

JOINT REGIONAL PLANNING PANEL (Northern Region)

JRPP No	2015NTH001
DA Number	DA 2014 - 960
Local Government Area	Port Macquarie-Hastings
Proposed Development	Alterations to Existing Extractive Industry - Increase in Extraction (Bago Quarry)
Street Address	129 Milligans Road, Herons Creek
Applicant/Owner	M, W & I Roche
Number of Submissions	Three(3)
Regional Development Criteria (Schedule 4A of the Act)	Designated Development - Extractive Industry
List of All Relevant s79C(1)(a) Matters	• State Environmental Planning Policy No. 33 Hazardous and Offensive Development • State Environmental Planning Policy No. 44 Koala Habitat • State Environmental Planning Policy No. 55 Remediation of Land • State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 • State Environmental Planning Policy (Rural Lands) 2008 • State Environmental Planning Policy (State and Regional Development) 2011 • Port Macquarie-Hastings Local Environmental Plan 2011 • Development Control Plan 2013 • Draft Bago Quarry Planning Agreement
List all documents submitted with this report for the panel's consideration	1. Recommended conditions 2. Development contributions calculations 3. NSW EPA advice 4. Draft Voluntary Planning Agreement 5. Plans of expansion and management
Recommendation	That DA 2014 - 0960 for Alterations to Extractive Industry - Increase in Extraction (Bago Quarry) at Part Lot 129 DP 754445, 129 Milligans Road, Herons Creek, be determined by granting consent subject to the recommended conditions.
Report by	Patrick Galbraith-Robertson

Executive summary

This report considers a Development Application (DA) for alterations to an existing extractive industry to increase extraction (Bago Quarry) at the subject site.

The proposal is Designated and Integrated Development.

This report provides an assessment of the application in accordance with the Environmental Planning and Assessment Act 1979.

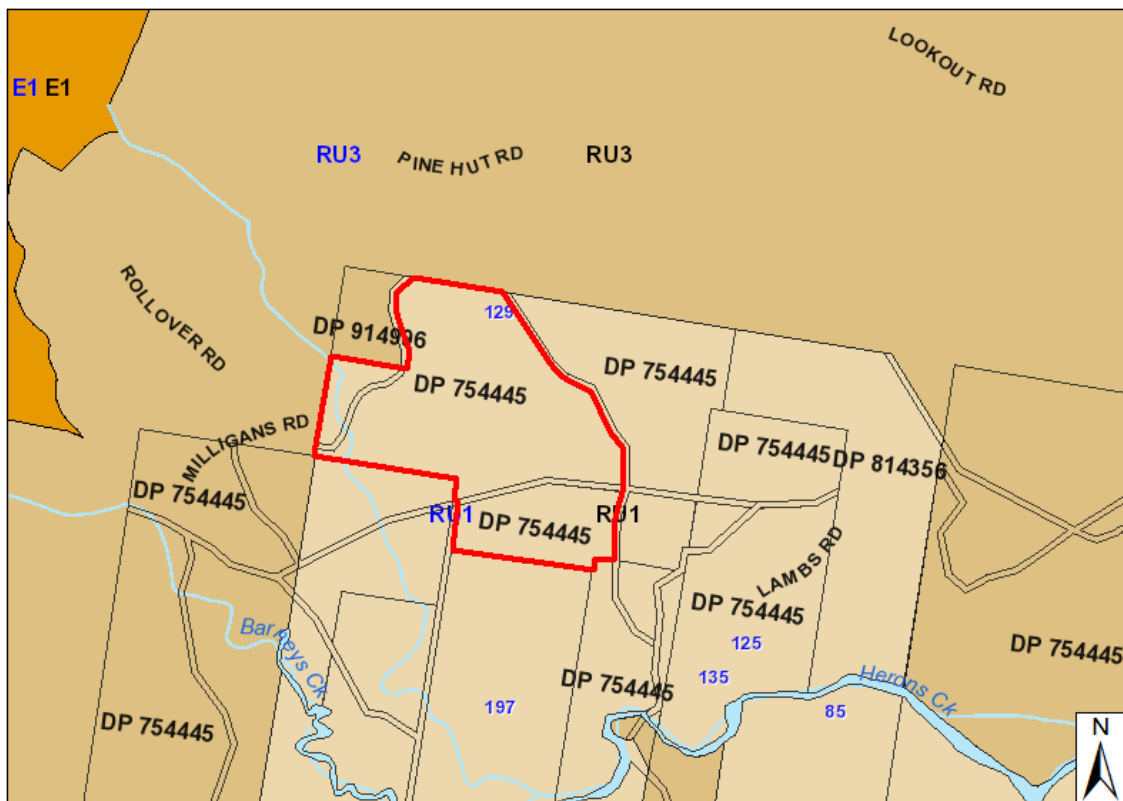
Following exhibition of the application, three (3) submissions have been received.

1. BACKGROUND

Existing sites features and surrounding development

The site has an area of 41 hectares. The existing quarry footprint is already cleared and comprises approximately 15.2 hectares of the 41 hectares lot area.

The site is zoned RU1 Primary Production in accordance with the Port Macquarie-Hastings Local Environmental Plan 2011, as shown in the following zoning plan:

