

Preliminary Environmental Assessment Report Request for Secretary's Environmental Assessment Requirements



Barleigh Ranch Way, Eagleton

Hard Rock Quarry

Submitted to Department of Planning and Environment
On Behalf of Eagleton Rock Syndicate Pty Ltd

October 2015 ■ 15647

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Contents

1.0	Introduction	1
1.0	Project Justification	2
1.1	Resource Description	2
1.2	Products and Market Demand	2
2.0	Site Analysis	3
1.3	Site Location and Context	3
1.4	Land Ownership and Legal Description	4
1.5	Site Characteristics	4
1.6	Surrounding Development	6
3.0	Proposed Development	8
3.1	Summary of Proposal	8
3.2	Site Access and Road Improvements	8
3.3	Administration and Processing Area	8
3.4	Extraction and Processing	9
3.5	Operating Hours	10
3.6	Services and Utilities	10
3.7	Water Management	10
3.8	Employment	10
3.9	Vehicle Movements	10
3.10	Indicative Project Timing	13
3.11	Closure and Rehabilitation	13
4.0	Planning Framework and Context	14
4.1	Strategic Planning	14
4.2	Legislative Requirements	15
4.3	Environmental Planning Instruments	17
5.0	Preliminary Environmental Assessment	20
5.1	Access, Transport and Traffic	20
5.2	Surface Water and Hydrology	20
5.3	Groundwater	21
5.4	Contamination	21
5.5	Heritage	22
5.6	Biodiversity, Flora and Fauna	22
5.7	Bushfire Risk Assessment	23
5.8	Noise and Vibration Impact	23
5.9	Air Quality	23
5.10	Socio-economic Impacts	23
5.11	Waste Management	24
5.12	Visual Impact Assessment	24
6.0	Consultation	25
7.0	Conclusion	26

Contents

1	Site Location Context	3
2	Site Locality Plan	4
3	Site Characteristics and Features	5
4	Surrounding Land Uses	7
5	Indicative Quarry Layout	11
6	Indicative Quarry Layout: Administration Area	12

1.0 Introduction

This report has been prepared by JBA on behalf of the Eagleton Rock Syndicate, who is proposing to develop a hard rock quarry at a site on Barleigh Ranch Way, Eagleton (the Eagleton Quarry).

The proposed quarry is located on land that is partly occupied by an existing landscape supplies facility, which has been operating at the site for over 10 years and is known as Port Stephens Gardenland. The landscape supplies facility is separate from the proposed Eagleton Quarry site, and is currently subject of a separate planning and approvals process with Port Stephens Council (Council) for its redevelopment.

Under clause 7, and clause 5 of Schedule 1, of *State Environmental Planning Policy (State and Regional Development) 2011* development for the purposes of extractive industry that extracts from a total resource of more than 5 million tonnes is State Significant Development (SSD). The proposed Eagleton Quarry will extract from a total resource of approximately 10 million tonnes, and so is SSD.

Pursuant to the *Environmental Planning and Assessment Act 1979* (EP&A Act), and Schedule 2, Part 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), this report seeks the Secretary's Environmental Assessment Requirements (SEARs) for the EIS that will support the State Significant Development Application (SSDA), for the development of the proposed Eagleton Quarry.

The report includes a preliminary environmental assessment to inform the preparation of the SEARs by the Department of Planning and Environment, including:

- An overview of the Site and the proposed development.
- An outline of the key strategic and statutory plans.
- A preliminary assessment of the environmental issues associated with the proposal.
- Explanation of the wider benefits that will result from the proposal.

1.0 Project Justification

1.1 Resource Description

The identified resource contains a mixture of igneous and sedimentary rock formations suitable for concrete, road surfacing and road base aggregates. The three main resource types include:

- Conglomerate which is a matrix of lithic sandstone comprising volcanogenic lithic fragments and lesser quartz and feldspar. The conglomerate is located at lower elevations generally in the eastern part of the proposed quarrying area.
- A porphyritic, felsic igneous rock (rhyodacite) which also contained some ignimbrite. The rhyodacite is mainly quartz and feldspar with fine groundmass, feldspar and shards of volcanic glass.
- At higher elevations to the northwest of the site a finer grained felsic igneous rock (rhyolite) has been identified, which contains higher amount of fine groundmass and correspondingly reduced quantities of quartz and feldspar.

1.2 Products and Market Demand

The resources described above have been identified as being suitable to produce crushed rock aggregate products suitable for use within a broad spectrum of construction materials and activities.

Eagleton Rock Syndicate in association with its affiliate company Williamtown Sand Syndicate Pty Ltd is developing further construction material product streams to compliment a new and dynamic quarry company. The company has detailed plans to provide high quality products backed up with long term quality and technical systems. The company will work towards energy efficient process systems that reduce waste and improve its environmental footprint.

The proposed Eagleton Quarry would service local and regional demand for aggregate and crushed rock products. As such, most of the customers would be based in Newcastle, Central Coast and the Lower Hunter. Sydney is also a potential market for road surfacing aggregates.

Lower Hunter's growth for the next 25 years has been forecast by the NSW Department of Planning and Environment and documented within the Lower Hunter Regional Strategy. This strategy has identified future development areas, principal land use types, settlement patterns and conservation outcomes. In particular, the Strategy aims to:

- ensure that sufficient employment lands are available to cater for 66 000 new jobs; and
- plan for an additional 160 000 residents and 115 000 new dwellings.

These fundamentals will create strong demand for the materials being produced. In addition, the strategic location of the quarry will make it viable to supply materials to the Port of Newcastle to support the continued expansion of port facilities including coal loading and handling facilities.

2.0 Site Analysis

1.3 Site Location and Context

The proposed Eagleton Quarry is located at a site approximately 12km north of Raymond Terrace, within the Local Government Area of Port Stephens. The site is approximately 1.5km to the west of the Pacific Highway, approximately 2km southwest of the intersection of the Pacific Highway with Italia Road, and approximately 2.5km northwest of Grahamstown Dam. The site's location and context are shown at **Figure 1** and **Figure 2**.

