noise and blasting consent criteria and operate Jandra Quarry in accordance with the conditions detailed in DA231-10-99. Holcim Australia will also undertake all blasts in accordance with the requirements of EPL2796.

5.4 Visual Impact

Topography of the site and surrounding area is generally undulating with rolling hills and plains. The existing quarry is cut into the northern face of the hillside and extends from the ridgeline in a north-easterly direction. The existing working face is visible from the north, however equipment and structures associated with quarry operations are not visible from surrounding areas.

Land surrounding the quarry is well vegetated to the perimeter of the property. Residential properties are located north, north-east, east, south and west of the quarry site. Views of the quarry from the surrounding residences is limited.

The existing visual environment from the nearest residential properties are as follows:

- Three residential properties located east of the site are well shielded from views of the quarry by vegetation and natural topography;
- One residential house located north of the site is well shielded from the quarry as it is situated within dense bushland;
- One residence is located north-east of the site. Views from this property are filtered by foreground vegetation so that the quarry is barely visible; and
- Three properties are located west of the site. The existing quarry is not visible from these properties as excavation works are limited to the eastern face of the western ridgeline.

Holcim Australia manages visual impacts in accordance with the existing Landscape and Rehabilitation Management Plan, which includes the following measures:

- retaining vegetation at the top of cut faces;
- immediately revegetating exposed benches at the high point of the ridgeline to ensure effective screening is in place prior to excavations exposing the quarry to residents to the east and west;
- progressively rehabilitating quarry benches above the self draining elevation; and
- undertaking consultation with relevant land owners if visual amenity impacts are identified.

5.4.1 Impact Assessment and Management

A visual impact assessment was undertaken as part of the 1999 EIS. The potential visual impacts of the quarry identified included:

- Minor impacts on existing residential properties as a result of the project;
- An increase in the exposure of the quarry face when viewed from vehicles travelling in a southerly direction along the Pacific Highway. The time of exposure along the Pacific Highway was determined to be limited; and
- Negligible visual impact from the Taree lookout facility and Fire Tower.

The proposed modification will not result in any changes to the visual impacts predicted in the 1999 EIS. No further assessment of potential impacts on visual amenity is required.

Holcim Australia will continue to manage visual impacts in accordance with the existing Landscape and Rehabilitation Plan.

5.5 Surface Water

The site is located at the head of a minor tributary of Talawahl Creek that flows northward crossing the Pacific Highway before joining a tributary that flows south-west to Talawahl Creek. Talawahl Creek is a tributary of Bungwahl Creek which flows to the Wallamba River approximately 5.5 kilometres south of the site.

The approved project disturbance area incorporates minor disturbances to ridgetops above minor tributaries to the west and south. The upper most section of another minor tributary will be impacted as part of approved operations during the eastern most extension of the quarry.

The proposed modification will not result in any change to the approved project disturbance area and will not result in any changes in the surface water impacts or management requirements associated with the quarry.

Holcim Australia will continue to comply with the requirements of EPL2796 for the discharge of water. The discharge point where water monitoring is undertaken is identified in **Figure 5.1**.

5.5.1 Mitigation Measures

A Soil and Water Management Plan (SWMP) has been implemented at the site. The SWMP relates to sedimentation controls and stormwater management; effluent treatment and disposal methods; fuel and lubricant storage and maintenance procedures; and proposed safeguards including management procedures for the containment of spillage and procedures for dealing with contaminated soil.

The environmental objectives of the SWMP are to:

- control erosion and sedimentation;
- manage stormwater using best management practices;
- dispose of effluent in an environmentally responsible way;
- minimise environmental impact of fuel and lubricant storage and spillage;
- appropriately manage contaminated soil; and
- set up a monitoring program for early detection of environmental problems.

Holcim Australia achieves these objectives through the implementation of effective sediment and erosion controls, spill control, runoff management controls and water recycling and re-use initiatives.

Holcim Australia monitors the effectiveness of the SWMP and the quarry operation by undertaking a water monitoring program in accordance with the requirements of the site Environmental Protection Licence. Holcim Australia will continue to implement the existing water quality monitoring program.

5.6 Traffic and Transport

Access to the site is provided from the Pacific Highway via an access road. A seagull intersection design is in place to provide safe access to the quarry and includes:

- a two stage crossing operation;
- storage area in the median for large quarry trucks; and
- an acceleration lane to the north to allow heavy vehicles exiting the quarry to achieve a safe merge speed prior to merging with through traffic.

Small trucks, rigid trucks, truck and dog configurations and semitrailers are used by the quarry.

