

## COUNCIL ASSESSMENT REPORT

<b>Panel Reference</b>	2016NTH002
<b>DA Number</b>	DA 2015 - 953.1
<b>LGA</b>	Port Macquarie-Hastings
<b>Proposed Development</b>	Extractive Industry (Quarry) and Associated Infrastructure
<b>Street Address</b>	Milligans Road, Herons Creek and The Paddock Road, Bago
<b>Applicant/Owner</b>	Applicant: CTK Natural Resources Pty Ltd Owner: Forestry Corporation of NSW
<b>Date of DA lodgement</b>	22 December 2015
<b>Number of Submissions</b>	129
<b>Recommendation</b>	That DA2015 - 953.1 be determined by granting consent subject to the recommended conditions.
<b>Regional Development Criteria (Schedule 4A of the EP&amp;A Act)</b>	Designated Development - Extractive Industry
<b>List of all relevant s79C(1)(a) matters</b>	<ul style="list-style-type: none"> <li>• State Environmental Planning Policy No. 33 - Hazardous and Offensive Development</li> <li>• State Environmental Planning Policy No. 44 - Koala Habitat</li> <li>• State Environmental Planning Policy No. 55 - Remediation of Land</li> <li>• State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007</li> <li>• State Environmental Planning Policy (Rural Lands) 2008</li> <li>• State Environmental Planning Policy (State and Regional Development) 2011</li> <li>• Port Macquarie-Hastings Local Environmental Plan 2011</li> <li>• Port Macquarie-Hastings Development Control Plan 2013</li> <li>• Draft Lookout Road Hard Rock Quarry Planning Agreement</li> </ul>
<b>List all documents submitted with this report for the Panel's consideration</b>	<ol style="list-style-type: none"> <li>1. Recommended conditions;</li> <li>2. NSW EPA general terms of approval;</li> <li>3. Development contributions estimate;</li> <li>4. Draft Voluntary Planning Agreement;</li> <li>5. Plans.</li> </ol>
<b>Report prepared by</b>	Chris Gardiner - Development Assessment Planner
<b>Report date</b>	30 January 2017

### Summary of s79C matters

Have all recommendations in relation to relevant s79C matters been summarised in the Executive Summary of the assessment report?

**Yes**

### Legislative clauses requiring consent authority satisfaction

Have relevant clauses in all applicable environmental planning instruments where the consent authority must be satisfied about a particular matter been listed, and relevant recommendations summarized, in the Executive Summary of the assessment report?

**Yes**

*e.g. Clause 7 of SEPP 55 - Remediation of Land, Clause 4.6(4) of the relevant LEP*

### Clause 4.6 Exceptions to development standards

If a written request for a contravention to a development standard (clause 4.6 of the LEP) has been received, has it been attached to the assessment report?	<b>Not Applicable</b>
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**Special Infrastructure Contributions**

Does the DA require Special Infrastructure Contributions conditions (S94EF)?

**Not Applicable**

*Note: Certain DAs in the Western Sydney Growth Areas Special Contributions Area may require specific Special Infrastructure Contributions (SIC) conditions*

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**Conditions**

Have draft conditions been provided to the applicant for comment?

**Yes**

*Note: in order to reduce delays in determinations, the Panel prefer that draft conditions, notwithstanding Council's recommendation, be provided to the applicant to enable any comments to be considered as part of the assessment report*

## Executive summary

This report considers a Development Application (DA) for establishment of a new extractive industry at the subject site. The proposal seeks consent to establish a hard rock quarry and processing plant to produce a maximum of 200,000 tonnes of quarry material per year for a 20 year period.

As part of the application Council has received an offer to enter into a Voluntary Planning Agreement (VPA) in connection with the Development Application. The Planning Agreement provides for payment by the developer to Council of a monetary contribution of \$0.20 per tonne, towards the maintenance of the Bago Road haulage route. The monetary contribution amount, maintenance requirements and security for performance of the planning agreement have been considered acceptable by Council engineering staff.

The proposal is classified as 'Designated Development' under *Schedule 3* of the *Environmental Planning and Assessment Regulation 2000*. The proposal will result in the extraction of more than 30,000m<sup>3</sup> of material per year.

An Environmental Impact Statement (EIS) prepared by de Groot & Benson Pty Ltd has been submitted with the application and is referred to in this report.

The development is also Integrated Development as it requires an Environment Protection Licence (EPL) under Section 48 of the Protection of the Environment Operations Act 1997 (POEO Act).

The proposal has been advertised on three (3) separate occasions in accordance with the requirements of the *Environmental Planning and Assessment Regulation 2000*. Following exhibition of the application, a total of 129 written submissions were received from 35 different parties. Of the submissions received, 14 supported the proposal, 8 provided comments on the Draft Voluntary Planning Agreement, and 107 objected to the proposed development.

The assessment of the application has also considered written submissions from the following public authorities:

- NSW Environment Protection Authority;
- NSW Department of Primary Industries - Water;
- NSW Department of Primary Industries - Agriculture;
- NSW Roads and Maritime Services;
- NSW Department of Industry - Geological Survey of NSW;
- NSW Rural Fire Service.

This report provides an assessment of the application in accordance with the Environmental Planning and Assessment Act 1979. The consent authority must be satisfied in relation to a number of provisions in relevant environmental planning instruments applicable to the proposal before granting consent to the development. A detailed assessment of the relevant clauses is noted within the report. A summary is also provided below:

- **Clause 7 of SEPP No 44 – Koala Habitat Protection.** Council officers are satisfied that the land is potential koala habitat. Clause 8 of the SEPP therefore must also be considered;

- **Clause 8 of SEPP No 44 – Koala Habitat Protection.** Council officers are satisfied that the land is not core koala habitat. The consent authority is therefore not prevented from granting consent because of this Policy;
- **Clause 7 of SEPP No 55 – Remediation of Land.** The land is not known to have previously been used for a purpose referred to in Table 1 of the contaminated land planning guidelines. The land is therefore not considered to be contaminated and Council officers are satisfied that the proposed development meets the provisions of clause 7(1) of the SEPP;
- **Clause 7.13 of the Port Macquarie-Hastings LEP 2011 – Essential Services.** Clause 7.13 requires the consent authority to be satisfied that any services that are essential for the proposed development are available or that adequate arrangements have been made to make them available when required. Subject to conditions of consent, Council officers are satisfied that the proposed development meets the provisions of clause 7.13 of the LEP;

In summary, the assessment of the proposed development has adequately addressed all consent considerations required by the above environmental planning instrument clauses. It is therefore considered that the Panel can proceed with determining the application, subject to the recommended conditions of consent.

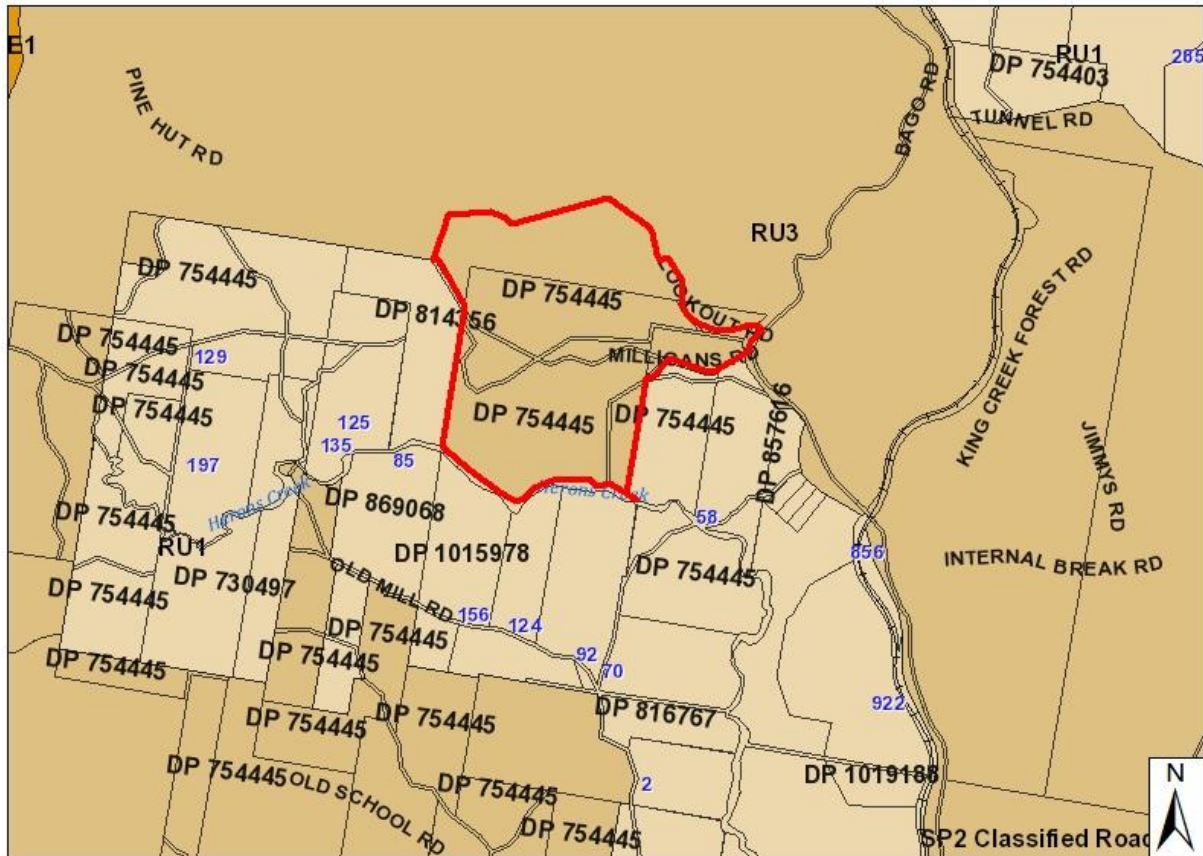
The Applicant has been provided with a copy of the draft 'without prejudice' conditions for review. There are no matters of disagreement in relation to the draft conditions.

## **1. BACKGROUND**

### **Existing sites features and surrounding development**

The site is located on Lot 161 DP 754445, and Compartments 42 and 43 of Broken Bago State Forest (described as Seq: 184 Ext: 15, Seq: 184 Ext: SEVERAL in Council's property database), which have a combined area of 188 hectares. The proposed quarry footprint is approximately 20 hectares in area.

The site is zoned RU3 Forestry in accordance with the Port Macquarie-Hastings Local Environmental Plan 2011, as shown in the following zoning plan:



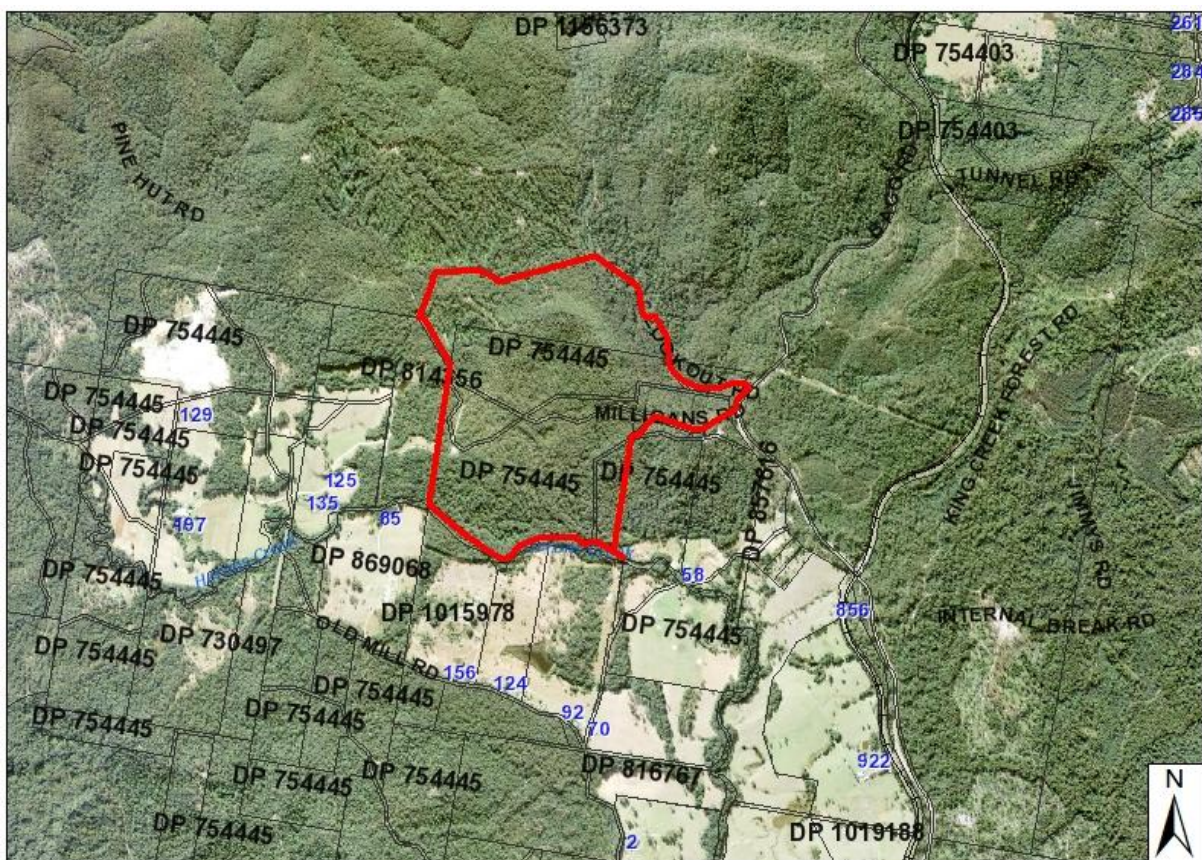
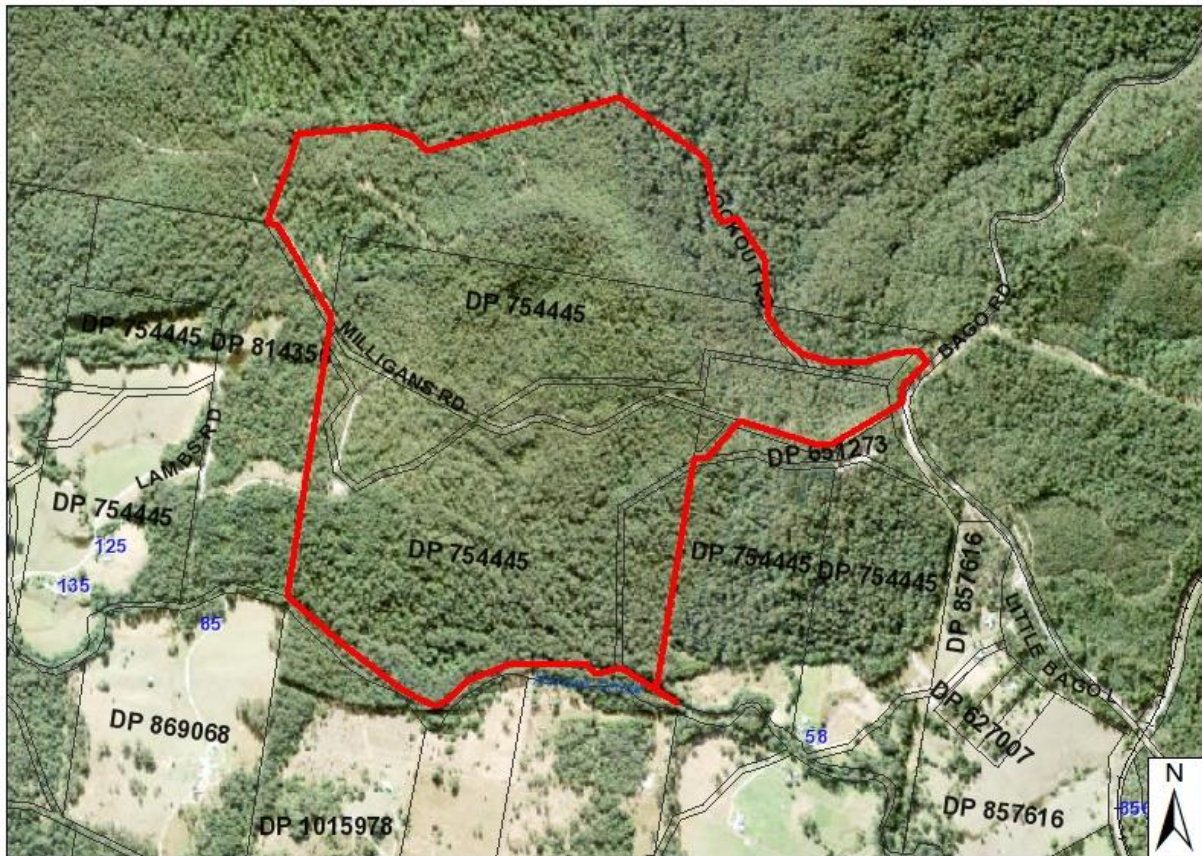
The site is located approximately 8 kilometres south of the Wauchope town centre and 4.5 kilometres to the north-west of the closest part of the Pacific Highway alignment.

Access to the site is from Bago Road via a forestry road known as Lookout Road (or Baulman Lookout Road).

Land in the immediate surrounds of the quarry to the north, north-west and east is forestry within Crown land set aside as Broken Bago State Forest. Land to the west and south is privately owned rural holdings, with areas generally in the order of 40 hectares and containing rural dwellings. The Bago Vineyard and Maze is located approximately 2.5 kilometres to the south-west of the proposed quarry. An existing hard rock quarry known as Coastal Quarry Products (also previously known as Bago Quarry or Volcanic Resources) is located approximately 2 kilometres west of the subject site.

The existing subdivision pattern and location of existing development within the locality is shown in the following aerial photographs:





## 2. DESCRIPTION OF DEVELOPMENT



The proposal seeks consent to establish a hard rock quarry and processing plant to produce a maximum of 200,000 tonnes of quarry material per year for a 20 year period. The development is intended to be carried out in the following stages:

- Stage 1 - extraction of approximately 400,000m<sup>3</sup> of material from an area of 4.7 hectares on the eastern side of the proposed quarry site.
- Stages 2 to 4 - extraction of approximately 1,700,000m<sup>3</sup> of material from an area of 9.9 hectares.

The development involves the construction of a new road from the proposed quarry to Lookout Road and upgrading of Lookout Road to a standard suitable for two-way heavy vehicle traffic. In addition, the intersection of Bago Road and Lookout Road will be upgraded. An existing forestry trail will be utilised for access to the proposed sediment and water process dam.

Key components of the proposed development include:

- Quarry extraction zone – approximately 14.6 ha;
- Residual vegetated area of the quarry site – 5.4 ha;
- Processing Plant (approx. 2,700 m<sup>2</sup>) consisting of a crushing plant, conveyors, screens and stockpiles;
- A product storage area (approx. 4,000 m<sup>2</sup>) with associated truck access and turning areas;
- Sediment and water process dam;
- 50,000L water tank – for general quarry operations and fire fighting purposes;
- 20,000L diesel tank;
- A rising main connecting the proposed Sediment and Process Water Dam to the onsite water storage tank and the RFS water tank;
- Header tank;
- Weighbridge;
- A Management Centre consisting of a workshop and storage shed, portable office building, portable lunch and amenities building, a portable toilet, on site car parking area;
- Overburden and topsoil stockpile areas;
- Internal access tracks, access driveway, turning areas and ramps;
- Perimeter fencing around the quarry and associated buildings;
- A front gate at the northern end of the access driveway, adjacent to Lookout Road;
- A secondary 'bushfire' escape gate south of the car parking area adjacent to Milligans Road.

The existing Blackbutt plantation on the subject site was identified in the Environmental Impact Statement (EIS) as being intended to be harvested by the NSW Forestry Corporation prior to commencement of the proposed development. Harvesting this vegetation has subsequently been completed during May 2016.

Extraction of the material will utilise methods such as periodic drilling and blasting, ripping, excavating, use of front end loaders or hydraulic methods. Fragmented rock will be loaded onto dump trucks and transported within the site for processing where it will be separated into various sized aggregates, generally for road building and construction applications.

Overburden is estimated to be an average depth of 1 metre below existing ground level based on preliminary geotechnical investigations. This material is proposed to be stripped off the site and stockpiled for progressive rehabilitation.

The proposed extraction area would be excavated to a maximum depth of approximately 37m. Extraction is proposed to be carried out generally from east to west, and three benches having finished levels of 100m AHD, 110m AHD and 120m AHD are intended to be established as shown on the quarry long section plan.

Plans of the proposed development are included in the attachments to this report.

#### Designated Development

The proposal is classified as 'Designated Development' under *Schedule 3* of the *Environmental Planning and Assessment Regulation 2000*. The proposal will result in the extraction of more than 30,000m<sup>3</sup> of material per year.

An Environmental Impact Statement (EIS) prepared by de Groot & Benson Pty Ltd has been submitted with the application and is referred to in this report.

