

DOC17/545163; EF15/16586

Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Attention: Ms Lauren Evens

By email: lauren.evans@planning.nsw.gov.au

6 November 2017

Dear Ms Evens

**State Significant Development (SSD 7332) - Proposed Eagleton Quarry – Eagleton Rock Syndicate Pty Ltd – Response to Submissions - Environment Protection Authority (EPA)
Recommended Conditions of Approval**

Reference is made to your email dated 16 October 2017, requesting the Environment Protection Authority's (EPA) comment on the *Response to Submissions State Significant Development (SSD) 7332, Barleigh Ranch Way Eagleton Hard Rock Quarry October 2017* ("the RTS") prepared by JBA Urban Planning Consultants Pty Ltd for Eagleton Rock Syndicate Pty Ltd ("the proponent").

Reference is also made to the document *State Significant Development Application, Environmental Impact Statement (EIS), Eagleton Quarry, Barleigh Ranch Way January 2017* ("the EIS").

The EPA understands the proposed development is for a new hard rock quarry. Some aspects of the project have varied from those proposed earlier in the development phase and EIS. Key changes include:

- Reconfiguration of the processing plant to reduce noise impacts via use of the existing hill as an acoustic and visual barrier and roofing the secondary and tertiary crushers;
- Relocation of an internal haul road to the northern side of the ridgeline to reduce noise impacts;
- Revise water management plan that includes a third dam and bunding to capture water from the reconfigured processing plant and stockpile area, increase of the total on-site dam capacity from 57ML to 82ML, controlled discharge of treated water to Seven Mile Creek (average of 48.3ML/year) and a total on-site storage of 265ML to prevent discharges during rainfall events up to the one in 500 year ARI 24 hour storm event and one in 500 year ARI 72 hour storm event; and
- Revised blasting hours and blast frequency.

The EPA understands the project now comprises:

- Extraction and processing of up to 600,000 tonnes per annum (tpa) of hard rock over a 30 year quarry life;
- Extraction and processing activities 7am – 6pm Monday to Friday and 7am-4pm Saturday;
- Transportation of processed material to market via truck primarily via Italia Road;

- Up to 18,750 heavy vehicles per year (approximately 170 truck movements per day), 6 days per week between 5am-10pm Monday to Friday and 5am-4pm Saturday;
- Blasting activities 9am – 5pm Monday to Friday, with up to two blasts per day, but not more than 4 per week during the construction phase; and, no more than one blast per week during operation;
- Construction of on-site infrastructure including internal site access roads, a new bridge over Six Mile Creek, water containment structures, administration buildings, weighbridge, workshop, fuel storage and processing area infrastructure (including four crushers, screening plant, silo, product pads and pug mill);
- Water management system with controlled discharge of treated water to Seven Mile Creek and on-site storage to prevent discharges during rainfall events up to the one in 500 year ARI 24 hour storm event and one in 500 year ARI 72 hour storm event; and
- Clearing of approximately 30ha of native vegetation.

The EPA notes the premises is located on the part of Lot 2 DP 1108702 west of Seven Mile Creek as identified within the EIS and is operated separately from the Port Stephens Gardenland landscape supply facility.

The EPA notes the revised Air Quality Impact Assessment (AQIA) predicts the potential for particulate matter exceeding the EPA's impact assessment criteria at the Hunter Valley Paint Ball and Motor Cross Track recreational receptors. The potential for impacts on recreational receivers should be considered by the Department of Planning & Environment ("the Department") in determining consent. If the proposal is approved, effective proactive operational practices and reactive management measures are important factors in managing air quality impacts. Sealing of all external roads will further assist with air quality management.

The revised AQIA also predicts the potential for particulate matter exceeding the EPA's impact assessment criteria at the Gardenland manager's house. The EPA understands that the Gardenland manager's house (Receptor 23) will be party to a private agreement with regard to air quality and noise impacts. In the event this is not the case, the impact should be considered by the Department in determining consent.

The EPA notes the proposed quarry is within the Grahamstown drinking water catchment. In addition to the treatment of water with gypsum and alum prior to discharge, the water management system includes a number of other measures to treat the captured dirty water including a gross pollutant trap and floating wetlands within Dam 3, a bio-retention swale upstream of Dam 2 and another between Dam 2 and Dam 1B, and floating wetlands within Dam 2.

Achievement of the proposed water quality criteria for discharges to Seven Mile Creek relies on effective treatment and management of the water management system. Adequate and on-going management is also important to prevent discharges below the system design criteria. The EPA recommends regular review and monitoring of water management measures and erosion and sediment controls, progressive rehabilitation of exposed areas and that adequate capacity be maintained within in the onsite water storages to capture the design rainfall events.

The EPA has reviewed the proposal for environmental matters relating to air, noise, surface water, chemicals and waste as described in the RTS and EIS and provides detailed comments in **Attachment A**.

The EPA initially provided recommended conditions of consent on 27 February 2017 (our reference DOC17/133932) based on the EIS. These recommended conditions have been revised to reflect changes outlined in the RTS. If the Department considers approval is appropriate, the EPA recommends that the conditions provided in **Attachment B** are incorporated into the consent.