The proposed modification will not result in any changes to the traffic movements associated with the quarry.

5.7 Heritage and Aboriginal Archaeology

Seven previously recorded Aboriginal sites (comprising small open artefact scatters, a scarred tree and potential archaeological deposits) occur within the development consent boundary. Four of the identified Aboriginal archaeology sites will be impacted by the already approved operations and are the subject of an existing Aboriginal Heritage Impact Permit (AHIP) that permits impacts on these sites as the approved quarry operations continue (permit No.N57/CDS/2000).

As there is no change to the nature of the already approved development under the proposed modification the impact of Jandra Quarry on heritage and Aboriginal archaeology will remain the same and will continue to be managed in accordance with the AHIP and Environmental Management Plan.

5.8 Ecology

An ecological impact assessment was undertaken as part of the 1999 EIS, with further survey and assessment being undertaken as part of the 2002 modification of DA231-10-99.

5.8.1 Impact Assessment

The ecological impact assessment determined that the following ecological impacts were likely to occur as a result of the project:

- removal of approximately 14 ha of habitat;
- displacement of fauna species and removal of tree and ground hollow resources within the project disturbance area;
- limited removal of large hollows;
- a small loss of habitat for most bird species occurring within the site area;
- a small increase in edge effects;
- restriction of fauna movement within the area; and
- potential of road strike from quarry traffic.

The proposed modification will not result in any change to the approved project disturbance area. As a result, the proposed modification will not result in any additional impacts on ecological values, threatened species or ecological communities. No further ecological assessment of the proposed modification is required.

5.8.2 Mitigation Measures

Holcim Australia will continue to implement the existing Flora and Fauna Management Plan (which forms part of the Environmental Management Plan) which is already in place for Jandra Quarry. Key elements of the Flora and Fauna Management Plan include:

- habitat enhancement of undisturbed forest areas;
- habitat protection and maintenance through the use of fencing, preservation of hollows and pre-clearance assessments;
- avoidance of road mortality through the use of appropriate signage, speed limits and staff awareness program; and
- wildlife corridor monitoring.

5.9 Rehabilitation and Closure

A landscape and rehabilitation plan was prepared for the site as part of the 1999 EIS. Key aspects of the landscape and rehabilitation plan include:

- topsoil management; and
- revegetation of bunds, stockpiles, haul roads, quarry benches and site facilities areas with immediate objectives to:
 - minimise visual impact;
 - control runoff;
 - prevent erosion and siltation; and
 - re-establish habitat for flora and fauna.

The quarry is expected to have a minimum life span of approximately 70 years, with further potential to expand the quarry within the greywacke resource.

The proposed modification will not result in any changes to the approved project disturbance area or to the quarry pit or quarry operations and as a result there are no additional areas which need to be considered as part of the approved rehabilitation and closure strategy.

5.10 Greenhouse Gas and Energy

Greenhouse gas emissions including those from extractive industries, are a growing concern for the wider community. The existing approved quarry operations results in the emission of greenhouse gases through the combustion of fuel used in diesel powered equipment and indirectly through the use of electricity to power quarrying equipment. The following equipment is currently used on site:

- crushing and screening plant;
- loaders;
- dump trucks;

- water cart;
- light commercial trucks; and
- drill rig.

Jandra Quarry has the following greenhouse gas emission sources:

- diesel combustion by on-site plant and equipment;
- diesel combustion by the transport fleet which delivers quarry products to customers;
- liquid fuels combustion by employees travelling to and from work;
- liquid fuels combusted during business travel;
- landfill emissions from organic wastes generated on-site; and
- potential emissions from hydrofluorocarbons (HFCs) leaking from air conditioning systems (site offices, plant).

Greenhouse gas emissions originating from business travel, landfill and HFC's are likely to be very small and immaterial in an assessment context based on the size of the operation.

Diesel consumption by plant, equipment and the transport fleet is predominantly driven by the quantity of quarry materials extracted. Similarly, liquid fuel consumption by employee transport is also driven by the quantity of quarry materials extracted.

The proposed modification is not expected to change the total extraction of quarry materials over the life of the project. The proposed modification is therefore not expected to change the total quantity of diesel and liquid fuel combusted over the life of the project. As the proposed modification is not predicted to change the quantity of fuels combusted, the modification is unlikely to change the quantity greenhouse gases emitted over the life of the project.