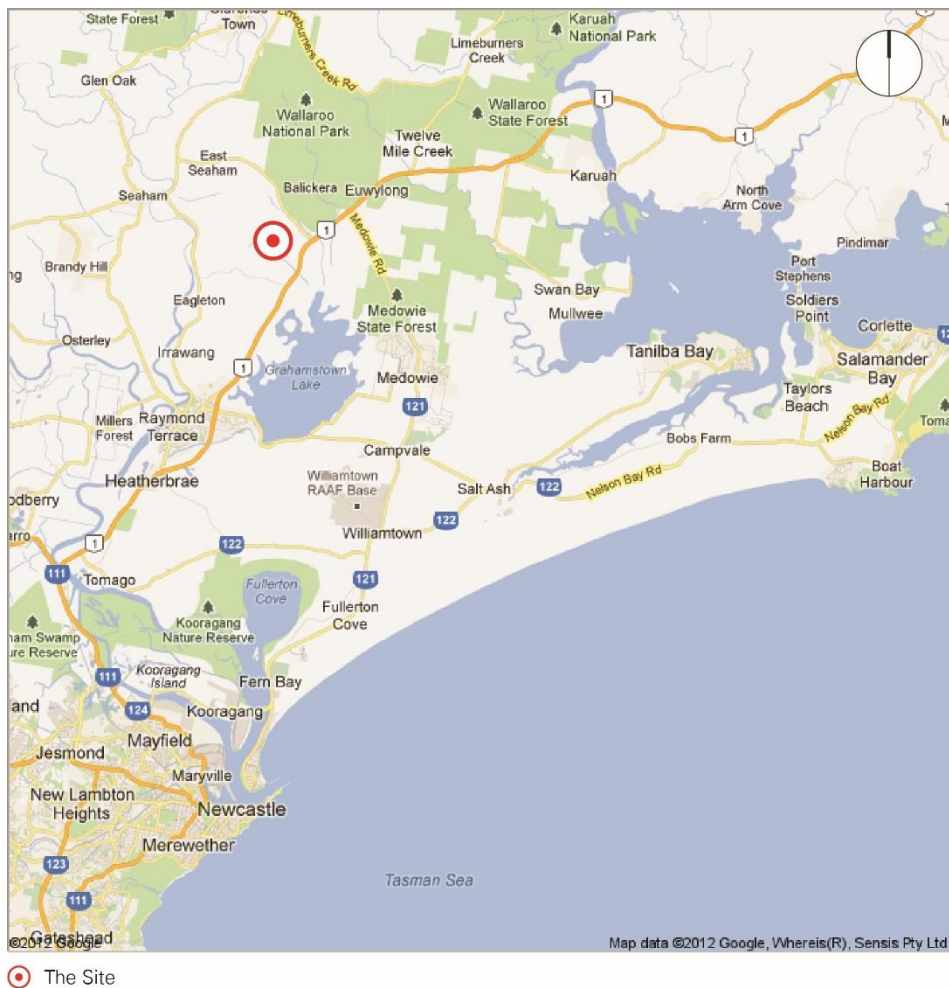


Figure 1 – Site Location Context



Figure 2 – Site Locality Plan

1.4 Land Ownership and Legal Description

The Eagleton Quarry site is located on part of Lot 2 DP 1108702, at Barleigh Ranch Way, Eagleton. Lot 2 is split north-south by Seven Mile Creek. The quarry site is approximately 30ha in area, generally located on the part of Lot 2 to the west of the creek.

The Eagleton Quarry site is owned by the owner and operator of the existing landscape supplies business (Gardenland) which operates on the eastern part of Lot 2 DP 1108702.

The right of carriageway upon which access to the proposed Eagleton Quarry site relies is located on private land legally described as Lot 2 DP 1158962 and Lot 1 DP 245116. Barleigh Ranch Way is public road owned by Council, but has never been formally constructed. It continues as a paper road to the east where it connects with the Pacific Highway.

1.5 Site Characteristics

The characteristics and natural features of the site are shown in **Figure 3** and described in the following sections.

1.5.1 Physical Context

The site is located in an area of undulating hills. The site is on a west to east trending spur which ranges from approximately 120m AHD at the north western boundary to about 30m AHD in the southeast. The site is split north-south by Seven Mile Creek, which has a minor tributary running east-west through the site. Seven Mile Creek forms a valley through the site at between 45m AHD in the north and 30m AHD in the south.