If you require further information regarding this matter please contact Rebecca Akhurst on (02) 4908 6807.

Yours sincerely



HAMISH RUTHERFORD
Acting Head Regional Operations Unit – Hunter
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Attachment A – EPA Comments - Proposed Eagleton Quarry (SSD 7332) Environmental Impact Statement (EIS) January 2017 and Response to Submissions (RTS) October 2017.

Attachment B – EPA Recommended Conditions of Consent – Proposed Eagleton Quarry (SSD 7332).

ATTACHMENT A

EPA's Comments - Proposed Eagleton Quarry (SSD 7332) Environmental Impact Statement (EIS) January 2017 and Response to Submissions (RTS) October 2017

AIR

The RTS provides a revised Air Quality Impact Assessment (AQIA) that has been undertaken to:

- Assess modifications to the quarry plan include:
 - Flipping of the plant layout such that the jaw crusher moves to the northwest towards the Boral quarry approximately 290 m;
 - Retention of 12.5-25m high bund along the southern extent of the processing area;
 - Movement of the haul road to the northern boundary; and
 - Erection of the roof structure over the secondary and tertiary crusher;
- Assess peak daily activity rates;
- Assess potential impacts at additional recreational receptors (Hunter Valley Paintball, Motor Cross Track); and
- Assess potential impacts at the respite centre and the proposed development at Kings Hill. ATASU understands these receptors are representative of residential areas.

The revised AQIA:

1. Predicts the potential for particulate matter exceeding the impact assessment criteria in the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* at recreational receptors, specifically:
 - Significant ground level concentrations of PM₁₀ over 24 hours at the Hunter Valley Paintball and Motor Cross reactional receptors. The predicted exceedances are discussed in the section below.
 - Potential for exceedances of annual average PM_{2.5} and PM₁₀ impact assessment criteria at reactional receptors on a cumulative basis.
2. Predicts the potential for particulate matter exceeding the EPA's impact assessment criteria at the Gardenland manager's house, specifically:
 - Potential exceedances of annual average PM_{2.5} on a cumulative basis; and
 - Potential ground level concentrations of PM₁₀ over 24 hours on a cumulative basis when considering peak daily activity rates.
3. The EPA understands that the Gardenland manager's house (Receptor 23) will be party to a private agreement with the proponent, hence the predicted exceedances are not discussed further. In the event this is not the case, the impact should be considered by the consent authority.
4. Advises that modelling is based on Italia Road being sealed, however consent from a landowner may not be provided to seal this portion of road.
5. The revised AQIA recommends reactive day to day management measures with real-time monitors to manage predicted worst-case impacts. However, the reactive management measures are not detailed, and the revised assessment has not conducted modelling or assessment incorporating reactive management to demonstrate its efficacy. Reactive management may not be effective at reducing predicted annual average exceedances.
6. Includes a modification to the assumed control factor for drilling. A control factor of 85% for the use of a cyclone has been adopted, as opposed to the 70% adopted in the air quality assessment submitted for public exhibition for wet injection during drilling.

7. Advises that the modelled emissions are based on the assumption that sealing of Italia Road will be implemented, however it is possible that consent from a landowner may not be obtained for sealing an 870m portion of Italia Road. The revised AQIA advises that in the event this portion of road is not sealed then the estimated emissions are likely to be:
- Underestimated by ~7.4% for PM₁₀;
 - Underestimated by ~5.5 % for Total suspended particles (TSP);
 - Overestimated for PM_{2.5}. It is not clear how PM_{2.5} emissions would decrease in the event the portion of road is not sealed. Notwithstanding this the predicted changes for particle emissions are within the range of uncertainty for emission estimation from these sources, and unlikely to significantly alter the outcomes of the assessment (i.e. exceedances are predicted for peak daily activity and annual activity rates).

Predicted impacts at receptors

Annual average

A summary of the predicted exceedances for the recreational receptors on an annual basis are provide below.

Receptor	PM2.5 (Annual) (ug/m ³)			PM10 (Annual) (ug/m ³)		
	Increment	Cumulative	IAC	Increment	Cumulative	IAC
23	1.1	8.1	8	-	-	-
C	1.3	8.3	8	5.2	25.3	25

Receptor 23 = Gardenland manager's residence

Receptor C = Hunter Valley Paintball

IAC = Impact assessment criteria

The EPA advises that:

- Significant increment ground level concentrations are predicted (i.e. > 10 % of the cumulative impact assessment criteria); and
- Reactive management measures may not be effective at reducing these predicted exceedances.

24hour Typical and Peak Daily Activity Rates

A summary of the predicted exceedances for the recreational receptors are tabulated below.