5.11 Groundwater

The existing quarry is not subject to groundwater inflow and no groundwater was recorded by the geological investigations undertaken for the 1999 EIS. The geological investigations concluded that any groundwater was likely to be located in fractured material above the basement rock. The groundwater impact assessment concluded that there was limited potential for groundwater flow as any groundwater would originate from subsurface flows following recent rainfall events rather than from interception of an aquifer.

The proposed modification will not result in any changes to the approved project disturbance area or quarry pit and as a result no further assessment of groundwater impacts.

5.11.1 Mitigation Measures

Holcim Australia will continue to manage quarry operations in accordance with the existing SWMP.

5.12 Socio Economic Impact

The Greater Taree LGA is located in the upper part of the coastal area of the Hunter region. The population growth projections for the five Local Government Areas in the vicinity of Jandra Quarry – Greater Taree, Great Lakes, Port Stephens, Newcastle and Lake Macquarie are between 135,000 and 140,000 people.

Jandra Quarry supports the local economy through the supply of rock products for road and building and other construction activities in the region. Jandra Quarry is also a valuable employment generator through the provision of 14 direct jobs as well as associated indirect jobs and regular engagement of local service contractors.

The proposed modification will not result in any significant changes to the potential socio-economic impacts of the Jandra Quarry. The continued operation of Jandra Quarry at an economically viable production rate will maintain the existing employment opportunities at the site and continue the supply of high quality construction materials to the region.

6.0 Conclusion

The proposed modification will not result in any change to the quarry operations, including no changes to the approved disturbance area, quarry pit or site operations which were assessed by the 1999 EIS. Holcim Australia will continue to undertake quarry operations in accordance with the conditions of DA231-10-99, EPL and associated management plans.

As detailed in **Section 5.0**, the potential environmental impacts of the proposed modification have been identified and an environmental assessment completed. **Table 6.1** provides a broad overview of the key outcomes of the environment and social impact assessment for the proposed modifications.

Table 6.1 – Overview of Environmental and Social Impacts

Environmental/Social Issue	Overview of Key Outcomes
Air Quality	As there is no change to the nature of the already approved development, the impacts with the modification will remain consistent with those of the already approved development. Holcim Australia will continue to undertake air quality management in accordance with the existing environmental management plan.
Noise and blasting	The proposed operations are consistent with the operations assessed in the 1999 EIS. The noise monitoring results for the quarry support these impact assessment findings indicating that the quarry operations result in noise levels that comply with relevant air quality criteria. Holcim Australia will continue to undertake noise and blast monitoring as per the requirements of DA231-10-99 and will continue to manage quarry operations in accordance with the existing environmental management plan.
Visual Amenity	The proposed modification will not result in any changes to the visual impacts predicted in the 1999 EIS. No further assessment of potential impacts on visual amenity is required. Holcim Australia will continue to manage visual impacts in accordance with the existing Landscape and Rehabilitation Plan.
Water Resources	The proposed modification will not result in any change to the approved project disturbance area and will not result in any changes in the surface water impacts or the management of water resources. Holcim Australia will continue to implement the requirements of their EPL and the Soil and Water Management Plan.
Traffic and Transport	The proposed modifications will not result in any changes to the existing traffic operations. The site access intersection was upgraded as a result of the 1999 EIS traffic impact assessment. No further assessment of traffic impacts is required.
Socio-economic	A socio-economic assessment was prepared as part of the 1999 EIS. The proposed modification will not result in any significant changes to the potential socio-economic impacts of the Jandra Quarry. The proposed modification will result in the continued operation of the site at an economically viable production rate. Jandra Quarry is a significant economic generator and will continue to provide 14 direct jobs and associated indirect jobs.

Table 6.1 – Overview of Environmental and Social Impacts (cont)

Environmental/Social Issue	Overview of Key Outcomes
Aboriginal Heritage	The proposed modification will not result in any changes to the approved project disturbance boundary and will therefore not have any additional impact on Aboriginal sites or objects. Holcim Australia will continue to manage quarry operations in accordance with the AHIP and the existing environmental management plan.
Ecology	The proposed modification will not result in any changes to the approved project disturbance boundary and will therefore not have any additional impact on ecological values, threatened species or ecological communities. Holcim Australia will continue to manage quarry operations in accordance with the existing Flora and Fauna Management Plan.
Rehabilitation and Closure	The proposed modification will not result in any changes to the approved project disturbance boundary. There will be no changes to the approved rehabilitation and closure strategy.
Greenhouse and Energy	The proposed modification is not expected to result in any change in the quantity of greenhouse gases emitted over the life of the quarry. The proposed modification will cap the maximum annual greenhouse gases associated with the project each year.

