



Our reference: DOC15/76408, EF13/3241  
Contact: Cameron Perry 4908 6808  
Electronic correspondence to: [hunter.region@epa.nsw.gov.au](mailto:hunter.region@epa.nsw.gov.au)

General Manager  
Port Macquarie Hastings Council  
PO Box 84  
PORT MACQUARIE NSW 2444

Attention: Patrick Galbraith-Robertson

Dear Mr Galbraith-Robertson

**ALTERATIONS TO EXTRACTIVE INDUSTRY – INCREASE IN EXTRACTION FOR VOLCANIC RESOURCES QUARRY, HERONS CREEK – DA 2014/960**

Reference is made to correspondence received by the Environment Protection Authority (EPA) requesting comment on the modification to Development Application (DA) DA 2014/960 for M A Roche Group Pty Ltd, t/as Volcanic Resources at 129 Milligans Road Herons Creek (Lot 129 DP 754445). Operations at 129 Milligans Road Herons Creek were previously subject to development consent 233/96 issued on 24 September 1996. Reference is also made to your email dated 10 February 2015 providing details on submissions received during public consultation on the proposal.

The EPA understands that the development proposal is to expand the existing quarry (Bago Quarry) by increasing the annual extraction rate from 30,000 tpa to 490,000 tpa for a period of five years from the date of the approval. Extraction rates would then revert to 250,000 tpa until the remaining available resources are exhausted.

The EPA had reviewed the proposal for environmental matters relating to air, noise and surface water as described in the EIS. The EPA has also considered the public submissions contained within section 5 of the environmental impact statement (EIS) and the submission received 10 February 2015.

The EPA advises Council the EPA can issue general terms of approval based on the Environmental Impact Statement for the environmental areas which the EPA regulates. These conditions may be incorporated by Port Macquarie Hastings Council into the consent, if the consent authority deems this appropriate.

As a part of any increase in the consent the EPA strongly recommends Council incorporate conditions relating to the final design and rehabilitation of the premises. The EPA notes that the EIS indicates that this would be done in the final five years of the quarry's life, however considering the proposal could have the resources in the quarry exhausted in eight years, the EPA recommends consideration of the final design as part of the existing stage of development.

Attachment 'A' sets out the EPA's general terms of approval in relation to air, water, noise, bunding and solid waste for the proposal, if the consent authority deems consent is appropriate.

PO Box 488G Newcastle NSW 2300  
Email: [hunter.region@epa.nsw.gov.au](mailto:hunter.region@epa.nsw.gov.au)  
117 Bull Street, Newcastle West NSW 2302  
Tel: (02) 4908 6800 Fax: (02) 4908 6810  
ABN 43 692 285 758  
[www.epa.nsw.gov.au](http://www.epa.nsw.gov.au)

If you require any further information or wish to discuss the matter please contact Cameron Perry on (02) 4908 6808.

Yours sincerely,

 10-3-15

**PETER JAMIESON**

**Head Regional Operations Unit - Hunter**  
**Environment Protection Authority**

**Attachment A**  
**General Terms of Approval**

**General**

Except as provided by these conditions of approval below, the works and activities must be undertaken in accordance with the Environmental Impact Statement (EIS) "*Bago Quarry Production Increase*", dated November 2014.

**Surface Water**

- 1) The following points referred to in the table below are identified for the purposes of monitoring and/or setting of limits for the emission of pollutants to water from the point.

**WATER**

Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location
1	Discharge quality monitoring	Discharge to waters	The discharge point from Pond 3, as shown on Figure 6.8 of the EIS " <i>Bago Quarry Production Increase</i> ", dated November 2014.
2	Discharge quality monitoring	Discharge to waters	The discharge point from Pond SB2, as shown on Figure 6.8 of the EIS " <i>Bago Quarry Production Increase</i> ", dated November 2014.
3	Discharge quality monitoring	Discharge to waters	The discharge point from Pond SB1, as shown on Figure 6.8 of the EIS " <i>Bago Quarry Production Increase</i> ", dated November 2014.
4	Ambient water monitoring		Site SW1 in Herons Creek immediately upgradient of any discharges from Bago Quarry as shown on the plan titled <proponent to supply to the EPA a plan with the application for licence variation that modifies Fig 6.9 of the EIS to show SW1 at a suitable location immediately upstream of any discharges from the quarry and downstream of the tributary to Herons Creek that enters from the north-west. The location of the site should be developed in consultation with Residential Receptor 1, Bago Winery>
5	Ambient water monitoring		Site SW2 in Herons Creek downgradient of any discharges from Bago Quarry as shown on the plan titled <proponent to supply to the EPA a plan with the application for licence variation that modifies Fig 6.9 of the EIS to show SW2 at a more accessible location downstream of any discharges from the quarry eg in a location in the general area of the site currently described as SW3. The location of the site should be developed in consultation with Residential Receptor 1, Bago Winery >
6	Ambient air monitoring		< Residential Receptor 1, Bago Winery or other suitable receptor as agreed by the EPA>
7	Weather Monitoring		The meteorological weather station sited on the premises as shown on plan titled <proponent to supply to the EPA a plan with the application for licence variation>