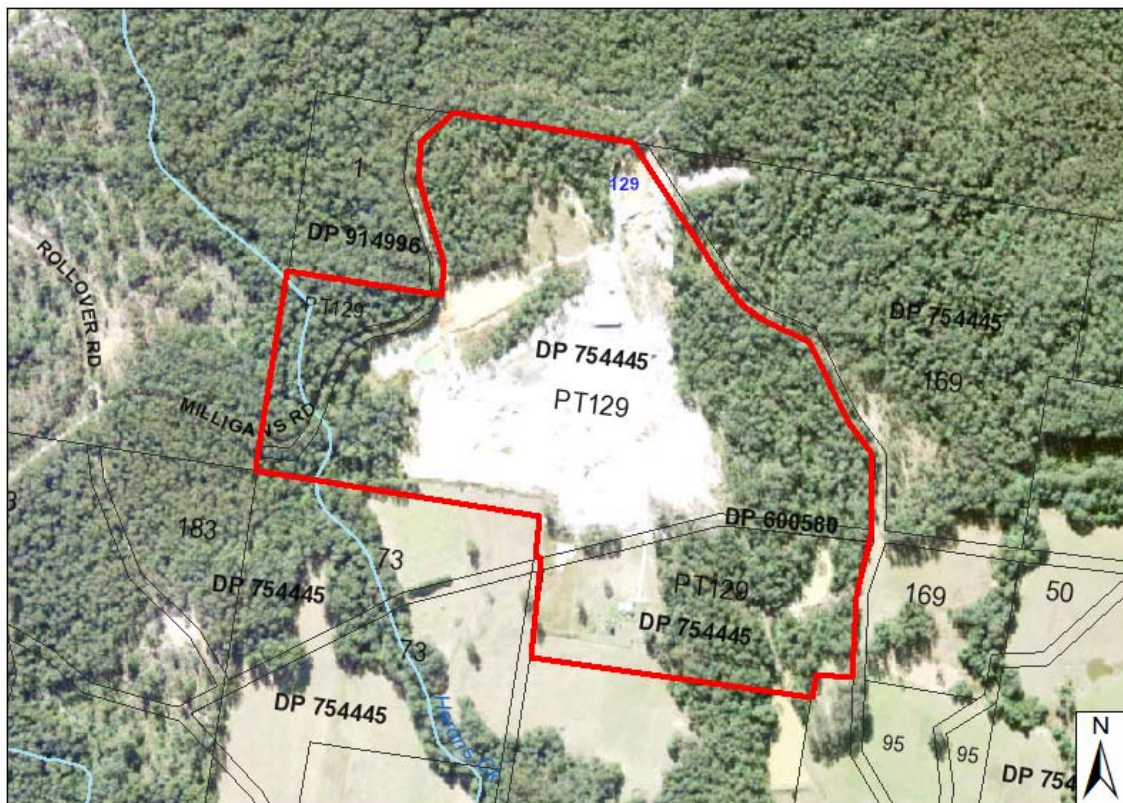


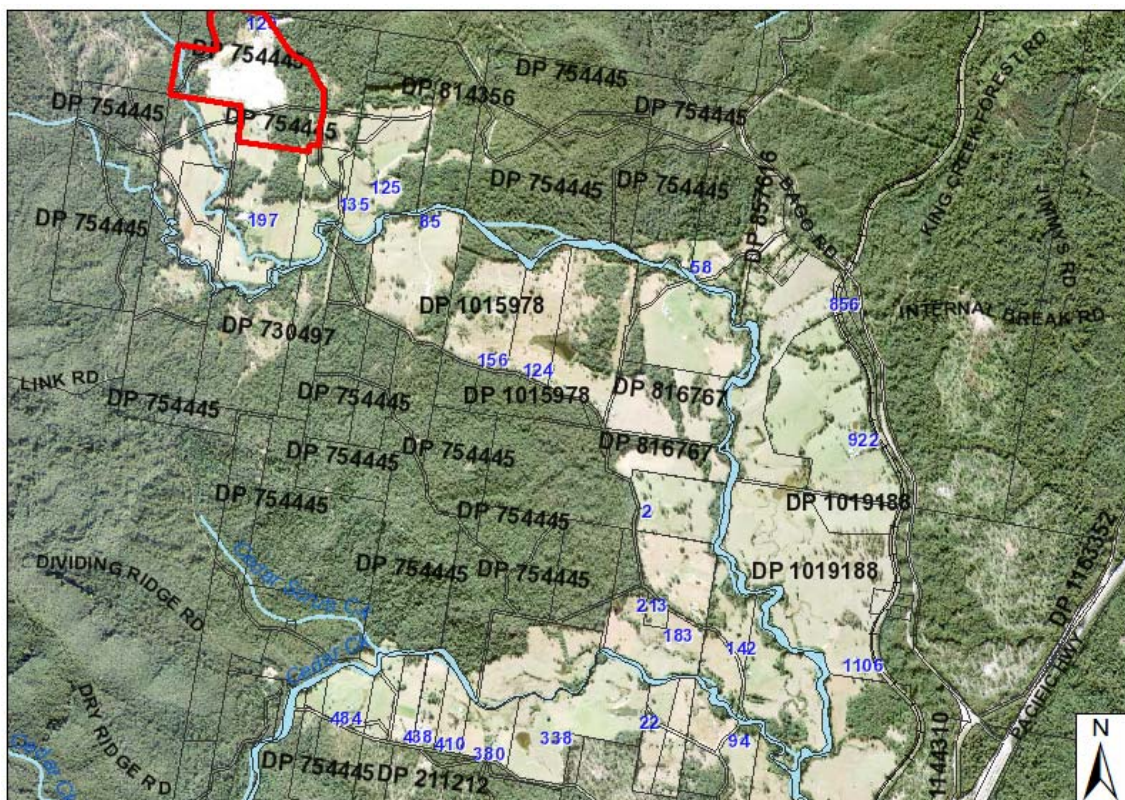
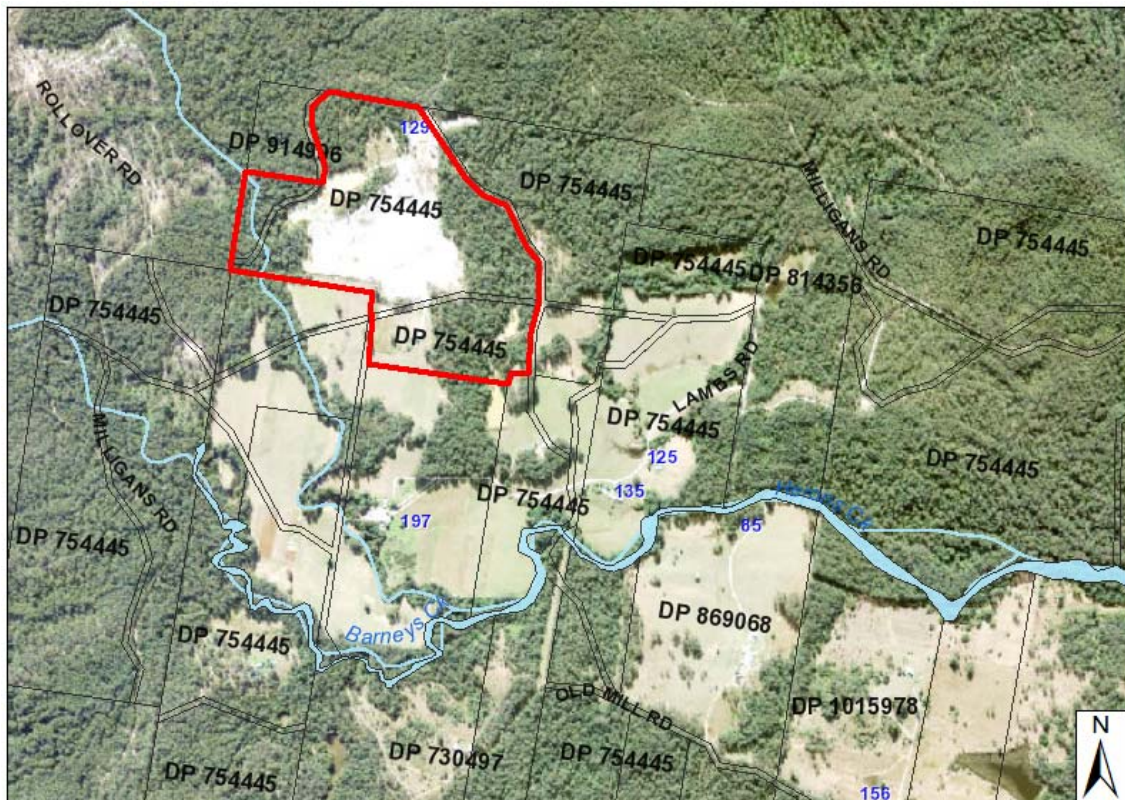
The site is located approximately 8.5 kilometres south-west of Wauchope and 9.5 kilometres to the west of the Pacific Highway.

Current access to the site is via an entrance approximately 3.5 kilometres along Milligans Road from its' junction with Bago Road, which in turn extends approximately 4.5 kilometres in a north-west direction from its' intersection with the existing Pacific Highway alignment.

Land use in the immediate surrounds of the quarry, to the north and west is Crown land set aside as Broken Bago State Forest. Land immediately to the east is privately owned and predominately forested. Land immediately to the south is also privately owned comprising rural land associated with the Bago Vineyard and Maze. The vineyard is the closest neighbour with a residential component approximately 700m to the south. Two rural residential properties are located approximately 900 and 1,000m to the south east of the quarry, respectively.

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 relates to an existing quarry. The existing 1996 Bago Quarry approval (DA 1995/252) limits the production of approximately 20,000m³ per annum

(approximately 30,000 tonnes per annum). The site is an existing gravel quarry used to source road construction materials (roadbase and select fill). The site has been utilised as a quarry dating back to the 1890s. Intensive extraction occurred from the mid-1980s onwards.

The Application details that production at the quarry has generally remained at or below within the 30,000 tonnes rate over the life of the current consent. There have been Compliance matters with the operations in the past relating particularly to extraction levels being exceeded.

Key components of the existing development include:

- Site office and amenities;
- Workshop and maintenance facilities;
- Employee and visitor carparking;
- Stormwater detention basins;
- Various product stockpile;
- Water supply ponds;
- Mobile crushing and screening equipment that can be moved throughout the quarry; and
- Product wash plant

The proposal seeks approval to expand the quarry to significantly increase the annual extraction rate from 30,000 tonnes per annum to 490,000 tonnes per annum for a period of five years from the date of approval. Extraction rates would then revert to 250,000 tonnes per annum until the remaining available resource is exhausted. The increased production at the quarry would be undertaken within the existing quarry footprint to the currently approved vertical limit of RL50. The lateral extent of the quarry will be limited within the extent of the existing cleared area and the current quarry footprint.

Investigations by the Applicant have determined that approximately 3,220,000 tonnes of resource is available with quarrying operations to RL50m and a single 70° batter. Assuming the maximum extraction of 490,000 tonnes per annum was reached in the five years following the approval, approximately 770,000 tonnes would remain available for extraction. This remaining resource would be exhausted in approximately three years at a subsequent output of 250,000tpa. It is noted that should maximum outputs not be reached during the operational period, the lifetime of the resource and hence quarry operations will extend until the available resource is exhausted.

Any required crushing is proposed to be undertaken primarily in-pit with mobile crushing plant placed near to the quarry face. Temporary stockpiling of material will be in-pit. Trucks will be used to haul this rock out of the pit and directly off-site.

Extraction

Overburden

Overburden is removed and stored, predominantly at the perimeter of the quarry. This material will be utilised to provide cover for the batters and the quarry floor upon completion of quarrying.