#### Integrated Development

The development is also an 'Integrated Development' as it requires an Environment Protection Licence (EPL) under Section 48 of the Protection of the Environment Operations Act 1997 (POEO Act).



## Application Chronology

- 12 March 2015- Environmental Assessment Requirements issued by Department of Planning and Environment prior to lodgement of the application.
- 22 December 2015 - Application lodged.
- 5 January 2016 - External referrals sent to NSW Environment Protection Authority (EPA), NSW Department of Primary Industries - Water, NSW Department of Planning and Environment, and NSW Rural Fire Service (RFS).
- 8 January 2016 to 8 February 2016 - Advertising and neighbour notification of the proposal.
- 18 January 2016 - Instructions provided to Lindsay Taylor Lawyers for commencement of drafting Voluntary Planning Agreement (VPA).
- 22 January 2016 - Exhibition period extended to 22 February 2016, due to delay in advertisement being published in the local newspapers. Amended letters sent and amended site notice displayed.
- 1 February 2016 - Application referred to Roads and Maritime Services (RMS).
- 4 February 2016 - Referral advice received from NSW Department of Primary Industries - Water.
- 9 February 2016 - Plans of quarry buildings submitted by Applicant.
- 24 February 2016 - Referral advice received from RFS.
- 24 February 2016 and 26 February 2016 - Copies of submissions received during exhibition period forwarded to NSW Environment Protection Authority (EPA), NSW Department of Primary Industries - Water, and NSW Department of Planning and Environment.
- 26 February 2016 - Referral advice received from RMS.
- 29 February 2016 - Copy of submissions forwarded to Applicant.
- 4 March 2016 - Additional details of proposed electricity supply submitted by Applicant.
- 14 March 2016 - Meeting between Council staff and Applicant to discuss potential changes to quarry access prior to proceeding with drafting of the Voluntary Planning Agreement (VPA).
- 17 March 2016 - Referral advice received from EPA.
- 24 March 2016 - Additional information requested from Applicant.
- 8 April 2016 - Further additional information requested from Applicant on water quality impacts.
- 22 April 2016 - Written request received from Applicant seeking Council's agreement for the application to be amended by relocating the proposed water storage dam slightly upstream to a second order stream.
- 22 April 2016 - Confirmation provided that Council agrees to the proposed amendment of the application.
- 27 April 2016 - Comments provided to Applicant regarding the submitted Traffic Impact Assessment.
- 3 May 2016 - Draft VPA sent to Applicant for review.
- 4 May 2016 - Comments of Draft VPA provided by Applicant.
- 9 May 2016 - Amended plans and Addendum EIS submitted to Council by the Applicant.
- 11 May 2016 - Further instructions provided to Lindsay Taylor Lawyers for amendments to Draft VPA.
- 12 May 2016 - External referrals sent to NSW Environment Protection Authority (EPA), NSW Department of Primary Industries - Water, NSW Department of Primary Industries - Agriculture, NSW Department of Industry, NSW Department of Planning and Environment, and NSW Rural Fire Service (RFS).
- 18 May 2016 to 16 June 2016 - Amended application re-advertised and notified to neighbours.

- 23 May 2016 - Additional information requested from Applicant regarding ecological impacts of amended dam location.
- 25 May 2016 - Additional information submitted by Applicant regarding ecological impacts of dam location.
- 3 June 2016 - Referral advice received from RMS on Addendum EIS.
- 7 June 2016 - Referral advice received from EPA on Addendum EIS.
- 8 June 2016 - Referral Advice received from NSW Department of Industry and RFS on Addendum EIS.
- 16 June 2016 - Referral Advice received from NSW Department of Primary Industries - Water on Addendum EIS.
- 16 June 2016 - Revised Draft VPA forwarded to Applicant.
- 17 June 2016 - Further comments on revised Draft VPA provided by Applicant.
- 20 June 2016 - Referral advice received from NSW Department of Primary Industries - Agriculture on Addendum EIS.
- 22 June 2016 - Final Draft VPA forwarded to Applicant.
- 27 June 2016 - Copy of additional submissions forwarded to NSW Environment Protection Authority (EPA), NSW Department of Primary Industries - Water, NSW Department of Planning and Environment, and the Applicant.
- 5 July 2016 - Additional information on Addendum EIS requested from Applicant.
- 19 July 2016 - Additional information submitted by the Applicant.
- 21 July 2016 - Executed version of Draft VPA submitted to Council by Applicant.
- 27 July 2016 to 26 August 2016 - Public exhibition of Draft VPA.
- 21 September 2016 - Joint Regional Planning Panel (JRPP) Determination Meeting - matter deferred pending additional information from the Applicant.
- 27 September 2016 - Additional information requested from the Applicant in accordance with JRPP requirements.
- 12 October 2016 - Additional information submitted to Council by Applicant.
- 19 October 2016 - 18 November 2016 - Application re-advertised and notified with additional information.
- 6 December 2016 - Additional information in response to submissions received from Applicant.
- 13 January 2017 - Draft conditions forwarded to Applicant for review.
- 20 January 2017 - Comments received from Applicant on draft conditions.

### **3. STATUTORY ASSESSMENT**

**The provisions (where applicable) of:**

#### **(a)(i) Any environmental planning instrument**

#### **State Environmental Planning Policy No. 33 - Hazardous and Offensive Development**

The primary aims of this SEPP relate to:

- the provision of standard definitions of offensive and hazardous industries for inclusion in environmental planning instruments;
- ensuring that in considering any application to carry out potentially hazardous or offensive development, the consent authority has sufficient information to assess whether the development is hazardous or offensive and to impose conditions to reduce or minimize any adverse impacts; and
- ensuring that in deciding whether a development is a hazardous or offensive industry, any measures proposed to be employed to reduce the impact of the development are taken into account.

A proposal is not considered to be an 'offensive industry' unless it is first identified as a 'potentially offensive industry'. The NSW Department of Planning's *Hazardous and Offensive Development Application Guidelines - Applying SEPP 33* provides that:

*"For developments identified as 'potentially offensive industry', the minimum test for such developments is meeting the requirements for licensing by the DECCW or other relevant authority. If a development cannot obtain the necessary pollution control licences or other permits, then it may be classified as 'offensive industry', and may not be permissible in most zonings."*

The Applicant has provided sufficient details to demonstrate that reasonable and practical mitigation measures can be employed on site and general terms of approval for an Environment Protection Licence have been issued by the NSW EPA. The development is therefore not considered to be an offensive industry.

#### **State Environmental Planning Policy No. 44 - Koala Habitat Protection**

With reference to clauses 6 and 7, the subject land is greater than 1 hectare (including any adjoining land under same ownership) and therefore the provisions of the SEPP must be considered.

The submitted EIS includes a Statutory Environmental Assessment prepared by Naturecall Environmental and dated December 2015, which included consideration of the SEPP. The site was identified as being potential koala habitat due to Tallowood constituting more than 15% of canopy trees in a 1 hectare area in the south of the quarry footprint.

Further investigation was carried out by the author to determine whether the site constituted core koala habitat. However, the site failed to qualify as core koala habitat for the following reasons:

- Lack of any recent or historical sightings of Koalas in the study area.
- Lack of evidence to indicate breeding activity eg females with young or a territorial male Koala response to call playback.
- Failure to identify an Area of Major Activity.

A Koala Plan of Management is therefore not required.

#### **State Environmental Planning Policy No. 55 – Remediation of Land**

Following an inspection of the site and a search of Council records, the subject land is not identified as being potentially contaminated and is therefore considered suitable for the intended use in accordance with Clause 7(1) of the SEPP.

The land is not known to have been used for a purpose referred to in Table 1 of the contaminated land planning guidelines. Therefore, a preliminary investigation is not required prior to determining the application.

#### **State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2008**

This SEPP aims to ensure the sustainable operation and management of mineral, petroleum and extractive material resources.

Clause 7 - Development for the purpose of an extractive industry is permissible with consent on land on which development for the purposes of agriculture or industry may be carried out (with or without development consent). Agriculture and extractive industries are permitted with consent in the RU3 Forestry zone under the Port Macquarie-Hastings Local Environmental Plan 2011.

The below table considers the relevant provisions in Part 3 of the SEPP that must be considered for development applications.

Applicable clauses for consideration	Comments
12(a)(i) - The existing uses and approved uses of land in the vicinity of the development.	Land in the immediate surrounds of the quarry to the north, north-west and east is forestry within Crown land set aside as Broken Bago State Forest. Land to the west and south is privately owned rural holdings, with areas generally in the order of 40 hectares and containing rural dwellings. The Bago Vineyard and Maze is located approximately 2.5 kilometres to the south-west of the proposed quarry. An existing hard rock quarry known as Coastal Quarry Products (also previously known as Bago Quarry or Volcanic Resources) is located approximately 2 kilometres west of the subject site.
12(a)(ii) - Whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be the preferred uses of land in the vicinity of the development.	<p>The preferred uses of land in the vicinity of the development are forestry and agricultural activities with associated dwellings.</p> <p>The use of nearby land for forestry is not expected to be significantly affected by the proposed development. However, agricultural and residential uses would potentially be impacted by various aspects of the proposed extractive industry, including:</p> <ul style="list-style-type: none"> <li>• Noise;</li> <li>• Blasting;</li> <li>• Air and water quality impacts;</li> <li>• Traffic;</li> <li>• Visual impact.</li> </ul> <p>The above matters are discussed in detail later in this report.</p>
12(a)(iii) - Any ways in which the development may be incompatible with any of those existing, approved or likely preferred uses.	<p>The following aspects of the development would potentially be incompatible with existing and approved agricultural, tourist and residential uses in the vicinity:</p> <ul style="list-style-type: none"> <li>• Noise;</li> <li>• Blasting;</li> <li>• Air and water quality impacts;</li> <li>• Traffic;</li> <li>• Visual impact.</li> </ul> <p>The above matters are discussed in detail later in this report.</p>



<p>12(b) - Evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii).</p>	<p><u>Public benefit of existing and approved land uses:</u></p> <ul style="list-style-type: none"> <li>• Production of primary products;</li> <li>• Production of timber resource;</li> <li>• Attraction of tourists to the area;</li> <li>• Public recreational opportunities in State Forest;</li> <li>• Employment in primary production and tourism (number of jobs created by existing uses in the area not known).</li> </ul> <p><u>Public benefit of proposed development:</u></p> <ul style="list-style-type: none"> <li>• Improved local supply of construction and road building resources;</li> <li>• Improved competition for construction and road building resources;</li> <li>• Employment opportunities (submitted EIS suggests 12 staff would be employed directly at the quarry and an additional 6 truck drivers);</li> <li>• Additional income stream from State Forest could be invested in improved forestry management in the region;</li> <li>• Multiplier effects on local economy (estimated in the EIS to be approximately \$4.5 Million per annum).</li> </ul> <p>With the exception of the forestry activities within the quarry footprint, the existing public benefits of surrounding land uses would largely remain. The assessment has demonstrated that impacts on agricultural and tourism land uses in the locality are acceptable, and these uses are therefore expected to continue.</p> <p>The timber harvested from the existing plantation been estimated to have a commercial value of approximately \$38,000. Temporary employment is generated during the establishment and harvesting phases of a plantation. The estimated rotation cycle for a plantation on the subject site is in excess of 40 years. The previous plantation is understood to have been planted in 1970 and harvested in 2016.</p> <p>The public benefit of the proposed development is therefore considered to be greater than the existing forestry use.</p>
<p>12(c) - Evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as</p>	<p>Proposed mitigation measures are evaluated in detail later in this report.</p>

referred to in paragraph (a) (iii).	
<p>14(1) - Whether or not the consent should be issued subject to conditions aimed at ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure the following:</p> <p>(a) that impacts on significant water resources, including surface and groundwater resources, are avoided, or are minimised to the greatest extent practicable,</p> <p>(b) that impacts on threatened species and biodiversity, are avoided, or are minimised to the greatest extent practicable,</p> <p>(c) that greenhouse gas emissions are minimised to the greatest extent practicable.</p>	<p>Any consent should be subject to such conditions. The recommended conditions address these matters.</p> <p>In relation to greenhouse gas emissions, the Greenhouse Gas Assessment prepared by de Groot &amp; Benson Pty Ltd suggests that greenhouse gas emissions can be minimised by the following strategies:</p> <ul style="list-style-type: none"> <li>• Use of bio-diesel for vehicles and equipment where possible;</li> <li>• Use of modern vehicles and machinery;</li> <li>• Regular maintenance of vehicles and machinery and driver education.</li> <li>• Progressive rehabilitation and revegetation of the quarry site to provide carbon sequestration.</li> </ul>
<p>14(2) - The consent authority must consider an assessment of the greenhouse gas emissions (including downstream emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions.</p>	<p>The submitted EIS includes a Greenhouse Gas Assessment prepared by de Groot &amp; Benson Pty Ltd and dated December 2015. The report has been considered having regard to the (Commonwealth) Department of Environment's guideline <i>National Greenhouse Accounts Factors</i> and is discussed in detail later in this report.</p> <p>There are no relevant State policies, programs or guidelines applicable to assessment of greenhouse gas emissions for extractive industries.</p>
<p>14(3) - The consent authority must consider any certification by the Chief Executive of the Office of Environment and Heritage or the Director-General of the Department of Primary Industries that measures to mitigate or offset the biodiversity impact of the proposed development will be adequate.</p>	<p>No such certification has been issued.</p>

<p>15(1) - The consent authority must consider the efficiency or otherwise of the development in terms of resource recovery.</p>	<p>Based on preliminary geotechnical investigations the EIS suggests that the development site will have approximately 146,000m<sup>3</sup> of overburden, based on an average depth of 1m. The overburden is proposed to be progressively stripped and stockpiled for use in site rehabilitation.</p> <p>The rhyolite resource is proposed to be crushed into a variety of aggregate sizes, predominantly for use as road or concrete aggregate. Waste products produced by the crushing process include crusher dust and clay fines. There is a limited market for these products and they will be sold where possible. Any material not able to be sold can be used in the progressive rehabilitation of the site.</p> <p>The proposal is considered to be efficient in terms of resource recovery.</p>
<p>15(2) - The consent authority must consider whether or not the consent should be issued subject to conditions aimed at optimising the efficiency of resource recovery and the reuse or recycling of material.</p>	<p>The resource recovery process is considered to be efficient. Waste products generated by the extraction and processing of rhyolite will be predominantly overburden, crusher dust and fines. These materials can all potentially be used in the future rehabilitation of the quarry.</p> <p>No specific conditions are considered necessary in relation to this matter.</p>
<p>15(3) - The consent authority may refuse to grant consent to development if it is not satisfied that the development will be carried out in such a way as to optimise the efficiency of recovery of minerals, petroleum or extractive materials and to minimise the creation of waste in association with the extraction, recovery or processing of minerals, petroleum or extractive materials.</p>	<p>The efficiency of resource recovery is satisfactory and it is not considered that the application could be refused on this basis.</p>
<p>16(1) - The consent authority must consider whether or not the consent should be issued subject to conditions that do any one or more of the following:</p> <ul style="list-style-type: none"> <li>(a) require that some or all of the transport of materials in connection with the development is not to be by public road,</li> <li>(b) limit or preclude truck movements, in connection with</li> </ul>	<p>The proposal includes haulage of material from the quarry to Bago Road via a private road. The remainder of the haulage route is via public roads. The haulage route does not pass through any residential areas or roads near schools.</p> <p>A condition is recommended requiring the preparation and implementation of a code of conduct for the transport of materials on public roads.</p>

<p>the development, that occur on roads in residential areas or on roads near to schools,</p> <p>(c) require the preparation and implementation, in relation to the development, of a code of conduct relating to the transport of materials on public roads.</p>	
<p>16(3) Consideration of comments received from the Roads and Traffic Authority (now RMS).</p>	<p>Comments were received from RMS on the original proposal on 26 February 2016 and on the Addendum EIS on 3 June 2016. The matters raised in their correspondence are addressed in detail later in this report.</p>
<p>17(1) and 17(2) - Whether or not the consent should be issued subject to conditions aimed at ensuring the rehabilitation of land that will be affected by the development.</p> <p>In particular, the consent authority must consider whether conditions of the consent should:</p> <p>(a) require the preparation of a plan that identifies the proposed end use and landform of the land once rehabilitated, or</p> <p>(b) require waste generated by the development or the rehabilitation to be dealt with appropriately, or</p> <p>(c) require any soil contaminated as a result of the development to be remediated in accordance with relevant guidelines (including guidelines under section 145C of the Act and the <a href="#">Contaminated Land Management Act 1997</a>), or</p> <p>(d) require steps to be taken to ensure that the state of the land, while being rehabilitated and at the completion of the rehabilitation, does not jeopardize public safety.</p>	<p>A Rehabilitation Plan prepared by Naturecall Environmental has been submitted as part of the EIS. The Plan addresses final land form and use, management of waste and contaminated soil, and public safety.</p> <p>Conditions are recommended requiring the implementation of the Rehabilitation Plan with the following additional requirements:</p> <ol style="list-style-type: none"> <li>Stabilisation of the quarry shall be completed as soon as practicable after sections of the quarry reach their finished surface levels. The stabilisation shall be recognised as the completion of the site preparation to a condition that leaves the site stable and ready to plant seedlings. The stabilisation shall include the spreading of topsoil, site grading, seeding to stabilise the disturbed areas, and the installation of sediment and erosion control works as required.</li> <li>The area of the site (including the quarry management centre) disturbed by excavation, building work and extraction activities shall not exceed 4 hectares at any time.</li> <li>A validation report shall be submitted to Council at the completion of the final stage of rehabilitation, confirming that the site has been investigated for potential contamination, any necessary remediation has been completed successfully, and the site is suitable for the proposed future use (forestry).</li> </ol>

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

Clause 20 - The proposal is regional development identified in Schedule 4A of the Environmental Planning and Assessment Act 1979, being Designated Development for an extractive industry.



Clause 21 - The Northern Joint Regional Planning Panel is authorised to exercise the consent authority functions of Council.

### **State Environmental Planning Policy (Rural Lands) 2008**

No provisions of this SEPP are applicable to the proposed development, as Part 3 relates only to rural dwellings and subdivision. It is noted that relevant rural planning principles and potential land use conflict are required to be considered in a similar manner under Clause 12 of SEPP (Mining, Petroleum Production and Extractive Industries) 2008, as discussed earlier in this report.

### **Port Macquarie-Hastings Local Environmental Plan 2011**

The proposal is consistent with the LEP having regard to the following:

- Clause 2.2, the subject site is zoned RU3 Forestry. In accordance with clause 2.3(1) and the RU3 zone landuse table, the proposed development for an extractive industry is a permissible landuse with consent.

The objectives of the RU3 zone are as follows:

- To enable development for forestry purposes.
- To enable other development that is compatible with forestry land uses.

In accordance with Clause 2.3(2), the proposal is consistent with the zone objectives having regard to the following:

- The proposal is a permissible landuse;
- The development is for a purpose that is compatible with forestry land uses. The Forestry Corporation of NSW have given owners' consent for lodgement of the development application and have entered into a Forest Material Licence Deed with the Applicant to ensure compatibility of the development with their surrounding forestry land uses.
- Clause 5.9 - Consent for removal of trees is not required under Clause 5.9(8)(c), due to the trees and other vegetation being located within a State Forest.
- Clause 5.10 – Heritage. The site does not contain or adjoin any known heritage items or sites of significance. Council has received written advice from the Bunyah Local Aboriginal Land Council, confirming that they have inspected the site and agree with the Aboriginal heritage assessment submitted as part of the EIS.
- Clause 7.13, satisfactory arrangements are in place for provision of essential services including electricity supply, on-site sewage management, stormwater drainage and suitable road access to service the development.

### **(a)(ii) Any proposed instrument that is or has been placed on exhibition**

No draft instruments apply to the site.

