

21 April 2020

File No: NTH14/00038/10

Your Ref: DA 2019.101

General Manager
Tenterfield Shire Council
PO Box 214
TENTERFIELD NSW 2372

Attention: Tamai Davidson

Dear Sir / Madam,

Re: Response to Submission - Development Application 2019.101 - Expansion of Doves Quarry - 668 Mount Lindsay Road Tenterfield.

I refer to your email of 20 March 2020 requesting comment from Transport for NSW (TfNSW) in relation to the abovementioned development application.

From 1 December 2019, all functions and responsibilities of Roads and Maritime Services will now be vested in an integrated Transport for NSW (TfNSW). Our key interests are for the safety and efficiency of the transport network, the integrity of State infrastructure and the integration of land use and transport in accordance with *Future Transport Strategy 2056*.

In accordance with Clause 16 of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007*, TfNSW is given the opportunity to review and provide comment on the subject development application.

TfNSW has reviewed the referred information addressing the TfNSW letter dated 19 November 2019 and provides the following comments to assist the consent authority in assessing the application:

1. The Consent Authority should be satisfied that the geometry of the haulage routes will cater for the swept paths the largest vehicle, especially the local road intersections of Logan / Naas Streets and Mount Lindsay / Ballandean Roads.

TfNSW understands from the Traffic Impact Assessment that the majority of the quartzose rock extracted from the Doves Quarry is to be transported to the Sunnyside Crushing Plant on the New England Highway. The northern access to the Sunnyside Crushing Plant encourages faster exit speeds and is creating maintenance problems for the New England Highway's shoulder. Tracking indicates vehicles are entering and exiting in both directions.

Access to the Sunnyside development site should be consolidated in order to provide the safest and most efficient arrangement for all road users in a 100km/h environment. Furthermore, Condition 26 of Council's Notice of Determination dated 19 March 2015 for the subject

development should be upheld and access to the site should be upgraded to Austroads standards, sealed and provided with a BAL treatment. TfNSW recommends that the outstanding consent condition needs to be resolved prior to the current Development Application DA2019.101 is determined.

Please note that any future roadwork on the classified (State) road, specifically the New England Highway, will need to be designed and constructed in accordance with the current Austroads Guidelines, Australian Standards and TfNSW Supplements.

The developer may be required to enter into a Works Authorisation Deed (WAD) with TfNSW for any roadwork deemed necessary on the classified (State) road. The developer will be responsible for all costs associated with the roadwork and administration for the WAD. It is recommended that developers familiarise themselves with the requirements of the WAD process. Further information can be accessed using the following link:

<http://www.rms.nsw.gov.au/projects/planning-principles/index.html>

If you have any further enquiries regarding the above comments please do not hesitate to contact Greg Sciffer, Development Assessment Officer on (02) 6640 1362 or via email at: development.northern@rms.nsw.gov.au

Yours faithfully,



for Kylie-anne Pont
A/Manager Land Use Assessment, Northern

14 May 2020

Mr Terry Dodds
Chief Executive
Tenterfield Shire Council
PO Box 214
TENTERFIELD NSW 2372

Attention: Ms Tamai Davidson
Email: t.davidson@tenterfield.nsw.gov.au

Dear Ms Davidson,

DOWE'S QUARRY EXPANSION (DA 2019/101)

Darryl McCarthy Constructions Pty Ltd (the proponent) has lodged a Development Application seeking Development Consent to extend Dowe's Quarry and increase extraction capacity. The quarry originally commenced operations in 1987 and is currently operating under a development consent originally issued by the Joint Regional Planning Panel on 19 March 2015 (as amended on 21 January 2016).

The Quarry is located approximately 8 km north-east of Tenterfield in NSW and has been operating at its current location since 1987. The Quarry is approved for extraction of up to 150 000 tonnes per annum (tpa) of quartzose material with land disturbance total area of 6.7 hectares (ha) and storages for a range of fine materials generated. Quartzose material is processed at the applicant's Sunnyside Crushing and Screening Plant, located approximately 10 kilometres (km) northwest of Tenterfield.

The existing development consent allows a maximum of 28 truck-loads of quartzose material to be transported daily (principally Monday to Friday) from the quarry to the Sunnyside Crushing and Screening Plant with no more than 120 truck-loads per week.

The current proposal is seeking approval for:

- Ongoing extraction of quartzose rock within the existing extraction area and a 4.4 ha extension of the extraction area, producing up to 230 000 tpa (an increase of 80 000 tpa).
- Campaign crushing and screening on site at the quarry using mobile processing equipment. On-site processing would be undertaken in response to client requirements. All on-site materials processing is proposed to be performed within the extraction area (the pit).
- Ongoing transportation of fragmented and crushed rock via the State road network, (i.e. the New England Highway), for delivery to the Sunnyside Crushing and Screening Plant, and

other destinations. Material would also continue to be delivered locally within Tenterfield for Council-managed road/infrastructure activities and directly to the local community.