Receptor	PM10 (24 hr) – Typical Day (ug/m ³)			PM10 (24 hr) – Maximum Day (ug/m ³)		
	Increment	Cumulative	IAC	Increment	Cumulative	IAC
23	-	-	50	31.5	56.6	50
C	19.3	53.8	50	52.3	82.9	50
D	-	-	50	31.9	57.9	50

Receptor 23 = Gardenland manager's residence

Receptor C = Hunter Valley Paintball

Receptor D = Motor Cross Track

IAC = Impact assessment criteria

The following additional exceedances are predicted:

- 4 additional exceedances at Receptor 23 when considering peak daily operations;
- 1 additional exceedance at Receptor C when considering typical day operations;
- 61 additional exceedances at Receptor C when considering peak daily operations; and
- 7 additional exceedances at Receptor D when considering peak daily operations.

The revised AQIA proposes "that the worst-case impacts would be managed on a day to day basis using a network of real-time monitoring stations, which will enable quarry personnel to respond to elevated dust levels prior to reaching critical levels and modify activities, their location or increase controls as required."

The EPA advises that:

- there is likely to be some conservativeness in the assessment of peak production rates, as the assessment assumes peak production occurring for every day of the modelled year, which is unlikely to happen in reality; and
- the revised assessment has not modelled or assessed the potential impacts with reactive management measures that could be implemented.

The proponent commits in the EIS to installation of air quality monitoring (High Volume Air Sampler or Tapered Element Oscillating Microbalance) at a location representative of nearby receptors. Should approval be granted for the proposal, the EPA would consider the application of air quality monitoring on an Environment Protection Licence.

The EPA notes:

- Barleigh Ranch Way (an external road) will be upgraded, sealed and maintained;
- Section 8 of the RTS states the proponent will undertake all reasonable endeavours to reach agreement with the private landowner of an access road between Italia Road and Barleigh Ranch Way to enable the right of carriageway to be upgraded, sealed and maintained; and
- There is no proposal within the EIS or RTS to undertake pre-coat activities at the premises.

The EPA's recommended conditions of approval remain unchanged with the exception of Condition 9. Condition 9 has been revised to remove the requirement for the "Right of Way" from Italia Road to be sealed. However, it is EPA's preference that this road be sealed and all reasonable and feasible efforts made to reach agreement to seal this road if approval for the proposal is granted.

NOISE AND BLASTING

The proponent has amended aspects of the proposal for the purpose of minimising environmental impacts including noise. These amendments include reconfiguration of the processing plant and use of the existing hill as an acoustic and visual barrier, roofing the secondary and tertiary crushers and relocation of an internal haul road to the northern side of the ridgeline.

The RTS provides a revised Noise Impact Assessment (NIA) assessing impacts from the amended proposal and includes assessment of potential impacts on the potential future residential land release area of Kings Hill, approximately 1 kilometre from the proposed quarry.

The revised NIA predicts lower noise levels than those predicted in the EIA. The EPA notes that the revised NIA uses some lower sound power levels than those used in the EIS.

The EPA's recommended conditions of consent remain largely unchanged with the following exceptions:

- The addition of limits for Location 35 - Six Mile Road, Kings Hill (representing residences in the Kings Hill estate);
- The removal from the noise limits table of some locations to the north-east, north and north-west, which would be exposed to noise from the Pacific Highway or other activities near the proposed quarry, including the existing Boral Seaham quarry, which are not the potentially most-affected locations;
- Nomination of 112 Six Mile Road, Eagleton as the noise monitoring location for compliance purposes, being representative of the potentially most-affected location, subject to the occupier's and Department of Planning & Environment agreement.

The noise limits proposed by the EPA are based on the proponent's noise modelling, which assumed all feasible and reasonable noise mitigation measures are implemented, including noise barriers. The proponent will need to design and build the quarry to include the feasible and reasonable noise mitigation measures recommended in the NIA to ensure compliance with the proposed noise limits.

The revised NIA predicts exceedances at Receiver 23, (i.e. 11 Barleigh Ranchway, Eagleton). The revised NIA states that this receiver is a manager's residence for the landscape supply operation, and that the proponent intends to consider a private agreement with the owner. Noise limits have not been proposed by the EPA for this receiver as it will be subject to a private agreement.

Appropriate noise, blast and meteorological monitoring locations need to be proposed and justified by the proponent if approval for the proposal is granted.

The RTS clarifies blasting activities are to occur between 9am to 5pm Monday to Friday; with up to two blasts per day, but not more than 4 per week, during the construction phase; and, no more than one blast per week during operation.

WASTE

The EIS states organic green material from vegetation clearing will either be transferred to Port Stephens Gardenland landscape supply facility for processing (page iv) or mulched onsite and reused in landscaping and sediment controls (page 103). The proponent should be aware that Port Stephens Gardenland has not currently been granted an environment protection licence to receive and compost waste.

A deposit of between 1,000 tonnes (EIS, page 104) and 3,000 tonnes (EIS, page v) of rejected tile fragments is located within the area identified for location of the process plant. The proposal plans to reuse tile fragments as aggregate for construction of internal roads and the processing area.

Assessment of tile fragments should be undertaken in accordance with the Recovered Aggregate Order 2014 (the Order) and applied in accordance with the Recovered Aggregate Exemption 2014 where the conditions of the Order are met.