Stockpile Management

The main stockpiling area is on the bottom bench of the quarry which is close to the final RL50 limit of extraction depth. At present two stockpiles of crushed product are located on the middle bench, along with a small stockpile area consisting of stockpile bays. On-going operations will predominately utilise the bottom bench for the stockpiling of product, with the middle bench occasionally used, dependent on the location from which the resources are being won. The site water cart will be utilised for the suppression of dust from stockpiles on an as needed basis.

Quarrying at Bago Quarry will involve the following stages:

- Ripping and stockpiling of material in-pit;
- Possible in-pit crushing and screening;
- Possible drilling and blasting at greater depths where rock is significantly harder and ripping is no longer feasible, prior to in-pit crushing and screening;
- Loading, transport and distribution to project sites; and
- Progressive rehabilitation.

All despatched material from Bago Quarry is currently proposed to be transported by road only, predominately using truck and dogs (48.5 tonnes maximum loading).

The production increase will commence immediately in the existing quarry pit upon granting of the development consent in order to ensure demands for the road construction materials can be met in a timely manner for the Pacific Highway upgrade projects.

Designated Development

The proposed increase in production at the Bago Quarry to 490,000tpa for a period of five years from the date of the approval, then reducing to a maximum of 250,000tpa until the remaining approved resource is exhausted, 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 30,000m³ of material per year.

An Environmental Impact Statement (EIS) has been submitted prepared by ERM Consultants which is referred to through 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

- 17 September 2014 - Environmental Assessment Requirements issued by Department of Planning and Environment prior to lodgement of the DA
- 17 December 2014 - DA lodged
- 18 December 2014 - External referrals sent to NSW Environment Protection Authority (EPA) and Department of Planning and Environment
- 23 December 2014 - Additional dust and noise information requested
- 23 December 2014 to 9 February 2015 - Public exhibition and neighbour notification of proposal
- 20 January 2015 - Consultation with the EPA
- 10 February 2015 - Copy of submission sent to the EPA
- 23 February 2015 - Further additional information requested - submission issues, site rehabilitation and mitigation of road impacts (recommended Voluntary Planning Agreement)
- 29 January 2015 - Additional information received - clarification of stockpiles
- 3 and 5 March 2015 - Copy of submissions forwarded to Applicant
- 5 March 2015 - Additional information requested - submissions issues
- 10 March 2015 - Referral advice received from the EPA.
- 19 March 2015 - EPA response forwarded to Applicant
- 26 March 2015 - Response to submissions received from Applicant
- 31 March 2015 - Site visit including discussion on application issues with Applicant
- 2 April 2015 - Additional information received from Applicant - response to site rehabilitation
- 7 April 2015 - Initial offer discussion on contribution to impact on Bago Road
- 22 April 2015 - Applicant chasing up status of VPA details being prepared.
- 27 April 2015 - Suggest conditional details to be included in VPA for Applicant to agree to
- 27 April 2015 - Applicant agreed to a VPA being prepared to include contributions towards Bago Road maintenance, maintenance of Milligans Road by proponent and provision of Bank Guarantees
- 6 May 2015 - Detailed instructions sent to Lindsay Taylor Lawyers to prepared draft VPA,
- 7 May 2015 - Applicant chasing draft VPA status
- 20 May 2015 - Response to submissions issues
- 28 May 2015 - Draft Service Agreement for Milligans Road and Engineering Conditions sent to Applicant
- 2 June 2015 - Meeting with Applicant to discuss draft Conditions and Service Agreement.
- 17 June 2015 - Draft VPA sent to Applicant as prepared.
- 17 June 2015 - Applicant agreed to formally enter into the Draft VPA
- 19 June 2015 - Feedback provided to Applicant of change to draft condition regarding intersection with Bago Road and Milligans Road.
- 26 June to 24 July 2015 - Public exhibition and Neighbour Consultation of draft VPA offered.

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'. SEPP 33 ensures that appropriate measures are taken to reduce the impact of the development on the environment.

The Applicant has provided sufficient details to demonstrate that reasonable and feasible mitigation measures will be employed on site and activities and emissions will be monitored and controlled within Environment Protection Authority (EPA) requirements. It is considered that the proposed production increase of Bago Quarry is not a hazardous or 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 SEPP must be considered.

The Department of Planning and Infrastructure's Circular No. B35, Section 1.5 states that "In relation to affected development applications it is the intention of the policy that investigations for 'potential' and 'core' koala habitats be limited to those areas in which it is proposed to disturb habitat".

The application has demonstrated that no habitat will be removed or modified therefore no further investigations are 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 suitable for the intended use.

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

This SEPP aims to ensure the sustainable operation and management of mineral, petroleum and extractive material resources. The policy requires that the determining authority consider the following:

- the compatibility of the proposed mining, petroleum or extractive development with surrounding land uses;
- the compatibility of any proposed development on land that is in the vicinity of a mine, petroleum production facility or extractive industry or on or near land that has been identified as a significant resource of minerals, petroleum or extractive materials;
- the environmental impacts of the proposal;
- the efficiency of resource recovery;
- the implications of the development on the public roads network; and
- the rehabilitation of the land, including final landforms and disposal/treatment of wastes and contaminated land.

The information provided , including additional information provided during the assessment of the application, satisfies the above and demonstrates that the proposal will be undertaken in an environmentally sustainable manner.

State Environmental Planning Policy (State and Regional Development) 2011

In accordance with clause 20, which refers to Schedule 4A of the Act - due to the proposal being Designated Development the proposal is a Regional Development. In this regard, the consent authority is to be exercised by the Northern Region Joint Regional Planning Panel.

State Environmental Planning Policy (Rural Lands) 2008

The following assessment table provides an assessment against specific requirements of this SEPP:

Applicable clauses for consideration	Comments	Satisfactory
The existing uses and approved uses of land in the vicinity of the development - 10(3)(a)	There is an existing quarry operating at the already disturbed site. It is therefore considered that the proposal would not fragment or alienate any land or result in conflict with adjoining land uses.	Yes
Whether or not the development is likely to have a significant impact on land uses that, in the opinion of the consent authority, are likely to be preferred and the predominant land uses in the vicinity of the development – 10(3)(b)		Yes
Whether or not the development is likely to be incompatible with a use referred to in paragraph (a) or (b) – 10(3)(c)		Yes
If the land is not situated within a rural residential zone, whether or not the development is likely to be incompatible with a use on land within an adjoining rural residential zone – 10(3)(d)	N/A	Yes
Any measures proposed by the applicant to avoid or minimise any incompatibility referred to in paragraph (c) or (d) – 10(3)(e).	The mitigation measures proposed are satisfactory to ensure no landuse incompatibility	Yes

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 RU1 Primary Production. In accordance with clause 2.3(1) and the RU1 zone landuse table, the proposed development for alterations to Extractive Industry is a permissible landuse with consent.

The objectives of the RU1 zone are as follows:

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*

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

- o the proposal is a permissible landuse;
- o There is an existing quarry operating at the already disturbed site. It is therefore considered that the proposal would not fragment or alienate any land or result in conflict with adjoining land uses.

o The proposed quarry production increase would result in the employment of three additional staff members during the proposed peak period and resulting in positive local economic benefits, and would allow the continued supply of a valuable resource to the construction industry.

- Clause 5.9 - no listed trees in Development Control Plan 2013 are proposed to be removed.
- Clause 5.10 – Heritage. The site does not contain or adjoin any known heritage items or sites of significance.
- 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:

There are no specific provisions of this DCP apply to the proposed development. The Director General's Requirements did not also specify any DCP requirements to be addressed in this regard.

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

During the assessment of the Application, it was identified that no mitigation measures were proposed to address likely impacts to Bago Road by trucks transporting material. After a significant length of time and negotiation with the Applicant, Council received an offer to enter into a Voluntary Planning Agreement (VPA) in connection with the Development Application.