- Ongoing transportation of material directly to end points of use, where further processing at the Sunnyside Crushing and Screening Plant is not required.
- Ongoing back loading of clay fines and crusher fines from the Sunnyside Crushing and Screening Plant to the Quarry;
- Progressive emplacement of overburden and fines within and adjacent to the quarry extraction area.
- Progressive and final rehabilitation of the Quarry to develop a landform suitable for native vegetation conservation.

The vast majority of dust from mining activities consists of coarse particles (around 40 per cent) and particles larger than PM₁₀, generated from natural activities such mechanical disturbance of rock and soil materials by dragline or shovel, bulldozing, blasting, and vehicle movements on dirt roads. Particles are also generated when wind blows over bare ground and varying types of stockpiles. These larger particles can have amenity impacts as well as health impacts.

Human exposure to silica is known to occur in industrial and occupational settings and particularly recognised as an important occupational inhalation hazard.

Hunter New England Population Health is aware and endorse the NSW Environment Protection Authority (EPA) request for **Additional Information Required to Inform EPA Assessment of Dowe's Quarry Expansion**.

1. **Noise Impact Assessment** – additional information on operational noise and road traffic noise assessment.
2. **Air Impact Assessment** – additional information on the modelling scenarios and fugitive emissions.

The *Human Health Risk Assessment for Respirable Crystalline Silica (HHRARCS): Expansion of Dowe's Quarry* prepared by Environmental Risk Sciences Pty Ltd on behalf of R. W. Corkery & Co. Pty Limited (RWC) includes consideration of exposures that may occur within the community, the following is suggested (pg 43):

- Existing or background exposures to RCS – no data is available for the area near the Quarry, hence expected background level of RCS in air as discussed in Section 3.4, of 1.9 µg/m³ has been adopted in this assessment. It is assumed that this background relates to RCS as PM_{2.5}.
- Impacts from the proposed quarry operations – this has been modelled for the project, with the maximum incremental increase in annual average PM_{2.5} predicted to be 0.2 µg/m³ (refer to Table 2.1) pg16. It is assumed that 100% of the PM_{2.5} is RCS.
- Total maximum annual average RCS exposures as PM_{2.5} are therefore 2.1 µg/m³, noting that the quarry is contributing only 9.5% of the cumulative exposure, with the remainder being assumed natural background exposure.
- This is less than the adopted guideline of 3 µg/m³.

On this basis, there are no health risk issues of concern in relation to community exposures to RCS in dust that may be sourced from 'The Quarry'.

There is correspondence received via this office and public submission from a collective of residents in varying proximity to the quarry that support a significantly less health based guideline level be adopted.

This office would be guided by the NSW Environment Protection Authority (EPA) on any environmental increase of particulate matter and standards/guideline limits that may apply.

Whilst the human body's respiratory system has a number of defence mechanisms to protect against the harmful effects of Particulate Matter, numerous studies link particle levels to increased hospital admissions and emergency room visits and even to death from heart or lung diseases. Both long (over years) and short term (hours or days) particle exposure have been linked to health problems.

Generally, it is thought that fine particles below 2.5 µm in diameter may be of a greater health concern than larger particles as they can reach the air sacs deep in the lungs. However, coarse particles (PM_{2.5-10}) could also be associated with adverse health effects.

When assessing health risks, both incremental changes in exposure from existing background pollutant levels and the cumulative impacts of specific and existing pollutant levels should be addressed at the location of receptors. Exposure should be assessed at the location(s) of the most affected receptor(s).

Potable Water Supply

Businesses or facilities that supply drinking water from an independent water supply (i.e. not town water) need to follow the *NSW Health Private Water Supply Guidelines* (2014). The *Public Health Act 2010* and the *Public Health Regulation 2012* require drinking water suppliers, including private water suppliers, to develop and adhere to a 'quality assurance program' (or drinking water management system). Further information and templates can be found at:
<http://www.health.nsw.gov.au/environment/water/Pages/private-supplies.aspx>

There appears to be no mention of a potable water supply for the facilities and employees at Dowe's Quarry. It is expected that there is no town water supply to the site and therefore the assessment should include comment on issues associated with drinking water quality and rainwater tanks. The peak reference document in Australia for information in relation to rainwater tanks is enHealth's *Guidance on use of rainwater tanks* (2010), which is accessible at:
<http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-enhealth-aintank-cnt.htm>

If you require any further information please telephone Mr Glenn Pearce, Senior Environmental Health Officer on 6764 8014.

Yours sincerely



Dr David Durrheim
Service Director - Health Protection
Hunter New England Population Health

General Terms of Approval - Issued



Notice No: 1587988

The General Manager
Tenterfield Shire Council
PO Box 214
TENTERFIELD NSW 2373

Attention: Ms Tamai Davidson

Notice Number 1587988
Date 27-May-2020

Issued pursuant to Section 4.46 Environmental Planning and Assessment Act 1979

Dear Ms Davidson,

RE: DOWE'S QUARRY EXPANSION (DA 2019/101)

I refer to the development application and accompanying information provided for Dowe's Quarry (DA 2019/101) received by the Environment Protection Authority (EPA) on 5 November 2019 and additional information on 20 March 2020.