Waste tiles that don't meet the requirements of the Order should be taken to a facility that can lawfully receive that waste. The EPA does not recommend approval for the receipt of waste at the premises.

SURFACE WATER MANAGEMENT

The EPA notes the proposed quarry is within the Grahamstown drinking water catchment. Boral's Seaham Quarry is located upstream on Seven Mile Creek and also within the drinking water catchment.

In response to submissions the proponent has provided a revised Water Management Plan. The revised Water Management Plan includes:

- Dirty water capture, treatment and controlled discharge of treated water to Seven Mile Creek (an average of 48.3ML/year).
- In-pit sump, three (3) dams, bunding bioswales to capture and treat dirty water. Dirty water from the sump is pumped to Dam 2 and overflows into Dam 1. Dirty water from the processing plant and stockpile area is captured in Dam 3 and overflows to Dam 1. Dam 1 is divided into two (2) compartments – water from the first compartment is pumped to the second and treatment with Gypsum and Alum prior to discharge.
- An increase in the total on-site dam capacity from 57ML to 82ML.
- Total on-site storage of 265ML to prevent discharges during rainfall events up to the one in 500 year ARI 24 hour storm event (i.e. 407mm) and one in 500 year ARI 24 hour storm event (i.e. 579mm).

The revised water assessment proposes treatment of dirty water with gypsum and alum to achieve discharge water quality concentrations similar to ambient water quality trigger levels for lowland rivers in the Australian and New Zealand Environment Conservation Council (ANZECC) *Guidelines for*

Fresh and Marine Water Quality (2000) ("the ANZECC Guidelines"). These are summarised as follows.

Pollutant	Proposed controlled discharge concentration (mg/L)	ANZECC <u>ambient</u> water trigger value for lowland rivers (mg/L)
Total suspended solids (TSS)	30	n/a
Total phosphorus (TP)	0.03	0.025
Total nitrogen (TN)	0.5	0.35

The water management strategy also adopts additional water quality targets specified on page 6 of the revised water management strategy.

In addition to the treatment of water with gypsum and alum prior to discharge, the water management system includes a number of other measures to treat the captured dirty water including a gross pollutant trap and floating wetlands within Dam 3, a bio-retention swale upstream of Dam 2 and another between Dam 2 and Dam 1B, and floating wetlands within Dam 2.

Achievement of the proposed treated water discharge quality criteria relies on effective treatment and management of the water management system. Adequate and on-going management of the water management system is also important to prevent discharges below the system design criteria and ensure the treated water quality criteria are met. The EPA recommends adequate capacity be maintained within in the onsite water storages to capture the design rainfall events and the installation of a level or volume indicator on the dams.

The EPA notes the EIS proposes monthly surface water quality monitoring of pH, electrical conductivity (EC), total suspended solids (TSS), total phosphorus and total nitrogen within Seven Mile Creek both upstream and downstream of the premises. The EIS also proposes monitoring of rainfall, water usage, dam volumes and discharges and updating of water balances. Regular review and monitoring of water management measures and erosion and sediment controls is proposed.

Progressive rehabilitation of exposed areas assists the management of dust and mitigates potential surface water pollution.

A sewage pump-out system is proposed for the site. The EPA has not provided recommended conditions of approval in relation to on-site application via spray irrigation as the impacts of such system have not been assessed.

ENVIRONMENT PROTECTION LICENCE

Based on the information provided in the EIS, the proposal is a scheduled (land-based extractive activity) under the *Protection of the Environment Operations Act 1997* (POEO Act) and will therefore require an Environment Protection Licence (EPL) if approval is granted. It is an offence under the POEO Act to undertake scheduled development works and/or activities without an Environment Protection Licence.

Should project approval be granted, the proponent will need to make a separate application to EPA for an EPL for the proposed facility prior to undertaking any on site works. Additional information is available through EPA's *Guide to Licensing* document at www.environment.nsw.gov.au/licensing/licenceguide.htm.

General information on licence requirements can also be obtained from EPA's Environment Line on 131 555 during office hours, or can be found at the EPA web site at: <http://www.epa.nsw.gov.au/licensing/>.

ATTACHMENT B

EPA's Recommended Conditions of Consent – Proposed Eagleton Quarry (SSD 7332)