### **(a)(iii) Any DCP in force**

#### **Port Macquarie-Hastings Development Control Plan 2013:**

<b>DCP 2013: General Provisions</b>			
<b>DCP Objective</b>	<b>Development Provisions</b>	<b>Proposed</b>	<b>Complies</b>
2.7.2.2	Design addresses generic principles of Crime Prevention Through Environmental Design guideline: <ul style="list-style-type: none"><li>• Casual surveillance and sightlines</li></ul>	Development includes security fencing to prevent unauthorised access.  Lighting is also proposed for the processing area.	Yes

	<ul style="list-style-type: none"> <li>• Land use mix and activity generators</li> <li>• Definition of use and ownership</li> <li>• Lighting</li> <li>• Way finding</li> <li>• Predictable routes and entrapment locations</li> </ul>		
2.3.3.8	Removal of hollow bearing trees	<p>The Naturecall Environmental Addendum Ecological Assessment identifies 11 hollow bearing trees in the vicinity of the proposed water storage and process dam. The report identifies that 4 of the hollow bearing trees would be impacted by the dam construction. These trees score between 10.5 and 13 in accordance with Council's hollow bearing tree assessment protocol.</p> <p>Trees scoring between 8 and 12 are required to be retained unless management measures are 'impractical to allow retention'. Trees that score more than 12 are required to be retained and afforded protection from the development. The Naturecall Environmental report notes that hollow bearing trees are uncommon in the area due to the history of forestry operations, and their retention is therefore considered to be important.</p> <p>The Applicant has refined the dam design and slightly reduced the top water level to provide greater protection to the hollow bearing trees. The amended plan from de Groot &amp; Benson Pty Ltd identifies only 2 hollow bearing trees that would potentially be impacted by the dam. The two trees are numbered H8 and H14 in the report and each score 12.5 on Council's HBT assessment protocol.</p>	Yes

		<p>Tree H8 would be located in the dam wall embankment and is proposed to be filled around during dam wall construction (approximately 3-4m deep). The tree is likely to ultimately die as a result of this action, but would retain its habitat value.</p> <p>Tree H14 is located adjacent to the dam spillway and would be impacted by the current spillway design. A re-design of the spillway location to the east could ensure that tree H14 is retained and not impacted by the dam construction/operation, and the Applicant has indicated that this amendment would be feasible. A condition is recommended requiring an amended dam and spillway design prior to the issue of a Construction Certificate for the development.</p>	
2.4.3	Bushfire risk, Acid sulphate soils, Flooding, Contamination, Airspace protection, Noise and Stormwater	Refer to main body of report.	
2.5.3.3	Off-street parking in accordance with Table 2.5.1. Reduction possible if supported by parking demand study.	<p>9 formal car parking spaces are proposed on the site plan, with additional overflow space to safely accommodate extra parking that may be generated from time to time.</p> <p>Given that the maximum full time employment is expected to be 12 persons, the proposed parking provision is considered acceptable.</p>	Yes
2.5.3.7	Parking in accordance with AS 2890.1.	The site plan provided with the application has demonstrated that the parking area is capable of complying with the standard, and conditions have been imposed to reflect this requirement at the design and post-construction stages.	Yes
2.5.3.11	Section 94 contributions	Refer to main body of report.	
2.5.3.14	Sealed driveway surfaces	A dust-free surface is	Yes

	unless justified	considered satisfactory given the separation between the site and the nearest sensitive receivers. Conditions have been recommended requiring construction and maintenance of the area in a dust-free condition.	
2.5.3.17	Parking areas to be designed to avoid concentrations of water runoff on the surface. No direct discharge to K&G or swale drain	Surface water runoff will be directed to the sediment basins.	Yes

**(a)(iii)(a) Any planning agreement or draft planning agreement**

Council has received an offer to enter into a Voluntary Planning Agreement (VPA) in connection with the Development Application.

The Planning Agreement provides for payment by the developer to Council of a monetary contribution of \$0.20 per tonne, towards the maintenance of the Bago Road haulage route. The monetary contribution amount, maintenance requirements and security for performance of the planning agreement have been considered acceptable by Council engineering staff.

A copy of the draft Planning Agreement is attached to this report.

Public notification of the draft Planning Agreement was carried out between 27 July 2016 and 26 August 2016, including a notice in the local newspaper. Adjoining owners and those people who had made previous written submissions on the associated Development Application were notified in writing of the proposed Planning Agreement. Following exhibition eight (8) submissions were received in relation to the Draft VPA. Key issues raised in the submissions received and comments in response to these issues are provided as follows:

<b>Submission Issue/Summary</b>	<b>Planning Comment/Response</b>
Added competition will lead to better supply and prices for road construction materials.	This matter is relevant to the Development Application rather than the draft VPA and is discussed in the Submissions section later in this report.
The formula for contributions in the draft VPA is favourable to Council and would place a heavy financial burden on the developer.	The calculated contribution is based on the relative impact of heavy vehicles associated with the development on the design life of the haulage route (Bago Road). The contribution has been determined using AUSTRROADS Guide to Pavement Technology, Part 2: Pavement Structural Design.  The contribution has been calculated in a consistent manner to other quarries recently approved in the Local Government Area.
Council is responsible for public road maintenance.	Agreed. The objective of the VPA is to ensure that the community is not left with the burden of funding additional road maintenance that is attributable to heavy vehicle movements from a private development.



Monetary contributions for road maintenance should not override consideration of other environmental impacts of the development.	Agreed. Other impacts of the proposal have been addressed in this report.
All matters raised in previous submissions on the DA still need to be considered.	Agreed. See comments later in this report regarding submissions made on the DA.
Increase in truck movements on an already sub-standard road.	This matter is relevant to the Development Application rather than the draft VPA and is discussed in the Submissions section later in this report.
Object to any further noise pollution given off by another quarry.	This matter is relevant to the Development Application rather than the draft VPA and is discussed in the Submissions section later in this report.
Agree that it is necessary for developments resulting in heavy vehicle traffic to contribute to the cost of road maintenance.	Noted.
Vegetation at the site has been cleared prior to approval of the DA.	This matter is relevant to the Development Application rather than the draft VPA and is discussed in the Submissions section later in this report.
As the land is owned by the Forestry Corporation of NSW, they should be a party to the VPA.	<p>Council's solicitors have drafted the agreement and are satisfied that the Forestry Corporation of NSW do not need to be a party to the VPA. Section 23 of the Draft VPA provides for its termination in the event that the Forestry Corporation of NSW terminates the FML Deed or Forest Material Licence.</p> <p>It is noted that the Forestry Corporation of NSW have granted land owner's consent for lodgement of the Development Application, which included an offer to enter into a Planning Agreement.</p>
The full capacity of the developer to enter into the deed is questioned due to winding up of sister company CTK Constructions Pty Ltd by the Deputy Commissioner of Taxation.	<p>CTK Natural Resources Pty Ltd is a registered company and the Applicant has provided warranty by executing the Draft VPA that the company has full capacity to enter into the agreement.</p> <p>The Draft VPA requires the developer to provide security equal to one year's contributions at the maximum extraction rate (200,000 tonnes). In the event of an unplanned closure of the quarry, Council would have sufficient funds to cover road impacts caused within the period.</p>
Part 9.1 of the Draft VPA states that the contributions can be used for the maintenance or upgrade of the Haulage Route, or such other public roads that Council determines as	This provision would only apply where Council could demonstrate that the haulage of material from the proposed quarry was having a detrimental impact on public roads other than the haulage route nominated in the Draft VPA.

being impacted by the Development. The “other public roads” should be identified and prioritised. Little Bago Lane, Lambs Road and Old Mill Road should be prioritised as their residents would be most negatively impacted by the development.	Little Bago Lane, Lambs Road and Old Mill Road are not expected to be regular haulage routes for the material and therefore it is unlikely that contributions would be used to maintain or upgrade these roads.
Part 9.3 of the Draft VPA indicates that the contributions can be used for a public purpose other than that specified in the agreement is it is deemed to better serve the public interest. The Herons Creek community should be the recipient of any such works.	Noted. The Draft VPA provides scope for Council to consider this on merit.
Part 10.3 of the Draft VPA leaves it too open for the quarry operator to falsify reports on haulage volumes for monetary advantage.	<p>It is understood that normal practice for other quarries operating under similar Planning Agreements is for the provision of a Statutory Declaration witnessed by a solicitor to be provided as part of the annual report. There is scope in the Draft VPA for Council to use any other means necessary to confirm that the haulage volumes provided are accurate.</p> <p>Section 27.2 of the Draft VPA requires the Developer to pay to Council the reasonable costs of enforcing the Deed.</p>
The contribution rate will not generate sufficient contributions to properly upgrade the haulage route and any other public roads. Cost estimates should be provided.	The contribution rate was calculated based on a cost estimate to fully rebuild 4.4 kilometres of Bago Road at \$2,500,000 per kilometre. The AUSTROADS Guide to Pavement Technology provides an industry accepted method for calculating damage to roads caused by repetitive truck movements. Using this method for a variety of truck sizes and loads, the likely worst case resulted in the quarry contributing about 10% of the overall deterioration of the road over the life of the quarry (i.e. local truck industries and through traffic contribute the other 90%). This equated to a total \$1,070,000 to be paid for 2,100,000 cubic metres of quarried material, or \$0.20 per tonne.
Council should not have to bear 50% of the costs associated with dispute resolution in Parts 13.6 and 14.6 of the Draft VPA. Disputes are only likely to arise as a result of the developer’s actions.	<p>The provisions relating to shared cost of dispute resolution are intended to ensure that there is more incentive for reasonable negotiation between the parties on matters contained in the agreement. Both parties would also have a disincentive to take matters to mediation or expert determination due to the costs involved.</p> <p>Section 16 and 23 of the Draft VPA provide for Council to recover any reasonable costs associated with the enforcement of the agreement and any breaches.</p>

<p>The security amount is inadequate and inconsistent with the amount required for the recent expansion of Coastal Quarry Products in Milligans Road.</p>	<p>The security has been calculated to be equivalent to the contributions applicable for 12 months of haulage at maximum capacity (200,000 tonnes) and an interest component to address indexation of the contribution. In the event that the contributions were not paid by the proponent, Section 16 of the Draft VPA provides for Council to call up the security. There are unlikely to be any significant legal costs in calling up the security that need to be accounted for.</p> <p>The difference in the security amount in the Draft VPA from that contained in the Bago Quarry Planning Agreement is essentially due to the following factors:</p> <ul style="list-style-type: none"> <li>• The maximum permitted extraction for the Bago Quarry is significantly greater (490,000 tonnes); and</li> <li>• The Bago Quarry includes haulage on both Bago Road and Milligans Road. The proposal will only include haulage on Bago Road.</li> </ul>
<p>Should the developer wish to assign their rights and obligations to another party, a new Development Application should be made. Council should withhold consent for assignment or novation of the rights until a Development Application process has been completed.</p>	<p>It would be possible for the developer to assign or novate their rights and obligations to another party without further Development Application or modification of consent under the terms of the Draft VPA.</p>
<p>Haulage Route Plan is inconsistent with statement in the Addendum EIS.</p>	<p>The recommended conditions clarify the permitted haulage route and would prevail over the statements in the Addendum EIS.</p>
<p>The Draft VPA is not consistent with the Objectives, Nature and Effect stated.</p>	<p>The objective of the Draft Planning Agreement is to secure the provision of monetary Development Contributions for the purpose of maintaining and upgrading the haulage route. In the absence of the Planning Agreement, Bago Road is likely to become degraded as a result of the additional vehicle movements. The Draft VPA would ensure proper management and coordination of road infrastructure at no additional cost to the community. Funding for future road maintenance and upgrading is also expected to reduce environmental and public safety impacts associated with a degraded road pavement.</p>
<p>The Draft VPA is inconsistent with the Bago Quarry Planning Agreement in regard to the following aspects:</p> <ul style="list-style-type: none"> <li>• Sections 13 - 21, 32, 39, 41 and 45 of the Bago Quarry Planning Agreement not</li> </ul>	<p>Sections 13 - 21, 32, 39 and 41 of the Bago Quarry Planning Agreement relate to road works and maintenance of a 2.1km section of Milligans Road that forms part of the haulage route to the nearby quarry. These provisions are not applicable to the Draft VPA as the haulage route is via Compartment 43/2 Trail and Lookout Road (not Council public</p>

<p>included in the Draft VPA.</p> <ul style="list-style-type: none"> <li>• No requirement in the Draft VPA for works and maintenance of Milligans Road.</li> <li>• Bank Guarantee amount is much greater for Bago Quarry than the proposed development.</li> <li>• No works required at Bago Road intersection under the Draft VPA.</li> <li>• Only one signature required for Company.</li> <li>• No pre-termination works clause in Draft VPA.</li> <li>• No definitions of Rectification Notice, Rectify or Work in Draft VPA.</li> </ul>	<p>roads) to Bago Road. The proposal would therefore not have any significant impact on Milligans Road and it is not necessary to include the additional provisions that exist in the Bago Quarry Planning Agreement.</p> <p>For the same reason, no upgrading of the intersection of Bago Road and Milligans Road is necessary. The recommended conditions include requirements for the intersection of Bago Road and Lookout road to be upgraded to a suitable safe standard. As there are suitable hold points to ensure that this work will be completed prior to extraction commencing it is not considered necessary to include the works in the Draft VPA.</p> <p>Section 45 of the Bago Quarry Planning Agreement relates to amendment of the Deed. A similar provision is included in Section 33 of the Draft VPA under the heading of 'Modification'.</p> <p>The version of the Draft VPA executed by CTK Natural Resources Pty Ltd includes the signatures of two company Directors in accordance with the Corporations Act.</p> <p>The definitions for 'Rectification Notice', 'Rectify' and 'Work', and the section on pre-termination works in the Bago Quarry are also only applicable to works in Milligans Road and are not relevant to this proposal.</p> <p>The difference in the security amount in the Draft VPA from that contained in the Bago Quarry Planning Agreement is essentially due to the following factors:</p> <ul style="list-style-type: none"> <li>• The maximum permitted extraction for the Bago Quarry is significantly greater (490,000 tonnes); and</li> <li>• The Bago Quarry includes haulage on both Bago Road and Milligans Road. The proposal will only include haulage on Bago Road.</li> </ul>
<p>Costs payable for preparation and execution of the VPA are not specified in the draft.</p>	<p>Section 27.1 of the Draft VPA requires the developer to pay Council reasonable costs of preparing, negotiating, executing and stamping of the Deed.</p>
<p>Why are the FML Deed, Forest Material Licence and Occupation Certificate absent from the Preliminary Section?</p>	<p>These terms are all defined in Section 1.1 of the Draft VPA.</p>
<p>There is no exact Quarry Land Clause in the Draft VPA.</p>	<p>The development site is defined under 'Land' in Section 1.1 of the Draft VPA.</p>

<p>The Draft VPA should be given wider scope to incorporate infrastructure, adverse environmental consequences and haulage routes.</p>	<p>The intention of the Draft VPA is to address the impacts on the road pavement of the haulage route from heavy vehicles hauling extracted material from the quarry. The other matters listed are relevant considerations in the assessment of the associated Development Application and do not need to be included in a VPA.</p>
<p>The process water / silt water dam is accessed via Milligans Road and Lambs Road. The maintenance and dust suppression of these roads should be included in the Draft VPA.</p>	<p>Following the initial construction of the dam, access would be limited to maintenance, re-fuelling of pumps, and water quality monitoring. It is not expected that these activities would have any significant impact on the section of Milligans Road that is a Council public road. Inclusion of these matters in the Draft VPA is not considered necessary.</p>
<p>No tender or transparent process was followed when the FML Deed was entered into between CTK Natural Resources Pty Ltd and the Forestry Corporation of NSW.</p>	<p>This is a matter for the Forestry Corporation of NSW.</p>
<p>Definition of the land in the Draft VPA is inconsistent with the references in the DA documentation.</p>	<p>Noted. The definition in the Draft VPA further clarifies the land details by reference to the maps in Schedule 1.</p> <p>It is recommended that the property description in the notice of determination for the DA notes that “Seq: 184 Ext: 15, Seq: 184 Ext: SEVERAL” is also known as Compartments 42 and 43, Broken Bago State Forest.</p>
<p>The definition of ‘Quarry Consent’ should be deleted or amended. “Extraction of material” should be more specific and refer to hard rock (rhyolite). The phrase “as modified from time to time” is not acceptable. Any modification must be publicly exhibited.</p>	<p>The term ‘Quarry Consent’ needs to be defined as it is used elsewhere in the Draft VPA. The definition refers to “<u>any</u> Development Consent granted” and does not bind the consent authority to granting consent to the associated Development Application. The Development Application must still be considered on merit having regard to the matters discussed within this report.</p> <p>It is not considered that “extraction of material” needs to be defined more specifically in the Draft VPA to include hard rock (rhyolite) as this is clarified in the associated Development Application documents.</p> <p>The phrase “as modified from time to time” provides for modification of any Development Consent without the need to necessarily also modify the Planning Agreement. Any subsequent modification would require an application under Section 96 of the Environmental Planning and Assessment Act 1979 and would require further public consultation in accordance with clause 118 of the Environmental Planning and Assessment Regulation 2000.</p>

The term of the Draft VPA should be limited to 20 years, with a new Development Application required for any extension.	The EIS estimates that the resource would be exhausted in 20 years at maximum extraction rates (200,000 tonnes per year). If the resource was extracted at a slower rate it would be reasonable for Council to consider extending the term of the Planning Agreement without the need for a new Development Application.
The interpretation of 'business day' in the Draft VPA should include Saturdays as the quarry proposes to operate on Saturdays.	<p>There is no link between the term 'business day' in the Draft VPA and the hours of operation of the proposed quarry. Operational hours are controlled through conditions of development consent and/or an Environment Protection Licence.</p> <p>The term 'business day' in the Draft VPA is used to set appropriate timeframes for provision of information, payment of contributions, etc. The definition in the Draft VPA is considered appropriate in this context.</p>
The reference in 1.2.3 of the VPA to matters or things being done on the next business day is not acceptable in the event of environmental incident.	This only applies to matters or things required to be done under the Draft VPA (eg payment of contributions, provision of information, etc). The clause has not application to other matters required under an associated Development Consent or Environment Protection Licence.
Noise impact of trucks bouncing over potholes.	Noise impacts from the development are discussed later in this report. The intention of the Draft VPA is to ensure that funds are available for programmed repair of potholes on the haulage route.
Loss of traffic safety due to vehicles crossing to the wrong side of the road to avoid potholes.	Traffic safety impacts from the development are discussed later in this report. The intention of the Draft VPA is to ensure that sufficient funds are available to repair potholes on the haulage route.
The security requirement is not adequate for rehabilitation of the site in the event that the developer becomes insolvent.	The security is to cover the applicable development contributions for each 12 month period and does not relate to any other aspects of the development. Rehabilitation of the site, including unplanned closure, is discussed later in this report.
All vehicles associated with the proposed new quarry should be able to be differentiated from those of the existing Coastal Quarry Products quarry.	This is not considered practical as both quarries are likely to contract haulage to transport companies, rather than owning their own vehicles.
The Locality Plan in Schedule 1 is incorrect and incomplete, as it does not include the location of the water process dam.	The Locality Plan's application to the Draft VPA is to show the extent of Lot 161 and Part Lot 52 DP 754445 that are included in the definition of 'Land'. The location of the water process dam is not necessary to serve this purpose.
The Haulage Route Plan in Schedule 2 is incorrect and incomplete as it does not include the location of the water process	The conditions recommended within this report do not permit haulage on Milligans Road.

dam and does not identify Milligans Road as a haulage route.	
Bago Road south of Lookout Road to the Pacific Highway should be considered in its entirety. The whole length should be upgraded to the same standard that exists at the southern end near the Pacific Highway.	<p>The southern end of Bago Road near the Pacific Highway has been excluded from the calculation for road impact contributions as the pavement has been constructed to a standard that heavy vehicles would have a negligible impact on the design life of the road.</p> <p>The timing of any future upgrade to the remaining length of the haulage route would be considered by Council in accordance with applicable policies for asset management.</p>
What will the s94, s94A and s94EF amounts be? When will these amounts be received? Where will the funds be applied?	<p>Only s94A contributions would be applicable to the proposed development. A calculation of the applicable contribution is included in the Attachments to this report. The recommended conditions require payment of the contributions prior to the issue of a Construction Certificate for the development. Money paid to the Council under the Port Macquarie-Hastings S94A Levy Contribution Plan 2007 is applied by the Council toward meeting the cost of the public facilities that will be, or have been, provided within the Commercial and Industrial areas of the LGA (refer to Schedule 1 of the Plan).</p> <p>Schedule 1 of the Plan indicates that contributions levied could be used for streetscape, parking, road and intersection upgrades in Wauchope, Port Macquarie, Lake Cathie and Bonny Hills.</p>
The Draft VPA notes that the proposal conforms with Council's Capital Works Program. What budget and maintenance plans are forecast for Bago Road? Will Council contribute to the upgrade and maintenance of Milligans Road?	<p>Council's current Capital Works Program includes approximately \$1.9 Million for rehabilitation works on Bago Road in 2018/19. Additional State and Federal funding opportunities are being pursued to supplement these funds.</p> <p>Council would remain responsible for the maintenance of the 2.1km of Milligans Road that is a Council public road. Coastal Quarry Products will also have an obligation for upgrading and maintaining this section of Milligans Road in accordance with the Bago Quarry Planning Agreement should the increased extraction approved under DA2014/960 commence.</p>
Page 28 indicates that the Draft VPA does not contain any requirements that must be provided before the issue of an occupation certificate. There are references elsewhere to an occupation certificate being required.	<p>The requirements in the Draft VPA commence the date that an Occupation Certificate is issued. The statement on Page 28 is therefore correct.</p> <p>It is agreed that an Occupation Certificate will be required for the buildings in the quarry management centre.</p>
There is no maintenance specification for the Lookout Road	The maintenance specification for Milligans Road in the Bago Quarry Planning Agreement relates to the

haulage route similar to that required for Milligans Road under the Bago Quarry Planning Agreement.	section of Milligans Road that is a Council public road. The Lookout Road haulage route is a 'private' forestry road and would need to be maintained to any relevant specifications of the Forestry Corporation of NSW.
There is no requirement for the upgrade of the intersection of Lookout Road and Bago Road, as was required for the intersection of Bago Road and Milligans Road under the Bago Quarry Planning Agreement.	<p>As the proposal is for a new quarry rather than expansion of an existing quarry, there are 'hold points' for the issue of Construction and Occupation Certificates that allow requirements for intersection upgrades to be addressed through conditions of development consent, rather than a Planning Agreement.</p> <p>The conditions recommended in this report included requirements for detailed design of the intersection works prior to the issue of a Construction Certificate, and completion and certification of the works prior to the issue of an Occupation Certificate.</p>

With regard to delegation for entering into the Planning Agreement, Council's resolution of 15 July 2015 (Item 13.05) provides the General Manager delegated authority to enter into a Voluntary Planning Agreement on behalf of Council where the development to which the Agreement relates is approved by the Joint Regional Planning Panel. The Planning Agreement has not currently been entered into, and would only be entered into if the DA is granted consent.