The Planning Agreement provides for maintenance responsibilities/requirements by the developer of approximately 2.1 kilometres of Milligan's Road and payment by the developer to Council of a monetary contribution of \$0.18 per tonne, over 30,000 tonnes, 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 made between 26 June and 24 July 2015 including a notice in the Port News local newspaper. Adjoining owners and those people who had made a previous written submission were notified in writing of the proposed Planning Agreement. Following exhibition a second separate single submission was received (note other general submissions later in report). Key issues raised in the submissions received and comments in response to these issues are provided as follows:

Submission 1 - Property owner 85 Lambs Road, Herons Creek

Submission Issue/Summary	Planning Comment/Response
Concern that Clause 9.4 provides for Council to apply a	This clause is consistent with other agreements entered into by Council

Development Contribution made under the Agreement toward a public purpose other than maintenance of the haulage route. The contribution that is collected should not be used in any other way than for haul route upkeep.	and provides some flexibility for Council to apply contributions in a manner that may not have been identified at the outset. An example may be road safety signage.
The contribution as outlined in the draft agreement is generous. If the revenue collected is not needed to undertake road repairs specific to this development application, the funds collected in excess should be credited back to the quarry. It is not equitable for the quarry to fund unrelated council infrastructure.	The monetary contribution amount has been calculated based on the developer's share of the cost to replace part of Bago Road. Given that the developer will only pay based on the amount of material that is hauled, there will not be any excess funds collected. Priorities for expenditure of the contributions will be determined by Council's Manager Transport & Stormwater Networks from year to year.
Council should remain the point of contact for any maintenance issues on the haul routes.	Council will remain the contact point for any maintenance issues or concerns in relation to the haulage route.
Maintenance works should be carried out during designated quarry operating hours.	A condition is recommended in this regard.
The notation on the plan at Schedule 1 - haulage Route map should read 'Developer to maintain at it's expense' rather than 'Developer to maintain at their expense' to remove ambiguity.	The current notation is considered acceptable.
The Planning Agreement does not address dust suppression or particulate matter which is considered a significant issue.	Dust potential is addressed later in this report.
Recommend construction of dedicated turning lanes, both north and south, along Bago Road into Milligan's Road due to the increase in truck and dog movements. Due to the current configuration of the intersection, trucks travelling north on Bago Road have to swing wide when making a left turn into Milligans Road. The wide swing results in trucks entering the oncoming	A condition has been imposed requiring widening of the northbound approach on Bago Road to accommodate trucks swinging wide. Additionally, a condition will require Milligans Road to be sealed leading up to the intersection, which will allow for line marking to make the movement clearer/safer. The detailed design for these works will need to be submitted to and approved by Council in the months following determination

traffic lane on Milligan's Road.	of the DA.
----------------------------------	------------

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 will only be entered into subject to the DA being approved.

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

N/A

(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 proposal will be unlikely to have any adverse impacts to existing adjoining properties and the public domain. Specifically the scale and site design layout of the quarry is not likely to result in any identifiable adverse visual or amenity impacts in the immediate locality. Other landuse activities within the locality will not be adversely affected.

Roads, Transport and Traffic

A Traffic Impact Assessment (TIA) was prepared by Local Government Engineering Services Pty Limited (LEGS) and submitted with the application, to satisfy the Director Generals Requirements and Roads and Maritime Services requirements. The report discusses the likely traffic impacts and any subsequent road upgrade requirements in the vicinity of the quarry.

Bago Road is a Council-owned and maintained rural arterial road. It is a sealed, two-lane road, with an average width of approximately 8m. Serving as the link between Wauchope and the industrial area to the north and the Pacific Highway, Bago Road is subject to a higher proportion of heavy vehicles than average (around 18% is stated in the TIA).

The quarry site has direct frontage to Milligans Road, a gravel public road that meanders through Bago State Forest and adjacent private properties, to Bago Road. The width of the Milligans Road formation varies but on average is sufficiently wide for two trucks to safely pass each other. Milligans Road is currently signposted at 50 km/h. At the time of site inspection by Council staff, the gravel surface had been maintained in good condition by the quarry operator.

The TIA presents data from traffic counts by TTM Consulting Pty Ltd. For Bago Road it is stated that approximately 1480 vehicle trips were counted near the intersection (which includes both directions). This is consistent with Council's annual average daily traffic (AADT) counts. Approximately 9.5% of these movements occur during the peak hour (3-4pm).

At the height of extraction (490 kTPA) the report estimates that the proposal will generate an increase of 55 truck and dog trips per day in each direction (to and from site). This presents an estimated 90% increase in the number of vehicle movements along Milligans Road, and an 8% increase in the traffic volume on Bago Road south to the Pacific Highway. One traffic movement represents a trip to and from the site.

The TIA concludes that traffic delays due to the production increase will be insignificant. However, the report does not address the increase in maintenance costs on public roads would result.

Due to the higher proportion of heavy vehicles already using Bago Road and its' high overall volume, Bago Road is among Council's most expensive roads to maintain. Because of the direct and quantifiable link between tonnage exported from the quarry, and decline in the condition of the road, Council has recommended a contribution per tonne be levied under the VPA to contribute to maintenance costs. The amount has been calculated by Council in accordance with pavement life reduction analysis as set out in the AUSTROADS Guide to Pavement Technology. A similar levy has been imposed on other extractive industry approvals in recent years. The levy amount is proportional to the length of road which trucks drive on to get from the quarry to the Highway.

As a consequence of this analysis, a condition of consent will limit the maximum capacity of truck and dog able to be used at the site to 48.5T gross weight. This capacity was requested by the Applicant during draft Planning Agreement negotiations. If this size of truck or the legal road mass limits were to be exceeded, accelerated damage to the road would result.

Review of historic records has determined that the portion of Milligans Road, 1.7km in length from the intersection with Bago Road, is owned by Council.

Historically the maintenance responsibility along Milligans Road has been understood to be a matter for forestry operations and the quarry. There are five allotments with direct frontage to the Council-owned segment of Milligans Road. Four dwelling clusters have their primary access via Milligans Road, and use of the road is also shared with the Bago Vineyards commercial operation. Ongoing maintenance of Milligans Road as a result of this proposal needs to occur in a manner that ensures Council's responsibilities and public standards are not compromised.

Because the quarry may be exhausted as early as 8 years from the date of determination, Council's Transport and Stormwater Network has deemed that it is not cost effective or appropriate to require a full upgrade of the road by the Applicant to meet Council's AUS-SPEC standards to cater for the increased traffic volumes. The recommendation of this report is that the landowner be required to perform ongoing maintenance of Milligans Road for the life of the quarry. Maintenance is to occur to an acceptable standard as set out in the Planning Agreement. The standard has been developed based on Council's best practice guides for maintenance of the broader rural road network.

There is flexibility within the Planning Agreement for the Applicant and Council to mutually vary the agreement. For significant changes, this may be permissible on merits-based assessment of a future s96 modification to the Application. This may be warranted if, for example, another significant traffic generating development is consented along Milligans Road.

Road Works and Traffic Measures

The quarry has performed significant works to date to improve the Bago Road and Milligans Road reserves, without a Roads Act (s138) approval. All future works will require s138 approvals from Council. Because the maintenance works will be ongoing, it is intended that the Applicant shall initially lodge a s138 application, and the approval once obtained will expire and have to be renewed annually.

The Applicant engaged TTM Consulting to undertake a Road Safety Audit (RSA) of Milligans Road, from its intersection with Bago Road to the quarry. The audit identified possible safety issues and recommendations for any remedial action where required. The RSA was undertaken in accordance with the requirements of *Austrroads' Guide to Road Safety: Part 6; Road Safety Audit Third Edition (2009)*.

The TIA and RSA reports have highlighted a number of issues with the ability of the existing road infrastructure to safely cater for the proposed increase in traffic, which can be addressed by the conditions of consent and the Planning Agreement as proposed. Some of these issues will require input and design by expert consultants prior to lodgement of the Roads Act (s138) application(s). Key traffic and road mitigation measures are proposed as follows:

- Voluntary Planning Agreement - maintenance by the developer of approximately 2.1 kilometres of Milligan's Road and payment by the developer to Council of a monetary contribution of \$0.18 per tonne exported over 30,000 tonnes, towards the maintenance of the Bago Road haulage route;
- To enable effective measurement of export tonnages, installation of a weighbridge to occur within six months of the date of determination or prior to exceeding 30,000 tonnes of material;
- Provision of a new two-coat seal for the first section of Milligans Road to prevent gravel being tracked onto Bago Road (to improve traffic safety and reduce wear and tear on the road surface);
- To ensure the on-going ride quality and safety for other users, maintenance operations on Milligan's Road will be increased to match the increased usage, with agreed service levels set out in the VPA;
- Installation of a "Caution Driveway" sign to be placed before and after the driveway at the quarry entrance to warn other motorists of quarry traffic;
- Removal of vegetation on the southern leg of Bago Road to improve northbound sight distance toward the intersection of Milligans Road with Bago Road;
- Increase the width of Milligans Road at the intersection with Bago Road to reduce the risk of a side swipe crash when the vehicles pass one another;
- Increase the width of the Bago Road lane approaching the turn into Milligans Road to accommodate the swept path of a truck and dog without impacting oncoming traffic;
- Provide signage at the T-intersection of Milligans Road with Bago Road to warn drivers, such as 'Give Way' and black and white chevron signs;
- Consideration to provide items such as guideposts to delineate the edge of the road at the locations of the hazards identified in *Section 6.7.2*;

- A road use permit will be need to be renegotiated with the Forestry Corporation of NSW to allow for the proposed increase in quarry vehicles should approval be received for the proposed production increase;
- Implementation of a truck management plan to continually improve driver practices and reinforce awareness of the conditions of the DA approval;
- The conditions of this permit, particularly relating to the maintenance and who is responsible for fielding and responding to complaints raised by the public is to be communicated to adjacent residents (as raised during the community consultation).