General and Operational

- 1) Except as provided by these conditions of approval, the works and activities must be undertaken in accordance with the proposal contained in the documents titled:
 - "State Significant Development Application, Environmental Impact Statement, Eagleton Quarry, Barleigh Ranch Way January 2017" prepared by JBA Urban Planning Consultants Pty (the EIS),
 - "Response to Submissions State Significant Development (SSD) 7332, Barleigh Ranch Way Eagleton Hard Rock Quarry October 2017" prepared by JBA Urban Planning Consultants Pty Ltd (the RTS)
 unless otherwise specified in these conditions of approval.
- 2) If consent is granted for this proposal the proponent will need to make a separate application to the EPA and obtain an Environment Protection Licence issued under the *Protection of the Environment Operations Act 1997* (POEO Act) prior to the commencement of any scheduled development work or scheduled activity.
- 3) 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.
- 4) All plant and equipment installed at the premises or used in connection with the licensed activity:
 - a) Must be maintained in a proper and efficient condition; and
 - b) Must be operated in a proper and efficient manner.
- 5) The proponent must nominate to the EPA a representative of the proponent that is available at all times and is capable of providing immediate assistance or response during emergencies or any other incidents at the premises. The name of the nominated representative and their contact details, including their telephone number, must be current at all times. The nomination and contact details must be provided to the EPA's Director- Hunter at PO Box 488G, Newcastle NSW 2300 or hunter.region@epa.nsw.gov.au.
- 6) The proponent must maintain, and implement as necessary, a current Pollution Incident Response Management Plan (PIRMP) for the premises. The PIRMP must be developed in accordance with the requirements in Part 5.7A of the POEO Act and Protection of the Environment Operations (General) Regulation 2009. 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. The PIRMP must be tested at least annually or following a pollution incident.
- 7) Pre-coat material and pre-coating activities are not permitted to be stored or undertaken at the premises.
- 8) Areas where extractive activities have concluded must be progressively rehabilitate as the quarry floor level is progressively lowered and each new extraction bench is established.

- 9) The proponent must maintain the "Right of Way" from Italia Road to the premises at all times in a state free from imperfections or residues from the quarry activities that could lead to the generation of sediment discharge, dust or offensive noise from trucks.
- 10) The proponent must not cause or permit the emission of offensive odour beyond the boundary of the premises.

Dust

- 11) The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.
- 12) Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission of dust from the premises.
- 13) Any plant operated in or on the premises must be operated by such practical means to prevent or minimise dust or other air pollutants.
- 14) All trafficable areas, stockpile areas and vehicle manoeuvring areas in or on the premises must be maintained, at all times, in a condition that will minimise the emission of dust to the air, or emission from the premises of wind-blown or traffic generated dust.
- 15) Trucks entering and leaving the premises carrying loads of dust generating materials must have their loads covered at all times, except during loading and unloading.

Air Quality Management

- 16) For all emission sources at the site the proponent must prepare an Air Quality Management Plan that includes, but is not limited to:
 - a) Key performance indicator(s) that are quantifiable, measurable and auditable;
 - b) Monitoring method(s);
 - c) Location, frequency and duration of monitoring;
 - d) Record keeping;
 - e) Response mechanisms; and
 - f) Compliance reporting.
- 17) The Air Quality Management Plan must include measures that:
 - a) represent both proactive and reactive management;
 - b) are benchmarked against international best management practice for the control of fugitive particle emissions; and
 - c) achieve emission controls equal to or greater than the control efficiencies included in the project air quality assessment, Eagleton Quarry Production Increase – Air Quality and Greenhouse Gas Assessment (25 January 2017) Pacific Environment Limited.
- 18) The Air Quality Management Plan must be implemented prior to the commencement of any dust generating activities at the site.

Surface Water

- 19) 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.
- 20) The concentration of a pollutant discharged from the final treatment Dam 1B (Point 1) must not exceed the concentration limits specified for that pollutant in the table below.

POINT 1

Pollutant	Units of measure	100 Percentile concentration limit
Total Suspended Solids	Milligrams per litre	30
Total Phosphorus	Milligrams per litre	0.03
Total Nitrogen	Milligrams per litre	0.5
Oil and Grease	Milligrams per litre	10 &/or none visible
pH	pH units	6.5 – 8.5

- 21) Water management dams are to be constructed downstream of proposed construction and vegetation clearing areas prior to other construction activities occurring.
 - 22) 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.
 - 23) The sedimentation basins, identified as Dam 1 and Dam 2 and Dam 3 in the RTS must be maintained to ensure adequate capacity to capture and store runoff from the design rainfall event criteria
- Note: The premises water management system is designed to capture rainfall events up to a 1 in 500 year ARI, 24 hour storm event, which is equivalent to 407mm rainfall, and rainfall events up to a 1 in 500 year ARI, 72 hour storm event, which is equivalent to 579mm rainfall, prior to wet weather discharge.
- 24) Level indicators must be installed and operated continuously in each of the sedimentation basins.
 - 25) 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 Stormwater Management Plan for the catchment. Where a Stormwater Management Plan has not yet been prepared the measures should be consistent with the guidance contained in *Managing Urban Stormwater: Soils and Construction: Volume 2C Unsealed Roads and Volume 2E Mines and Quarries* (DECCW 2008).
 - 26) The premises must prepare a Flood Management Plan that details the impacts of flood waters on the premises, including how the site will be managed prior to a flood occurring, along with mitigation measures during and immediately following a flood event, until the premises returns to normal operation. This needs to include management of exposed areas, machinery and materials (including chemicals) stored at the premises.

Chemical Management and Bunding

- 27) All above ground tanks and storage areas for drums containing material that is likely to cause environmental harm must be bunded or have an alternative spill containment system in place.
- 28) 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.