**(a)(iv) Any matters prescribed by the regulations**

No matters prescribed by the regulations are applicable to the proposal.

**(a)(v) Any Coastal Zone Management Plan**

No Coastal Zone Management Plan applies to the subject site.

**(b) The likely impacts of that development, including environmental impacts on both the natural and built environments and the social and economic impacts in the locality**

**Context and Setting**

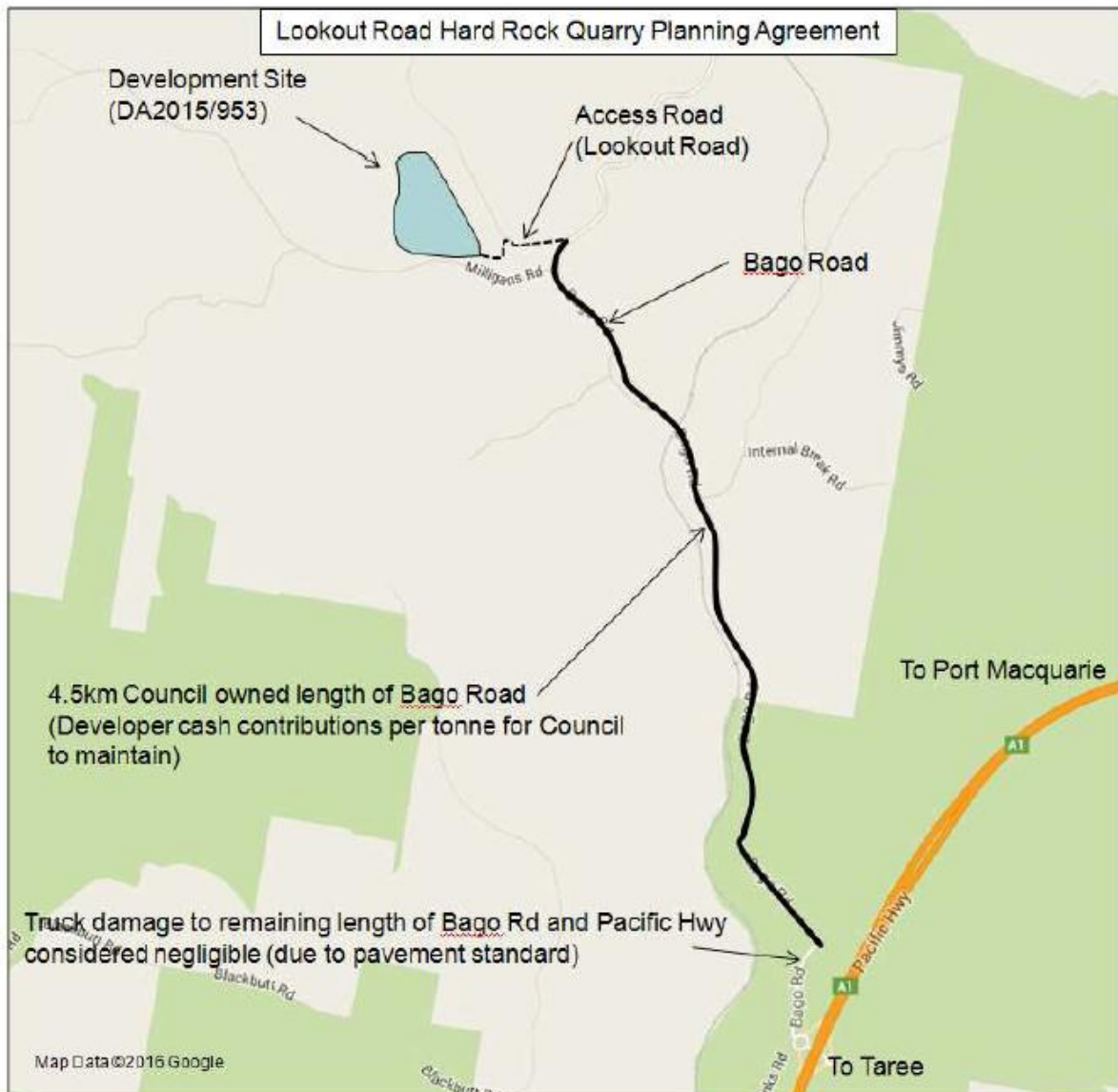
The location of the proposed development on a ridgeline in proximity to a number of rural dwellings makes it vulnerable to a variety of adverse impacts. It is important that such impacts can be appropriately mitigated or managed to maintain the amenity of the locality. The likely impacts and measures proposed to manage or mitigate them are discussed in greater detail in this section.

**Haulage Route**

The proposed haulage route for extracted material is via a forest trail (Compartment 43/2 Trail) to Lookout Road, then to Bago Road, then south on Bago Road to the Pacific Highway as shown in the Haulage Route Plan in Schedule 2 of the Draft Lookout Road Hard Rock Quarry Planning Agreement (see below).



## Haulage Route Plan



Lookout Road is a Forestry trail and provides access to other parts of the Broken Bago State Forest and Bago Bluff National Park. There are no dwellings or other sensitive uses located on the part of Lookout Road proposed to be used for haulage.

Bago Road between Lookout Road and the Pacific Highway is a sealed public road with an 80km/h speed limit. Land on the eastern side of Bago Road is State Forest and does not contain any dwellings or other sensitive uses. The North Coast Railway runs adjacent to the western side of Bago Road for the majority of the haulage route. Bago Road crosses the railway approximately 1.2 kilometres south-east of Lookout Road.

The closest rural dwellings along the haulage route are located on Nelsons Road/Little Bago Lane. Four dwellings in this locality are setback between approximately 100m and 190m from Bago Road. Further dwellings are located at No. 922 and No. 1106 Bago Road. These two dwellings are setback approximately 200m and 350m respectively.

## Roads

This section of the report considers the likely impacts on the road network by traffic associated with the development.

Compartment 43/2 Trail is currently a four wheel drive only gravel track from the proposed development site to Lookout Road. It is part of the broader forest road network owned by Forestry Corporation of NSW and does not provide access to any specific buildings or points of interest. Maintenance responsibility for Compartment 43/2 Trail is a matter for the quarry lease operator and the Forestry Corporation.

The section of Lookout Road proposed to be used for access to the site (approximately 350m in length to Bago Road) is similarly a forestry-owned gravel road varying generally between 5 and 7 metres in width. It is currently used by the public for access to the greater Broken Bago State Forest area, including for access to the top of Bago Lookout and Bago Bluff. This section of Lookout Road is currently graded to a standard enabling two wheel drive access.

Due to the proposed traffic volumes, both Cpt 43/2 Trail and Lookout Road will need to be upgraded to allow two trucks to pass each other. A 7m carriageway (3.5m each lane) has been specified, plus 1m shoulders on each side before dropping away to table drains as proposed by the applicant. This will provide additional width consistent with AUSTROADS standards for a major public road, to minimise risk of collision between trucks and public users of the road. The pavement design and roadside drainage mainly affect long term maintenance of the road and are therefore considered a matter for the quarry operator to negotiate with Forestry Corporation in accordance with that authority's standards and practices.

Milligans Road joins Bago Road approximately 150m to the south of Lookout Road. The existing approved quarry at 129 Milligans Road (Coastal Quarry Products) uses this intersection for its principal access. The Applicant has proposed not to use Milligans Rd for truck access. Adjacent to the proposed quarry's site entrance, a trail will be provided back to Milligans Road from Compartment 43/2 Trail, to allow for emergency access. However, to prevent trucks and staff from using Milligans Road on a routine basis, the trail is proposed to be gated and a condition of consent is recommended to clarify the circumstances under which the gate can be unlocked.

The proposal also includes a dam for water quality purposes, sited south of Milligans Road. Once constructed, any operational needs to access the dam are likely to be infrequent and not have an impact on traffic in Milligans Road.

According to Council's mapping system, a number of Crown-owned road reserves ('paper roads') cross the proposed access road (Compartment 43/2 Trail) and existing trails. The applicant has sought the concurrence of the Crown Lands Authority, who confirmed that because the proposal will not hinder existing public access through the Crown reserves, there is no objection to the proposal.

Bago Road is a sealed, two-way Rural Arterial road owned and maintained by Council. The sealed carriageway is approximately 8 to 9m wide plus additional gravel shoulders, and has a posted speed limit of 80 km/h. The intersection of Lookout Road with Bago Road is about 4.4km northwest of the point where Bago Road joins the Pacific Highway.

A condition of consent is recommended to restrict the quarry's trucks from using Bago Road north of the site except in the case of local deliveries (King Creek or Bago localities), as the approximately 10km length of road would result in a disproportionate increase in Council's

maintenance burden along Bago Road. For example, deliveries to Wauchope or west along the Oxley Highway are to first be routed southeast to the Pacific Highway, then north to the Oxley Highway 'donut' before heading west. In other words, the shortest route to the Pacific Highway is to be used, and from there the highway will distribute all deliveries across the Local Government Area or further abroad, as there are considered to be no significant impacts on the Pacific or Oxley Highways arising from the proposed development.

## **Traffic**

A Council traffic count on Bago Road south in 2014 indicated that traffic volumes along Bago Road were in the order of 1650 vehicles per day (total in both directions). Generally Bago Road has a high proportion (greater than 10%) of heavy vehicles given its proximity to the Wauchope industrial area and its function as a link between the Pacific Highway and Oxley Highway.

The recently approved increase in extraction at Coastal Quarry Products (129 Milligans Road) is anticipated to result in an additional 110 trips per day along Bago Road at peak output. The existing traffic count on Bago Road (before any quarry development on Lookout Road) is therefore likely to be in the order of 1800 trips per day, which equates to one vehicle every 20 seconds on average during the peak hour.

The applicant provided an addendum (dated May 2016) to the Traffic Impact Assessment (TIA) following queries from Council and State Government referrals. The revised assessment provides the following quantities:

Extracted material, T/yr	200,000
Extracted material, m <sup>3</sup> /yr	80,000 (at 2.5 T/m <sup>3</sup> )
Exported material, m <sup>3</sup> /yr	120,000 (bulking factor 1.5x)
Typical load size, m <sup>3</sup>	20 (typical truck and dog)
Trips per year	6,000 in and 6,000 out
Days of operation per year	305
Hours of operation per day	8
Average trips per day	20 in and 20 out
Average trips per hour	2.5 in / 2.5 out
Peak trips per day	40 in / 40 out (peak factor 2x)
Peak trips per hour	5 in / 5 out

Using the above numbers the TIA included a SIDRA model to simulate traffic performance at the Milligans Road and Lookout Road intersections. The assessment concluded that traffic delays would be insignificant (Level of Service A).

Council's assessment indicates the above numbers may potentially underestimate the actual number of movements that local roads could experience (particularly during peak output hours, which may only be limited by the maximum throughput rate of the truck loading machinery). Additionally, if the quarry operator uses lower load rated trucks, the number of movements will increase, although there is commercial incentive for the operator to maximise each truck load to save on haulage costs - which would reduce the truck count in line with the Applicant's estimates or less.

Despite potential understated numbers, a sensitivity analysis by Council confirms the same conclusion as the applicant; i.e. that the existing road network has sufficient capacity to cater for the proposed increase in trucks, except for road works recommended in the conditions attached to this report. Required upgrades to Compartment 43/2 Trail and Lookout Road were discussed under the Roads heading above, and improvements to the Bago Road / Lookout Road intersection are discussed under the Road Works heading below.

## **Road Works**

Lookout Road is currently primarily used by tourists accessing Broken Bago State Forest and Bago Bluff National Park, and also seasonally (at maturity of plantations) as a haul route by Forestry Corporation when plantation harvesting is underway. Prior to logging, Forestry Corporation assesses and upgrades haul route(s) in accordance with their standards and best practice. However, noting the ongoing nature of the quarry approval sought, the intersection will need to be upgraded to meet current AUSTROADS standards. Details are to be lodged with and approved by Council (as the Road Authority under s138 of the Roads Act) prior to the issue of the Construction Certificate for building works. Some of the recommended details include:

- Upgrades or relocation of the intersection to achieve safe sight distances in each direction;
- Widening of lanes and shoulders to accommodate large truck turning movements;
- Upgrade of the seal in the footprint of the intersection itself, as turning trucks exert significant sideways forces on pavements which can result in premature failures and water ingress into the pavement (e.g. shoving, stripping of seal);
- Sealing of the Lookout Road leg of the intersection for approximately 50m, so that trucks shed gravel and mud before arriving at the main road. Tracking of debris onto high speed roads can present a significant risk for motorists, and damage road seals;
- Line marking and signage to comply with current standards and address safety risks.

Minor additional road work is also proposed in Milligans Road to provide a process water pipe from the dam to the quarry, and also for the emergency access gate. Details of these works will also need to be submitted to Council for approval.

## **Parking and Manoeuvring**

Onsite parking and manoeuvring will need to comply with AS 2890 to ensure that all users (staff and visitors) have adequate space to manoeuvre onsite. The site plan provided with the application can comply with the standard, and conditions have been imposed to reflect this requirement at the design and post-construction stages.

Importantly for safe operations, the truck loading and turning area has been separated from the general user car park.

Nine (9) formal car parking spaces are proposed on the site plan, with additional space onsite to safely accommodate extra parking that may be generated from time to time.

## **On-site sewage management**

The EIS indicates that wastewater generated from the office and amenities building would be processed through an on-site effluent treatment system in the form of a septic tank and evapotranspiration bed. Approval to install and operate the system will be required from Port Macquarie-Hastings Council in accordance with Section 68 of the Local Government Act 1993. A condition is recommended in this regard.

A geotechnical investigation will be required as part of the Section 68 application.

## **Other Utilities**

Telecommunication services are available to the site.

Electricity for the development is proposed to be provided by a stand-alone photovoltaic system comprising 16 solar panels, one inverter, and 12 batteries. The specifications

submitted with the application indicate that the batteries are each capable of operating for between 48 and 120 hours during periods when solar energy is not being generated. A condition is recommended requiring certification from the installer that the system complies with AS/NZS 4509 - *Stand-alone power systems*.

## **Heritage**

No known items of European heritage significance exist on the property.

The Applicant's EIS indicates that a search of the Aboriginal Heritage Information Management System (AHIMS) database was carried out and no Aboriginal sites or places were recorded within a 1 kilometre radius of the site. A search of the National Native Title Register (NNT) and the LEP Heritage Map and Schedule 5 was also carried out and produced no results.

A field survey was undertaken over the whole of the proposed quarry site by a Forestry Corporation officer in accordance with the recognised due diligence procedures adopted for works within the Broken Bago State Forest. The survey did not identify any sites of significance and the EIS concluded that further consultation with the relevant Aboriginal communities/parties was not required.

However, Council received a letter from the Bunyah Local Aboriginal Land Council dated 3 February 2016, raising concerns that they had not been consulted about the proposal and the Land Council did not have officers present during the site survey. In their opinion the assessment of impacts on cultural heritage could not be relied upon.

The Applicant subsequently met with the Bunyah Local Aboriginal Land Council and arranged for their officers to carry out a site inspection. Council received written advice from Bunyah Local Aboriginal Land Council on 18 February 2016 confirming that the concerns raised by the organisation had been satisfactorily addressed.

## **Other land resources**

The subject site is within the Broken Bago State Forest and has historically been used for forestry purposes. The hardwood plantation on the site of the proposed quarry has recently been harvested by the Forestry Corporation of NSW and no viable forestry resource remains on the site.

The fenced area of the proposed quarry and the water storage and process dam would be lost to forestry production for the life of the development (minimum 20 years). However, the Rehabilitation Plan provides for progressive rehabilitation of the quarry site back to a hardwood plantation. The staged nature of the proposal would allow for the earlier stages of rehabilitation to establish advanced plantation prior to the rhyolite resource being exhausted.

## **Water Management**

A detailed Water Management Plan dated December 2015 and Addendum dated May 2016, has been prepared. The Management Plans outline how site operations will be managed so that potential impacts on soil and water resources are minimised and the operational water needs on the site are met.

### Water Supply:

The report has considered water demands for the development to include the following:

- Human consumption;
- Sanitation and hygiene;
- Processing Plant operation;

- Dust suppression; and
- Irrigation.

The water supply is proposed to consist of a 7.8ML dam, 50kL rainwater tank (20kL of which is reserved for fire-fighting purposes) and potential re-use of water from the sediment basins. The Water Management Plan includes a water balance calculation, which indicates that the total annual water demand for the development would be 39ML, based on maximum production of 200,000 tonnes per annum. Using 103 years of rainfall data, the water supply reliability has been determined to be 96.6%.

The water supply network will need to be designed by a hydraulic engineer and details submitted as part of the Section 68 application.

The NSW Department of Primary Industries - Water issued general terms of approval for the proposed water storage dam dated 4 February 2016. The approval noted that the proposed dam would require a licence under the Water Act 1912 and that there was currently an embargo on the water source preventing the issue of any new licences for irrigation and industry. The developer would therefore need to purchase an existing licence from another user.

The Applicant subsequently amended the location of the proposed water storage dam to a second order stream north-west of the location originally proposed. The amended proposal was reconsidered by NSW Department of Primary Industries - Water and written advice was received by Council on 16 June 2016, stating the following:

*“A dam at that location and of the proposed capacity would not require a licence under the Water Act 1912 and accordingly the General Terms of Approval previously issued are no longer relevant or required.”*

#### Stormwater Flow Management and Water Quality Control:

Conceptual plans for stormwater flow management and water quality control have also been included in the Water Management Plan and associated plans. Stormwater flows are proposed to be directed away from people and quarry infrastructure by site grading and constructed swale drains for each stage of the development. The swales would direct water towards a single sediment basin for Stages 1 and 2 of the development, with a second basin proposed to be constructed as part of the Stage 3 civil works. The swales and sediment basins are indicated to have been designed for relevant rainfall intensities up to 100 year ARI.

The proposed sediment basins will detain surface water runoff from the upstream quarry catchment to allow for suspended solids and gross pollutants to settle before water is discharged. The Water Management Plan indicates that a settling period of around 5 days would be required.

Council’s stormwater engineers have reviewed the Water Management Plan and identified some concerns with the details, as follows:

- Section 4.4: Pollutant loading parameters should be in accordance with *Draft NSW MUSIC Modelling Guidelines, BMT WBM, 2010* not the South East Queensland MUSIC Modelling Guidelines. For a quarry the pollutants loads would be similar to that of an “Eroding Gully”.
- Section 4.5: Permanent storage volume of 50m<sup>3</sup> seems very low for the catchment size. *Managing Urban Stormwater: Soils and Construction (2004)* (‘The Blue Book’) should be used to check sizing.

- Section 4.5: Need to expand on basin sizing with respect to settling time and cleaning frequency.
- Section 4.5.1: The author states that sediment basins are to store water up to 5 days. The MUSIC model treatment nodes indicate that notional detention time is 1.82 - 1.38hrs.
- Section 4.5.1: Figure 3 earlier in report indicates extended detention depth of 1m, with 2m depth for sediment storage. The MUSIC model treatment nodes are not consistent with this.
- Section 4.6: The author claims PMHC has not provided pollution reduction targets. PMHC has previously advised:  
*“Stormwater Flow Management must be updated in accordance with requirements of AUSPEC D5 and D7 and the requirements of relevant Australian Standards, demonstrating how all stormwater and surface water discharging from the proposed development site, buildings and works will be discharge back to pre-development flows and velocities.”*
- The author should refer to AUSPEC D7 and note the receiving environment for which the specific targets apply. The pollution reduction targets used in the report also apply. While TN, TP, SS and gross pollutants are discussed; pH, oil and grease are not.
- Section 4.6: MUSIC model results should be compared with ‘the Blue Book’ calculations to confirm sediment basin sizing.