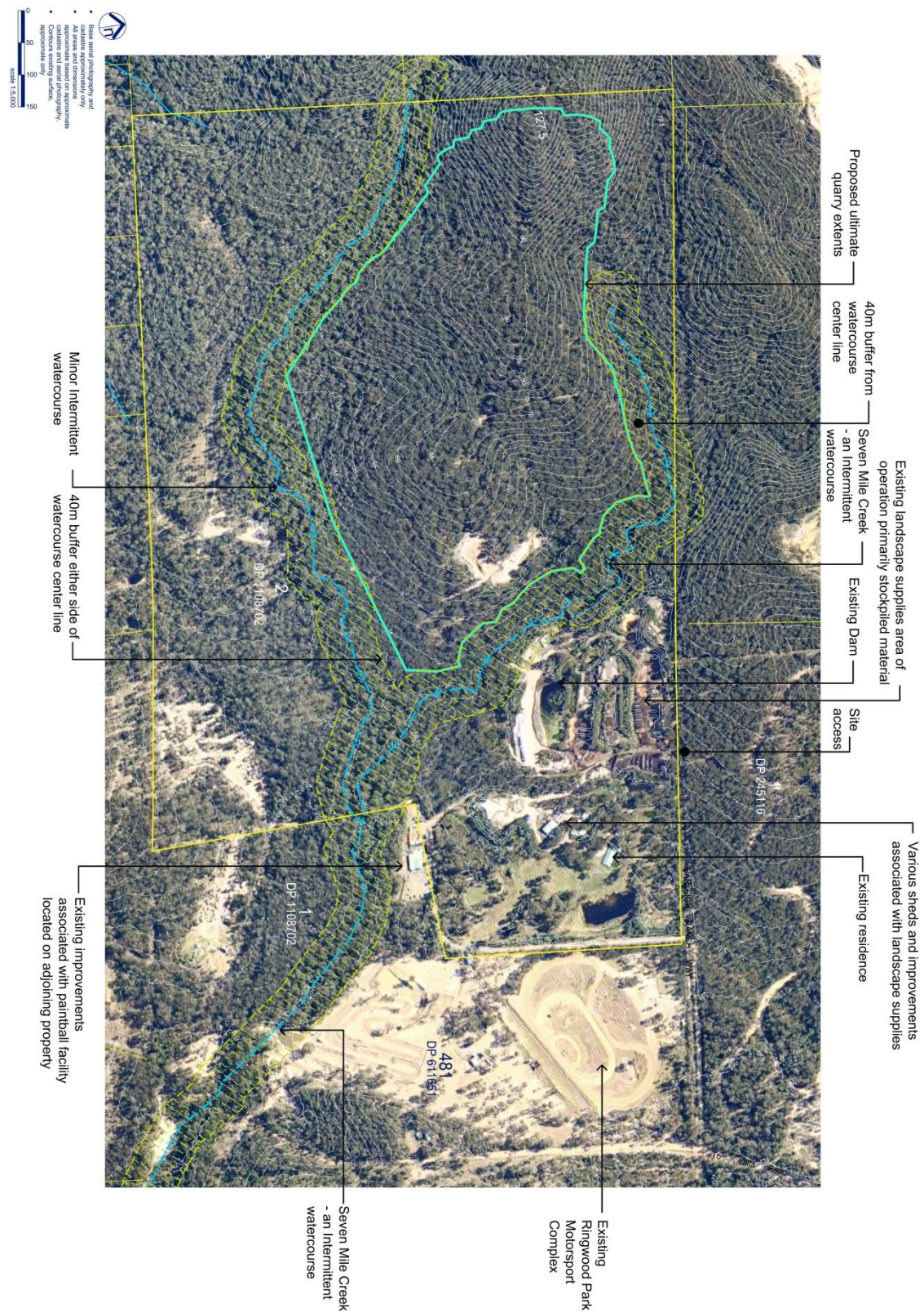


Figure 3 – Site Characteristics and Features

1.5.2 Physical Infrastructure

The site has a number of un-sealed partially formed vehicle tracks, including an existing crossing of Seven Mile Creek, and a cleared area of approximately 0.6ha which has been cleared and graded.

1.5.3 Geological Setting

Reference to the Statewide Geology GIS database and the Newcastle 1:100,000 Geology Sheet indicates that three geological units are present near the site, as follows:

- The Italia Road (Cui) comprises sandstone, shale and coal. This is shown as sub cropping at the eastern side of the site.
- The Balickera Conglomerate (Cul) comprises conglomerate, rhyolite, tuff and ingnimbrite and is shown as sub cropping over the remainder of the site.
- The Eagleton Volcanics (Ceg1e) sub crops to the north west of the site.

1.5.4 Natural and Cultural Heritage

The site is heavily wooded with vegetation type "Spotted Gum - Grey Ironbark open forest on the foothills of the Central Coast, Sydney Basin".

The site is split north-south by Seven Mile Creek, which has a minor tributary running east-west through the site. Seven Mile Creek conveys water to the south-east spilling Grahamstown Dam. As such, the site is within the drinking water catchment of Grahamstown Dam.

There is a high potential for isolated finds and/or artefact scatters of aboriginal significance in the vicinity of Seven Mile Creek and its tributaries.

1.5.5 Site Access

Access to the proposed quarry site is via Italia Road, which connects along a right of carriageway access road located on private land to Barleigh Ranch Way (a public road). The quarry site is accessed directly off Barleigh Ranch Way.

Italia Road connects through to Seaham in the west, and provides access to the Boral Seaham Quarry. The right of access provides access to a number of adjacent recreational land users, and Barleigh Ranch Way also provides access to the existing landscape supplies facility.

1.6 Surrounding Development

The property (Lot 2 DP 1108702) is currently occupied by a landscape supplies business and associated dwelling, which is situated in the north eastern corner of the site. The land owner and operator of the existing landscape supplies business occupies this dwelling; and it is not proposed to treat this dwelling as a sensitive receptor for the purposes of environmental impact assessment.

Seaham quarry is located on an adjacent lot to the north and northwest. The site is surrounded by a number existing recreational land uses including:

- The MG Car Club located at Lot 1 DP 1158962 to the northeast of the proposed Eagleton Quarry. The MG Car Club currently takes its access from the same right of carriageway as the Eagleton Quarry is proposed to. However, a Development Application is currently in with Port Stephens Council for a new intersection to provide access directly to the MG Car Club from Italia Road.
- Lot 2 DP 1158962 to the northeast of the proposed Eagleton Quarry is owned privately and contains the right of carriageway which would be required to be

used for the proposed Eagleton Quarry. A Development Application has been lodged for this land for a racing facility. This Development Application includes the modified access for the MG Car Club.

- Hunter Valley Paintball is located at Lot 1 DP 1108702 to the southeast of the proposed quarry, and immediately south of the existing landscape supplies operation.
- Hunter MCC Raceway and MX Central are located at Lot 481 DP 611651 to the east of the site, between the landscape supplies operation and the Pacific Highway.

Apart from the residential dwelling located onsite, the nearest residential dwellings are located approximately 1km to the southwest of the site along Six Mile Road. South of Six Mile Road, some four kilometres south of the site, is the Kings Hill land release area, which has been rezoned for up to 4,500 residential lots.

There is a single residential dwelling located to the northeast of the site, located on Italia Road between the intersections with the Pacific Highway and the right of carriageway. This dwelling is approximately 1.8 km away from the proposed Eagleton Quarry site.

The nearest dwelling to the west is approximately 2km away.

Neighbouring land uses and sensitive receivers are shown in **Figure 4**.



Figure 4 – Surrounding Land Uses

3.0 Proposed Development

3.1 Summary of Proposal

The Eagleton Quarry is for the extraction of a hard rock reserve that is a mixture of various igneous and sedimentary rock formations, which are suited to local and regional construction markets.

It is proposed to extract and process up to 600,000 tonnes of rock per annum to be transported by truck along local roads to market.

The Eagleton Quarry proposal incorporates a 30 year quarry operation area of approximately 30ha, which includes a processing, sales and administrative area.

The proposal includes:

- Clearing of approximately 30ha of native vegetation on a staged basis.
- Improvements to public roads and a right of carriageway (on private land) to support the traffic transporting quarry products.
- New on-site infrastructure to support quarry activities, including internal site access roads, a new bridge over Six Mile Creek, an Administration and Processing area, and water containment structures.

An indicative layout of the proposal is provided in **Figures 5 and 6**.

3.2 Site Access and Road Improvements

Access to the proposed quarry site will continue to be via Barleigh Ranch Way and the right of carriageway access road (located on private land) connecting to Italia Road. The project would require an upgrade to the intersection between the right of carriageway and Italia Road. It is proposed to upgrade this intersection to a Major Access Driveway type intersection designed to provide for heavy road vehicles and articulated vehicles, as shown in Australian Standard AS 2890.2-2002.

The existing right-of-carriageway and Barleigh Ranch Way will be upgraded to meet the criteria for trafficable widths and other road safety requirements set out under the ARRB's *Unsealed Road Design Guidelines*, March 2009.

3.3 Administration and Processing Area

The processing area will provide for stockpiling of extracted material, mobile crushers, screening plant, fine aggregate wash plant and a pug mill. The processing area will be located generally on the part of the site that is already cleared and graded.