- 29) All fuel storage and refuelling areas at the premises must be designed, engineered, and constructed to comply with the relevant Australian Standards.
- 30) No fuel storage or refuelling activities may occur at the premises outside of the areas constructed to the relevant Australian Standards.

Waste

- 31) The proponent 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.
- 32) The proponent must ensure that any liquid and/or non-liquid waste generated and/or stored at the premises is assessed and classified in accordance with the EPA Waste Classification Guidelines as in force from time to time.
- 33) Waste tiles which have been land applied at the premise must be tested to determine whether the waste meets the conditions and chemical criteria in the 'Recovered Aggregate Order 2014'.
- 34) Waste tiles which meet the conditions of the 'Recovered Aggregate Order 2014' may be land applied at the premises in accordance with the 'Recovered Aggregate Exemption 2014'.
- 35) Waste tiles which do not meet the conditions of the 'Recovered Aggregate Order 2014' must be removed from the site within 6 months of the issue of an Environment Protection Licence and taken to a facility which is lawfully able to receive that waste.
- 36) For all waste removed from the premises to meet the condition above, the proponent must provide documentation to verify that the waste has been taken to a facility which is lawfully able to receive that waste.

Hours of Operation

- 37) Operations are only permitted:
 - a) Between 7:00 am and 6:00 pm, Monday to Friday, excluding public holidays;
 - b) Between 7:00 am and 4:00 pm Saturdays, excluding public holidays;
 - c) At no time on Sundays or public holidays.
- 38) The following activities are permitted outside of the hours described in the condition above:
 - a) Sales activities are permitted only from 5:00 am to 10:00 pm, Monday to Friday and 5:00 am to 4:00 pm Saturdays.
 - b) Trucks may arrive and depart the site between 5:00 am and 10:00 pm, Monday to Friday, excluding public holidays;
 - c) Trucks may arrive and depart the site between 5:00 am and 4:00 pm Saturdays, excluding public holidays;
 - d) Unscheduled maintenance works shall not exceed the evening noise limits contained in "Table 1 – Noise Limits in dB(A)".

Noise

- 39) All noise mitigation measures, identified in the Noise Impact Assessment for Eagleton Rock Syndicate Pty Ltd – Eagleton Quarry (Report Reference: 15396_R01_Revision C) by Global Acoustics Pty Ltd, dated 28 January 2017 and Noise Impact Assessment Proposed Quarry – Revised Scenarios Eagleton, NSW (Project No: 161324) by Spectrum Acoustics, dated

September 2017 and used to determine noise impacts from the premises, must be installed prior to the commencement of crushing and processing activities.

- 40) Noise generated at the premises must not exceed the noise limits in the table below. The locations referred to are in Figure 1 Noise Impact Assessment Proposed Quarry – Revised Scenarios Eagleton, NSW (Project No: 161324) by Spectrum Acoustics, dated September 2017.

TABLE 1 - NOISE LIMITS IN dB(A)

Location	Locality	NOISE LIMITS dB(A)			
		Morning Shoulder		Day	Evening
		LA1,1min	(LAeq,15min)	(LAeq,15min)	(LAeq,15min)
35 Six Mile Road	Kings Hill	49	35	38	35
100 Six Mile Road	Eagleton	49	38	41	35
106 Six Mile Road	Eagleton	49	38	41	35
112 Six Mile Road	Eagleton	49	39	41	35
132 Six Mile Road	Eagleton	49	37	40	35
160 Six Mile Road	Eagleton	49	37	40	35
164 Six Mile Road	Eagleton	49	37	39	35
164 Six Mile Road	Eagleton	49	35	37	35
258 Six Mile Road	Eagleton	49	35	35	35
264 Six Mile Road	Eagleton	49	35	35	35
3 Killaloe Lane	Eagleton	49	35	35	35
296 Six Mile Road	Eagleton	49	35	35	35

- 41) For the purpose of the noise limit condition in Table 1:

- Day is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sunday and Public Holidays.
- Evening is defined as the period 6pm to 10pm.
- Morning Shoulder is defined as the period from 5am to 7am Monday to Saturday.

- 42) The noise limits set out in Table 1 of the noise limit condition above apply under all meteorological conditions except for the following:

- Wind speeds greater than 3 metres/second at 10 metres above ground level; or
- 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.

- 43) For the purposes of the condition above:

- a) Data recorded by the meteorological station identified as Point 4 must be used to determine meteorological conditions; and
- b) 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.

44) To determine compliance:

- a) with the $L_{eq(15 \text{ minute})}$ noise limits in the Noise Limits condition, Table 1, 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.
- b) with any L_{Amax} noise limits in the Noise Limits condition, Table 1, the noise measurement equipment must be located within 1 metre of a dwelling façade.
- c) with the noise limits in the Noise Limits condition, Table 1, the noise measurement equipment must be located:
 - at the most affected point at a location where there is no dwelling at the location; or
 - at the most affected point within an area at a location prescribed by items a) or b) of this condition.