- 2) Except as may be expressly provided by a licence under the *Protection of the Environment Operations Act 1997* in relation to the development, section 120 of the *Protection of the Environment Operations Act 1997* must be complied with in connection with the carrying out of the development.
- 3) For each monitoring/discharge point or utilisation area specified in the table above the concentration of a pollutant must not exceed the concentration limits specified for that pollutant in the tables below.

**POINT 1**

<b>Pollutant</b>	<b>Units of measure</b>	<b>100 PERCENTILE LIMIT</b>
Suspended Solids	mg/L	40
Oil and Grease	mg/L	5 and/or none visible
pH	pH units	6.5 – 8.5

**POINT 2-3**

<b>Pollutant</b>	<b>Units of measure</b>	<b>100 PERCENTILE LIMIT</b>
Suspended Solids	mg/L	50
Oil and Grease	mg/L	5 and/or none visible
pH	pH units	6.5 – 8.5

- 4) The proponent must supply to the EPA with an application to vary the environment protection licence to extract in excess of 30,000 tpa (and prior to any works commencing on this development consent) a report from a practicing civil engineer on the current and future structural stability of all ponds used on the premises. In particular the assessment must include a detailed assessment of Pond 1 as shown in Figure 6.8 of the EIS titled *"Bago Quarry Production Increase"* (dated November 2014), which failed in 2010 and 2012.
- 5) Prior to any works associated with this development consent commencing the proponent must install and commission the sediment pond described as SB2, as shown on Figure 6.8 of the EIS *"Bago Quarry Production Increase"*, dated November 2014. Evidence demonstrating the installation of the pond SB2 must be submitted to the EPA with the application to vary the environment protection licence to extract in excess of 30,000 tpa.
- 6) Prior to any soil disturbance works occurring in Catchment C the proponent must install and commission the sediment pond described as SB1, as shown on Figure 6.8 of the EIS *"Bago Quarry Production Increase"*, dated November 2014. Evidence demonstrating the installation of the pond SB1 must be submitted to the EPA with an application to vary the environment protection licence to include a licence discharge point from pond SB1.
- 7) For each monitoring/discharge point or utilisation area specified below (by a point number) the concentration of each pollutant specified in Column 1 must be monitored by sampling and obtaining

results by analysis. Specified opposite in the other columns are the sampling method and units of measure to be used and the frequency with which samples are to be taken.

#### POINT 1-2

Pollutant	Units of measure	Frequency	Sampling Method
Suspended Solids	mg/L	Special Frequency 1	Grab sample
Turbidity	ntu	Special Frequency 1	Probe
pH	pH units	Special Frequency 1	Probe
Oil and grease	visible	Special Frequency 1	Visual observation

Note: For the purposes of the table above 'Special Frequency 1' means:

- (a) prior to any controlled discharge; and
- (b) daily during any discharge.

#### POINT 4-5

Pollutant	Units of measure	Frequency	Sampling Method
Suspended Solids	mg/L	Quarterly	Grab sample
Turbidity	ntu	Quarterly	Probe
pH	pH units	Quarterly	Probe
Oil and grease	visible	Quarterly	Visual observation

### **Bunding**

- 8) All above ground tanks containing material that is likely to cause environmental harm must be banded or have an alternative spill containment system in place.
- 9) Bunds must:
  - a) have walls and floors constructed of impervious materials;
  - b) be of sufficient capacity to contain 110% of the volume of the tank (or 110% volume of the largest tank where a group of tanks are installed);
  - c) have floors graded to a collection sump; and
  - d) not have a drain valve incorporated in the bund structure, or be constructed and operated in a manner that achieves the same environmental outcome.

## Waste

- 10) The licensee must not cause, permit or allow any waste generated outside the premises to be received at the premises for storage, treatment, processing, reprocessing or disposal or any waste generated at the premises to be disposed of at the premises, except as expressly permitted by a licence.

## Hours of operation

- 11) Activities covered by this consent must only be carried out between the hours of 0600 and 1700 Monday to Friday, and 0600 and 1300 Saturday, and at no time on Sundays and Public Holidays.

Maintenance activities may be undertaken outside these hours provided it is not audible at nearby residential receptors.

## Noise

### 12) Noise Limits

Noise generated at the premises must not exceed the noise limits in the table below.