However, it is considered that these matters of detail can be addressed at the Construction Certificate/Section 68 stage and conditions have been recommended to ensure that the relevant stormwater management can be appropriately reviewed prior to any work commencing on the site. The quarry has sufficient area to allow for the proposed sedimentation basins to be increased in size or depth if necessary, without any additional environmental impacts.

The general terms of approval issued by the NSW Environment Protection Authority (EPA) also include water quality outcomes and monitoring requirements. The Applicant would be required to demonstrate that the development continues to achieve satisfactory water quality outcomes as part of any Environment Protection Licence issued by the EPA.

To ensure that the water management within the development continues to achieve the required discharge standards, the following conditions are recommended:

- Any breach of the water quality standards specified in the Environment Protection Licence is to be reported to Council and operations at the quarry are to cease immediately.
- The quarry operator is to engage an appropriately qualified person to carry out an independent review of water management at the site and make recommendations about necessary rectification work to address the breach. Any necessary rectification work is to be carried out to the satisfaction of Council prior operations at the quarry recommencing.

#### Flooding:

Having regard to the elevation of the proposed quarry site, the development would not be adversely affected by flooding of Herons Creek or its tributaries. However, localised stormwater inundation could still occur within the quarry footprint during significant rainfall events. This has been accounted for in the Water Management Plan and the indicative swale and sediment basin sizing has been calculated for events up to 100 year ARI.

The general terms of approval issued by the NSW Environment Protection Authority (EPA) require the Applicant to prepare a flood management plan that details the impacts of flood waters on the premises, including how the site will be managed prior to a flood occurring, along with mitigation measures during and immediately following a flood event, until the premises returns to normal operation. This needs to include management of exposed areas, machinery and materials (including chemicals) stored at the premises.

#### Groundwater:

The site is located at the top of a ridge and the quarry excavations range between approximately 100m AHD and 150m AHD. Geotechnical investigations carried out by Regional Geotechnical Solutions did not encounter any groundwater to a depth of 59m AHD and it is therefore not expected that the development would interfere with any groundwater aquifers.

The Bureau of Meteorology's Groundwater Dependant Ecosystem Atlas identifies that the proposed extraction area water storage dam location are not considered to have potential to support groundwater dependant ecosystems (GDE). The proposed water storage dam is located in an area identified to have moderate potential for supporting vegetation which is groundwater dependant.

The closest positively identified GDEs are Lake Innes, Lake Cathie and Queens Lake approximately 12 kilometres to the east of the site. The closest high potential area for groundwater interaction is along Herons Creek, immediately south of the development site.

The ecological assessment submitted with the application did not identify any GDEs at the site of the proposed water storage dam that would be directly impacted by its construction. The water quality controls noted above will ensure that any interaction between the dam and groundwater in the area would not reduce the quality of groundwater. It is therefore considered that the development would be unlikely to have any adverse impact on GDEs.

#### **Air and microclimate**

An Air Quality Impact Assessment has been prepared by Ramboll Environ and submitted with the application. An Addendum to the report has also been submitted to clarify consideration of Stages 2 to 4 of the development have been considered in the modelling. The assessment was undertaken to determine the emissions associated with the proposed extractive industry, the potential impacts on sensitive receptors in the locality, and any required mitigation measures that should be implemented.

Air emissions associated with the quarry would primarily comprise fugitive particulate matter releases. Potential sources of emission were identified as follows:

- Removal, handling, transportation and dumping of topsoil and overburden material;
- Quarry pit operations (drill/blast, raw material handling);
- Crushing, screening and conveying at the processing plant;
- Wheel-generated dust from vehicle movements across unpaved surfaces;
- Wind erosion from stockpiles and exposed surfaces across the Quarry site;
- Combustion of diesel fuel by mobile plant and equipment.

The assessment has been carried out in accordance with the EPA Approved Methods for Modelling using CALPUFF software. A meteorological model for the site was generated using a combination of regional data from the Port Macquarie Airport AWS, Taree Airport AWS and predictive modelling.



Ambient air quality has been assumed using data collected at Korora as part of the Pacific Highway upgrade north of Coffs Harbour. There is limited long-term air quality data available for regional areas and it is understood to be accepted practice for the data from either Korora or Tamworth to be used for air quality modelling. The Korora data has been considered to be more representative of the site conditions due to similar proximity to the coast and the Pacific Highway.

The modelling has been carried out including the following emission reduction factors:

- Water spraying across the fixed processing plant – 50% emissions reduction for water sprays;
- Unpaved haul roads – 75% reduction for water application.

The reduction factors are consistent with the mitigation measures identified in the submitted EIS.

The report concludes that the predicted incremental and cumulative TSP, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations and dust deposition rates are well within NSW EPA assessment criteria and NEPM advisory reporting goals for all pollutants and averaging periods modelled.

The modelling for Stage 2 to 4 has assumed a wind erodible area of 14.6 hectares (with no rehabilitation of earlier stages). The conditions recommended elsewhere in this report would restrict the wind erodible area of the quarry to a maximum of 4 hectares at any time. The outputs from the modelling are therefore considered to be conservative.

The general terms of approval issued by the EPA include the following requirements to ensure that acceptable air quality is maintained:

- Continuous PM<sub>10</sub> monitoring at location R10 shown on Figure A3-1 of the Air Quality Impact Assessment.
- Preparation of an air quality management plan.
- All areas of the premises to be maintained in a condition that prevents or minimises the emission of dust to the air.
- Any activity carried out in or on the premises must be carried out by such practical means as to prevent dust or minimise the emission of dust to the air.
- Any plant operated in or on the premises must be operated by such practical means to prevent or minimise dust or other air pollutants.
- All trafficable areas, stockpile areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the emission of dust to the air, or emission from the premises of wind-blown or traffic generated dust.
- Trucks entering and leaving the premises that are carrying loads of dust generating material must have their loads covered at all times, except during loading and unloading.

### **Flora and fauna**

The submitted EIS includes a Statutory Environmental Assessment prepared by Naturecall Environmental and dated December 2015, and later Addendum to the report dated 11 April 2016.

The assessment identifies that approximately 12.59 hectares of the vegetation within the quarry footprint is a Blackbutt plantation intended to be harvested by the Forestry Corporation of NSW in 2016 in accordance with the *Plantations and Reafforestation Act 1999*. Harvesting of this plantation has since been completed.

Following the plantation harvest, a total of 3.74 hectares of immature regrowth native forest remains in the north of the quarry site. In addition, the 1.1 hectare dam and access road footprint and approximately 0.75km of fence line are proposed in immature native forest. The proposal itself would see clearing of a total of approximately 5.04 hectares of native forest in addition to the plantation harvest already carried out by the Forestry Corporation of NSW.

The proposal will thus have the following direct impacts:

- Loss/modification of approximately 5.04 hectares of immature regrowth native forest.
- Loss of a limited extent of potential foraging and refuge resources for a number of threatened and migratory species eg. Allocasuarinas, Koala browse species, sap and nectar producing species.
- Topographic modification to construct the dam embankment.
- Modification of aquatic habitat through damming of an ephemeral creek to create a permanent water body.
- Minor risk of loss and or injury of native fauna during clearing and construction.

A series of indirect impacts have also been considered in the assessment, including the following:

- Erosion and sedimentation;
- Hydrological regime changes;
- Dust;
- Fragmentation and landscape change;
- Fencing;
- Weed invasion;
- Vehicle strike;
- Noise, vibration, and anthropogenic disturbances;
- Artificial lighting;
- Predation, competition and assemblage modifications;
- Introduction of feral/introduced species; and
- Introduction of diseases.

The assessment includes a 7 part test in accordance with Section 5A of the Environmental Planning and Assessment Act 1979 addressing the above likely impacts, and it is concluded that the development is unlikely to have any significant adverse impacts on biodiversity or threatened species of flora and fauna. The report has been reviewed by Council's ecologist and it is considered that the assessment has been carried out appropriately. The conclusion in the ecological assessment is agreed with and a Species Impact Statement is therefore not required.

The report includes a number of recommendations to mitigate the potential ecological impacts of the development, which include the following:

- Retention of hollow bearing trees.
- Pre-clearing survey for Green-thighed Frog.
- Quarry rehabilitation to ensure that erosion and sedimentation are not long-term issues.
- Fencing of the site is not to include any barbed wire.
- Implementation of a Weed Management Plan.
- Sedimentation and erosion control.
- Chytrid control for any machinery used at the site.

- Water tanks are to include measures to prevent access by fauna.
- Any artificial lighting is to be directed towards the ground and not onto retained hollow bearing trees or other vegetation.

A condition is recommended incorporating the above requirements.

## Visual Impact

A Visual Impact Assessment prepared by de Groot & Benson Pty Ltd and dated December 2015 was submitted with the EIS and an amended Visual Assessment dated May 2016 was included as part of the Addendum EIS, addressing concerns identified during the initial assessment of the application.

The amended visual assessment includes a GIS analysis of existing views from 16 nearby privately owned dwellings and two local lookouts in the Bago Bluff National Park. The GIS analysis uses LiDar data to model the line of sight from a standing observer (1.75m above ground level) at each of the observation points towards the proposed quarry site. The GIS model has been provided to Council, and reviewed by GIS officers. The model is based on reliable government data sources and the configuration is considered to provide an accurate representation of views towards the development site from the various locations.

The visual assessment also includes cross sectional analysis that takes into account existing topography and vegetation that screen views towards the quarry site from most locations.

The visual impacts of the development can be broken down into three main categories:

- Impacts on residential dwellings;
- Impacts from public locations; and
- Landform change.

### Impacts on residential dwellings:

A summary of the affected residential dwellings is provided in the table below:

Observation Point	Address	Distance from quarry	Extent of visibility
13	124 Old Mill Road	1.8km	Visible when quarry area clear felled and excavated to a depth of up to 10 metres, with 'Visual Management Screen' in place. Visible parts of the site are located within Stages 3 and 4 of the quarry.
15	922 Bago Road	2.8km	Visible when quarry area clear felled and excavated to a depth of up to 10 metres, with 'Visual Management Screen' in place. Visible parts of the site are located within Stages 3 and 4 of the quarry.

The Stage 3 area of the quarry would not be visible from either location once the depth of excavation is greater than 5 metres. The Stage 4 area would cease to be visible once the depth of excavation is greater than 10 metres.

Progressive rehabilitation of Stages 1, 2 and 3 of the quarry may provide some visual screening of operations in Stages 3 and 4. However, this would be dependent upon extraction rates and the amount of time between completion of rehabilitation and the commencement of subsequent stages. It is also expected that the trees in the 'Visual Management Screen' will increase in height over the time before extraction in Stage 3 commences (likely to be at least 10 years).

The volume of extractive material located on the part of the site that may be visible during the early stages of excavation in the Stage 3 and 4 areas is estimated to be approximately 40,000m<sup>3</sup> (100,000 tonnes). This constitutes half of the proposed maximum annual extraction and would be visible for a period of approximately 6 months at maximum extraction rates.

Given the temporary nature of the impacts and the distance between the affected residences and the proposed quarry, it is not considered that the application is refusable on this basis.

The visual impact of the Stage 4 operations (which will be visible to the greatest depth) could be significantly reduced with the following measures:

- Extraction from the Stage 4 area should proceed generally from north to south, with the operational face of the quarry being oriented so that it is not visible.
- Establishment, at the commencement of quarry operations, of additional screen plantings on the south-facing slope of the Stage 4 extraction area. These plantings would have considerable time to establish (approximately 15 years) before the commencement of extraction in the Stage 4 area and would assist with integrating the site with the existing landscape and reducing the visibility of Stage 4 works.

Conditions are recommended confirming the above requirements.

#### Impacts from public locations:

The proposed development is potentially visible from parts of Milligans Road and Old Mill Road. Submissions received during the advertising of the application also suggest that the proposed development would be visible from the Bago Lookout and The Rollover within Bago Bluff National Park to the north-west of the site.

Bago Lookout and The Rollover are accessed via Lookout Road (Forestry road) / Rollover Road (National Parks road). The access is essentially restricted to 4WDs and there is not signage from Bago Road directing tourists or the public to these locations. The extent of usage is therefore likely to be minimal.

The Bago Bluff National Park Plan of Management (September 2007) also provides the following:

*"The Bago Bluff, along Rollover Rd, has a number of steep cliff faces, and poses a potential or possible risk to visitor safety. It is proposed that a small viewing platform will be constructed on Bago Bluff along Rollover Rd to provide a safe lookout site over the Hastings Valley."*

The intention of the Plan of Management is to provide safe views over the Hastings Valley to the north, rather than to the south-east over the proposed quarry site.

Adjacent to Milligans Road the proposed quarry would be at a higher elevation. The operations centre and processing plant would be approximately 15m higher than the adjoining Milligans Road, and the difference in levels increases further to the west. Established vegetation has currently been retained between Milligans Road and the

development site, but could potentially be removed by the Forestry Corporation of NSW in the future.

The site security fence would be visible from some places in Milligans Road. However, the fence in itself would not be considered as an adverse visual impact, particularly where there is also retained vegetation.

The overall visual impact would be negligible from Milligans Road.

The other affected public location is a section of Old Mill Road between No. 92 and No. 156. The road runs generally east-west and potential views of the proposed quarry would be similar to those described above for the dwelling at 124 Old Mill Road. However, the likely impacts would be considerably less for the following reasons:

- The alignment of the road would mean that a driver has to turn away from the road to view the ridgeline.
- The northern side of Old Mill Road is vegetated and would screen views towards the subject site.
- Old Mill Road is a narrow, uneven gravel road and drivers are expected to be more focussed on the road.

#### Landform Change:

The proposal would result in a significant change to the existing landform on the site. The existing ridgeline has an elevation ranging between approximately 100m AHD and 155m AHD. The design levels for the quarry are 100m AHD, 110m AHD and 120m AHD respectively for the three benches. The submitted quarry long section plan indicates that the greatest change in level would be 36.692m at Chainage 275.000.

Due to the limited overburden and waste material from processing, the rehabilitation of the site will not be able to restore the site to its original levels. This change would clearly be noticeable as the extraction progressed. However, with rehabilitation of the quarry to a hardwood plantation in time, the visual impact is not likely to be considered offensive.

## **Waste**

#### Establishment waste:

Waste forestry timber that remains within the site following the plantation harvest will be windrowed, and burnt under the Plantation Code.

While this may be normal practice for forestry activities, it is not considered appropriate for vegetation removed for development to be disposed of by burning, due to the adverse air quality impacts. The 5.04 hectares of additional vegetation proposed to be removed by the developer for the extractive industry will require disposal by means other than burning. A condition is recommended confirming this requirement.

#### Construction Waste:

The following waste management procedures are proposed to be carried out during the construction of the buildings within the proposed management centre:

- Any top soil and overburden will be stockpiled for future rehabilitation use;
- Building materials will be selected with low waste rates. Building dimensions have considered waste minimisation by adopted standard sizes wherever possible;
- Bulk waste skip bins will be placed on site for the duration of the construction. Skip bins will be emptied via an authorised waste contractor as required;

- Timber - Pallets returned to the supplier. Small amounts of timber waste will be disposed to landfill by skip bin contractors;
- Plastics/cardboards – to be recycled.

A standard site management condition has been recommended in relation to management of construction waste.

#### Operational Waste:

Soil by-products such as clay fines are produced as a waste by-product in the processing of saleable hard rock materials. Soil waste will be stockpiled with the overburden and eventually used in the rehabilitation of the quarry extraction zones.

There is an estimated 146,000m<sup>3</sup> of existing overburden to be managed over the life of the proposal. The overburden will be progressively stripped, stockpiled and utilised at a later date for rehabilitation.

Crusher dust and fines are also produced as a waste by-product in the processing of saleable hard rock materials. Crusher dust and fines will be sold as market demand allows and stockpiled until saleable market opportunities arise. If no market is available for these product it is also capable of be utilised in the rehabilitation of the quarry.

Waste water is discussed in detail above under Water Management.

Non-operational waste produced from the quarry will be minimal. General solid waste and scrap material will be appropriately disposed of off-site at an authorised waste facility by a contractor. Petrochemicals such as diesel, oil and petrol waste will be disposed of at licensed premises.

#### **Energy**

The submitted EIS indicates that the proposed management centre for the quarry is intended to be entirely self-sufficient in terms of energy generation.

Electricity for the development is proposed to be provided by a stand-alone photovoltaic system comprising 16 solar panels, one inverter, and 12 batteries. The specifications submitted with the application indicate that the batteries are each capable of operating for between 48 and 120 hours during periods when solar energy is not being generated.

#### **Noise and Blasting**

A detailed Noise and Blasting Assessment prepared by EMM Consulting has been submitted as part of the EIS.

The scope of the assessment included operational noise, heavy vehicle haulage (road traffic), and impacts potentially associated with blasting overpressure and ground vibration. Predicted noise and blasting impacts have been modelled and compared with the relevant acceptable levels contained in the following documents:

- Industrial Noise Policy (EPA, 2000);
- Interim Construction Noise Guideline (DECCW, 2009);
- Road Noise Policy (EPA, 2011);
- Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZECC 1990).

It is noted that the Noise and Blasting Assessment has been carried out for Stage 1 of the development only. However, the consultant has confirmed that Stage 1 represents the worst case noise scenario as it contains the noisiest aspect of the proposed operation (crushing plant), the majority of vehicle movements, loading/unloading activities, and it is located nearest to the surrounding sensitive receptors.

A subsequent letter from EMM Consulting dated 11 October 2016 confirmed that additional modelling had been carried out for Stages 2, 3, and 4 of the development, consistent with the parameters of the original Noise and Blasting Assessment. Predicted noise contours for each stage of the extraction have been provided. The additional assessment predicts that the development will also achieve relevant noise criteria for Stages 2, 3, and 4 of the development.

The assessment has considered cumulative noise impacts as there is an existing quarry operating in proximity to the site. The assessment concludes that the operational noise is greater than 10dB(A) below the relevant noise amenity level criteria at all locations and therefore the development would not adversely contribute to industrial-type noise in the vicinity of the subject site.

The results of the modelling of construction noise, operational noise and blasting indicate the following:

- Operational noise would achieve the Project Specific Noise Level (PSNL) of 35 dB(A)  $L_{eq,15-min}$  for dwellings and 50 dB(A)  $L_{eq,period}$  for Bago Vineyard at all assessment locations under worst-case weather conditions (3m/s source to receiver winds) for all stages of the development.
- Construction noise would achieve the noise management level of 40 dB(A) at all assessment locations.
- The predicted traffic noise levels will be below the relevant criteria of 60 dB(A)  $L_{eq(15-hr)}$  and the relative increase criteria of 2 dB.
- Blasting would achieve the airblast overpressure criteria of 115 dB( $L_{inpeak}$ ) and ground vibration criteria of 5 mm/s Peak Particle Velocity (PPV) for explosives with a Maximum Instantaneous Charge (MIC) of up to 940kg. It is understood that the MIC of explosives proposed to be used at the site would be 250kg, and this would ensure that the criteria is satisfied.

The general terms of approval issued by the EPA include conditions requiring compliance with noise and blasting criteria, ongoing monitoring and reporting, and limits on the hours of operation for certain aspects of the development. The EPA has recommended that the proposed hours of operation in the EIS be reduced slightly to the follow hours, which are consistent with the existing quarry in Milligans Road:

- 6.00am to 5.00pm Monday to Friday;
- 6.00am to 1.00pm Saturdays;
- At no time on Sundays and public holidays.

Sleep disturbance criteria for the period between 6.00am and 7.00am were not considered in the Noise and Blasting Assessment. The Applicant has agreed to the operational hours to being restricted further from those recommended by the EPA to prevent operation commencing prior to 7.00am. A condition is therefore recommended restricting operation to the following hours:

- 7.00am to 5.00pm Monday to Friday;
- 7.00am to 1.00pm Saturdays;
- At no time on Sundays and public holidays.

Maintenance activities may occur 24 hours seven days per week provided it is inaudible at all residential receivers.

Blasting at the premises may only take place between 10.00am and 3.00pm Monday to Saturday. Blasting is not permitted on Sundays or public holidays. The blasting hours in the EPA general terms of approval are inconsistent with overall hours of operation for the quarry, which do not allow the business to operate after 1.00pm on Saturdays. It is recommended that blasting be restricted to between 10.00am and 1.00pm on Saturdays.

### **Bushfire**

The site is identified as being bushfire prone.

The submitted EIS included a Bushfire Hazard Assessment Report prepared by Holiday Coast Bushfire Solutions. The application has been referred to the NSW Rural Fires Service, and recommended conditions were received on 24 February 2016.

The conditions include:

- Provision and maintenance of a minimum 70 metre inner protection area around the management centre buildings.
- Minimum 20,000 litre static fire fighting water supply.
- Construction of buildings in the management centre comprising office, amenities and lunch room to comply with BAL-12.5 requirements.
- Development of a Bushfire Emergency Response Plan for the site.