Parking and Manoeuvring

The quarry has existing carparking within the quarry footprint beside the existing office. The proposed intensification of operations is anticipated to increase staff numbers from 6 to 9 full time employees. There is ample area in this regard on-site for staff parking for more than 9 parking spaces if required. Circulation and manoeuvring areas on site are also sufficient.

On-site sewage management

The Applicant has advised that wastewater generated from the office building is processed through an on-site effluent treatment system in the form of a septic tank and evapotranspiration bed. The site does not currently have any identified formal approval for the evapotranspiration bed on-site. Approval will have to be retrospectively sought for the system, via a Section 68 approval of the Local Government Act (1993) through the Port Macquarie Hastings Council. A condition is recommended in this regard.

Other Utilities

Telecommunication and electricity services are available to the site.

Heritage

No known items of Aboriginal or European heritage significance exist on the property. No adverse impacts anticipated.

Other land resources

The quarry will provide a viable supply of road construction materials to the surrounding region. The proposal can be implemented with minimal adverse environmental impacts as demonstrated throughout this assessment and is justified in terms of the overall economic benefits to both the local, state and national economies.

The road construction materials, such as produced at Bago Quarry, are used to meet fundamental community needs for the construction of roads and other infrastructure and major development projects.

Soils and Water Management

A detailed Soil and Water Management Plan has been prepared. The Management Plan outlines 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.

Key soil and water assessment outcomes and management mitigation measures are proposed as follows:

- *Groundwater* - There have been no additional groundwater investigations completed on the site. The proposal will not extend beyond the currently approved vertical limit of RL50. Broad interference with the groundwater aquifer is between RL 43m to 50m. Water for processing will be sourced from the sediment basins and series of ponds, as is current practice at the site. The proposed production increase therefore poses limited inherent risk of groundwater quality impacts. No pumping of groundwater is proposed for quarrying activities, therefore groundwater levels would not be lowered.
- *Erosion hazard* - ERM undertook an assessment of erosion hazard across the site to help identify existing shortcomings and to identify priority works for soil and water management. In high erosion hazard areas greater attention should be given to erosion control and thereby reduce the reliance on end of catchment sediment traps.
- *Water balance* - ERM advised that on-site water supply demands are met primarily from harvesting of stormwater in a number of catchment dams which also serve as treatment ponds for the wash plant.
- *Erosion and sediment controls for area located on eastern side of the quarry where select fill is Won* - ERM advised that the medium term approach in this location will be to shape the quarry area with on-going excavation in the area such that all runoff generated from the site drains to the sediment basin in western portion of the quarry footprint. Short-term this may be achieved by installing a drain along the perimeter to capture runoff and allow it to drain to the sediment basin in the western portion of the quarry footprint.

In Sub-catchment D, on the top bench of the quarry a sediment basin of 456m³ is proposed to capture runoff from the areas of disturbance that are intended for quarrying on the top bench. The formalisation of the existing perimeter drain on this eastern edge will convey runoff to the low point where this basin is proposed to be constructed and the insertion of rock checks to provide for control of velocity and additional sediment treatment. An additional diversion drain will be constructed to separate the flat portion of the top bench that is used for the laydown and workshop facilities and the steep area of disturbance to be quarried. The flat portion of the top bench, which poses a low erosion hazard, will be treated with a mulch bund.

Sub-catchment B where the site has been cleared in preparation for excavation currently has limited protection and the spreading of the mulch in a surface layer of 100mm would provide for erosion control in this location. As excavation is to commence in this location small, manageable areas can be opened, with mulch erosion control remaining in undisturbed areas to prevent the generation of significant volumes of sediment entrained runoff. The runoff from the small areas to be excavated will be directed to Pond 1.

- *Erosion and sediment controls for area where mulch is currently stored* - ERM advised that the mulch in this location is greater than 5 years old and consequently the risk of tannin leachate is low. It is recommended that a diversion bund be placed upslope of the mulch stockpile to prevent the entry of runoff into the stockpile and a sump created to capture any water generated

from rainfall on the stockpile. The water captured in this sump can be used for dust suppression within the site boundary. The low tannin risk associated with the mulch makes it an ideal material for use around the site in the form of sediment filter bunds or cover for exposed areas.

The bunds will provide a suitable method for filtering sediment from runoff generated in exposed catchments and the cover of exposed ground will prevent erosion from raindrop impact.

A primary location where a perimeter bund could be established from the mulch is the car park to the east of the site workshop at the eastern boundary of Sub-catchment D. The topography in this location is such that runoff would flow off-site and at present the small catchment has no protection prior to leaving site. The provision of a perimeter bund constructed from the mulch would be a suitable treatment in this location.

The separation of clean and dirty water in Sub-catchment C is recommended by the installation of a cleanwater diversion bund along the eastern boundary. The batters in this location should be brought to final design slope and rehabilitated. While the location remains disturbed, a sediment basin is proposed to provide treatment to the catchment. This basin will also provide a short-term water supply option for the water cart following storm events, though it should be noted that the design criteria is for capacity to be restored to the basin within five days after a storm event.

- *Improved Stormwater Drainage and Water Management* - ERM details that it is proposed to ameliorate current mixing of clean and dirty run-on, the current series of ponds are proposed to be split into a network of clean ponds, only receiving clean water from upslope catchments, and a treatment train limited to receiving water from the wash process only. The revised method of management requires the clean water pond, Pond 2 and Pond 4 to be run as clean water ponds for the supply of water for quarry processes.

No runoff from the washing process is proposed to enter the clean water within this series of ponds. Modification to the current water management at the site will require minor changes to achieve this clean water separation including:

- o the installation of a bund to prevent Pond 2 receiving runoff from the silt dam;
- o the installation of a spillway and batter chute to provide a flow path for washwater from the silt dam to pond 4
- o the improvement and extension of the spillway drain from the clean water pond to Pond 3;
- o closing the current spillway/drain between Pond 3 and Pond 4 with an earth bund; and
- o formalisation of the Pond 3 spillway to the east, to overflow off-site.

Implementation of these measures will allow for the series of ponds to be considered a clean runoff storage area.

The Silt Dam and Pond 4 are to become a stand-alone collection and treatment system for the wash plant. The method for management of wash water will be for the Silt Dam to provide a first flush pond to settle out the larger of the washed soil particles and Pond 4 to act as the main settlement pond and source of water for recirculating into the wash plant. Additional water

for replenishing the wash water system can be sourced from Pond 2, 3 or 4 by pumping. In the event of significant rainfall and capacity needing to be restored in Pond 4 the site pump can be used to send water to Pond 1 in the quarry void.