As outlined in this EA, the proposed modification will not result in any significant change to the environmental impacts of Jandra Quarry when compared to those of the currently approved operation.

6.1 Benefits of the Proposed Modification

The proposed modification will provide for the continued operation of Jandra Quarry at an economically viable production rate. Jandra Quarry is a regionally significant resource which is well positioned to supply hard rock materials to the surrounding region.

Jandra Quarry is an important contributor to local employment through the provision of direct and indirect employment.

The proposed modification will not result in any changes to the approved project disturbance area and will have limited environmental impact.

7.0 References and Technical Terms

7.1 References

- Benbow Environmental (2010), Environmental Monitoring Report;
- CSR Readymix (2002), Jandra Quarry Statement of Environmental Effects for Enlargement of an Overburden Emplacement Area;
- Environmental Resources Management Australia Pty Ltd (2000), Jandra Quarry Environmental Management Plan. Report for CSR Readymix;
- Environmental Resources Management Australia Pty Ltd (1999), Jandra Quarry Extension – Air Quality Assessment. Report for CSR Construction Materials;
- Environmental Resources Management Australia Pty Ltd (1999) Jandra Quarry Extension – Archaeological Assessment. Report prepared for CSR Construction Materials;
- Environmental Resources Management Australia Pty Ltd (1999), Jandra Quarry Extension – Ecological Investigations. Report for CSR Construction Materials;
- Environmental Resources Management Australia Pty Ltd (1999), Jandra Quarry Extension Environmental Impact Statement. Report for CSR Construction Materials;
- Environmental Resources Management Australia Pty Ltd (1999), Jandra Quarry Extension – Noise and Blast Assessment. Report for CSR Construction Materials;
- Environmental Resources Management Australia Pty Ltd (1999) Jandra Quarry Extension – Visual Assessment. Report for CSR Construction Materials;
- Greater Taree Local Environmental Plan, 2010;
- Ian Stenhouse (1997), Jandra Hard Rock Quarry Geological Investigation. Report for CSR Readymix;
- Minister for Urban Affairs and Planning (2000), Development Consent No.231-10-99 (including amendments dated 2002 and 2007);
- NSW Government Department of Planning (2006–2031) Mid to North Coast Strategy; and
- NSW National Parks and Wildlife Service, Consent to destroy and permit to salvage (NPWS #N57/CDS/2000).

7.2 Acronyms and Abbreviations

AHIP	Aboriginal Heritage Impact Permit
DA	Development Application
dB	Decibel
DCP	Development Control Plan
DECCW	Department of Environment, Climate Change and Water
DP	Deposited Plan
DP&I	Department of Planning and Infrastructure
EA	Environmental Assessment
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act
EP&A Regulation	Environmental Planning and Assessment Regulation
EPBC Act	Environmental Protection and Biodiversity Conservation Act
EPL	Environmental Protection Licence
GHG	Greenhouse Gas
LEP	Local Environmental Plan
LGA	Local Government Area
NSW	New South Wales
PAD	Potential Archaeological Deposit
PM	Particulate Matter
PoEO Act	Protection of the Environment Operations Act 1999
SEPP	State Environmental Planning Policy
TSP	Total Suspended Particles

APPENDIX 1

Statement of Authorship

**Submission of
environmental assessment (EA)**

under Section 75W of the Environmental Planning and Assessment Act 1979

EA prepared by

Name:

Qualifications:

Address:

John Merrell

B Env Sc

Umwelt (Australia) Pty Limited

PO Box 838

Toronto 2283

in respect of

Applicant Name

Applicant Address

Jandra Quarry Clarification of Production and
Transportation Limits - Environmental Assessment

Rachel Heath, Holcim Australia Pty Ltd

Tower B, Level 8, 799

Pacific Highway

Chatswood NSW 2067

Land to be developed:

lot no, DP/MPS, vol/fol etc

Lot 2 DP 255621 and Lots 11, 12, 13, 14 and 15 DP
790056

Proposed Development

Holcim (Australia) Pty Ltd is seeking to modify the
Jandra Quarry development consent (DA231-10-99) to
provide for the continuation of existing quarry
operations with a maximum annual production and
transportation limit of 250,000 tonnes of finished quarry
products.

Environmental assessment

An environmental assessment (EA) is attached.

Certification

I certify that I have prepared the contents of this
environmental assessment and to the best of my
knowledge

- it is in accordance with Section 75W of the
Environmental Planning and Assessment Act 1979,
and
- it is true in all material particulars and does not, by
its presentation or omission of information,
materially mislead.

Signature:

Name:

Date:



John Merrell

23 December 2011

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