Noise Area Category	Description	Monday to Saturday – $L_{Aeq}(15\text{ minute})$	
		07:00 to 17:00 weekdays and 7:00 to 13:00 Saturdays "Day Period"	06:00 -07:00 "Morning shoulder period"
Residential Receptors	Noise Limits	45	40

- 13) The noise limits set out in the condition above apply under all meteorological conditions except for the following:
- Wind speeds greater than 3 metres/second at 10 metres above ground level.
  - Stability category F temperature inversion conditions and wind speeds greater than 2 metres/second at 10 metres above ground level; or
  - Stability category G temperature inversion conditions.
- 14) For the purposes of the condition above:
- Temperature inversion conditions (stability category) are to be determined by the sigma-theta method referred to in Part E4 of Appendix E to the NSW Industrial Noise Policy.
- 15) To determine compliance with the  $L_{Aeq}(15\text{ minute})$  noise limits detailed above, the noise measurement equipment must be located:
- approximately on the property boundary, where any dwelling is situated 30 metres or less from the property boundary closest to the premises; or

- within 30 metres of a dwelling façade, but not closer than 3m, where any dwelling on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable
  - within approximately 50 metres of the boundary of a National Park or a Nature Reserve.
- 16) A non-compliance of noise limits condition will still occur where noise generated from the premises in excess of the appropriate limit is measured:
- at a location other than an area prescribed by the condition above; and/or
  - at a point other than the most affected point at a location.
- 17) For the purposes of determining the noise generated at the premises the modification factors in Section 4 of the NSW Industrial Noise Policy must be applied, as appropriate, to the noise levels measured by the noise monitoring equipment.
- 18) To assess compliance with the noise limits condition, attended noise monitoring must be undertaken in accordance with the conditions above and:
- a) at Residential Receptor R1 (Bago Winery) as shown on Figure 6.6 of the EIS *"Bago Quarry Production Increase"*, dated November 2014 (this document has been filed as EPA document DOC14/324619-01);
  - b) occur annually in any reporting period;
  - c) occur during each "day" or "morning shoulder" period as defined in the noise limits condition above for a minimum of 1.5 hours during the day;
  - d) occur for three consecutive operating days; and
  - e) occur during a period of normal operations.

Note: The EPA will consider this frequency of monitoring, upon request, after the first three years of monitoring or if monitoring or community complaint suggests more frequent monitoring is required.

- 19) Quarry processing operations with the potential to generate maximum noise level events (such as running several items of plant concurrently) must be managed so they will not occur during the morning shoulder period (6am and 7am).

## **Blasting**

- 20) The airblast overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time at any noise sensitive locations. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.
- 21) The airblast overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.
- 22) Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time at any noise sensitive locations. Error margins associated with any



monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.

- 23) Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec at any noise sensitive locations for more than five per cent of the total number of blasts over each reporting period. Error margins associated with any monitoring equipment used to measure this are not to be taken into account in determining whether or not the limit has been exceeded.
- 24) Blasting at the premises may only take place between 9:00am-3:00pm Monday to Friday. Blasting is not permitted on public holidays.

Blasting outside of the hours specified in this condition can only take place with the written approval of the EPA.

- 25) Offensive blast fume must not be emitted from the premises.

Definition: Offensive blast fume means post-blast gases from the detonation of explosives at the premises that by reason of their nature, duration, character or quality, or the time at which they are emitted, or any other circumstances:

- are harmful to (or are likely to be harmful to) a person that is outside the premises from which it is emitted, or
- interferes unreasonably with (or is likely to interfere unreasonably with) the comfort or repose of a person who is outside the premise from which it is emitted.

- 26) The proponent must monitor all blasts carried out in or on the premises at or near the nearest residence or noise sensitive location (such as a school or hospital) that is likely to be most affected by the blast and that is not owned by the licensee or subject of a private agreement between the owner of the residence or noise sensitive location and the proponent relating to alternative blasting limits.

## Air

### 27) Requirement to monitor ambient particulate matter

- The licensee must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

Point 6

Parameter	Units of measure	Frequency	Averaging Period	Method
PM <sub>10</sub>	Micrograms per cubic metre	continuous	1-hour	AS 3580.9.8 - 2008

Note: The number and location of PM<sub>10</sub> monitors must be approved by the EPA prior to the installation of the monitoring equipment. It is the intention of the EPA that initially monitoring will be conducted at Residential Receptor R1 (Bago Winery) as shown on Figure 6.6 of the EIS "Bago Quarry Production Increase", dated November 2014 (this document has been filed as EPA document DOC14/324619-01)

### Requirement to monitor weather

- 28) For each monitoring point specified in the table below the proponent must monitor (by sampling and obtaining results by analysis) the parameters specified in Column 1. The licensee must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

#### Point 7

Parameter	Units of Measure	Frequency	Averaging Period	Sampling Method
Air temperature	°C	Continuous	1 hour	AM-4
Wind direction	°	Continuous	15 minute	AM-2 & AM-4
Wind speed	m/s	Continuous	15 minute	AM-2 & AM-4
Sigma theta	°	Continuous	15 minute	AM-2 & AM-4
Rainfall	mm	Continuous	15 minute	AM-4
Relative humidity	%	Continuous	1 hour	AM-4

- 29) The meteorological weather station must be maintained so as to be capable of continuously monitoring the parameters specified in condition.