- 45) A non-compliance of this 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 items a) and b) in the condition above; and/or
 - at a point other than the most affected point at a location.

- 46) 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.

Blasting

- 47) 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.
- 48) 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.
- 49) 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.
- 50) 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.

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

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:

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

52) Blasting at the premises may only take place between 9:00am-5:00pm Monday to Friday. Blasting is not permitted on public holidays.

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

Monitoring Conditions

Surface Water Monitoring

54) 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 to waters Discharge quality monitoring	Discharge to waters Discharge quality monitoring	Discharge from final treatment Dam 1B prior to entry into Seven Mile Creek as shown on Figure 1.1 of Eagleton Quarry Revised Water Assessment, dated 4 August 2017
2	Ambient water quality monitoring		Seven Mile Creek upstream of the premises (plan to be submitted for approval by the EPA with the application for environment protection licence)
3	Ambient water quality monitoring		Seven Mile Creek downstream of the premises (plan to be submitted for approval by the EPA with the application for environment protection licence)

Note: The premises water management system is designed to capture rainfall events up to a 1 in 500 year ARI, 24 hour storm event, which is equivalent to 407mm rainfall, and rainfall events up to a 1 in 500 year ARI, 72 hour storm event, which is equivalent to 579mm rainfall, prior to wet weather discharge.

55) 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

Pollutant	Units of measure	Frequency	Sampling Method
Total Suspended Solids	Milligrams per litre	Daily during any discharge	Grab sample
Total Phosphorus	Milligrams per litre	Daily during any discharge	Grab sample
Total Nitrogen	Milligrams per litre	Daily during any discharge	Grab sample
Electrical conductivity	Microsiemens per centimetre	Daily during any discharge	Grab sample
Oil and Grease	Milligrams per litre	Daily during any discharge	Grab sample
pH	pH units	Daily during any discharge	Grab sample

POINT 2, 3

Pollutant	Units of measure	Frequency	Sampling Method
Total Suspended Solids	Milligrams per litre	Special Frequency 1	Grab sample
Electrical conductivity	Microsiemens per centimetre	Special Frequency 1	Grab sample
Oil and Grease	visible	Special Frequency 1	Visual observation
pH	pH units	Special Frequency 1	Grab sample
Total nitrogen	Milligrams per litre	Special Frequency 1	Grab sample
Total phosphorous	Milligrams per litre	Special Frequency 1	Grab sample

For the purpose of the table(s) above, Special Frequency 1 means monitoring is to be undertaken once a month at the same time when there is a discharge from Point 1.

Weather Monitoring

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

Point 4 – Meteorological monitoring station

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
Siting				AM-1

Note 1: Sampling methods as defined in the *Approved Methods for the Sampling and Analysis of Air Pollutants in NSW*.

Note 2: The location of meteorological monitoring must be confirmed and approved by the EPA prior to earth moving activities being undertaken at the site.

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

58) Monitoring of all parameters listed must commence prior to earth moving activities being undertaken at the premises.

Air Monitoring

59) 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 the air from the point.

Air

POINT 5 (TBD)

Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location
5	Ambient Air Monitoring (type of monitoring to be determined by the EPA at the time of the environment protection licence application)		PM10 particulate monitoring station - Position TBD

60) For each monitoring/discharge point or utilisation area specified below (by a point number to be determined) 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. The sampling methods are defined in the publication "Approved Methods for the Sampling and Analysis of Air Pollutants in NSW".

POINT 5 (TBD)

Pollutant	Units of measure	Frequency	Sampling Method
PM10	ug/m ³	Frequency of monitoring to be determined by the EPA at the time of the Environment Protection Licence application)	Australian Standard 3580.9.8 – 2001 or as approved by the EPA

Noise Monitoring

61) To assess compliance with Noise Limits specified in Table 1 of the noise limit condition, attended noise monitoring must be undertaken in accordance with the noise location conditions for determining compliance and:

- at 112 Six Mile Road Eagleton, or as otherwise agreed with the EPA;
- occur at the time of commencement of typical initial and final configuration processing activity;

- c) occur annually each reporting period;
- d) occur during the morning shoulder, day and evening as defined in the NSW Industrial Noise Policy for a minimum of 1 hour duration for each of the morning shoulder/day/evening periods for typical initial and final processing activity.

Note: The frequency of this noise monitoring may be varied at the discretion of the EPA.

Blast Monitoring

62) To determine compliance with the blasting limit conditions:

- a) Airblast overpressure and ground vibration levels experienced at or near the nearest noise sensitive location(s) must be measured and recorded for all blasts carried out on the premises;

Note: Any Environment Protection Licence issued by the EPA will identify specific noise sensitive locations, identified by Lot & DP and street address.

- b) Instrumentation used to measure and record the airblast overpressure and ground vibration levels must meet the requirements of Australian Standard AS 2187.2-2006.

Notes:

A breach of the blasting limit will still occur where airblast overpressure or ground vibration levels from the blasting operations at the premises exceeds the limit specified in the limit conditions at any other noise sensitive location.