EPA has reviewed the information provided and has determined that it is able to issue a licence for the proposal, subject to a number of conditions. The applicant will need to make a separate application to EPA to obtain this licence.

The general terms of approval for this proposal are provided at **Attachment A**. If Tenterfield Shire Council grants development consent for this proposal these conditions should be incorporated into the consent. Mandatory environment protection licence conditions are also provided for your information at **Attachment B**.

The general terms of approval include conditions of existing environment protection licence 20598 for context. New or altered conditions are marked with an asterisk (*).

Air Quality Impact Assessment

The EPA has reviewed the additional information provided by the proponent and considers the Response to Submissions Report has sufficiently addressed the air quality issues raised in our previous advice.

Updated modelling results show that there are no predicted exceedances of the corresponding short and/or long-term criteria for total suspended particles, Dust Deposition, PM₁₀ and PM_{2.5} fractions as well as NO₂.

General Terms of Approval - Issued



Notice No: 1587988

In addition, the revised Air Quality Impact Assessment¹ (AQIA) has included the assessment of crystalline silica (as the total predicted annual PM_{2.5}) against the EPA Victoria criterion and no exceedances are predicted.

Whilst the revised AQIA has included assumptions to address recommendations previously provided by EPA, it should be noted that there are still deficiencies in the assessment:

- discrepancies between calculated and presented emissions from the same activity (e.g. loading of product) for different scenarios.
- discrepancies between some activity factors presented in Table 3.1 of the AQIA and the emissions inventories tables.
- unclear how many hours a day blasting was modelled for.

Notwithstanding this, the EPA considers that the adopted modelling scenarios have assessed the potential impacts from the largest sources for each modelling scenario and adverse air quality impacts are unlikely to occur provided all mitigation measures are effectively implemented.

The EPA notes the following mitigation measures are proposed:

Mitigation measures included in the model:

- 1) Dust collection system on the drill rig
- 2) Processing of all materials will be performed within the extraction area to provide a level of wind shielding to those activities (Pit retention)
- 3) Road watering during peak daily activities
- 4) Water sprays for crushing and screening operations
- 5) All vehicles travelling on the quarry access road are limited to a speed no greater than 30km/hr.
- 6) All vehicles travelling on internal unsealed roads within the Quarry Site are limited to a speed no greater than 10km/hr.
- 7) A bitumen seal will be applied to a 600 m section of the quarry access road to and from its intersection with the Mount Lindesay Road
- 8) Blasting is limited to only 12 blasts a year.

Additional mitigation measures not included in the model but included in the revised AQIA¹ and the letter² following the teleconference:

- 1) Daily road watering for hauling operations
- 2) All internal roads are surfaced with appropriate materials to limit dust lift-off and graded, where necessary.
- 3) Blasting and secondary rock breakage is limited during periods of high winds or extremely dry weather, where it is practical to do so. Blasting would only occur once every three to five weeks.
- 4) Load size is limited, as appropriate, to ensure materials do not extend above truck sidewalls.
- 5) Each truck cover is fully extended on laden vehicles before each truck leaves the Quarry.
- 6) Misting water sprays that include chemical suppressants (Polo Citrus) would be used on the mobile crushing and screening plant.
- 7) Road watering is undertaken on the remaining unsealed roads on a daily basis, with the frequency of watering increased if dust becomes a nuisance during periods of westerly winds. Polo Haulage-DC is

General Terms of Approval - Issued



Notice No: 1587988

applied for the management of unsealed access roads to limit dust lift off and to reduce water consumption.

- 8) Polo Citrus, a chemical dust suppressant, is used on all sprays within processing equipment and in the water cart, applying water to internal haul roads and on stockpiles. The suppressant is added to water and acts to aggregate dust particles and cause these to drop out of the air.

The requirement to implement all above mitigation measures to ensure an acceptable air quality impact is reflected in the EPA's recommended conditions of approval in Attachment A.

Noise Impact Assessment

The EPA has reviewed the Response to Submissions Report which included updated noise assessment information. The proponent has addressed the EPA's comments regarding noise and no further information is required. We have included recommended noise conditions in Attachment A.

Our general terms relate to the development as proposed in the documents and information currently provided to EPA. In the event that the development is modified either by the applicant prior to the granting of consent or as a result of the conditions proposed to be attached to the consent, it will be necessary to consult with EPA about the changes before the consent is issued. This will enable EPA to determine whether its general terms need to be modified in light of the changes.

If you have any questions, or wish to discuss this matter further please contact Daniel Stokes on (02) 4908 6804.

Yours sincerely

A handwritten signature in blue ink that reads 'Rebecca Scrivener'.

.....
Rebecca Scrivener

Head Regional Operations Unit

North - Armidale

(by Delegation)

References

1 Revised Air Quality Assessment, Dowe's Quarry, Northstar Air Quality Pty Ltd., March 2020.

2 Dowe's Quarry Expansion Project – Air Quality Assessment Queries, R.W. Corkery & CO. Pty Limited, March 2019

General Terms of Approval - Issued



Notice No: 1587988

Attachment A - General Terms of Approval for DA 2019/101 - Dowe's Quarry Expansion

The condition numbering below aligns with the existing Environment Protection Licence (EPL) no. 20598. Should consent be granted, the existing conditions on EPL 20598 remain in force and applicable to the activities carried out at the premises.