### Potentially Offensive Odour

- 30) The proponent must not cause or permit the emission of offensive odour beyond the boundary of the premises.

### Reporting Conditions

#### Water Monitoring

- 31) Where the discharge water quality monitoring at Points 1, 2 or 3 shows any exceedance of any limit of the EPA licence for the premises the EPA must be notified immediately (by contacting the EPA's Environment Line 131555) and an investigation conducted. A report must be provided to the EPA within seven days as to the reason for the exceedance of the licence limit.
- 32) Where the ambient water quality monitoring at Points 4 and 5 (sites SW1 and SW2) shows a turbidity concentration greater than 20 % higher at the downstream site compared to the upstream site the EPA must be notified immediately (by contacting the EPA's Environment Line 131555) and an investigation conducted. A report must be provided to the EPA within seven days as to the reason for the elevated downstream turbidity.

## Noise Monitoring Report

- 33) A noise compliance assessment report must be submitted to the EPA within 30 days of the completion of the yearly monitoring. The assessment must be prepared by a suitably qualified and experienced acoustical consultant and include:
- a) an assessment of compliance with noise limits presented in the condition above; and
  - b) an outline of any management actions taken within the monitoring period to address any exceedences of the noise limits detailed in the condition above.

## Reporting of blasting monitoring

- 34) The proponent must report any exceedence of the blasting limits to the regional office of the EPA as soon as practicable after the exceedence becomes known to the proponent or to one of the proponent's employees or agents.
- 35) The proponent must supply, with each EPA license Annual Return, a Blast Monitoring Report which must include the following information relating to each blast carried out within the premises during the reporting period covered by the Annual Return:
- a) the date and time of the blast;
  - b) the location of the blast on the premises;
  - c) the blast monitoring results at each blast monitoring station; and
  - d) an explanation for any missing blast monitoring results.

## Reporting of Ambient Air Quality (PM<sub>10</sub>) levels greater than criteria

- 36) The proponent must, within 7 days of recording a PM<sub>10</sub> value greater than the 24 hour EPA impact assessment criteria, provide a written report to the EPA that details:
- the instantaneous values reported during that day;
  - the 24 hour average for that day;
  - activities that were being conducted at the premises on that day, including the location of extraction activities and an estimation of the tonnage of material transported off-site;
  - The weather data, and in particular hourly average wind direction and strength, obtained from the on-site weather station; and
  - any other factors (eg bushfires) that might have contributed to the elevated reading, including justification as to why these factor(s) might have contributed to the result.

## Operating Conditions

- 37) Activities must be carried out in a competent manner. This includes:
- a) The processing, handling, movement and storage of materials and substances used to carry out the activity; and
  - b) The treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.
- 38) All plant and equipment installed at the premises or used in connection with the activity:
- a) Must be maintained in a proper and efficient condition; and

- b) Must be operated in a proper and efficient manner.

### **General Dust Conditions**

- 39) All areas in or on the premises must be maintained in a condition that prevents or minimises the emission of dust to the air.
- 40) 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.
- 41) Any plant operated in or on the premises must be operated by such practical means to prevent or minimise dust or other air pollutants.
- 42) All trafficable 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.

### **Stormwater Management**

- 43) Stormwater management measures must be prepared and implemented to mitigate the impacts of stormwater run-off from and within the premises in a manner that is consistent with the guidance contained in *Managing Urban Stormwater: Soils and Construction: Volume 2C Unsealed Roads and Volume 2E Mines and Quarries* (DECCW 2008).
- 44) The drainage from all areas at the premises which will liberate suspended solids when stormwater runs over these areas must be diverted into adequately sized sedimentation basins.
- 45) The sedimentation basins must be maintained to ensure that their design capacity is available for the storage of all runoff from cleared areas.

### **Emergency Management**

- 46) The proponent must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises in accordance with the requirements in Part 5.7A of the *Protection of the Environment Operations (POEO) Act 1997* and POEO regulations. The proponent must keep the incident response plan on the premises at all times. The incident response plan must document systems and procedures to deal with all types of incidents (e.g. spills, explosions or fire) that may occur at the premises or that may be associated with activities that occur at the premises and which are likely to cause harm to the environment.

EPA - 10 March 2015