The administration area will include the administration, sales stock pile areas, training and staff amenities, laboratory test room, weighbridge, refuelling tanks, and maintenance area, as follows:

- Administration buildings will include office, lunchroom, amenities, lab-maintenance and a first aid room, and are likely to comprise demountable units placed on suitable foundations.
- A weighbridge will be set up for taring trucks and weighing outbound sales trucks.
- Rainwater storage tanks will be installed to collect water for use in the administration buildings.

- Diesel storage tank, which will be designed and installed in accordance with *Australian Standard AS 1940–2004: Storage and Handling of Flammable and Combustible Liquids*, including being separately bunded to prevent any spillage from entering the surface water catchment.
- A maintenance shed for storage of maintenance equipment and materials.
- Parking areas for employees and visitors, as well as mobile machinery (e.g. loaders, dump trucks, water cart and fuel truck).

3.4 Extraction and Processing

The quarry products would require traditional drill and blasting quarry techniques to produce rock fragments that are suitably sized for crushing and screening.

Extraction would consist of haulage from the quarry face to stockpiles near processing areas. Extraction would be carried out by mobile plant and equipment including excavators and dump trucks.

The location of the extraction area would change throughout the course of the quarry life.

Dump trucks would haul the extracted materials to raw product stockpiles in the processing area. The processing area will include wet processing and dry stockpiling and processing.

The wet processing area would contain wash plant and a wet screen.

The dry processing area would provide for crushing, screening and blending of rock products for stockpiling for sale and would likely contain the following equipment:

- Loaders – a vehicle for loading material from the process stockpile into processing equipment.
- Reclaimer-Plate Feeder – Machinery designed to transfer material to from machine or component to another machine or component.
- Jaw Crusher – Machine designed to crush and break up the materials in a vertical manner.
- Cone Crusher – Machine designed to crush and break up the material by squeezing and spinning the material.
- Impactor – Machine that uses a rock lined spinning rotor to accelerate material before being impacted in a rock lined crushing chamber.
- Screens – Machinery used as a final extract and grader of material then outputting clean graded material.
- Stackers – Machines used to convey material into stockpiles.
- Pugmill (when required) – Machine designed to add moisture content to road base materials.

The crushing plant and sales area will be ultimately established in one location and remain in this location for the duration of the quarry. Initial works will be required to establish this area and as it becomes available within the first 12 months of operations the modular plant will be established progressively. The location and configuration of this production and sales area will be optimised to minimise noise and dust impacts associated with double handling quarry products, and impacts to sensitive receptors.

A water truck and fuel truck will operate throughout the site. The water truck will wet down all unsealed roads at the quarry, as well as the temporary unsealed components of Barleigh Ranch Way and the right of carriageway.

3.5 Operating Hours

Quarry operations are expected to be carried out during the following hours:

- Extraction activities, being the operation of the excavators and dump trucks, would generally take place 7am-7pm Monday to Friday, and 7am to 6pm Saturdays.
- Drill and Blast would be limited to 7am-6pm Monday-Friday and Saturday 7am-12pm.
- Processing activities would generally take place 7am-6pm Monday – Friday.
- Loading and dispatching of sales trucks would generally take place 5.00am-10pm Monday to Friday, and 6am-12pm Saturday.

3.6 Services and Utilities

Currently the site is serviced by power (11kva) and telecommunication lines. These will be extended and reticulated throughout the site.

3.7 Water Management

It is expected that the Eagleton Quarry can be designed to be self-sufficient in terms of water supply and so is not expected to place additional demand on water supplies in the district.

Water running off from all operational areas, including extraction areas, processing and sales, and haul roads, will be conveyed to water storage cells on the southern side of the quarry and stored for reuse. As well as stormwater runoff from operational areas this will include processing water. The containment cells will also capture and store silt conveyed with the surface waters.

3.8 Employment

Site staff will consist of permanent employees and contractors. It is expected that the quarry will initially operate with up to 12 employees, rising to 18-20 employees as the quarry develops.

3.9 Vehicle Movements

Based on sales estimates up to approximately 15,000 heavy vehicles per year could be required to haul product offsite. These trucks would be spread evenly through the main operational hours between 5.00am and 10pm Monday to Friday, and 6 am to 12pm Saturday. Most sales trucks are expected to be dispatched to locations within the Newcastle, Lower Hunter and Lower North Coast regions.

Staff vehicle movements would result from the 20 (maximum) staff members arriving and leaving by car, 6 days a week.

Other vehicles accessing the site would include for fuel delivery and contractors, which would contribute a minimal number of vehicle movements.