- *Stormwater diversion* - ERM have advised that the majority of the quarry is positioned on the ridgeline such that no cleanwater runs onto the site. The only exception to this is the north eastern portion of Sub-catchment C, where cleanwater run-on from the adjacent west facing vegetated slope conveys water to the same drain as that which currently collects quarry runoff. Formalisation of a cleanwater diversion bund is proposed to divert the clean runoff generated from the western slope from entering the site. Sediment basin (SB1) is proposed to be constructed at the lowest point in the drain adjacent to the quarry boundary to treat quarry runoff from this catchment. The remaining mulch to be stored in this location is to be stockpiled such that it does not become saturated and potentially generate tannins in the event of the sediment basin becoming full of run-off.
- *Mulch* - ERM have advised that a stockpile of mulch is stored in Sub-catchment C. This mulch was provided to the quarry from the vegetation clearing activities associated with an adjacent road construction project. The well-aged mulch is suitable for use around the site as an erosion control blanket, applied in a 100mm thick layer. This approach is recommended for Sub-catchment B, an area that has been cleared, although topsoil stripping and excavation is yet to take place. The application of the mulch blanket will provide a suitable erosion and control measure until quarrying at the location is to commence.
- *Site stabilisation* - ERM have advised that a stockpile of mulch is stored in Sub-catchment C. This mulch was provided to the quarry from the vegetation clearing activities associated with an adjacent road construction project. The well-aged mulch is suitable for use around the site as an erosion control blanket, applied in a 100mm thick layer. This approach is recommended for Sub-catchment B, an area that has been cleared, although topsoil stripping and excavation is yet to take place. The application of the mulch blanket will provide a suitable erosion and control measure until quarrying at the location is to commence.
- *Sediment control* - ERM have advised that with Pond 1 (Sediment Basin) Design: The existing basin has a capacity of 6732m³, more than 2.5 times larger than required, which has been deemed sufficient to receive the design volume.
- *Additional basins* - ERM have advised that Pond 1 located at the south western extent of the site, within the quarry void will provide the predominant method for capturing sediment at the site at present and as the quarry void increases into Sub-catchments C and D. In the interim whilst some run-off from Sub-catchments C and D is not able to be directed to Pond 1, two additional sediment basins are proposed within these sub-catchments. All basins are to be desilted as required to restore capacity, with removed sediment to be stockpiled within the quarry footprint and with sediment fence downslope. The sediment basin and wash water runoff ponds on the site currently require flocculation, which is undertaken using Alum. Alum is listed in

Landcom (2004) as a common agent for flocculation that 'produces a much faster (sediment settling) rate than gypsum'.

- *Pollution control* - ERM have advised that trade waste receptacles will be provided for the safe and efficient storage of all construction and miscellaneous wastes, as necessary. Recyclable materials will be separated and recycled where possible. Otherwise, disposable wastes will be removed from site regularly and disposed by approved means. Spent chemical and hydrocarbon drums are to be removed from site immediately to limit the potential for spills of the remnant product. It was noted that a store of spent drums was present on the top bench. These drums should be removed from the site as soon as practicable.
- *Spill management* - ERM have advised that the workshop area has a designated chemical storage area within an internally bunded shipping container. The bunding appeared to be present along the opening edge of the shipping container but not in the remainder of the shipping container. To further develop the shipping container such that any potential spills would be suitably contained, bunding on the remaining three sides of the shipping container is recommended. The impervious bund is to be constructed to contain any spills of more than 110% of the volume of the largest container in the bunded area. Any spillage will be immediately contained and absorbed with a suitable absorbent material.
- *Water pump locations* - ERM have advised that locations where pumps are stationed could be improved by providing housing and bunding underneath pumps. The provision of housing and bunding would also provide an appropriate storage location for fuel and lubricants for the pumps and eliminate the potential for storing such products on bare soil. Pump housing can be in the form of a prefabricated 'garden shed' type structure or a purpose built structure.
- *Refueling area* - ERM have advised that the aboveground diesel storage tank is currently located adjacent to the workshop. The location is considered appropriate given the flat topography of the immediate area and the separation distance from the nearest drainage line. The storage tank is surrounded by a bund wall constructed of Besser blocks. The bunded area had collected water at the time of the inspection. To rectify the problem of pooling water and create a more robust fuel handling area the following improvements are suggested:
 - the refuelling area adjacent to the storage tanks should have a concrete hardstand area, to prevent potential soil and water impacts from spilt hydrocarbons (hydrocarbon staining of the soil was identified in proximity to the fuelling area);
 - construct a roof over the aboveground storage tank and bunded area (if feasible over the refuelling area as well); and
 - provide a well-stocked spill kit.
- *Site monitoring* - ERM have recommended that that a delegated site representative undertake regular inspections of the erosion and sediment controls and to advise on necessary changes, to help ensure the success of the erosion and sediment control program. Inspections will be undertaken at least monthly, and always after significant rainfall events.

Air and microclimate

An Air Quality Assessment (AQA) has been submitted with the application. The AQA was undertaken to determine the air emissions associated with the expanded operation, the potential impacts on sensitive receptors and any required mitigation.

The main potential air quality issues resulting from the proposed development and addressed in the air quality assessment are particulate emissions from operational activities such as wheel dust from haul trucks and other equipment as well as windblown dust from exposed areas and stockpiles.

Key dust mitigation measures are proposed as follows:

- emissions of dust from the quarry will be controlled by prompt revegetation of exposed areas, bunds and topsoil stockpiles, where practicable a water tanker will be used to maintain a watering rate of at least 2 litres/m²/hr (Level 1 watering) for the haul roads and roads inside the pit, as required;
- within the quarry, all earth handling movements of the excavators, front end loaders, trucks, crushers, screeners and conveyors will have water suppression (using water carts or similar) to control dust emissions;
- where practicable, hydraulic rock drills will be fitted with industrial exhaust extraction and control systems;
- it is a site requirement that all vehicles transporting materials from the premises must have their tailgates securely fixed and must be covered at all times with tarpaulin covers after loading and before unloading to prevent wind-blown emissions;
- general monitoring of the effectiveness of dust control/ mitigation measures will continue to be carried out on a daily basis to ensure:
- water suppression for process controls in the quarry is operational and effective;
- haul routes and quarry roads are kept damp;
- all loads leaving the quarry are kept covered;
- topsoil stockpiles, bunds and other exposed areas are re-vegetated where possible.
- Specific monitoring will be undertaken to minimise any exceedances at nearby sensitive receptors;
 - continuous wind direction monitoring;
 - continuous PM₁₀ monitoring upwind and downwind of the site to track site contributions versus background concentrations; and
 - if monitored background concentration is near or at the assessment criterion, and sensitive receptors are downwind of the site, then the site production rate will be reduced (or in certain extreme cases, stopped) so as not to cause exceedance of the assessment criterion due to the increment impact from the site.
- An air quality monitoring plan, detailing the monitoring method and trigger values for action, will be put in place before the site operations are increased to 490,000 tonnes/yr.

Flora and fauna

An Ecological Assessment has been submitted as part of the EIS. Given the already highly disturbed nature of the site, and the fact that there are no proposed changes to the existing quarry footprint, it is unlikely that the proposed development will have any impacts on any threatened species or populations and their habitats as listed under the TSC Act or the EPBC Act. The proposal will not:

- have an adverse effect on the life cycle of any threatened species such that viable local populations of the species are likely to be placed at risk of extinction;
- result in removal or modification of habitat for threatened species;
- fragment or isolate habitat from other areas of habitat;
- have an adverse effect on critical habitat for any threatened species (either directly or indirectly); and
- provided the recommended mitigation measures are undertaken, the action proposed will not constitute or be part of a key threatening process or is likely to result in the operation of, or increase the impact of, a key threatening process.

ERM have advised that patches of vegetation adjacent to the quarry may make up the TSC Act listed *Sub-tropical Coastal Floodplain Forest EEC*. However, provided the quarry remains within currently cleared locations, and that environmental management measures are implemented to prevent any indirect impacts to surrounding vegetation, it is unlikely that the proposed development will have any impacts on the potential EEC.

During the assessment of the DA, additional details regarding site rehabilitation plans was requested. The Applicant has advised that the Environmental Impact Statement (EIS) submitted provides rehabilitation principles and a rehabilitation strategy. Further advice was provided that it was not the scope of the EIS to detail a full rehabilitation plan, but it is expected that it will be a condition of consent for the quarry to provide a detailed plan to Council. A condition is recommended in this regard to provide the plan within six (6) months of date of the consent.

The proposal will therefore be unlikely to have any significant adverse impacts on biodiversity or threatened species of flora and fauna. Section 5A of the Act is considered to be satisfied.

Waste

Satisfactory arrangements are in place for proposed storage and collection of waste and recyclables. No adverse impacts anticipated. Standard precautionary site management condition recommended.

Energy

No adverse energy use impacts anticipated.

Noise and vibration

A detailed Noise and Vibration Assessment prepared by ERM Consultants has been submitted with the Application.

The scope of the acoustics assessment included operational noise, vibration and heavy vehicle haulage (road traffic) noise impacts; including those potentially associated with blasting. Acoustic recommendations have been made for noise and vibration control mitigation and/or management measures for Volcanic Resources to implement at the site where feasible and reasonable.