"Noise sensitive locations" includes buildings used as a residence, hospital, school, child care centre, places of public worship and nursing homes. A noise sensitive location includes the land within 30 metres of the building.

63) The airblast overpressure and ground vibration limits do not apply at noise sensitive locations that are owned by the proponent or subject to a private agreement, relating to airblast overpressure and ground vibration levels, between the proponent and land owner.

Reporting Conditions

Noise Monitoring Report

- 64) A noise compliance assessment report must be submitted to the EPA within 30 days of the commencement of initial and final typical processing operations and completion of the annual 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 Table 1 as defined in the noise limits conditions above; and
 - b) an outline of any management actions taken within the monitoring period to address any exceedences of the Noise Limit condition contained in Table 1.

Blast Monitoring Report

- 65) The proponent must supply annually a Blast Monitoring Report which must include the following information relating to each blast carried out within the premises during the respective reporting period:
- 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.

MANDATORY CONDITIONS FOR ENVIRONMENT PROTECTION LICENCES

The following mandatory conditions will apply:

ADMINISTRATIVE CONDITIONS

Other activities

This licence applies to all activities carried on at the premises.

OPERATING CONDITIONS

O1 Activities must be carried out in a competent manner

O1.1 Licensed 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.

O2 Maintenance of plant and equipment

O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:

- a) must be maintained in a proper and efficient condition; and
- b) must be operated in a proper and efficient manner.

MONITORING AND RECORDING CONDITIONS

M1 Monitoring records

M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.

M1.2 All records required to be kept by this licence must be:

- a) in a legible form, or in a form that can readily be reduced to a legible form;
- b) kept for at least 4 years after the monitoring or event to which they relate took place; and
- c) produced in a legible form to any authorised officer of the EPA who asks to see them.

M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:

- a) the date(s) on which the sample was taken;
- b) the time(s) at which the sample was collected;
- c) the point at which the sample was taken; and
- d) the name of the person who collected the sample.

M6 Recording of pollution complaints

M6.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.

M6.2 The record must include details of the following:

- a) the date and time of the complaint;
- b) the method by which the complaint was made;
- c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
- d) the nature of the complaint;
- e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- f) if no action was taken by the licensee, the reasons why no action was taken.

M6.3 The record of a complaint must be kept for at least 4 years after the complaint was made.

M6.4 The record must be produced to any authorised officer of the EPA who asks to see them.

M7 Telephone complaints line

M7.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.

M7.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.

REPORTING CONDITIONS

R1 Annual return documents

R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:

- 1. a Statement of Compliance,
- 2. a Monitoring and Complaints Summary,
- 3. a Statement of Compliance - Licence Conditions,
- 4. a Statement of Compliance - Load based Fee,
- 5. a Statement of Compliance - Requirement to Prepare Pollution Incident Response Management Plan,
- 6. a Statement of Compliance - Requirement to Publish Pollution Monitoring Data,
- 7. a Statement of Compliance - Environmental Management Systems and Practices; and
- 8. a Statement of Compliance - Environmental Improvement Works.

At the end of each reporting period, the EPA will provide to the licensee a copy of the form that must be completed and returned to the EPA.

R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.

Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.

R1.3 Where this licence is transferred from the licensee to a new licensee:

- a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and

- b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.

Note: An application to transfer a licence must be made in the approved form for this purpose.

- R1.4** Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
 - a) in relation to the surrender of a licence - the date when notice in writing of approval of the surrender is given; or
 - b) in relation to the revocation of the licence - the date from which notice revoking the licence operates.
- R1.5** The Annual Return for the reporting period must be supplied to the EPA by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6** Where the licensee is unable to complete a part of the Annual Return by the due date because the licensee was unable to calculate the actual load of a pollutant due to circumstances beyond the licensee's control, the licensee must notify the EPA in writing as soon as practicable, and in any event not later than the due date. The notification must specify:
 - a) the assessable pollutants for which the actual load could not be calculated; and
 - b) the relevant circumstances that were beyond the control of the licensee.
- R1.7** The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.8** Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
 - a) the licence holder; or
 - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.

R2 Notification of environmental harm

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

- R2.1** Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2** The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

R3 Written report

- R3.1** Where an authorised officer of the EPA suspects on reasonable grounds that:
 - a) where this licence applies to premises, an event has occurred at the premises; or
 - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence, and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.

- R3.2** The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3** The request may require a report which includes any or all of the following information:
- a) the cause, time and duration of the event;
 - b) the type, volume and concentration of every pollutant discharged as a result of the event;
 - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
 - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
 - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
 - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
 - g) any other relevant matters.
- R3.4** The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

GENERAL CONDITIONS

G1 Copy of licence kept at the premises or on the vehicle or mobile plant

- G1.1** A copy of this licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.
- G1.2** The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3** The licence must be available for inspection by any employee or agent of the licensee working at the premises or operating the vehicle or mobile plant.

**Environment Protection Authority
November 2017**