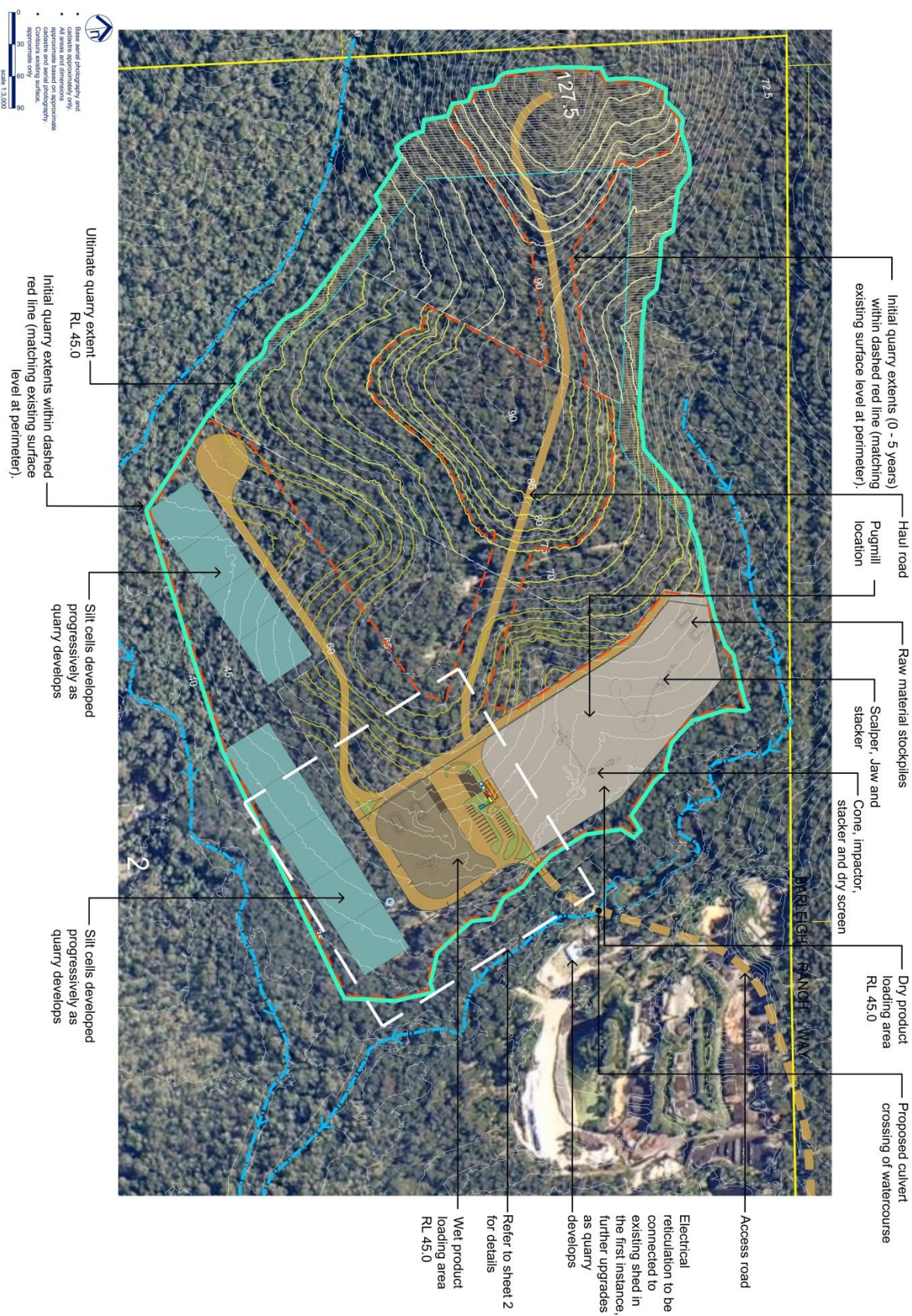


Figure 5 – Indicative Quarry Layout



3.10 Indicative Project Timing

The proposed Eagleton Quarry is expected to operate for up to 30 years. The initial quarry activities would extend to the west along the southern and northern boundary of the ultimate quarry extent. Extraction would then take place predominantly at the northern extraction boundary areas on the north facing Summit Pit, proceeding generally in a southerly direction to minimise impacts on sensitive receptors to the south.

3.11 Closure and Rehabilitation

The rock resource at the location of the Eagleton Quarry is extensive, and it is expected that it extends beyond the extent proposed for quarrying as part of this application. Consequently, it is likely that the preferred land use at the site at the end of 30 years of quarrying will be the continuation of quarrying.

However, if further quarrying was not proposed then the closure and rehabilitation plan would include spreading overburden and planting of native vegetation that is consistent with the vegetation currently at the site and on land surrounding the site.

4.0 Planning Framework and Context

4.1 Strategic Planning

4.1.1 The Lower Hunter Regional Strategy

The NSW Government's Lower Hunter Regional Strategy is the principal strategic plan which applies to the site. This Strategy identifies how the expected growth in the Lower Hunter Region will be managed to provide for both economic development and the protection of environmental assets, cultural values and natural resources.

The Strategy identifies that the Lower Hunter Region has seen significant population growth and continues to grow strongly, with accelerated growth rates experienced in recent years. The Regional Strategy is based upon a population growth scenario which forecasts a regional population of 675 000 persons by 2031. This equates to an additional 160 000 persons over the period 2006–31 or an additional 115,000 new dwellings. This growth scenario responds to current levels of growth and recognises that this growth will continue as the Region broadens its economic role in the context of the NSW and national economy.

Environmental Considerations

Environmental features that characterise the Hunter include its wetlands, which are of international significance, the largest mobile sand dune in NSW, the largest saltwater lake in Australia and high quality aquifers that supply drinking water to the people of the Lower Hunter and Central Coast. Much of the native vegetation remaining in the Region is of high conservation significance and provides habitat for numerous threatened species.

A number of important green corridors have been identified running through the Region. The protection and management of these corridors for conservation and biodiversity have been identified as a key focus of both government and the community.

The Strategy stipulates that a Lower Hunter Regional Conservation Plan will be prepared by the Department of Environment and Conservation (now the Office of Environment and Heritage), which will include a suite of actions to, as far as possible, meet the biodiversity commitments within the Regional Strategy.

Economic Considerations

Economically, the Strategy identifies that the Lower Hunter Region contributes to the global competitiveness of the Greater Metropolitan Region, with the Newcastle City Centre the largest and most diversified city centre outside of the Sydney Basin. The Region also contains the capacity for the ongoing growth of employment opportunities due to its extensive employment lands and existing infrastructure.

The Region accounts for 14% of Australia's total exports through the Port of Newcastle. In addition, it is Australia's largest port in bulk terms and the world's largest coal exporting port. Projected economic activity in the Lower Hunter, together with that in the Illawarra and Western Sydney, is recognised as providing a significant number of new industries and workforce that will substantially drive economic growth in NSW.

The Region is also characterised by its abundant natural resources. As an agricultural area, the Region has extensive agricultural landscapes providing opportunities for the dairying industry as well as cropping and vegetable production. The Region is also home to one of the largest and most successful

vineyard and winemaking districts in Australia, with spin-off impacts on manufacturing, service and tourism industries. Finally, the Region still retains significant coal resources and the potential for ongoing coal production and export.

Eagleton Quarry in Context

The proposed Eagleton Quarry site is located on land identified in the Regional Strategy as Rural and Resource Land and specifically as Non-Coal Extractive Resources land and land within a drinking water catchment (of Grahamstown Dam).

The Strategy specifies that productive resource lands such as extractive industries, coal, gas and other mining, and quarrying should be protected from inappropriate development. Implicitly, therefore, the Strategy supports the development of these resources for the benefit of the economy.

The Strategy also states that drinking water catchments need to be protected through the relevant Local Environmental Plan.

4.1.2 Lower Hunter Regional Conservation Plan

The Regional Conservation Plan (RCP) sets out a 25-year program to direct and drive conservation planning and efforts in the Lower Hunter Valley. It seeks to establish a framework to guide conservation efforts in the Lower Hunter.

The RCP illustrates vegetation communities in the Lower Hunter and their conservation status. It identifies that the site is part of an area where the vegetation reservation target has yet to be met. It also identifies that the site is not part of a high priority regional conservation area, but that a biodiversity corridor passes through the land in the vicinity of the site. This biodiversity corridor represents a 'non-reservation' regional conservation priority, connecting Wallaroo National Park to the vegetation south of Grahamstown Dam.

The RCP sets out that the mechanisms to be employed in offsetting biodiversity impacts in these areas is likely to include BioBanking, planning agreements or dedication of land for national parks or other conservation reserves. The proposal will incorporate a biodiversity offsetting strategy consistent with the OEH's NSW biodiversity offsets policy for major projects, and so will be consistent with the Lower Hunter Regional Conservation Plan.