Key noise and vibration mitigation measures are proposed as follows:

- The proposed hours of operation will remain as currently undertaken at the site; 7am to 5pm Monday to Friday and 7am to 1pm on Saturdays. However, the Environmental Protection Licence (EPL 12364) permits operational hours of Monday to Friday, 6am to 5pm and Saturday, 6am to 1pm. No activities are proposed on Sundays and public holidays.
- Quarry Layout and Orientation - to manage emissions from quarry processing plant it is recommended that the layout of quarry plant be optimised to reduce noise levels at receptors. By the positioning plant and equipment behind existing quarry topography (quarry faces etc.) and implementing large stockpiles, noise emissions and likely impacts will be reduced at the most affected receptors;
- Equipment Maintenance – plant and equipment in use at the quarry was observed to be in good working order and well maintained. The on-going maintenance of this plant and equipment is vital to enable ongoing compliance of the quarry. It is recommended that the maintenance schedule include consideration for noise emissions; where any items are identified to be “louder” than previous checks or generating abnormal or potentially intrusive noise, it’s use will be limited until the noise issue is resolved;
- Early Morning Noise Management – quarry processing operations with the potential to generate maximum noise level events (such as running several items of plant concurrently) will be managed so they will not occur during the morning shoulder period (6am and 7am). This management approach will identify source or potential activities and ensure they occur after 7am. This will facilitate compliance and minimise potential sleep disturbance impacts;
- Meteorological Forecasts – local meteorological forecasts e.g. at the nearby Bureau of Meteorology (BOM) Port Macquarie Airport Automated Weather Station (AWS), will be monitored on a monthly basis (and re-checked weekly) so that any high noise level generating events are planned to occur during favourable wind (i.e. a southerly wind blowing noise away from receptors) or calm conditions. Predictions for calm conditions identified a noise level reduction of 3 dB when compared to source to receiver winds. This reduction is expected to be further improved during favourable southerly winds.
- It is recommended that Volcanic Resources develop an appropriate complaints processing mechanism that allows for a timely response to community and stakeholder enquires regarding noise associated with the proposed quarry production increase.
- Large stockpiles be utilised to assist with noise mitigation - 10m high stockpile 260m in length.

Bushfire

The site is identified as being bushfire prone. The quarry is existing together with an existing dwelling on the property. There is no identifiable increase in bushfire risk with the proposal.

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

Social impacts in the locality

Given the nature of the proposed development together with mitigation measures proposed and its' location, the proposal is unlikely to result in any adverse social impacts.

Economic impact in the locality

ERM have provide details that the primary economic benefit arising from the proposed quarry production increase is the provision of surety in the supply of road construction materials to assist in meeting the demands of the Mid North Coast region. The Mid North Coast Regional Strategy (Department of Planning, 2009) recognises the importance of the regions natural resources base to the continued sustainable growth and development of the region. By 2031, the Mid North Coast population is expected to grow more than 28% to around 424,400. The population of the Port Macquarie-Hastings Region is projected to increase from 76,788 in 2012 to 104,589 by 2031, an increase of 27,801 people, or 36.2% (PMHC, 2013). Bago Quarry is in a strong position to provide quality construction materials for the provision of vital road network infrastructure. The ongoing supply of these materials to the Mid North Coast market is critical in ensuring increased demand for construction materials is met, thus contributing to the affordability of major infrastructure projects such as Pacific Highway upgrades as well as the continued maintenance of the local road network and the anticipated new development within the region.

The operation of the quarry will continue to contribute to the local economy through ongoing operational expenditure and employment. The quarry will provide employment for up to 9 full time workers during peak extraction periods. Flow on and multiplier effects can also be expected to occur as a result of the additional expenditure which will be injected into the local economy.

Based upon the above there are no identifiable adverse economic impacts.

Site design and internal design

The proposed development design satisfactorily responds to the site attributes and will fit into the locality. No adverse impacts likely.

ERM have provided details that Volcanic Resources is committed to progressive and final rehabilitation, and development of the best end use for the quarry. Development of the most appropriate end use for a quarry is best done within the last 5 years of the quarry's operational life within the context of market, environmental and land uses in the region at the time. As the quarry resource is exhausted, the following conceptual rehabilitation principles would be expected to be implemented at a minimum:

- minimal or limited benching;
- all out-of-pit runoff will be directed away from the quarry;
- all in-pit runoff to be directed to erosion control devices until plantings with locally endemic trees, shrubs, grasses and groundcovers of species become established;
- final shaping and batters using overburden to make the closed site as safe as possible;
- final batters will be capped with a layer of overburden and topsoil, and
- planted with locally endemic trees, shrubs, grasses and groundcovers; and
- all ancillary infrastructure (with the possible exception of erosion control dams and devices) will be removed and the land rehabilitated.

Quarry rehabilitation work will be undertaken in accordance with *Mine Rehabilitation* (Commonwealth Department of Industry Tourism and Resources) and/or what is otherwise considered best practice at the time.

Cumulative impacts

The proposed development is not expected to have any adverse cumulative impacts on the natural or built environment or the social and economic attributes of the locality.

(c) The suitability of the site for the development

The proposal will fit into the locality and the site attributes are conducive to the proposed development.

All site constraints have been adequately addressed and appropriate conditions of consent recommended.

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

Following the first exhibition of the application in accordance with DCP 2013, three (3) submissions were received.

Following the exhibition of the draft Voluntary Planning Agreement an additional one(1) submission was received which is addressed above in the Planning Agreements section of this report.

A further two (2) general submissions by the same nearby residents were received raising concerns with the proposal during the second exhibition period also.

Key issues raised in the submissions received and comments in response to these issues are provided as follows. Please also refer to draft recommended conditions and the NSW EPA conditions:

Submission 1 - Property owner 85 Lambs Road, Herons Creek

Submission Issue/Summary	Planning Comment/Response
Issues relating to the public consultation process prior to lodging DA.	The Applicant has provided a response that Quarry Operator managed the community consultation process. ERM consultants provided guidance as to the contents of the newsletter, but were not involved in the distribution of the newsletters. The DA has been formally notified and publicly exhibited as required.
In the DA there are inconsistencies amongst the various NSW State Departments referring to an increase from 250,000 tonnes to 490,000 tonnes (EAR #845 annex B and EPA letter of 19/6/14 contradictions).	The Applicant has provided a response that EAR#845 was issued following the decision to increase production to 490,000 tonnes per annum. The EPA letter refers to an early request to increase to 250,000 which was superseded by the request for 490,000 tonnes. The Application has been confirmed with the Applicant as being intended for this production amount.
Page 100 6.10 refers to the visual impact and quotes "there are no sensitive receptors with views to the site. My property has a two storey dwelling with a direct line of site to the quarry. The rear of my land is at a higher elevation and thus is subject to a greater visual impact. There is currently a tree-line buffer. I am concerned that the buffer I now enjoy may be disturbed by any future development. The other visual impact is due to dust from the quarry which frequently reduces my attractive, treed, mountain outlook to a smudged haze.	The Applicant has provided a response that the visual impact assessment of the EIS noted the property under question. Due to the topography adjacent to the site, the quarry cannot be seen from this location. No residences have direct line of site to the property as shown in the photographs in the EIS due to their location on the other side of a hillcrest. No vegetation will be removed for the proposed extraction increase; hence the existing tree line buffer is not proposed to be removed as part of the development. Numerous dust mitigation measures are proposed and monitoring system recommended to manage potential dust impacts associated with the proposed expansion.
Whilst work is conducted on the face of the quarry, at the southern boundary of the quarry and at depth, noise affectation from the quarry is minimal. I feel that as the quarry works its' way north, up the property, towards the National Park, noise from the	The Applicant has provided a response that the following four scenarios were considered for the purposes of the noise assessment, representing different noise emissions associated with the proposed stages of works within the overall Project Area: • Scenario 1: Existing Bench Heights –

quarry will be amplified. My property is situated at a higher elevation than neighbours in the winery precinct. From the higher elevation a "canyon effect" is experience when sound reverberates off the mountain.	Exposed Noise Sources; • Scenario 2: Existing Bench Heights – Managed Noise Sources; • Scenario 3: Drilling and Road Haul – Exposed Bench; and • Scenario 4: Final Pit – Managed Noise Sources. Subject to the implementation of the Noise recommendations being complied as detailed earlier in this report there are no adverse noise impacts identified to warrant refusal of the Application.
The greatest noise disturbances and noted decibel exceedences reported in EIS findings, are from high pitched, what appears to me to be, "reversing" alarms on heavy equipment. This noise frequently emanates from the quarry at 06:00am. The other most frequent noise disturbance is experienced when empty trucks and dogs, returning to the quarry, bounce over road corrugations at speed. Given the increased extraction requested, this is set to become a constant, rumbling thunder.	The Applicant has provided a response that exceedances of operational noise criteria were identified during the morning shoulder period (6am to 7am). It is expected that operations during the morning shoulder are able to be managed, reducing noise emissions, by limiting the use of various plant during this period and in particular running several items of plant concurrently. A road traffic noise assessment based on predicted truck increases was undertaken and determined to meet all applicable criteria.
Curious as to how and when the Noise Impact study for the EIS was conducted (page 124) "discrete receptors were placed at the (sensitive receptor) sites". My property is identified as a sensitive receptor, I had no knowledge this activity occurred.	The Applicant has provided a response that discrete receptors here refers to receptors chosen as individually separate and distinct receptors, which were included in the modelling of the noise and air quality impact assessments. No noise loggers or air quality monitoring equipment was placed on the property under question, rather the site was chosen as a sensitive receptor for input into the noise modelling.
The printed EIS was a difficult document to comprehend as most of the "tables" were illegible due to an incorrect print format. I noted also that some of the "figures", namely the particulate study, had no legend and were therefore, indecipherable.	The Applicant has provided a response that ERM cannot comment on the print quality of the EIS viewed, however, all the figures in the EIS and specialist study reports do have legends and when printed in colour are decipherable.