Conditions have been recommended consistent with the RFS requirements.

### **Safety, security and crime prevention**

The proposed development will be unlikely to create any concealment/entrapment areas or crime spots that would result in any identifiable loss of safety or reduction of security in the immediate area. The extraction area and management centre are proposed to be securely fenced, and the management centre building are proposed to have some lighting.

### **Social impacts in the locality**

The Applicant has provided a Social Impact Comment addressing the matters specified in clause 7.5.3 of the Policy, as detailed in the below table:

<b>Social Impact Comment requirement</b>	<b>Assessment comment</b>
How does your development impact on the local area? What is the extent of the impact?	The potential impacts of the development on the local area have been comprehensively addressed in the EIS and Addendum 1 and 2. Detailed comments on each aspect of the impacts are provided throughout this report.
What are the positive and negative impacts of your development on the local community?	The positive and negative impacts of the development have been comprehensively addressed in the EIS and Addendum 1 and 2. Detailed comments on each aspect of the impacts are provided throughout this report.  A summary of the positive and negative



	<p>impacts of the development is provided below.</p> <p><u>Positive impacts:</u></p> <ul style="list-style-type: none"> <li>• Improved local supply of construction and road building resources;</li> <li>• Improved competition for construction and road building resources;</li> <li>• Employment opportunities;</li> <li>• Additional income stream from State Forest could be invested in improved forestry management in the region;</li> <li>• Multiplier effects on local economy.</li> </ul> <p><u>Negative impacts:</u></p> <ul style="list-style-type: none"> <li>• Traffic;</li> <li>• Impacts on road infrastructure;</li> <li>• Water quality impacts;</li> <li>• Air quality impacts;</li> <li>• Ecological impacts;</li> <li>• Visual impacts;</li> <li>• Noise and blasting impacts.</li> </ul>
Community participation in the project will only be required from persons directly affected (neighbours and key stake holders).	Council's notification and advertisement of the proposed development and subsequent amendments and additional information has provided opportunity for participation of directly affected persons and stake holders.
Describe both the positive and negative aspects of the proposal. Highlighting the positive and indicate how the negative aspects, if any, will be neutralised in the interests of those affected (neighbours, occupants or the wider community).	<p>The positive and negative aspects of the proposal have been discussed in the above section.</p> <p>Mitigation measures that will ensure satisfactory amenity and environmental outcomes are discussed throughout this report and relevant conditions recommended where necessary.</p>

A full Social Impact Statement in accordance with Council's Social Impact Assessment Policy is not considered necessary as the proposed development is not likely to result in:

- A definite (either positive or negative) effect on a particular social group (e.g. Aboriginal, young people, aged, people with a disability);
- An identifiable effect on the social composition and/or character of the locality;
- An identifiable effect on the availability and use of existing community services, facilities and land;
- Additional demand for the provision of such services, facilities and land;
- Safety of residents within the identified area;
- Change in housing choice, shopping, recreational facilities and services;
- Change to the lives of specific groups;

- A reduction in employment opportunities in the local area;
- Significant loss of production of local products;
- Adverse change in the affordability of goods and services; or
- Demand for provision of urban infrastructure.

### Economic impact in the locality

The Applicant has suggested that the proposed quarry will provide employment for 12 full-time employees once the quarry is fully operational. It is envisaged additional permanent and casual staff will be required over time. The quarry will also engage the services of sub-contractors to transport various quarry products, an explosives specialist and specialist consultants may also be engaged when required. Additional flow-on effects of secure employment for employees who reside within the local area would provide an additional stimulus to retail, health services and other industries within Wauchope and the wider Port Macquarie-Hastings area.

Addendum 2 to the EIS suggests that the annual wages paid to quarry staff and truck drivers will be approximately \$1,400,000. Multiplier effects to the local economy have been estimated by the Applicant to be approximately \$4,530,000.

The economic impact assessment has been reviewed by Council's Economic Development Officer using REMPLAN software. The below table provides a comparative analysis between Council's calculations and those submitted by de Groot & Benson:

Measurement INPUT	IMPACTS	
	de Groot and Benson	REMPPLAN
Wages and Salaries (18 jobs)	\$1,400,000	\$1,481,000
Direct Effect (18 jobs)	\$630,000	\$6,360,000
Flow On Effects 1 (18 jobs)	\$1,400,000	\$2,035,000
Flow On Effects 2 (18 jobs)	\$2,500,000	\$1,638,000
TOTAL	\$4,530,000	\$10,033,000
Multiplier (Construction - 18 jobs)	2.796	3.679

Council's review suggests that the multiplier effects calculated by the Applicant are quite conservative. There is a significant discrepancy in the 'Direct Effect' calculated by the Applicant compared with that modelled by Council's Economic Development Officer. The Applicant has confirmed a typographical error in their calculation (the direct effect was meant to be entered as \$6,300,000).

Council's modelling using REMPLAN was based on the information in the EIS regarding the number of jobs created and does not account for any loss of employment in existing quarries. From a review of EIS documentation for other recent quarry expansions in the Local Government Area, the amount of employment stated to be generated by the development appears to be slightly overstated and would rely on the quarry operating at maximum production each year. The overall economic benefit of the proposal is expected to be lower than the \$10,033,000 modelled above.

The Draft North Coast Regional Plan provides:

*“The region’s natural resources have the potential to drive regional economic development and prosperity. They include traditional and renewable energy sources and a broad range of mineral resources and construction materials. These mineral resources include hard rock aggregate, clay, sand and coarse aggregate. The development of these resources is necessary to support major infrastructure projects, the new housing needed for a growing population, and industrial and agricultural businesses. The extraction of these resources generates employment in the region. Local extraction of these resources is particularly important as transporting these bulky materials can be relatively expensive.”*

The proposed development would provide a hard rock aggregate resource to support major infrastructure projects and housing needs of a growing population. The location of the resource in proximity to major transport routes and markets would ensure that transport cost remain relatively inexpensive for local users.

The proposed development would generate increased competition for hard rock aggregate and associated products, which would have a positive impact for the construction industry and would contribute to maintaining housing affordability.

The economic impact assessment submitted by the Applicant does not include a full supply and demand analysis for the resource to demonstrate that there is a market gap that would be filled by the proposed development. However, the economic feasibility/viability of the project is a matter for the proponent to consider and is not relevant to the assessment of this application. It is not considered to be in the public interest to prevent increased competition in the market for hard rock products, even if the current demand is being met by existing extractive industries.

## **Rehabilitation**

The submitted EIS includes a Rehabilitation Plan prepared by Naturecall Environmental. The Plan identifies the following objectives for rehabilitation of the quarry site:

- Rehabilitation results in a site that is safe to humans and fauna;
- Surface and ground waters leaving the subject site will not be degraded compared to their condition prior to the commencement of mining operations;
- Mine wastes and disturbed land will be rehabilitated so that they are non-polluting and self-sustaining or to a condition where the maintenance requirements are limited;
- Vegetation cover will be established to reduce rates of erosion and sediment loss so that it is comparable to surrounding undisturbed landscapes.
- To achieve a stable landform capable of supporting similar land uses to those that existed prior to the activity.

The rehabilitation is proposed to be carried out in stages following completion of extraction in each area. The Rehabilitation Plan recommends that an annual review be carried out by the quarry operator to ensure that sufficient resources will be available for the rehabilitation to be completed in the event of unplanned closure. The progressive nature of the rehabilitation will ensure that the extent of rehabilitation required in the event of an unplanned closure is minimised.

Given the nature of the extraction of resources from the site, the Applicant has suggested that it is not feasible to return the site to the same landform that currently exists. The rehabilitation strategy therefore seeks to return the site to a state that is geotechnically stable, free draining, and suitable for ongoing use as a hardwood plantation.

The Forestry Corporation of NSW have advised that they intend to require the quarry operator to provide monetary security as part of any Forest Materials Licence to cover the cost of site rehabilitation in the event that the quarry operator is not able to meet their obligations in this regard. The advice indicates that the security would be calculated based on a maximum area of 2 hectares requiring rehabilitation at any time. The quarry management centre occupies approximately 1.8 hectares of the site and would remain in place until the final closure of the quarry. A condition is recommended restricting the total 'disturbed' area of the quarry to a maximum of 4 hectares, to ensure manageable rehabilitation obligations and better water quality outcomes.

The planting of Blackbutt seedlings is the final component of the rehabilitation program. The Forestry Corporation of NSW have advised planting in accordance with their normal requirements is dependent upon substantial rainfall occurring on the site in late January (or shortly after) each year. If there is insufficient rain in any one year, the planting regime can be delayed until the following year.

The Applicant has suggested that site stabilisation form the initial phase of the rehabilitation, with the timing of the final planting being more flexible to ensure that the future plantation can be established under good conditions. The stabilisation would be recognised as the completion of the site preparation to a condition that leaves the site stable and ready to plant seedlings. This would include the spreading of topsoil, site grading, seeding to stabilise the disturbed areas, and the installation of sediment and erosion control works as required. A condition has been recommended requiring the stabilisation works to be completed as soon as practicable after sections of the quarry reach their finished surface levels.

The Rehabilitation Plan includes a recommendation for assessment of potentially contaminated soils in accordance with the National Environment Protection Measure guidelines, with a particular focus on areas where use of potentially contaminating materials or substances has been conducted. Where contamination is identified, appropriate remediation will need to be carried out in accordance with relevant legislation. A condition is recommended requiring a validation report to be submitted to Council at the completion of the final stage of rehabilitation, confirming that the site has been investigated for potential contamination, any necessary remediation has been completed successfully, and the site is suitable for the proposed future use (forestry).

An annual Rehabilitation Monitoring Plan is proposed to ensure that the site rehabilitation is successful. The predicted monitoring period is five years after the completion of rehabilitation work. A condition is recommended requiring the Rehabilitation Monitoring Plan to be submitted to Council annually.

Overall, the submitted Rehabilitation Plan is considered to be appropriate for the site and proposed development, subject to the above recommended additional requirements.

### **Cumulative impacts**

An existing hard rock quarry known as Coastal Quarry Products (also previously known as Bago Quarry or Volcanic Resources) is located approximately 2 kilometres west of the subject site. This quarry is currently extracting up to 30,000 tonnes of material per year and has a recent approval to increase production to a maximum of 490,000 tonnes per year. There is potential for two quarries operating in close proximity to result in cumulative impacts.

The expected cumulative impacts of the proposal have been considered in the various assessments in the EIS. The main aspects of the development with the greatest potential to result in cumulative impacts include:

- Noise;
- Air quality; and
- Traffic.

The EIS has accounted for the impacts of the existing quarry (including the approved increase in production) and demonstrated that the cumulative impacts of development would be within acceptable standards.

### **(c) The suitability of the site for the development**

All site constraints have been adequately addressed and appropriate conditions of consent recommended. No particular hazards that would make the site unsuitable for the proposed development have been identified.

The suitability of the site in terms of the likely impacts of the development on the environment and the amenity of nearby residents has been discussed in detail in the above section of this report.

### **(d) Any submissions made in accordance with this Act or the regulations**

Following the exhibition of the application in accordance with DCP 2013, and advertising in accordance with the Environmental Planning and Assessment Regulation 2000, 129 written submissions were received from 50 different parties.

Fourteen (14) of the submissions are in support of the application for the following reasons:

- Improved supply of quarry materials.
- Increased competition likely to improve prices of quarry products.
- There is demand in the local construction industry for the materials proposed to be produced at the quarry.
- Employment opportunities.
- The extractive materials would support the projected continuing growth in the Port Macquarie-Hastings area and Mid North Coast generally.

107 of the submissions objected to the proposed development. Key issues raised in these submissions and comments in response to the issues are provided as follows.

<b>Submission Issue/Summary</b>	<b>Planning Comment/Response</b>
Water quality impacts on Herons Creek. <ul style="list-style-type: none"> <li>• Sedimentation</li> <li>• Fuels</li> </ul>	See comments earlier in this report under Water Management.  The general terms of approval issued by the EPA require all above ground fuel storage to be contained within a suitable bund or alternative spill containment system.
Impacts on road safety on Bago Road from additional traffic and particularly heavy vehicles.	Bago Road already has a high proportion of heavy vehicles given its proximity to the Wauchope industrial area and function as a link between the Pacific and Oxley Highways. The proposed increase of 80 truck trips on a peak day represents a less than 5% increase over existing traffic levels. Council has long term plans to improve and address safety and maintenance issues along Bago Road which are generally inherited from the

	time the road was built.
Additional trucks associated with the development will deter tourists from accessing local attractions from Bago Road.	<p>Bago Road has sufficient width to accommodate heavy vehicles and other traffic safely. The intersection of Bago Road and Lookout Road is proposed to be upgraded and sealed, and Lookout Road widened to accommodate two-way traffic. This would improve traffic safety for tourist accessing Bago Lookout or The Rollover.</p> <p>Milligans Road is not proposed to be used for haulage of material from the proposed quarry and there would be no interaction between heavy vehicles associated with the development and tourist traffic accessing the Bago Vineyard via Milligans Road.</p>
<p>Visual impact of dam and quarry.</p> <ul style="list-style-type: none"> <li>• Dam visible from properties in Old Mill Road.</li> <li>• Quarry visible from several locations - 124 &amp; 156 Old Mill Road, 85 Lambs Road, parts of Old Mill Road, Old School Road, and Blackbutt Road, Bago Lookout, The Rollover.</li> <li>• Inaccurate visual assessment, and no consideration of visual impact of the dam.</li> <li>• No assessment of impact of night lighting.</li> </ul>	<p>See comments earlier in this report under Visual Impact.</p> <p>The Applicant has confirmed that night lighting would be confined to the management centre for security purposes, and it is therefore not expected to be visible from nearby residences. The Ecological Assessment also includes recommendations requiring lighting to be directed to the ground.</p>
Impacts on air quality.	See comments earlier in this report under Air and Microclimate.
Proposed hours of operation are not acceptable for the location, particularly overnight maintenance. Inconsistent hours of operation are provided in the application documents.	Hours of operation consistent with the other quarry operating in the locality have been recommended in the general terms of approval issued by the EPA. The conditions permit 24 hour maintenance provided that it is inaudible at all residential receivers.
Deterioration of local roads on the haulage route.	The Applicant has offered to enter into a Planning Agreement with Council that would require payment of a monetary contribution per tonne of material transported on the Bago Road haulage route. The contribution has been calculated based on the proportion of road damage that could be attributed to traffic from the proposed quarry. Funds collected in accordance with the planning agreement would be used to carry out road repairs on the haulage route.
Potential conflict with other uses of	The Forestry Corporation of NSW have advised

<p>the State Forest (eg. bushwalking, mountain biking, etc).</p>	<p>that they are satisfied that sufficient opportunities would be retained for a variety of recreational activities in the Broken Bago State Forest. The quarry site is proposed to be securely fenced to prevent public access.</p> <p>The only potential location for conflict between recreational users of the State Forest and the quarry would be at the Lookout Road access to the site. The intersection of Lookout Road and Bago Road is proposed to be upgraded and a section of Lookout Road will be widened to accommodate two-way traffic to the quarry access. It is expected that this would provide safe road conditions for both quarry and recreational users.</p>
<p>Adverse noise impacts on nearby residents.</p> <ul style="list-style-type: none"> <li>• Report does not consider the impact of dam construction and operation of pump/s.</li> <li>• Elevated position of quarry will increase the distance noise travels.</li> <li>• Drilling, crushing and screening activities should be enclosed to reduce noise emissions.</li> <li>• Question accuracy of Noise Impact Assessment.</li> <li>• No assessment of cumulative noise impact from existing quarry.</li> <li>• Road noise impacts on dwellings in Little Bago Lane (R1, R2, and R6 in NIA).</li> </ul>	<p>See comments under Noise and Blasting earlier in this report.</p> <p>The potential impacts of dam construction, operation of pumps, road noise on dwellings in Little Bago Lane, and cumulative noise impacts with the existing quarry in Milligans Road have been addressed in the Noise and Blasting Assessment Addendum prepared by EMM Consulting and dated 28 April 2016. It has been demonstrated that relevant noise criteria can be achieved in relation to these matters.</p> <p>The Noise Impact Assessment has been reviewed by the EPA and Council's Environmental Health Officer and is considered to have been carried out using accepted practice for noise modelling.</p> <p>The elevated position of the proposed quarry site would mean that noise mitigation cannot be achieved by the surrounding topography. The submitted Noise and Blasting Assessment and additional letter from EMM Consulting has accounted for elevation and topography in the noise modelling.</p> <p>It is agreed that the enclosure of the drilling, crushing and screening activities would reduce noise emissions. However, the noise modelling has demonstrated that relevant noise criteria can be satisfied without enclosure of these activities. The EPA general terms of approval include a condition requiring the preparation and implementation of a Noise Management Plan, which is to include periodic assessment of Best Available Technology Economically Achievable (BATEA). This may result in future enclosure of such plant.</p>
<p>Insufficient justification of the need</p>	<p>The economic impact assessment submitted by the</p>

for an additional quarry in the area. Numerous existing quarries produce similar products within 1 hour of the site.	<p>Applicant does not include a full supply and demand analysis for the resource to demonstrate that there is a market gap that would be filled by the proposed development. However, the economic feasibility/viability of the project is a matter for the proponent to consider and is not relevant to the assessment of this application. Markets for such products are not static and it is therefore not possible to accurately predict changes to supply and demand into the future.</p> <p>It is not considered to be in the public interest to prevent increased competition in the market for hard rock products, even if the current demand is being met by existing extractive industries.</p>
Any jobs created by the proposal would come at the cost of existing jobs.	Competition impacts on existing quarries cannot be given weight in the assessment of the Application.
Adverse ecological impacts.	See comments earlier in this report under Flora and Fauna.
Odour from diesel storage/use.	Given that the nearest residential dwelling is located approximately 1 kilometre from the proposed quarry, it is not expected that the development would result in offensive odours.
The proposed dam would affect the amount of water able to flow into Herons Creek. This would adversely impact aquatic ecosystems and farming activities relying on irrigation.	The location and capacity of the proposed dam has been reviewed by the NSW Department of Primary Industries - Water. The Department has advised that a water licence is not required for the dam as it is located on a second order stream and has a capacity within the allowable limits of the Harvestable Rights Order.
Loss of property value.	No evidence has been submitted to substantiate that property values would be adversely impacted by the development. The proposal is a permissible land use in the zone.
Aboriginal Cultural Heritage Assessment was prepared by an officer of the Forestry Corporation, who has a conflict of interests in the application. There was also a failure to consult with the Bunyah Local Aboriginal Land Council in relation to Cultural Heritage.	The Applicant met with the Bunyah Local Aboriginal Land Council in response to this concern and arranged for their officers to carry out a site inspection. Council received written advice from Bunyah Local Aboriginal Land Council on 18 February 2016 confirming that the concerns raised by the organisation had been satisfactorily addressed.
Monitoring of compliance with conditions for quarries is poorly resourced by Local and State Government. Nearby residents left to report/record breaches.	<p>The EPA is responsible for compliance with conditions of the Environment Protection Licence and Council is responsible for compliance with conditions of development consent.</p> <p>Council has a resourced Regulatory Services section capable of investigating any breaches of the conditions of consent. Compliance action is</p>



	generally reactive, as noted in the submission, and relies on nearby residents to report issues.
There is uncertainty about future quarry expansion/intensification.	Any future quarry expansion or intensification would be subject to a separate Development Application.
Loss of opportunity for tourism and other potential future uses in proximity to the quarry due to amenity issues.	The Application has demonstrated that satisfactory amenity criteria can be achieved for surrounding properties in the locality. A range of future uses would therefore remain possible for these properties.
Quarries do not belong in communities. There should be a minimum 3km setback from residential or rural housing.	The NSW Department of Primary Industries handbook <i>Living and Working in Rural Areas</i> recommends a minimum buffer distance of 1000m between extractive industries that carry out blasting and any rural dwellings or tourist accommodation. The proposal achieves a buffer distance consistent with this guideline.
The level of employment noted in the EIS is questioned based on the number of employees at similar local quarries.	Noted. The economic benefit of employment generated by the development has not been given any determinative weight in the assessment of the application as the net increase/decrease in employment has not been analysed in the EIS.
Many of the markets identified in the EIS are either over saturated or non-existent.	The commercial feasibility of the proposal is a matter for the Applicant to consider and is not relevant to the assessment of the application.
The estimated cost of the development is not considered to be accurate.	An amended cost of works has been submitted.
Existing quarry on Milligans Road (Coastal Quarry Products) will be affected by bad publicity from the proposal.	It cannot be assumed that the proposal would generate bad publicity.
The estimated number of vehicle movements does not correspond to the proposed extraction limit of 200,000 tonnes.	Refer to the Roads and Traffic headings earlier in this report for a breakdown provided by the applicant, which is considered consistent with the likely increase. The variation between the Council's and the applicant's assessment arises from the likely loading of the truck and dogs to be used, although there is commercial incentive for the operator to fully load higher capacity trucks to reduce haulage costs - which would reduce the truck count in line with the applicant's estimates or less. Regardless, Council has tested the conclusions of the traffic assessment using more conservative assumptions, and concluded that the road network has capacity to cater for the proposed increase (subject to conditions).
Penalties for breaching conditions of consent are not sufficient to deter such breaches.	Penalties are set by State legislation.
Health risks to nearby residents from dust generated by the	See comments earlier in this report under Air and Microclimate. The air quality modelling submitted in

development, including silicosis.	<p>the EIS demonstrates that the proposal is capable of complying with the relevant EPA criteria, subject to implementation of mitigation measures.</p> <p>There are no known guidelines for silica emissions from extractive industries. The only published material on this subject that was able to be found is a SafeWork Australia workplace document on Crystalline Silica, which deals with silica levels in the workplace. As this guideline is intended to protect the health and safety of employees rather than nearby property owners, it is considered more appropriate to adopt the EPA air quality requirements.</p>
The affected parts of the Broken Bago State Forest were originally proclaimed as a 'Fauna Protection District'. Development is an inappropriate use of a State Forest and is not consistent with the historical purpose that the land was set aside for.	Council has received owner's consent from the authority responsible for the management of the Broken Bago State Forest (Forestry Corporation of NSW). It has been taken in good faith that the Forestry Corporation reviewed the relevant legislation applicable to the use of State Forests prior to granting owner's consent.
Misleading omissions in the information provided by the Applicant in their community consultation.	Noted. The relevant information has been made available in full during the advertising periods for the application.
Full geotechnical report required to confirm the quality and extent of material proposed to be extracted.	Agreed. The full geotechnical assessment was subsequently submitted by the Applicant and made available for public review during the second advertising period.
Various dust control technologies listed in Section 5.3 of the National Pollutant Inventory Estimation Technique Manual for Mining are not intended to be implemented by the Applicant.	Noted. The submitted air quality assessment indicates that the development can achieve the relevant air quality criteria without additional dust mitigation measures or dust control technologies.
The Water Management Plan indicates that only part of the stockpile area and the haulage routes are proposed to be continuously watered. There will still be dust emissions from the remaining parts of the site.	<p>The submitted air quality assessment includes the following reduction factors:</p> <ul style="list-style-type: none"> <li>• Water spraying across the fixed processing plant – 50% emissions reduction for water sprays (NPI, 2012);</li> <li>• Unpaved haul roads – 75% reduction for water application (NPI, 2012).</li> </ul> <p>Potential dust emissions from other parts of the quarry have been accounted for in the air quality modelling.</p>
Inaccuracies in the calculated water demand for the development. The water supply is inadequate and will result in dust suppression being compromised.	Revised calculations have been submitted in the Water Management Plan Addendum prepared by de Groot & Benson Pty Ltd. The water supply reliability has been calculated to be 96.6% using a similar methodology to that accepted for the recent