4.2 Legislative Requirements

4.2.1 Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)

The Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) encompasses an assessment and approvals system for actions that have a significant impact on matters of National Environmental Significance (NES).

Threatened species listed under the EPBC Act have been identified as likely to occur within the locality of the site and may be impacted by the proposal. As such, a referral will be prepared for submission to the Commonwealth Department of Environment.

4.2.2 Environmental Planning and Assessment Act 1979

The Environmental Planning and Assessment Act 1979 (EP&A Act) governs the approvals process for developments in the State. As the proposed development constitutes SSD the Minister for Planning (or delegate) will be the consent authority. An EIS that meets the requirements set out in Schedule 2 of the EP&A Regulation will be required to support the State Significant Development Application (SSDA) for the proposed development.

Section 89J of the EP&A Act specifies legislative approvals that are not required in regards to an approved SSD. In particular, approvals under the following legislation are likely to have been required for the proposed Eagleton Quarry, but would not be required if the SSDA is approved:

- An Aboriginal Heritage Impact Permit under section 87 or section 90 of the National Parks and Wildlife Act 1974 (NPW Act) to affect or destroy an Aboriginal object.
- An authorisation referred to in section 12 of the *Native Vegetation Act 2003* to clear native vegetation or State protected land.
- An activity approval under section 91 of the *Water Management Act 2000*.

Section 89K of the EP&A Act specifies legislative approvals which must be applied consistently with a SSDA approval. Approvals under the following legislation identified in Section 89J are expected to be required for the proposed Eagleton Quarry:

- Consent from Port Stephens Council under Section 138 of the *Roads Act 1993* to carry out works to a public road.
- An Environment Protection Licence issued by the Environment Protection Authority under Chapter 3 of the *Protection of the Environment Operations Act 1997*

4.2.3 Roads Act 1993

The Eagleton Quarry project would include carrying out of works that affect public roads as follows:

- Improvements to Barleigh Ranch Way, being widening, grading, and creation of a compacted gravel surface.
- Construction of an upgraded intersection connecting the existing Right of Carriageway with Italia Road.

Consent from Port Stephens Council under Section 138 of the *Road Act 1993* would be required for these works. However, as described above, the Section 138 Roads Act approval must be consistent with the SSDA approval.

4.2.4 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) regulates operations which have the potential to harm the environment. The proposed development is a type of activity listed under Schedule 1 of the POEO Act as the quarry is expected to extract up to 600,000 tonnes per annum. Clause 19 of Schedule 1 of the POEO Act specifies that a land-based extractive industry involves the extraction, processing or storage of more than 30,000 tonnes of extractive material per year requires an Environment Protection Licence (EPL).

As the proposal constitutes a scheduled activity, an EPL will be required. Section 89K of the EP&A Act establishes that, if the Eagleton Quarry is approved as SSD then the EPL issued for the Eagleton Quarry is required to be consistent with the SSD approval.

4.2.5 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) regulates activities that are likely to impact on items of Aboriginal cultural heritage value or Aboriginal archaeological significance. Previous Aboriginal archaeological studies have identified that Aboriginal items may be present at the site. However, as described above, Section 89J of the EP&A Act sets out that an Aboriginal Heritage Impact Permit is not required for an approved SSD.

4.2.6 Threatened Species Conservation Act 1995

The *Threatened Species Conservation Act 1995* (TSC Act) identifies threatened species and populations, and endangered ecological communities which are protected in NSW. A number of these species are likely to occur or may possibly occur at the site.

4.2.7 Water Management Act 2000

Seven Mile Creek is identified as a third order stream under the Strahler system, and its on-site tributary is identified as a category 1 stream. In accordance with the NSW Office of Water's *Guidelines for Riparian Corridors on Waterfront Land* the appropriate vegetated riparian corridor width on each side of the stream are 20m and 10m respectively. Quarry activities will generally be located outside of riparian corridors for on-site watercourses.

Notwithstanding the above, the project involves the construction of a new road over Seven Mile Creek, which would require works within the vegetated riparian corridor of Seven Mile Creek. But for Section 89J of the EP&A Act a controlled activity approval issued under Section 91 of the *Water Management Act 2000* would have been required for such works.

The project is also expected to intercept groundwater. Whilst significant quantities of groundwater are not expected to be removed any dewatering can trigger the need for an aquifer interference approval issued by the NSW Office of Water under Section 91 of the *Water Management Act 2000*. However, as described above, Section 89J of the EP&A Act sets out that an aquifer interference approval activity approval is not required for an approved SSD.

4.3 Environmental Planning Instruments

4.3.1 State Environmental Planning Policy (State and Regional Development) 2011

State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP) was adopted on 1 October 2011 and identifies SSD. Pursuant to clause 7 of Schedule 1 of the SRD SEPP, the development of the Eagleton Quarry is declared to be SSD, because it would extract from a total resource (the subject of the application) of over 5 million tonnes.

Clause 11 of the SRD SEPP also states that development control plans do not apply to SSD. As such, the *Port Stephens Development Control Plan 2013* does not apply to the project.

4.3.2 State Environmental Planning Policy No. 55 – Remediation of Land

This policy introduces state-wide planning controls for the remediation of contaminated land. It states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. Contamination has been considered and investigations will be undertaken and included in the EIS to ensure the site is suitable for the proposed use.

4.3.3 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

Dangerous Goods will not be stored on-site in volumes that exceed the thresholds set out in Applying SEPP 33. As such, the quarry is not expected to be characterised as a potentially hazardous development.

4.3.4 State Environmental Planning Policy No. 44 (Koala Habitat Protection)

Port Stephens Council has implemented a Comprehensive Koala Plan of Management which identifies the Eagleton Quarry site as being Marginal Koala Habitat. Marginal Koala Habitat as defined by the Plan of Management as the lowest Community based survey category, essentially being all forested areas which are neither Preferred nor Supplementary Koala Habitat. As such, the site does not represent Core Koala Habitat and SEPP 44 does not apply further to the project.

4.3.5 Port Stephens Local Environmental Plan 2013

The site is located within the Port Stephens Local Government Area (LGA) and as such the provisions of the *Port Stephens Local Environmental Plan 2013* (Port Stephens LEP) apply.

Under the Port Stephens LEP the site is zoned RU2 – Rural Landscape. The proposed development is permissible with consent under this zone.