My property borders Herons Creek to the north and is subject to downstream flood plain risk and soil and water issues from the quarry. It has been pointed out that Alum is used to flocculate the quarry detention ponds. The EPA prefers gypsum to be used for this purpose as gypsum results in little or no residual. I believe there was no water sampling undertaken for the EIS.	The Applicant has provided a response that in ERM's experience, the preferred method for flocculating sediment basins is with gypsum, given its widespread use and negligible residual effects. However, there are several other products available for use that can be used (such as Alum and polymers) that are much more effective at expeditiously settling sediment compared to gypsum. ERM noted in the report that the Quarry Operator uses Alum. No water samples were undertaken for the preparation of the EIS. The Churnside Property is downstream of the Quarry. There is not identifiable significant increase in flood risk potential generated to neighbouring properties with the proposal.
The Traffic Study in the EIS is flawed, inept and grossly inaccurate with glaring contradictions. The LEGS report states Milligans Road is 3.5 to 5 metres wide. 6.7.2 refers to Milligans Road as 5–6metres wide. The road is described as suitable for two way traffic. The report also states "the proposal will have a minor impact on existing average traffic volumes" and "the roadway capacities are sufficient". It is said that the traffic volume increase on Bago Road is likely to affect four (4) properties on Bago Road (South). Have the owner/occupiers of these properties been notified of the DA? 6.1 of the LEGS study alarmingly and erroneously states that "there is currently no private property dwellings or commercial buildings utilising Milligans Road". There are a number of	The Applicant has provided a response that noted, although the EIS refers to a "carriageway width varying between 5m and 6m, set in an approximate 20m wide road reserve (approx.)." The LEGS report refers to Milligans Road as "a 3.5 to 5m wide unsealed road". There is no legislative requirement to officially notify all residents along Bago Road. ERM have further advised that all adjoining landholders and Milligans Road users were issued a copy of the community newsletter and the DA was advertised in the local newspaper. Noted. The LEGS report states this in the road traffic section of the report (Section 6.1) is erroneous as a number of private residences on Lambs Road and the Bago Winery do utilise this Milligans Road, as is mentioned in other sections of the LEGS report (section 3.2 estimated Traffic Generation) and discussed in the broader EIS. Section 3.2 of the LEGS report states: <i>'For the purpose of this report, it has been assumed that the difference in the</i>

private properties on this route, mine being one of them. The exact number I am unsure of.	<i>count obtained between the north and south side of the intersection between Milligans Road and Bago Road, can be attributed to light vehicles turning into Milligans Road to access Bago winery and private properties'.</i> In relation to traffic noise, ERM carried out the assessment based on an understanding of private dwellings being located on Lambs Road, that joins to Milligans Road. Traffic impacts and safety have been further considered earlier in this report under heading <i>Roads Transport and Traffic</i> section.
---	---

Submission 2 - Property owner Bago Vineyards, Herons Creek

Submission Issue/Summary	Planning Comment/Response
We wish to acknowledge we have reviewed the documents provided by Port Macquarie Hastings Council and have no definite objections to the development. We do however wish to provide the followings comments: • We support the Surface Water Monitoring Locations SW2 and SW3. The exact locations should be determined in conjunction with Bago Vineyards owners. • We wish to raise a concern that we have in relation to the increased heavy truck traffic on Milligans Road and the safety issue it poses for residents of the farms on Lambs Road and visitors to the Vineyards. • We would like assurance that all recommendations in the TTM Road Safety Audit Document and LGES Traffic Impact Assessment will be implemented. Please clarify if there will be an inspection by a qualified professional that will sign off on implementation of these recommendations? In addition to the items identified in the Road safety audit we believe there are several corners and bends on Milligans road that have minimal site lines and minimal road width that are not necessarily identified in the Road Safety Audit that would benefit from widening and vegetation removal to improve safety. • If accidents do happen on Milligans road. What procedures will be in place to ensure they do not happen again? • We would like details of the road use permit (referenced on page 85 of the document 0213484/Final/19 November 2014) to be provided to the owners of Bago Vineyards and neighbouring farms.	The Applicant has provided a response that: • Noted. • Noted. Final surface water monitoring locations will be issued in the Environment Protection Licence. • Bago vineyards can be consulted in regards to these locations. • Noted. The Road Safety Audit has recommended a number of measures to be implemented to ensure safety on Milligans Road. • Noted. This will be a requirement for Council to undertake safety audit. Refer Planning Agreement obligations also. • Noted. Any accidents occurring on Milligans Road will be investigated by crash investigators. • The Forestry Corporation of NSW would need to be consulted to determine if the permit can be made available to those requesting a copy.

Submission 3 - Second property owner 85 Lambs Road, Herons Creek

Submission Issue/Summary	Planning Comment/Response
No objection to an increase in the extraction limit of the above quarry, provided that; • Milligans Road is made and kept to a standard which is safe for all users, considering the probability of a huge increase in heavy vehicle traffic. • Consideration be given to erecting signs along Milligans Road, to 'Keep Left' and restrict speed. • That dust be kept to a minimum by regular watering.	ERM have provided the following satisfactory advice: • Noted. The Planning Agreement details requirements for road maintenance. • The measures included in the Traffic Impact Assessment (LEGS 2014) and Road Safety Audit (TTM 2014) address road safety. • The Road Safety Audit includes requirements for signs and lighting. Additional signage, including 'keep left' could be considered. • A water tanker will be used for the haul roads and roads inside the pit, as required. Consideration could be given for extended this to Milligans Road during dry times as required.

(e) The public interest

The proposed development satisfies relevant planning controls and is not expected to impact on the wider public interest.

The quarry will provide a viable supply of road construction materials to the surrounding region. The proposal can be implemented with minimal adverse environmental impacts as demonstrated throughout this assessment and is justified in terms of the overall economic benefits to both the local, state and national economies. The road construction materials, such as produced at Bago Quarry, are used to meet a fundamental community need for the construction of roads and other infrastructure and major development projects.

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 Applicant has advised that the increased annual extraction rates at Bago Quarry will result in considerable social and economic benefits at both the local and regional level. It will enable the quarry to better service both existing demand and projected future demand particularly that associated with ongoing upgrades to the Pacific Highway in the region. The quarry is strategically positioned on the Mid North Coast of NSW, being in close proximity to existing and future Pacific Highway Upgrade Projects.

The proposed increase in annual extraction rates at Bago Quarry has given satisfactory consideration to the principles of Ecologically Sustainable Development. In particular, the Applicant has taken a satisfactory precautionary approach to identification and management of environmental issues to ensure all appropriate mitigation measures are employed to prevent any associated environmental degradation. Subject to compliance with all recommendations and conditions the proposal will be acceptable.

4. PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997

The Applicant currently holds an Environmental Protection License (EPL) issued by the NSW Office of Environment and Heritage (former EPA).

The subject Application was referred to the NSW Office of Environment and Heritage for comment during assessment as the proposal is Integrated Development. The Department have issued a letter advising that a separate application must be made to vary the conditions of the Applicant's EPL for the premises to increased extraction subject to conditions. The Applicant will be required to obtain this EPL post development consent being issued.

5. DEVELOPMENT CONTRIBUTIONS

The s.94A levy applies to the development under the Port Macquarie Hastings Council S94A Levy Contributions Plan 2007 in addition to the Planning Agreement obligations proposed as offered.

A monetary contribution towards maintenance of the Bago Road haulage route applies under the Bago 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.