Administrative conditions

Note: Mandatory conditions for all general terms of approval

A1. Information supplied to the EPA

***A1.1** Except as expressly provided by these general terms of approval, works and activities must be carried out in accordance with the proposal contained in:

- the development application DA 2019/101 submitted to Tenterfield Shire Council on 5 November 2019;
- any environmental impact statement *"Expansion of the Dowe's Quarry via Tenterfield"* dated October 2019 relating to the development; and
- all additional documents supplied to the EPA in relation to the development, including *"Dowe's Quarry Expansion Project - Response to Environment Protection Authority"* dated 20 March 2020.

A2. Fit and Proper Person

A2.1 The applicant must, in the opinion of the EPA, be a fit and proper person to hold a licence under the Protection of the Environment Operations Act 1997, having regard to the matters in s.83 of that Act.

Discharges to Air and Water and Applications to Land

P1. Location of monitoring/discharge points and areas

***P1.1** The following points referred to in the table are identified in the licence for the purposes of the monitoring and/or the setting of limits for discharges of pollutants to water from the point.

Water and Land

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Location Description
1	Wet Weather Discharge / Discharge Water Quality Monitoring	Wet Weather Discharge / Discharge Water Quality Monitoring	Overflow from sediment dam marked as Northern Sediment Dam on plan titled "Amended Figure 4.2 Existing Topography and Catchments of Dowe's Quarry supplied with licence application (DOC15/56063)
2	Wet Weather Discharge /	Wet Weather Discharge /	Overflow from sediment dam

General Terms of Approval - Issued



Notice No: 1587988

	Discharge Monitoring	Water	Quality	Discharge Monitoring	Water	Quality	marked as Southern Sediment Dam on plan titled "Amended Figure 4.2 Existing Topography and Catchments of Dowe's Quarry" supplied with licence application (DOC15/56063)
*3	Wet Weather Discharge Monitoring	Discharge Water	Quality	Wet Weather Discharge Monitoring	Discharge Water	Quality	Overflow from western sediment dam. Plan to be supplied.

***P1.2** The following points referred to in the table below are identified in this licence for the purposes of weather and/or noise monitoring and/or setting limits for the emission of noise from the premises.

Noise/Weather

EPA Identification no.	Type of monitoring point	Location description
3	Noise monitoring	76 WASHPOOL LANE TENTERFIELD Lot 305 DP 751540 Receiver 3A as defined in DOC20/234651
4	Noise monitoring	524 MOUNT LINDESAY ROAD TENTERFIELD LOT 2 DP 1104997 Receiver 9 as defined in DOC20/234651
5	Noise monitoring	652 MOUNT LINDESAY ROAD TENTERFIELD LOT 12 DP 702804 Receiver R12 as defined in DOC20/234651
6	Noise monitoring	Any other affected residential receiver.
7	Meteorological Station	Meteorological Station location TBC by proponent.

Limit conditions

L1. Pollution of waters

L1.1 Except as may be expressly provided by a licence under the Protection of the Environment Operations Act 1997 in relation of the development, section 120 of the Protection of the Environment Operations Act 1997 must be complied with in and in connection with the carrying out of the development.

L2. Concentration limits

L2.1 For each monitoring/discharge point or utilisation area specified in the table/s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentrations limits specified for that pollutant in the table.

L2.2 Where a pH quality limit is specified in the Table, the specified percentage of samples must be within the specified ranges.

General Terms of Approval - Issued



Notice No: 1587988

L2.3 To avoid any doubt, this condition does not authorise the discharge or emission of any other pollutants other than those specified in the table\

L2.4 The Total Suspended Solids concentration limits specified in the table\

a) the discharge occurs solely as a result of rainfall measured at the premises that exceeds 47.4 millimetres over any consecutive 5 day period immediately prior to the discharge occurring; and

b) all practical measures have been implemented to dewater all sediment dams within 5 days of rainfall such that they have sufficient capacity to store run off from a 47.4 millimetre, 5 day rainfall event.

***L2.5** Water and/or Land Concentration Limits

POINTS 1,2,3

Pollutant	Units of measure	50% concentration limit	90% concentration limit	3DGM concentration limit	100% concentration limit
Oil and Grease	mg/L				10
pH	mg/L				6.5 - 8.5
Total Suspended Solids	mg/L				50

L3. Waste

L3.1 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 under the Protection of the Environment Operations Act 1997.

L3.2 This condition only applies to the storage, treatment, processing, reprocessing or disposal of waste at the premises if it requires an environment protection licence under the Protection of the Environment Operations Act 1997.

L3.3 Clay and crusher fine products from the licensee's 'Sunnyside Crushing and Screening Plant' that have been produced during the processing of raw quarry product from Dowe's Quarry may be received at the premises for storage and/or disposal purposes.