Clause 7.8 of the Port Stephens LEP relates to drinking water catchment. The site is located within the drinking water catchment for Grahamstown Dam. Clause 7.8 states that:

- (3) *Before determining a development application for development on land to which this clause applies, the consent authority must consider the following:*
 - (a) *whether or not the development is likely to have any adverse impact on the quality and quantity of water entering the drinking water storage, having regard to the following:*
 - (i) *the distance between the development and any waterway that feeds into the drinking water storage,*
 - (ii) *the on-site use, storage and disposal of any chemicals on the land,*
 - (iii) *the treatment, storage and disposal of waste water and solid waste generated or used by the development,*
 - (b) *any appropriate measures proposed to avoid, minimise or mitigate the impacts of the development.*
- (4) *Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that:*
 - (a) *the development is designed, sited and will be managed to avoid any significant adverse impact on water quality and flows, or*

- (b) if that impact cannot be reasonably avoided—the development is designed, sited and will be managed to minimise that impact, or*
- (c) if that impact cannot be minimised—the development will be managed to mitigate that impact*

Other controls within the Port Stephens LEP are not expected to be relevant to the proposed Eagleton Quarry.

5.0 Preliminary Environmental Assessment

This information has been compiled to assist in the preparation of the Secretary's Environmental Assessment Requirements which will guide the preparation of the EIS for the proposal. The key environmental considerations associated with the proposed development are listed below. Specialist studies will be undertaken as part of the proposal to assist in addressing these issues.

5.1 Access, Transport and Traffic

Access to the proposed quarry site will continue to be via Barleigh Ranch Way and the right of carriageway access road (located on private land) connecting to Italia Road.

The project would require an upgrade to the intersection between the right of carriageway and Italia Road. It is proposed to upgrade this intersection to a Major Access Driveway type intersection designed to provide for heavy road vehicles and articulated vehicles, as shown in Australian Standard AS 2890.2-2002.

Taking account of shut downs it is expected that about 360 trucks per week, or up to about 65 trucks per day could be required to access the site. Most trucks are expected to be dispatched to locations within the Newcastle, Lower Hunter and Lower North Coast regions and so would be expected to travel via Italia Road to access the Pacific Highway at the existing intersection.

The EIS will include a traffic and transport impact assessment of the proposed development taking into account:

- Proposed improvements to Barleigh Ranch Way and Italia Road.
- Analysis of service levels and traffic safety associated with the use of the existing Italia Road / Pacific Highway intersection and the Italia Road / Right-of-way intersection by the Eagleton Quarry heavy vehicles.
- Cumulative impacts with other proposed development in the locality.

Due to the use of this intersection by heavy vehicles accessing Boral's Seaham Quarry on Italia Road, it is not expected that any improvements to the Italia Road / Pacific Highway intersection will be required.

5.2 Surface Water and Hydrology

A Water Management System will be designed to contain runoff from the quarry area to prevent impacts on the water quality of the downstream catchment. The Water Management System would include:

- a clean water diversion channel to keep clean water out of the quarry;
- dirty water catch drains constructed on the perimeter of the quarry extraction and processing areas;
- water management dams located downstream of the dirty water catch drains; and
- sediment dam adjacent to Seven Mile Creek to contain runoff from the access road.

Based on licensing requirements for other facilities in the area the design criteria considered likely to be acceptable is for the Water Management System to be

designed to avoid spilling for flood events of less than the 10 year ARI 24 hour flood event.

A detailed site water balance will be prepared to establish the volume of on-site detention required to ensure collected water from the extraction and processing areas can be treated for reuse on-site in dust suppression. It is expected that controlled discharges from the site will be required in accordance with an EPL and water quality criteria based on the ANZECC guidelines.

The EIS will include a detailed assessment of impacts on water quality and flows in Seven Mile Creek and Grahamstown Dam.

5.3 Groundwater

Detailed groundwater investigations have been carried out and will be documented in the EIS.

The investigations identify that the proposed development would intersect the ground water table during extraction. As a result of this intersection, dewatering is likely to need to occur. This dewatering would involve directing the groundwater from dewatering from within the quarry bed into the quarry surface water management system, through which it would be conveyed ultimately into the water containment dam, treated and reused on-site for dust suppression or discharged into Seven Mile Creek.

The EIS will include detailed assessments to assess the implications of groundwater dewatering on:

- Baseflows into Seven Mile Creek from groundwater and potential impacts on groundwater dependent ecosystems within the creek.
- The capacity of the on-site water management system to handle and manage the groundwater flows.

5.4 Contamination

The site of the proposed quarry activities largely comprises native vegetation. Whilst agricultural uses may have occurred in the past it is unlikely that any substantial ground contamination is present.

Searches of databases have identified that:

- The site is not listed on the EPA's Contaminated Sites Register.
- There is no record of the storage of dangerous goods at the site (Work Safe NSW).
- The Section 149 Certificate does not identify any critical habitats, conservation areas, mine subsidence issues or contamination notices at the site.

A small section of the proposed quarry site has been cleared and subjected to the placement of reject ceramic tile fragments. It is proposed to validate the reject tile fragments in accordance with the criteria set out in the EPA's Recovered Aggregate Exemption 2010 and then to reuse them as crushed aggregate material for the purposes of internal site and haulage road construction and for ground preparation of the processing areas.

Based on the above there is no evidence to suggest that ground contamination is currently causing a risk of harm to the environment. Given that the proposed land use is consistent with the existing and previous uses on the land near the site (i.e. quarrying and landscape supplies) the site is considered to be suitable for the proposed quarry land use.

5.5 Heritage

5.5.1 Aboriginal Heritage

Knowledge from previous assessments suggests that the potential for isolated finds and/or artefact scatters is influenced by waterways and the landform.

It is considered that there is a high potential for isolated finds and/or artefact scatters on the site due to the presence of Seven Mile Creek. A moderate potential for finds is also considered along the second order streams to the south of the site, and a low potential across other areas due to the distance to reliable water and the steep landform.

One isolated find has previously been encountered within a creek bed on the southern part of the site. This find consisted of a mudstone flake which has been visibly weathered, and was assessed as being of very poor integrity and having low research potential and scientific significance.

As such, further investigations are likely to be required. The EIS will document the detailed investigations, which will be carried out in accordance with the relevant assessment guidelines including:

- Aboriginal cultural heritage consultation requirements for proponents 2010.
- Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales.

5.5.2 Non-Aboriginal Heritage

There are no non-Aboriginal heritage items (either locally listed or listed on the State Heritage Register) on the site.

The closest non-Aboriginal Heritage item is 'Balickera House', located at 303 Italia Road, over 2km from the proposed Eagleton Quarry. The Boral Seaham Quarry is located in-between the heritage item and the site.

The quarry will not affect the context, setting or fabric of the item by virtue of the significant distance between the two, and the presence of Boral Seaham Quarry.