	<p>quarry expansion of the Coastal Quarry Products quarry in Milligans Road. The water consumption rates used in the Water Management Plan were compared with several other similar developments and shown to be quite conservative.</p> <p>The air quality conditions in the EPA general terms of approval would apply to the development at all times and it would be up to the quarry operator to implement management strategies in the event that the water supply is exhausted. This could include importing water from off site for dust suppression and/or ceasing production.</p>
Air quality data from Korora (160km from the site) used for base line air quality. Not representative of site conditions. Site specific monitoring required.	There is limited long-term air quality data available for regional areas and it is understood to be accepted practice for the data from either Korora or Tamworth to be used for air quality modelling. The Korora data has been considered to be more representative of the site conditions due to similar proximity to the coast and the Pacific Highway.
Inconsistencies in the information about machinery that will be used at the quarry (particularly number of crushers and plant that would be used to load the material). This will potentially affects noise and greenhouse gas emission projections.	<p>The Addendum EIS confirms that only a single crusher will be used at the quarry, which is consistent with the assumptions used in the noise and greenhouse gas projections.</p> <p>A condition is recommended confirming that only a single crusher is permitted for the development.</p>
Several nearby residences not identified in the EIS.	Noted. The specialist reports accompanying the EIS for noise and blasting, air quality and visual impact correctly identify the nearest residences in the locality and consider the likely impact of the development on these properties.
The application does not consider potential impacts on agricultural activities in the area, some of which are located on Regionally Significant Farmland.	<p>The site of the proposed quarry is in the Broken Bago State Forest and there has been a long history of forestry operations at the site. The submitted Rehabilitation Plan indicates that it is intended to progressively restore the land to a state capable of supporting forestry activities following the completion of extraction in each stage of development. In this respect, there would be no long term loss of agricultural productivity at the subject site.</p> <p>The potential impacts of the development on surrounding agricultural activities (including Regionally Significant Farmland) have been considered in the assessment of the application. The impacts are considered acceptable for the following reasons:</p> <ul style="list-style-type: none"> <li>Noise and blasting impacts have been demonstrated to be within the relevant standards;</li> </ul>

	<ul style="list-style-type: none"> <li>• Air and water quality impacts have been demonstrated to be within the relevant standards;</li> <li>• The water storage dam has a capacity within the Harvestable Rights Order and would not result in a significant reduction in access to water for other agricultural users in the catchment.</li> </ul> <p>The proposal has been referred to the NSW Department of Primary Industries - Agriculture as part of the assessment of the application. The Department has confirmed in correspondence dated 20 June 2016 that they are satisfied with the potential impacts on nearby agricultural uses due to the separation distance and proposed ameliorative measures.</p>
A land use conflict risk assessment has not been provided with the application.	A land use conflict risk assessment has been submitted with the Addendum EIS.
Prior community consultation not carried out in accordance with the Secretary's Environmental Assessment Requirements. EIS does not include discussion of issues raised and how they are proposed to be addressed.	<p>Agreed. The community consultation carried out by the Applicant prior to lodging the Development Application was limited.</p> <p>However, the advertising of the application by Council has resulted in a significant number of submissions. It is expected that all relevant matters of concern from the community have now been received and can be considered in the assessment of the application.</p> <p>It is not considered that there would be any benefit from requiring the Applicant to carry out further community consultation of their own.</p>
The application does not consider SEPP (Rural Lands) 2008.	No provisions of this SEPP are applicable to the proposed development, as Part 3 relates only to rural dwellings and subdivision. It is noted that relevant rural planning principles and potential land use conflict are required to be considered in a similar manner under Clause 12 of SEPP (Mining, Petroleum Production and Extractive Industries) 2008, as discussed earlier in this report.
Superseded drawings have been referenced in the Bushfire Assessment and correspondence with NSW Trade and Investment - Resources and Energy.	Amended documentation has been referred to the relevant agencies for consideration as part of the assessment of this application.
A copy of the correspondence from Geological Survey NSW has not been provided.	<p>A copy of the correspondence was provided in the Addendum EIS.</p> <p>The proposal was also referred to the NSW Department of Industry - Resources and Energy</p>

	<p>Division and part of the assessment of the application. A letter dated 8 June 2016 confirms that the Department are satisfied that the proposal addresses their requirements in the SEARs for the project and that they have no other issues in relation to the proposal.</p>
<p>The Abridged Geotechnical Assessment indicates that only some of the samples meet relevant specifications for the higher order uses claimed in the application.</p>	<p>Agreed. The full geotechnical assessment also recommends that further investigations and testing be carried out to confirm whether the resource is suitable for some uses.</p>
<p>Socio-economic profile in the EIS is not representative of the local area.</p>	<p>Noted.</p>
<p>The consent authority is not transparent enough for the community to have faith in the application process.</p>	<p>The proposal is required to be determined by the Joint Regional Planning Panel (JRPP). The JRPP is comprised of five members; three independent experts appointed by the Minister and two appointed by Council.</p> <p>The appointment of an independent chairperson from one of the three state-appointed members requires the concurrence of Local Government NSW.</p> <p>The three state-appointed members must have expertise in one or more of the following fields: planning, architecture, heritage, the environment, urban design, land economics, traffic and transport, law, engineering, tourism or government and public administration.</p> <p>Of the two council appointed members, one member must have expertise in one or more of the following fields: planning, architecture, heritage, the environment, urban design, land economics, traffic and transport, law, engineering or tourism.</p> <p>Details of the panel members are available to the public on the JRPP website.</p>
<p>Adverse social impacts and divisions in the community.</p>	<p>These comments in the submission are based on the assumption that the proposed development would operate in a manner that adversely impacts the amenity of nearby residents and that there would be continual breaches of conditions of consent.</p> <p>The likely amenity impacts of the development have been discussed throughout this report. Subject to the recommended conditions, the development can achieve relevant standards for amenity impacts.</p> <p>It cannot be assumed that conditions of consent would not be complied with and that environmental controls would not be implemented. The proposed</p>

	mitigation measures in the EIS and considered to be practical and achievable.
Insufficient funds have been set aside for the future rehabilitation of the land and monitoring of water quality.	See comments earlier in this report under Rehabilitation.
Consideration of SEPP No. 33 - Hazardous and Offensive Development is required.	See comments earlier in this report under SEPP No. 33 - Hazardous and Offensive Development.
Insufficient consideration of the impact of the development on groundwater.	See comments earlier in this report under Water Management.
No bunding or containment provisions have been proposed for the diesel storage tank.	The general terms of approval issued by the EPA include a requirement for appropriate bunding of fuel and chemical storage areas.
No details have been provided of the proposed water supply infrastructure (pump/s and pipes) between the new dam and the quarry site.	Indicative details of the water supply infrastructure are provided in the Addendum EIS. Final details would be subject to detailed design by a hydraulic engineer and would need to be submitted with the Section 68 application.
No figures for operational face height, operational bench width, terminal bench width, or face angle in Section 2.5 of the EIS.	Details of these matters have been provided in the Addendum EIS.
Rainfall data from Telegraph Point not considered as being representative of the site conditions. Calculations for the sediment basins may be inaccurate.	Telegraph Point is considered to be the closest comparable location with long-term weather records.
The Harvest Operational Plan prepared by the Forestry Corporation identifies a koala sighting near the intersection of Lookout Road and Bago Road. Core koala habitat assessment is required.	<p>See comments earlier in this report under SEPP No. 44 - Koala Habitat Protection. The ecological assessment prepared by Naturecall Environmental identified only a small area of potential koala habitat south of the proposed quarry. This part of the site was investigated for koala activity and determined not to be core koala habitat, as defined in the SEPP.</p> <p>The sighting near the intersection of Lookout Road and Bago Road does not correspond with the location of the potential habitat on the land.</p>
Greenhouse Gas Assessment is inaccurate due to number of vehicles and plant assumed for the calculations.	<p>The calculated number of vehicles is considered acceptable. There is a degree of variability in the vehicle numbers depending on the vehicle size and loading used by the quarry operator.</p> <p>As there are no adopted standards or guidelines for maximum greenhouse gas emissions for developments of this nature, changing the number of vehicles would not change the outcome of the Greenhouse Gas Assessment. Current legislation is aimed at minimising greenhouse gas emissions,</p>

	and recommendations have been made to ensure the development incorporates practical means of greenhouse gas reduction.
Contradictory information provided regarding electricity supply. Both solar and grid connect mentioned. Use of solar power not reliable and likely to result in use of a generator, which would result in noise impacts.	<p>It has been confirmed that the proposed electricity supply for the development would be a stand-alone photovoltaic system comprising 16 solar panels, one inverter, and 12 batteries.</p> <p>The use of a generator has not been proposed in the application. If a generator was required, it is not expected that it would generate greater noise emissions than the other quarry activities modelled in the noise impact assessment.</p>
Methodology for determining wind roses is flawed. Results in inaccurate modelling for noise and air quality impacts.	The Air Quality Impact Assessment prepared by Ramboll Environ states that it has been prepared in accordance with the EPA's document <i>The Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales</i> . The document has been reviewed by the EPA as part of their integrated development referral and no concerns were raised regarding the methodology for determining the wind roses.
AHIMS search for Aboriginal heritage has not been carried out for the whole development site.	The AHIMS search was carried out for Lot 52 DP 754445, with a 1000m buffer. It is noted that Lot 52 is located at the eastern extent of the proposed quarry footprint. However, the 1000m buffer included in the search covers all parts of the site that are proposed to be disturbed for the proposed development.
The EIS indicates that the extracted material will be used for 'metal by-products'. No information has been submitted on what these are and what processes are involved in producing.	The Addendum EIS indicates that the reference to metal by-products in the original version of the EIS was intended to refer to marine riprap, landscape aggregates, landscape slabs and pavers. It has been confirmed that there are no additional processes that have not been considered in the EIS for the production of these items.
There are alternative locations for the proposed dam on the northern side of Milligans Road that would have less impact.	The proposed dam location is intended to provide the largest available catchment, to ensure the reliability of the water supply. Locating the dam on the northern side of Milligans Road would considerably reduce its catchment area.
The proposed sediment dam will not have sufficient capacity and will overflow into Herons Creek during heavy rainfall. The EIS indicates that the site will be abandoned in times of heavy rainfall, so there will be no-one on site to monitor water levels.	<p>The size and volume of the sediment basins will need to be determined in accordance with Managing Urban Stormwater: Volume 2C Unsealed Roads and Volume 2E Mines and Quarries. The submitted Water Management Plan indicates that the sediment basins will be designed to accommodate a 5-day 90<sup>th</sup> percentile rainfall event.</p> <p>The sediment basins would overflow in rainfall events more extreme than the design standard. However, receiving waters would already be</p>

	degraded during extreme rainfall events. The EPA general terms of approval include a requirement for water quality monitoring on Herons Creek
Potential impacts on Milligans Road from access to the proposed new dam.	After construction of the dam is completed, access via Milligans Road would be limited to infrequent maintenance traffic. No significant impact on Milligans Road is expected from such traffic.
Traffic assessment does not consider cumulative traffic impact of approved increased extraction at existing quarry in Milligans Road.	The Addendum Traffic Impact Assessment considers cumulative traffic impact, including the additional traffic projected for the expansion of the existing quarry in Milligans Road.
Application does not consider NSW Trade and Industry Environmental Assessment Requirements for consideration of threatened aquatic species and impact on fishing activities.	See comments earlier in this report under Flora and Fauna.  With the recommended conditions regarding water quality, it is not expected that the development would adversely impact on downstream fishing activities.
Mineral exploration at the site carried out without a licence.	This is a matter for the authority that regulates exploration licenses (NSW Department of Industry - Resources and Energy).
The LiDar data cannot be relied upon for visual impact assessment given the tree harvesting that has been recently completed and is proposed in the future by Forestry Corporation of NSW.	The submitted Visual Impact Assessment accounts for clearing of the proposed quarry site with the exception of the vegetation noted on the plans as Visual Management Screen. No visual screening has been assumed for other land in the Broken Bago State Forest that may be harvested in the future.  A condition has been recommended requiring retention all vegetation making up the Visual Management Screen.
Number of pumps and size of pipes proposed for scale of development is questioned. No details of pump shed insulation provided.	The number and size of the proposed pumps will need to be determined by a hydraulic consultant as part of the detailed design for the Section 68 application.  Given that the number and type of pumps and their expected noise outputs are not known, it is recommended that a condition be imposed requiring certification from an appropriately qualified acoustic consultant that the construction of the pump shed will achieve satisfactory noise levels.
The geotechnical assessment indicates that the majority of the material tested does not meet the specifications for the main uses identified in the EIS. The report does not identify anything unique about the resource on the subject site. The report's author	Agreed. See comments earlier under Economic Impacts in the Locality.  The significance of the resource has not been demonstrated and therefore should not be given any weight over other social and environmental impacts in the assessment of the application.



recommends further testing to confirm the extent and quality of the resource.	
Cumulative noise impacts not adequately addressed in Addendum Noise and Blasting Assessment.	The Addendum Noise and Blasting Assessment has been reviewed by the EPA and Council's Environmental Health Officer and consideration of cumulative noise impact has been carried out in accordance with relevant guidelines.
The submitted noise and blasting assessment for the proposal only assesses the Stage 1 operations (4.7 hectares and approximately 400,000m <sup>2</sup> of material) and not the subsequent stages.	Additional noise assessment has been provided by the Applicant for Stages 2, 3, and 4.
The original noise, blasting and air quality modelling will now be inaccurate due to subsequent harvesting of forestry plantation in the area.	The original noise, blasting and air quality modelling did not account for any reduction of impacts from the existing vegetation at the site. The harvesting of the plantation would therefore not affect the accuracy of the modelling.
Alternative locations where the resource is available have not been explored by the Applicant.	Noted.
Leasing of State Forests for extractive industries should be open to expressions of interest or public tender.	This is a matter for the Forestry Corporation of NSW.
Addendum EIS indicates that the haulage route will now include Milligans Road, in addition to Lookout Road and Bago Road.	<p>All haulage of extracted material shall be via Lookout Road to Bago Road, then south on Bago Road to the Pacific Highway as shown in the Haulage Route Plan in Schedule 2 of the Draft Lookout Road Hard Rock Quarry Planning Agreement. A condition is recommended restricting haulage to this route.</p> <p>It is also recommended that a condition be imposed confirming that access from Milligans Road is only permitted for emergency access to the management centre and for maintenance access to the water supply dam.</p>
Traffic volumes in the Traffic Impact Assessment Review are still understated and have not been calculated in accordance with Council's advice.	Refer to the Roads and Traffic headings earlier in this report for a breakdown provided by the applicant, which is considered consistent with the likely increase. The variation between the Council's and the applicant's assessment arises from the likely loading of the truck and dogs to be used, although there is commercial incentive for the operator to fully load higher capacity trucks to reduce haulage costs - which would reduce the truck count in line with the applicant's estimates or less. Regardless, Council has tested the conclusions of the traffic assessment using more conservative assumptions, and concluded that the road network has capacity to cater for the proposed

	increase (subject to conditions).
Environmental impacts of the installation of the water supply pipe have not been addressed.	<p>The submitted EIS and Addendum indicate that it is proposed to lay the water supply pipe/s above ground on an alignment that avoids any vegetation removal. If the detailed design determines that additional vegetation removal is required for the water supply infrastructure, modification of any approval would likely be required.</p> <p>It is noted that the water supply would need to be piped under Milligans Road in accordance with an approval under Section 138 of the Roads Act 1993.</p>
Lambs Road is not suitable for construction access to the proposed water storage dam.	<p>The access to the proposed water storage dam is via an existing forestry road known as Lambs Road and Compartment 42/2 Trail. Lambs road is an all weather gravel road and is expected to be suitable for construction access in its current state.</p> <p>Compartment 42/2 Trail does not appear to have been used or maintained recently and the surface is not likely to be suitable for construction access. It is expected that the access would require additional gravel and the removal of some undergrowth. However, all existing mature trees adjacent to the access could be retained. The construction/maintenance access is therefore not expected to have any adverse environmental impacts.</p>
Removal of trees from the site by Forestry Corporation constitutes commencement of the development without consent and is a breach of the Environmental Planning and Assessment Act 1979.	Part of the existing hardwood plantation on the site of the proposed quarry has been harvested by the Forestry Corporation of NSW in accordance with the Forestry Act 2012. Uses authorised under the Forestry Act 2012 are permitted without consent in the RU3 zone under the Port Macquarie-Hastings Local Environmental Plan 2011.
Inconsistencies in the description of the property in the Environmental Assessment Requirements and public notification of the development.	<p>The Secretary's Environmental Assessment Requirements described the site as "Lot 161 DP754445, Compartments 42 and 43 of Broken Bago State Forest".</p> <p>The description of the site in Council's advertising of the application was based on the details contained in the Name and Address Register (NAR). The first advertisement described the land as "LOT: 161 DP: 754445, PLT: 52 DP: 754445, Seq: 184 Ext: SEVERAL, Milligans Road HERONS CREEK, State-Forest Broken Bago BAGO".</p> <p>The second advertisement described the land as "LOT: 161 DP: 754445, Seq: 184 Ext: 15, Seq: 184 Ext: SEVERAL, Milligans Road HERONS CREEK, The Paddock Road BAGO". The change of description resulted from an update to the NAR</p>