General Terms of Approval - Issued



Notice No: 1587988

L4. Noise limits

***L4.1** Noise generated at the premises must not exceed the noise limits at the times and locations in the table below. The locations referred to in the table below are indicated in P1.2:

Location	Noise Limits in dB(A)			
	Day	Evening	Night	Night
	LAeq(15 minute)	LAeq(15 minute)	LAeq(15 minute)	LAFmax
EPA Identification Number 3, 4, 5 and 6.	35	35	35	45

***L4.2** For the purposes of condition L4.1:

- a) Day means the period from 7am to 6pm Monday to Saturday and the period from 8am to 6pm Sunday and public holidays.
- b) Evening means the period from 6pm to 10pm.
- c) Night means the period from 10pm to 7am Monday to Saturday and the period from 10pm to 8am Sunday and public holidays.

*L4.3 - Standard Meteorological Conditions

a) The noise limits set out in condition L2.1 apply under the following meteorological conditions:

Assessment Period	Meteorological Conditions
Day	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level
Evening	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level
Night	Stability Categories A, B, C and D with wind speeds up to and including 0.5m/s at 10m above ground level

b) For those meteorological conditions not referred to in condition L4.3(a), the noise limits that apply are the noise limits in condition L4.1 plus 5dB.

***L4.4** For the purposes of condition L4.3:

- a) The meteorological conditions are to be determined from meteorological data obtained from the meteorological weather station identified in condition M4.
- b) Stability category shall be determined using the following method from Fact Sheet D of the *Noise Policy for Industry* (NSW EPA, 2017):

General Terms of Approval - Issued



Notice No: 1587988

i) Use of sigma-theta data (section D1.4).

***L4.5** To assess compliance:

a) with the LAeq(15 minutes) or the LAmax noise limits in condition L4.1 and L4.3, the noise measurement equipment must be located:

- i) approximately on the property boundary, where any residence is situated 30 metres or less from the property boundary closest to premises; or where applicable,
- ii) in an area within 30 metres of a residence façade, but not closer than 3 metres where any residence on the property is situated more than 30 metres from the property boundary closest to the premises; or, where applicable,
- iii) in an area within 50 metres of the boundary of a National Park or Nature Reserve,
- iv) at any other location identified in condition L4.1.

Note: The reasonably most affected point is a point at a location or within an area at a location experiencing or expected to experience the highest sound pressure level from the premises.

***L4.6** A non-compliance of conditions L4.1 and L4.3 will still occur where noise generated from the premises is measured in excess of the noise limit at a point other than the reasonably most affected point at the locations referred to in condition L4.5(a) or L4.5(b).

Note: The reasonably most affected point is a point at a location or within an area at a location experiencing or expected to experience the highest sound pressure level from the premises.

***L4.7** For the purposes of determining the noise generated from the premises, the modifying factor corrections in Table C1 in Fact Sheet C of the *Noise Policy for Industry* (NSW EPA, 2017) may be applied, if appropriate, to the noise measurements by the noise monitoring equipment.

***L4.8** Noise measurements must not be undertaken where rain or wind speed at microphone level will affect the acquisition of valid measurements.

L5. Blasting

L5.1 The overpressure level from blasting operations at the premises must not exceed 120dB (Lin Peak) at any time and at any point within 30 metres of any non project related residential building or other sensitive location. 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.

L5.2 The overpressure level from blasting operations at the premises must not exceed 115dB (Lin Peak) for more than five per cent of the total number of blasts over each reporting period at any time and at any point within 30 metres of any non project related residential building or other noise sensitive location. 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.

L5.3 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 10mm/sec at any time and at any point within 3.5 metres of any non project related residential building or other noise sensitive location. 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.

L5.4 Ground vibration peak particle velocity from the blasting operations at the premises must not exceed 5mm/sec for more than five per cent of the total number of blasts over each reporting period at any time and at any point within 3.5 metres of any non project related residential building or other noise sensitive location. Error margins associated with any

General Terms of Approval - Issued



Notice No: 1587988

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

***L5.5** To determine compliance with condition(s) L5.1, L5.2, L5.3 and L5.4:

*a) airblast overpressure and ground vibration levels must be measured and electronically recorded at the nearest non-project related premises for all blasts carried out in or on the premises; and

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

Note: A breach of the blast limits will still occur where airblast overpressure or ground vibration levels from the blasting operations at the premises exceeds the limit specified in this licence at a "noise sensitive location(s)" other than the locations identified in the above condition.

***L5.6** Blasting operations on the premises must only be carried out between the hours 10am to 2pm, Monday to Friday, inclusive. Blasting is not permitted on Saturdays, Sundays or Public Holidays.

L5.7 The hours of operation for blasting operations specified in this licence may be varied by the EPA, having regard to the effect that the proposed variation would have on the amenity of the residents in the locality, and where the EPA gives written consent to the variation.

***L5.8** Blasting at the premises is limited:

- a) to 1 blast each day on which blasting is permitted,
- b) to a maximum of 12 blasts per reporting period.