5.6 Biodiversity, Flora and Fauna

An initial investigation of flora and fauna across the site was undertaken in 2012. This survey identified that the site contains Spotted Gum-Ironbark Dry Sclerophyll Forest, which is not an Endangered Ecological Community (EEC) under the *Threatened Species Conservation Act 1995* (TSC Act) or a Threatened Ecological Community under the Commonwealth EPBC Act.

The initial investigations identified that a number of threatened species are known to occur or potentially occur within the site and the locality. The clearing of vegetation associated within the quarry will result in the removal of native vegetation and reduce the area of habitat available for these species.

A detailed assessment will be carried out as part of the EIS in accordance with the NSW Biodiversity Offsets Policy for Major Projects, and the Framework for Biodiversity Assessment.

The Framework for Biodiversity Assessment outlines the assessment methodology to quantify and assess the site's biodiversity values, and sets out the mechanism to establish the amount (and type) of biodiversity offsets required to address any unavoidable impacts. The Framework removes the need to carry out Assessments of Significance under Section 5A of the EP&A Act, however

assessment of impacts to threatened species listed under the Commonwealth EPBC Act are still required, and will be included in the biodiversity assessment.

5.7 Bushfire Risk Assessment

The site is characterised by substantial stands of vegetation, which also surrounds the site on all sides. Due to the existing vegetation there is a risk of bushfire, especially during dry summer months.

The site is located on land that is designated as Category 1 Vegetation on the Port Stephens Bushfire Prone Land Map. As such the EIS will address the relevant provisions of the NSW Rural Fire Service's *Planning for Bush Fire Protection*.

The quarry extraction, processing and sales areas will be cleared of all existing vegetation. As such, the chances of a bushfire being caused by on-site activities are minimal.

5.8 Noise and Vibration Impact

The proposed development will result in new noise sources being created. The impact of these new noise sources in relation to the closest sensitive receivers would be assessed in the EIS, in accordance with the Environmental Protection Authority's Industrial Noise Policy.

Blast vibration and overpressure impacts would be assessed in accordance with the Australian and New Zealand Environment and Conservation Council (ANZECC) *Guidelines to minimise annoyance due to blasting, overpressure and ground vibration*.

5.9 Air Quality

There is the potential for air quality impacts during quarry activities as a result of quarry activities, as well as from haulage over unsealed roads between the site and Italia Road.

An Air Quality and Greenhouse Gas Assessment would be prepared as part of the EIS, in accordance with the EPA's Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales.

5.10 Socio-economic Impacts

The main economic benefit of the proposed Eagleton Quarry would be the security of supply of aggregate to Newcastle and the Lower Hunter region. The Lower Hunter Regional Strategy forecasts strong growth for the Lower Hunter with 66,000 new jobs and an additional 160,000 residents and 115,000 new dwellings being planned for. In addition, the strategic location of the quarry will also make it viable to supply the Port of Newcastle for the continued expansion of port facilities including coal loading and handling facilities.

Initially the quarry will employ up to 12 people, rising to 18-20 employees as the quarry develops.

The quarry is a small employer and will not generate significant demand for additional community based infrastructure and services. However, the quarry is a large generator of heavy vehicle movements which will impact on the capability and longevity of local road infrastructure.

The Port Stephens S94 Development Contributions Plan 2007 has a specific clause which provides for extractive industries, setting out a rate of contribution for road haulage from industries that cause heavy vehicle movements. Where a Transportation and Economic Assessment Study has not been carried out a nominal contribution of 4 cents per tonne per kilometre of haul route will be levied.

The following strategy is proposed for addressing impacts to local road infrastructure.

- The Eagleton Rock Syndicate would upgrade (and maintain for the life of the quarry) Barleigh Ranch Way at its own expense to ensure it meets the criteria for trafficable widths and other road safety requirements set out under the ARRB's *Unsealed Road Design Guidelines, March 2009*.
- The Eagleton Rock Syndicate will construct the improvements to the intersection at Italia Road and the Right of Way as a Major Access Driveway generally in accordance with Australia Standards AS28090.2.
- The Eagleton Rock Syndicate will pay to Council a Heavy Vehicle Haulage Levy of 4c per tonne per km for transportation of quarry products on Italia Road, between the Right of Carriageway and the intersection with the Pacific Highway (a distance of approximately 450m).

This strategy is considered reasonable and justifiable because:

- Whilst Barleigh Ranch Way is a public road it is not accessible by the general public, with its only access point across a Right of Carriageway across private land.
- It is expected that 100% of heavy vehicles will access the Pacific Highway directly rather than travelling west on Italia Road. The Pacific Highway is owned and maintained by the Roads and Maritime Service and so it is not reasonable for haulage on this road to be considered towards Council's local road network costs.

5.11 Waste Management

The quarry will generate only small quantities of waste. Where possible these waste materials will be recycled. Waste materials that cannot be recycled will be removed by suitably licenced contractors and disposed of at suitably licenced landfill facilities.

The project includes for the reuse of rejected tile fragments, which are currently located in the proposed area for processing, and can be readily used as base for the site haulage roads and processing areas. Chemical testing will be carried out to ensure that the reject tile fragments do not pose an unacceptable risk to the environment.

5.12 Visual Impact Assessment

Dense wooded vegetation covers the slopes surrounding the site, and therefore provides a significant level of screening. Significant view corridors and views from surrounding residential properties are unlikely to be adversely impacted by the proposed quarry due to the location of the site beyond existing sight lines, and also the existing environmental factors such as the ridge line and trees.

6.0 Consultation

It is recognised that there are a number of stakeholders who will require consultation throughout the preparation of the EIS for the Eagleton Quarry. In addition to the utility suppliers, these include:

- The local community, particularly Six Mile Road residents living to the south of the site.
- NSW Office of Environment and Heritage – in relation to assessing and managing biodiversity and cultural heritage issues.
- Commonwealth Department of Sustainability, Environment, Water, Population and Communities – in relation to assessing and managing federally listed endangered species and ecological communities that may be present on the site.
- Port Stephens Council.
- Roads and Maritime Services – in relation access to the Italia Road / Pacific Highway intersection.
- Hunter Water Corporation – in relation to ensuring the water quality outcomes for Grahamstown Dam are achieved.

A consultation strategy is being prepared, and the outcomes of consultation activities will be described in the EIS.

7.0 Conclusion

This submission provides information to assist in the preparation of the Secretary's Environmental Assessment Requirements to inform the preparation of an EIS for the proposed Eagleton Quarry.

The issues discussed in this report are considered to represent the key environmental considerations associated with the proposal and are adequate to inform the Secretary's Requirements.

It is therefore requested that the Secretary issue the requirements for the preparation of an EIS for a State Significant Development Application for the Eagleton Quarry, at Barleigh Ranch Way, Eagleton.