	<p>which incorporated Part Lot 52 DP 754445 into an adjoining parcel of State Forest.</p> <p>The plans accompanying the advertisements have clearly identified the location of the proposed development on each occasion and it is not considered that there would have been any confusion about the location of the proposed development.</p> <p>It is recommended that the property description in the notice of determination for the DA notes that Seq: 184 Ext: 15, Seq: 184 Ext: SEVERAL is also known as Compartments 42 and 43, Broken Bago State Forest.</p>
<p>The Water Management Plan (WMP) does not address suspension of fine particles in the sediment basins. Fine particles are expected to remain suspended for longer than the 5 day period indicated in the WMP.</p>	<p>See comments earlier in this report under Water Management. The detailed design will need to demonstrate that water discharged from the sediment basins will achieve the water quality requirements of the Environment Protection Licence.</p> <p>The relevant standards specified in the general terms of approval issued by the EPA are 50 mg/L of suspended solids for discharge from the sediment basins and 40 mg/L of suspended solids for discharge from the water storage dam. Total suspended solids will include fine particles.</p>
<p>The visual impact assessment was carried out prior to harvesting of existing vegetation by the Forestry Corporation in May 2016 and is therefore not accurate.</p>	<p>The submitted visual impact assessment accounted for clearing of all vegetation within the quarry footprint.</p>
<p>The submitted noise and blasting assessment was carried out prior to harvesting of existing vegetation by the Forestry Corporation in May 2016 and is therefore not accurate.</p>	<p>The noise and blasting assessment does not assume any noise reduction from existing vegetation. The harvesting of vegetation in May 2016 would therefore not affect the accuracy of the modelling.</p>
<p>The Applicant has not taken up the offer of Volcanic Resources to carry out noise testing using their quarry machinery on the site.</p>	<p>Noted. The EPA's approved methods for modelling do not require such testing.</p>
<p>Financial capacity of the Applicant to carry out the development and associated rehabilitation questioned.</p>	<p>The financial capacity of the Applicant to carry out the development is not a relevant matter for consideration.</p> <p>However, rehabilitation of the site in the event of an unplanned closure is important to prevent ongoing environmental degradation. The recommended conditions require rehabilitation to be completed for each stage prior to the commencement of the subsequent stage of extraction. This would limit the extent of rehabilitation required in the event of an</p>

	<p>unplanned closure.</p> <p>A further condition is recommended requiring rehabilitation to be carried out in accordance with the Rehabilitation Plan if extraction from quarry ceases for a continuous period of more than 12 months. This would ensure that there is scope for the rehabilitation to be enforced in the event of an unplanned closure.</p> <p>The Environmental Planning and Assessment Act 1979 does not permit the consent authority to require a bond for this work as it does not relate to a public asset. However, the Forestry Corporation of NSW may wish to have security from the quarry operator as part of any licence/agreement, to cover the cost of any rehabilitation for the applicable stage of extraction.</p>
Majority of adjoining properties are of adequate size and are used for primary production.	Noted. This has been acknowledged in the assessment of potential land use conflict.
Retention of hollow bearing trees affected by the water storage dam is important given their rarity in the State Forest.	Agreed. Conditions have been recommended to ensure the protection of all hollow bearing trees adjacent to the proposed dam site.
Detailed design of stormwater management should not be deferred until the Construction Certificate stage.	It is not practical to require detailed design of infrastructure at the Development Application stage. It has been demonstrated that it is possible to achieve the required water quality outcomes, and conditions of consent can ensure that the modelling and detailed design are submitted and approved prior to the issue of a Construction Certificate.
Inconsistency between the noise contours provided with the Addendum EIS and the tables in the Noise and Blasting Assessment prepared by EMM Consulting.	<p>EMM Consulting have provided the following advice regarding this matter:</p> <p><i>“The noise contour figures show the 35 dB contour re-appearing to the south in between receivers R5 and R8 where ground level becomes relatively elevated. The fact that it doesn’t reach either of these residences is likely due to rounding of noise levels. It is well established and accepted by acousticians that noise contours are only approximations of noise across an area derived through interpolation of data points. Therefore, Table 5.2 of the NBIA results are the accurate results for each assessment location.”</i></p>
Noise reduction achieved by separation distance is questioned.	<p>EMM Consulting have provided the following advice regarding this matter:</p> <p><i>“Noise modelling was based on three-dimensional digitised ground contours of the surrounding land and surface infrastructure. Noise predictions were carried out using the Brüel and Kjær Predictor</i></p>

	<i>Version 11 software. 'Predictor' calculates total noise levels at assessment locations from concurrent operation of multiple noise sources. The model has considered factors such as the lateral and vertical location of plant, source-to-receptor distances, ground effects, atmospheric absorption, topography of the site and surrounding area and applicable meteorological conditions. Predictor applies recognised noise algorithms that are accepted by the NSW EPA, in this case, in accordance with ISO 9613 Acoustics – Attenuation of sound during propagation outdoors."</i>
Additional information submitted with EIS Addendum 2 does not actually explore alternative sites.	<p>The following alternative sites were assessed:</p> <ul style="list-style-type: none"> <li>– Lot 2 DP 814356 situated on the southern side of Milligans Road to the west of the subject land.</li> <li>– Compartment 42 (south side of Milligans Rd)</li> <li>– Compartment 43 ( the subject site)</li> </ul>
The social impact assessment is inadequate and does not include any community consultation or surveys of the local area.	<p>Demographic data used in the social impact assessment is understood to have been sourced from Council's website, community profile ID. Profile ID data is sourced from ABS and is modelled using "REMPLAN economy" software.</p> <p>The same data source was used for the social impact assessment in the recently approved expansion to Coastal Quarry Products operations (DA2014 - 960).</p>
The dwellings at 92 and 124 Old Mill Road should be included as a receptor in the noise modelling.	<p>EMM Consulting have provided the following advice regarding this matter:</p> <p><i>"The houses located at 92 and 124 Old Mill Road were not considered as noise assessment locations because it is expected that operational noise criteria would be achieved at these locations given they are predicted to be achieved at the nearer locations in their direction (eg R5 and R7). See map at Annexure B showing the location of 92 and 124 Old Mill Road in relationship to assessment locations R5 and R7. In addition, the noise contours demonstrate that the noise criteria are predicted to be achieved at these houses for all proposed stages of quarry operation."</i></p>
The location of the pump in the noise contour plans does not reflect the revised location of the dam and pump shed.	<p>EMM Consulting have acknowledged that a superseded plan was used for modelling of the pump location. However, the amended pump location would not alter the predicted noise levels at the nearest residences given the relatively low sound power level of the pumps and the fact that the revised location is further from the residences.</p> <p>A condition has also been recommended requiring</p>

	certification that noise requirements are achieved in the design and construction of the proposed pump shed.
The assessment needs to include consideration of 'alternatives' (eg. do nothing, establish a smaller quarry, etc) rather than just 'alternative sites'.	<p>The Applicant has provided additional comments in response to this submission.</p> <p>The 'do nothing' option was rejected by the Applicant and Forestry Corporation on the basis that this option represents a considerable and significant lost economic opportunity.</p> <p>A shorter quarry lifespan than 20 years was investigated by the proponents. This option was found to be economically unattractive having regard achieving a financial return on investment on the cost of the capital outlay in establishing the quarry.</p>
The economic and public benefit of the proposal has still not been substantiated in EIS Addendum 2.	See comments earlier in this report under Economic Impacts.
Reduced water quality will affect oyster aquaculture in the Camden Haven.	Water discharged from the development will be required to meet the water quality conditions in the Environment Protection Licence and is not expected to adversely impact oyster aquaculture.
Council's Operational Plan for 2016/2017 includes \$251,200 for road safety improvements on Bago Road north of Milligans Road - suspicion that that the work are associated with the proposed development.	Bago Road north of Milligans Road is not part of the haulage route for the proposed development.
The proposal is inconsistent with the objectives of Council's Transport Strategy Working Paper (February 2014).	This document is currently only a working paper and a formal Integrated Transport Strategy has not been adopted by Council. The document is not relevant to the assessment of the application.
Issues with Council process in Port Macquarie-Hastings Local Environmental Plan 2011 Amendment No. 34, which made extractive industries permissible in the RU3 Forestry zone.	LEP Amendment No. 34 commenced on 11 December 2015 when it was published on the NSW legislation website. In accordance with Section 35 of the Environmental Planning and Assessment Act 1979, the validity of an environmental planning instrument shall not be questioned in any legal proceedings except those commenced in the Court by any person within 3 months of the date of its publication on the NSW legislation website.
The social impact assessment does not address the likely impact of the development on the mental health of residents in the locality from sleep deprivation, excessive noise and blasting, reduction in air and water quality, and cumulative impacts.	<p>The impacts of the proposed development in terms of noise, blasting, air and water quality have been considered in the assessment and the proposal can achieve acceptable impacts.</p> <p>The proposed quarry would not operate during the night (other than inaudible maintenance work) and is not expected to cause sleep deprivation.</p>
Dispute Applicant's claims about	Noted.

CTK Natural Resources being a good corporate citizen and reputable local employer.	
EPA general terms of approval are dated 24 March 2016. Did EPA receive a copy of EIS Addendum 1 for comment?	The EPA were provided with a copy of EIS Addendum 1 for comment and provided a letter received on 14 June 2016 indicating that they had no further comments on the proposal.
Clean and dirty water cannot be separated in accordance with the EPA conditions.	<p>Clean water (surface water from outside the disturbed area of the quarry) can be directed away from the quarry with use of appropriate diversion drains.</p> <p>Dirty water (surface water runoff from within the quarry footprint, and process water) can be drained to the proposed sediment basins.</p> <p>It is considered possible to separate clean and dirty water in accordance with the EPA requirements.</p>
How will sediment regularly cleaned out of the sediment basins be managed?	<p>Sediment regularly cleaned out of the sediment basins would be stored in the overburden stockpiles for future use in site rehabilitation. The same requirements would apply to any sediment cleaned out of the water process dam and a condition has been recommended in this regard.</p> <p>Removal of sediment from the water process dam is expected to be significantly less regular than would be necessary for the sediment basins. The EPA requires water discharged from the sediment basins to have a maximum of 50 mg/L of suspended solids. Therefore the sediment load of water entering the process dam will be relatively low.</p> <p>Based on the estimated annual water usage of 39ML indicated in the Water Management Plan, 390kg of sediment would be retained in the water process dam annually.</p>
Will access to private property at 85 Lambs Road be impeded by the access to the water process dam? Who will be responsible for future maintenance?	<p>The property access to 85 Lambs Road referred to in the submission is from Milligans Road via Broken Bago State Forest on Lot 161 DP 754445, and privately owned property (Lot 2 DP 814356). The access is signposted as Lambs Road, but is not a dedicated public road.</p> <p>Future access and maintenance obligations for this road are a matter for the relevant parties in accordance with any existing legal rights that exist over the access.</p> <p>It is noted that 85 Lambs Road has alternative access to a Council public road (Old Mill Road) on its southern boundary.</p>
Employment numbers used in the	Agreed. This has been noted in the Economic

<p>economic impact assessment have increased from those in the original EIS, and are overstated compared to other quarry operations.</p>	<p>Impact section earlier in this report.</p> <p>The Applicant has further clarified that they expect the employment created by the development to include the following:</p> <p><i>“Full time on-site staff positions are projected to be as follows:</i></p> <ol style="list-style-type: none"> <li><i>1. Site Manager (also responsible for coordinating toolbox meetings, and ensuring all personnel are appropriately inducted and trained regarding environmental management, monitoring procedures and environmental emergency procedures).</i></li> <li><i>2. Crushing Plant operator</i></li> <li><i>3. Excavator operator</i></li> <li><i>4. Front end loader operator</i></li> <li><i>5. Dump Truck operator</i></li> <li><i>6. Maintenance Mechanic</i></li> <li><i>7. Weighbridge operator (including customer liaison)</i></li> <li><i>8. Administration Assistant</i></li> </ol> <p><i>Part time/ casual on-site positions as follows:</i></p> <ol style="list-style-type: none"> <li><i>1. Environmental monitoring officer</i></li> <li><i>2. Quality control officer</i></li> <li><i>3. Security officer</i></li> </ol> <p><i>In addition to the on-site positions listed above, it is projected that there will be an additional off site Corporate manager position, whose duties will include contract management, accounting management, legal management, compliance with statutory obligations, marketing, liaison with drilling and blasting contractors, traffic control, management of geotechnical testing, surveying and stockpile reconciliations, human resource recruiting, management of rehabilitation, environmental reporting, and reporting to Forestry Corporation.”</i></p>
<p>If Coastal Quarry Products closes as a result of the proposed development, Council would lose their current contributions towards the maintenance of Milligans Road.</p>	<p>The Voluntary Planning Agreement associated with the expansion of this quarry relates only to extraction in excess of 30,000 tonnes per annum as approved under DA2014 - 960. The increased extraction authorised by this consent has not yet commenced.</p> <p>Monetary contributions under the Bago Quarry VPA only apply to the Bago Road component of the haulage route, with ‘works in kind’ applicable to Milligans Road.</p> <p>If Coastal Quarry Products closed, the heavy vehicles associated with that development would no longer impact on Milligans Road or Bago Road and the need to for maintenance on these roads would</p>



	be significantly reduced.
The economic impact assessment provides no comparison between the relative benefits of the proposal compared with the existing forestry use.	The relative benefits of the two uses have been discussed earlier in this report under SEPP (Mining, Petroleum Production and Extractive Industries) 2007.
Documentation was not readily accessible during public exhibition of EIS Addendum 2.	The exhibition material was available in hard copy at the Port Macquarie Council office and Department of Planning and Environment Grafton Office. It was also available electronically at Council's Branch Offices and on Council's website.
The Bago Range is of cultural significance to the local community.	The part of the Bago Range considered to be of cultural significance in contain within Bago Bluff National Park.
The Statutory Ecological Assessment prepared by Naturecall Environmental has not been carried out in accordance with accepted practice/methodology and cannot be relied upon in the assessment of the application.	<p>The Naturecall Environmental has provided a response to the issues raised in this submission. The submission and response have been reviewed by Council's ecologist.</p> <p>Council's ecologist considers that the ecological assessment has been carried out in accordance with accepted practice and can be relied upon in the assessment of the Application.</p>
The economic impact assessment does not address the potential negative economic impact and multiplier effects of any loss of employment from existing quarries.	Agreed. This has been noted in the Economic Impact section earlier in this report.
Air Quality Impact Assessment addressed only Stage 1 of the development and cannot be relied upon for the subsequent stages.	An Addendum to the Air Quality Impact Assessment prepared by Ramboll Environ has been submitted by the Applicant in response to this concern. See comments earlier in this report under Air and Microclimate.
The Industrial Noise Policy states that a default drainage wind value be applied where sources are at a higher elevation than the receptors with no intervening topography. This has not been addressed in the Noise and Blasting Impact Assessment.	This requirement relates to temperature inversion during the night time period. The recommended conditions would prevent the quarry from operating during the night time period.
The Noise and Blasting Assessment does not address potential sleep disturbance for operations between 6.00am and 7.00am.	<p>See comments earlier in this report under Noise and Blasting. A condition has been recommended restricting hours of operation to the following:</p> <ul style="list-style-type: none"> <li>• 6.00am to 5.00pm Monday to Friday;</li> <li>• 6.00am to 1.00pm Saturdays;</li> <li>• At no time on Sundays and public holidays.</li> </ul>
The Forestry Corporation of NSW has denied access to the site for objectors to carry out independent	Noted.

noise testing.	
The ABS suggests that the use of Input - Output Multipliers is a biased estimator of the benefits or costs of a project and their inherent shortcomings make them inappropriate for economic impact analysis.	Noted.
The 'temporary nature' of the visual impact of Stages 3 and 4 of the quarry cannot be quantified as it is dependent upon extraction rates.	<p>Agreed.</p> <p>Some analysis of the volume of extractive material within the part of the site that is visible from nearby dwellings. It is conservatively estimated that the volume of material is approximately 100,000 tonnes, which equates to half the maximum annual extraction rate sought in this application.</p> <p>If extraction proceeds at a slower rate the quarry may not reach the relevant part of Stage 3 and 4 within the 20 year life recommended in the conditions. Slower extraction rates would also allow additional time for growth of trees in the proposed 'Visual Management Screen', which would reduce the extent of the site that is visible. The visual impact modelling has not assumed any growth of the trees over the life of the quarry and provides a conservative estimate of the impact.</p>
EPA requirements for air quality monitoring (continuous PM10 monitoring at location R10) is not considered effective as it would be difficult to identify the source of the emissions (existing or proposed quarry). The more hazardous particles are smaller than those required to be monitored.	<p>This requirement has been discussed with the EPA. The rationale for selection of location R10 for the air quality monitoring was the proximity to the quarry site and direction of prevailing winds in the area.</p> <p>The EPA are satisfied that they would be able to determine the source of any pollution incident by reviewing the corresponding wind conditions at the time.</p>
Documented records of discussion between CTK NR and Volcanic Resources should be made public.	These documents are not required to be included in the application.
The dam should be located on the northern side of Milligans Road - alternative locations with similar catchment area provided in submission.	The suggested alternatives have been provided to the applicant for their consideration. The Applicant has not proposed any changes to the dam location, and the assessment of the application has been carried out on this basis.
The quarry should be designed to face north rather than south.	The recommended conditions require Stage 4 of the development to be carried out from north to south, with the operational face generally oriented towards the north. Stage 4 of the development is located at the highest elevation and is the most visually prominent.

### **(e) The public interest**

The quarry will provide a supply of road construction and building materials to the surrounding region. The aggregates produced at the quarry would be used to meet a fundamental community need for the construction of roads, infrastructure and buildings in the region.

The proposed development is consistent with relevant planning strategies for the region and is not expected to impact on the wider public interest.

### **Ecologically Sustainable Development and Precautionary Principle**

Ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes.

The four principles of ecologically sustainable development are:

- the precautionary principle,
- intergenerational equity,
- conservation of biological diversity and ecological integrity,
- improved valuation, pricing and incentive mechanisms.

The proposed progressive rehabilitation of the site will ensure that the land is returned to a suitable condition to support forestry plantations for future generations. The submitted greenhouse gas assessment also includes recommendations to minimise greenhouse gas emissions and the associated impacts of climate change on future generations.

The ecological assessment has demonstrated that the development would not have a significant impact on biological diversity or ecological integrity subject to the implementation of the recommendations in the Naturecall Environmental report.

The development adopts a 'user pays' approach in relation to the potential impacts of heavy vehicles on local roads along the haulage route. The Applicant has offered to enter into a planning agreement with Council for the payment of monetary contributions towards future repairs to Bago Road.

### **Mid North Coast Regional Strategy 2006-31**

The Strategy predominantly focuses on the impacts of urban and rural residential growth on the environment and agricultural resources:

*"The Region's natural resources including farmland, extractive resources, energy resources and timber will be protected from urban and rural residential development, with appropriate buffers considered when development occurs near these resources."*

There is no further guidance in the Strategy as to priorities where extractive resources are being balanced against other land uses and potential impacts on rural residents.

### **Draft North Coast Regional Plan 2016**

The proposal is consistent with the following aspects of the Draft North Coast Regional Plan:

*"Action 1.3.1 Protect marine environments, water catchment areas and groundwater sources:*

*Protecting water quality, managing access to water supplies, and avoiding activities that interrupt natural ecological processes are essential for the health of the region's marine environments, water catchments and to support continued population and economic growth.*

Action 1.5.1 Facilitate investment in the resources and energy sector:

*The region's natural resources have the potential to drive regional economic development and prosperity. They include traditional and renewable energy sources and a broad range of mineral resources and construction materials. These mineral resources include hard rock aggregate, clay, sand and coarse aggregate. The development of these resources is necessary to support major infrastructure projects, the new housing needed for a growing population, and industrial and agricultural businesses. The extraction of these resources generates employment in the region. Local extraction of these resources is particularly important as transporting these bulky materials can be relatively expensive."*

**Port Macquarie-Hastings Urban Growth Management Strategy (UGMS) 2011 - 2031**

Section 3.4 of the UGMS recognises that:

*"Planning must also consider the impact on the long-term viability of known extractive resources, which are critical for future growth in the Region."*

Map 3.8 in the UGMS also identifies part of the subject site and adjoining land as a known mineral resource and notes that Section 117 Directions aimed at protecting mineral and extractive resources would apply to any proposed rezoning in the area.

#### **4. PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997**

If consent is granted to the proposal, the proponent will need to make a separate application to the EPA to obtain an Environment Protection License (EPL) in accordance with the Protection of the Environment Operations Act 1997.

The proposal was referred to the EPA as integrated development and general terms of approval issued on 17 March 2016. The amended proposal including Addendum EIS was also further considered by the EPA and advice was received on 7 June 2016 that the original general terms of approval remain applicable.

A condition is recommended incorporating the EPA's general terms of approval into the consent.

#### **5. DEVELOPMENT CONTRIBUTIONS**

The s.94A levy applies to the development under the Port Macquarie Hastings Council S94A Levy Contributions Plan 2007.

A monetary contribution towards maintenance of the Bago Road haulage route applies under the Draft Lookout Road Hard Road Quarry Planning Agreement. Refer to comments earlier in this report addressing contribution rates and maintenance requirements.

#### **6. CONCLUSION**

The application has been assessed in accordance with Section 79C of the Environmental Planning and Assessment Act 1979.

Issues raised during assessment and public exhibition of the application have been considered in the assessment of the application.

The site is suitable for the proposed development, is not contrary to the public's interest and will not have a significant adverse social, environmental or economic impact. It is

recommended that the application be approved, subject to the EIS recommendations and conditions of consent provided in the attachment section of this report.