Note: Additional blasts are permitted where it is demonstrated to be necessary for compelling safety reasons and the EPA and neighbours have been notified of the intended blast prior to the additional blast being fired.

L6. Hours of operation

L6.1 All construction work at the premises must only be conducted between 7am and 5pm Monday to Saturday. No construction work may be carried out during Sundays and public holidays.

L6.2 Activities at the premises may only be carried out at the times specified in the table below.

Activity	Monday to Friday	Saturday	Sunday	Public Holidays
Dispatch of trucks to haul quarry product or arrival of trucks delivering products	7am to 5pm	7am to 5pm	Nil	Nil
Arrival and loading of trucks to haul quarry product	7am to 5pm	7am to 5pm	Nil	Nil
Light vehicle traffic associated with employees or light service vehicles entering or leaving the site	24 hours a day	24 hours a day	24 hours a day	24 hours a day
Maintenance of plant and equipment including workshop activity	24 hours a day	24 hours a day	24 hours a day	24 hours a day
Stockpiling operations	7am to 5pm	7am to 5pm	Nil	Nil
Drilling	7am to 5pm	7am to 5pm	Nil	Nil
Rock hammering	7am to 5pm	Nil	Nil	Nil

General Terms of Approval - Issued



Notice No: 1587988

L6.3 This condition does not apply to the delivery of material outside the hours of operation permitted by condition L6.1 or L6.2, if that delivery is required by police or other authorities for safety reasons; and/or the operation or personnel or equipment are endangered. In such circumstances, prior notification is provided to the EPA and affected residents as soon as possible, or within a reasonable period in the case of emergency.

L6.4 The hours of operation specified in conditions L6.1 and L6.2 may be varied with written consent if the EPA is satisfied that the amenity of the residents in the locality will not be adversely affected.

L7. Other limit conditions

***L7.1** No more than 230,000 tonnes during any consecutive 12 month period can be extracted and processed at the site.

***L7.2** On-site crushing and screening activities must not exceed 470 tonnes per hour or 230,000 tonnes during any consecutive 12 month period.

***L7.3** No more than 120 loaded trucks are to be dispatched per week with a maximum of 28 loaded trucks on any one day.

***L7.4** All vehicles travelling on:

- a) the quarry access road are limited to a speed no greater than 30km/hr;
- b) internal unsealed roads within the quarry are limited to a speed no greater than 10km/hr.

***L7.5** For the purposes of determining compliance with condition L7.1 and L7.3, a tally of trucks and trailers carrying loads from the quarry must be maintained by the licensee, to enable production to be calculated for any consecutive 12 month period by multiplying the number of truck and trailer loads for each vehicle type by the known capacity of each relevant vehicle.

Operating conditions

O2. Dust

O2.1 Activities occurring at the premises must be carried out in a manner that will minimise emissions of dust from the premises.

***O2.2** The premise must be maintained in a manner that prevents and minimises the emissions of air pollutants.

***O2.3** Trucks entering and leaving the premises that are carrying loads must be covered at all times, except during material inspection, loading and unloading.

***O2.4** All plant and equipment (including loaders, excavators, crushers, screen, drill rig, trucks) must be maintained in accordance with manufacturer requirements to minimise malfunction that could result in increased air quality emissions.

***O2.5** The maximum disturbance area due to the project operations must not exceed 16.4 hectares. This includes, but not limited to, the extraction area, product stockpiling area, overburden and fines stockpile and emplacement.

***O2.6** No external material must be received or processed at the premises, apart from in accordance with condition L3.3.

***O2.7** No overburden removal or transportation must be undertaken while fresh rock is being removed and transported.

***O2.8** All drill rigs must have a dust collection system.

***O2.9** Watering must be used as a means of dust suppression for the following activities and locations:

- a) During all:
 - i) crushing and screening operations;
 - ii) product loading and unloading operations in the product stockpile area;

General Terms of Approval - Issued



Notice No: 1587988

- iii) material delivery to and from the premises (road watering);
 - b) At all points where material is transferred; and
 - c) At all stockpiles.
- *O2.10** The maximum height of all stockpiles at the premises is 10 metres.

O4. Processes and Management

O4.1 A *Soil and Water Management Plan* (SWMP) must be prepared and implemented. The plan must describe the measures that will be employed to minimise soil erosion and the discharge of sediment and other pollutants to lands and/or waters during operations at the premises. The SWMP should be prepared in accordance with the requirements of the *'Managing Urban Stormwater: Soils and Construction'* guidelines including, *Volume 1, 4th edition* (Landcom, March 2004) and *Volume 2E Mines and Quarries* (Department of Environment and Climate Change, June 2008) available at:

<http://www.environment.nsw.gov.au/stormwater/publications.htm>.

***O4.2** The proponent must develop and implement an air quality management plan prior to the commencement of project operations. As a minimum, the air quality management plan must include the following parts:

- a) Risk assessment;
- b) Proactive and reactive mitigation measures of all significant, and potentially significant, emission sources;
- c) Key performance indicator(s);
- d) Monitoring method(s);
- e) Location, frequency and duration of monitoring;
- f) Record keeping;
- g) Response mechanisms and contingency measures;
- h) Responsibilities; and
- i) Compliance reporting.

***O4.3** A bitumen seal must be applied and regularly maintained along the entire length of the quarry access road. The seal must be applied prior to the commencement of the project operations.

***O4.4** Processing (crushing and screening) must only be undertaken in the quarry pit (the extraction area).

Monitoring and recording conditions

M1 Monitoring records

***M1.1** The results of any monitoring required to be conducted by the EPA's general terms of approval, or a licence under the Protection of the Environment Operations Act 1997, in relation to the development must be recorded and retained as set out in conditions M1.2 and M1.3.

M1.2 All records required to be kept by the 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.

General Terms of Approval - Issued



Notice No: 1587988

M1.3 The following records must be kept in respect of any samples required to be collected:

- 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.

M2. Requirement to monitor concentration of pollutants discharged

M2.1 For each monitoring/ discharge point or utilisation area specified below (by a point number), the applicant must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The applicant must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

***M2.2** Water and/or Land Monitoring Requirements

***Point 1,2,3**

Water and Land

Pollutant	Units of measure	Frequency	Sampling Method
Oil and Grease	mg/L	Special Frequency 1	Representative sample
pH	pH	Special Frequency 1	Representative sample
Total suspended solids	mg/L	Special Frequency 1	Representative sample

M2.3 For the purposes of this condition. 'Special Frequency 1' means as soon as practicable after overflow commences and in any case not more than 12 hours after any overflow commencing and prior to any controlled discharge from the sedimentation basins to demonstrate compliance with the concentration limits defined at condition L2.

M3. Testing methods - concentration limits

M3.1 Subject to any express provision to the contrary in this licence, monitoring for the concentration of a pollutant discharged to waters or applied to a utilisation area must be done in accordance with the Approved Methods Publication unless another method has been approved by the EPA in writing before any tests are conducted.

M4. Weather monitoring

***M4.1** On-site Meteorological Monitoring Station:

- a) The proponent must monitor the parameters specified in Column 1 in the table below at the Site Meteorological Monitoring Station. The proponent must use the sampling method, units of measure, averaging period and sample at the frequency, specified opposite in the other columns.

General Terms of Approval - Issued



Notice No: 1587988

b) The proponent must maintain and calibrate the meteorological monitoring station in accordance with the reference test methods and manufacturer's specifications. Records of the calibration and maintenance must be made available to the EPA upon request.

Parameter	Units of measure	Frequency	Averaging Period	Sampling Method ^{1 2}
Rainfall	mm/hour	continuous	1 hour	AM-4
Sigma theta	degrees	continuous	10 minute	AM-2 and AM-4
Siting				AM-1
Temperature at 2 metres	kelvin	continuous	10 minute	AM-4
Temperature at 10 metres	kelvin	continuous	10 minute	AM-4
Total solar radiation	watts per square metre	continuous	10 minute	AM-4
Wind Direction at 10 metres	degrees	continuous	10 minute	AM-2 and AM-4
Wind Speed at 10 metres	metres per second	continuous	10 minute	AM-2 and AM-4

Note 1 – Any other method approved in writing by the EPA.

Note 2 – The weather monitoring instrumentation installed and operated at the site must be have a stall speed or lower limit of measure for measuring wind speed less than 0.2 m/s.

M7. Noise monitoring

***M7.1** To assess compliance with the noise limits presented in the noise monitoring table in condition L4, attended noise monitoring must be undertaken in accordance with condition L4.5, outlined above and:

- a) at EPA identification point no. 3, 4, and 5 listed in the noise monitoring table in condition L4;
- b) occur from time to time when requested in writing by the EPA;
- c) occur during each day, evening and night period as defined in the NSW Industrial Noise Policy for a minimum of:
 - i) 1.5 hours during the day
 - ii) 30 minutes during the evening; and
 - iii) 1 hour during the night.

General Terms of Approval - Issued



Notice No: 1587988

d) occur for three consecutive operating days.

***M7.2** To assess compliance with the noise limits presented in the noise monitoring table in condition L4 for EPA identification point no. 6, attended noise monitoring must be undertaken in accordance with condition L4.5, outlined above, only if required to do so at a location; frequency and manner specified in writing by the EPA.

Reporting conditions

R1.1 The applicant must provide an annual return to the EPA in relation to the development as required by any licence under the Protection of the Environment Operations Act 1997 in relation to the development. In the return the applicant must report on the annual monitoring undertaken (where the activity results in pollutant discharges), provide a summary of complaints relating to the development, report on compliance with licence conditions and provide a calculation of licence fees (administrative fees and, where relevant, load based fees) that are payable. If load based fees apply to the activity the applicant will be required to submit load-based fee calculation worksheets with the return.

****R4. Noise Monitoring Report***

A noise compliance assessment report must be submitted to the EPA within 90 days of the completion of noise monitoring. The assessment must be prepared by a competent person and include:

- a) an assessment of compliance with noise limits presented in Condition L4.1 and L4.3; and
- b) an outline of any management actions taken within the monitoring period to address any exceedences of the limits contained in Condition L4.1 and L4.3.

General Terms of Approval - Issued



Notice No: 1587988

Attachment B – Mandatory Conditions for all EPA licences

Administrative conditions

Other activities

(To be used on licences with ancillary activities)

This licence applies to all other activities carried on at the premises, including:

- **Extractive activities**
- **Crushing, Grinding or Separating**

Operating conditions

Activities must be carried out in a competent manner

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.

Maintenance of plant and equipment

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

Recording of pollution complaints

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.

The record must include details of the following:

- the date and time of the complaint;
- the method by which the complaint was made;
- any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;

General Terms of Approval - Issued



Notice No: 1587988

- the nature of the complaint;
- the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- if no action was taken by the licensee, the reasons why no action was taken.

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

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

Telephone complaints line

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.

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.

This condition does not apply until 3 months after this condition takes effect.

Reporting conditions

Annual Return documents

What documents must an Annual Return contain?

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

- a. Statement of Compliance; and
- b. Monitoring and Complaints Summary.

A copy of the form in which the Annual Return must be supplied to the EPA accompanies this licence. Before 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.

Period covered by Annual Return

An Annual Return must be prepared in respect of each reporting, 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.*

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.

General Terms of Approval - Issued



Notice No: 1587988

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

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.

Deadline for Annual Return

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').

Notification where actual load can not be calculated

(Licences with assessable pollutants)

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.

Licensee must retain copy of Annual Return

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.

Certifying of Statement of Compliance and Signing of Monitoring and Complaints Summary

Within the Annual Return, the Statement 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.

A person who has been given written approval to certify a Statement of Compliance under a licence issued under the Pollution Control Act 1970 is taken to be approved for the purpose of this condition until the date of first review this licence.

Notification of environmental harm

Note: The licensee or its employees must notify the EPA 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

Notifications must be made by telephoning the EPA's Pollution Line service on 131 555.

General Terms of Approval - Issued



Notice No: 1587988

The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.

Written report

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.

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.

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; and
- 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;
- g. any other relevant matters.

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

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

A copy of this licence must be kept at the premises or on the vehicle or mobile plant to which the licence applies.

The licence must be produced to any authorised officer of the EPA who asks to see it.

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.



Our reference: : SF15/26554; DOC20/523362
Contact: : Daniel Stokes – 02 4908 6804 – armidale@epa.nsw.gov.au
Date : 02 July 2020

The General Manager
Tenterfield Shire Council
PO Box 214
TENTERFIELD NSW 2373

Attention: Ms Tamai Davidson

Email: t.davidson@tenterfield.nsw.gov.au

BY EMAIL

Dear Ms Davidson,

RE: DOWE'S QUARRY EXPANSION (DA 2019/101)

I refer to a meeting held with the Environment Protection Authority (EPA), Quarry Solutions and R.W. Corkery Consultants (Corkery) to discuss the General Terms of Approval (GTAs) for the Dowe's Quarry Expansion Project (DA 2019/101). I also refer to correspondence received from Corkery providing written comments on the GTAs received by the Environment Protection Authority (EPA) on 19 June 2020.

The EPA has reviewed the requested changes to the GTAs and has agreed to modify a number of the proposed conditions on the basis that no additional adverse environmental or human health impacts will occur due to the changes. The purpose of the changes is to ensure the GTAs adequately reflect proposed activities, impacts arising and associated mitigation measures from the Dowe's Quarry Expansion Project.

Blasting

The proponent sought to change GTA condition L5.8 to allow a maximum of 24 blasts per 12-month reporting period. The reasoning being by providing more flexibility in blasting, it will effectively reduce the size of blasts and minimise environmental and community impacts. The EPA notes that the Air Quality Impact Assessment (AQIA) is based on modelling of blasts being undertaken on a daily basis which equates to significantly more than 24 blasts over 12 months. The EPA also notes that the amount of blasting is effectively controlled by the annual extraction limit of product.

The EPA considers with adequate controls and mitigation measures implemented, allowing 24 blasts per 12-month period will not result in adverse air quality impacts.

Truck Movements

The proponent has requested the maximum number of loaded trucks per week is averaged over four consecutive weeks to allow for periods of poor weather when operations would not occur. The EPA notes that the AQIA assessed the impacts assuming 28 loaded trucks on any one day and this is unchanged in the original condition. The EPA agrees it is appropriate to consider truck movements as averaged over a specified time period, rather than specific number of movements.

Overburden Removal

The proponent has requested that GTA condition O2.7 be removed as it does not reflect peak daily activities. The proponent has advised it is not possible to undertake both overburden removal and transport of fresh rock concurrently, due to fleet restrictions.

The EPA has decided to modify GTA condition O2.7, instead of removing the condition, to reflect the AQIA modelling.

Other Conditions

The proponent has requested the inclusion of extraction and processing activities in GTA condition L6.2. For clarity, the EPA agrees with this change.

The proponent has also requested amendments to GTA conditions L3.3, L7.1, L7.2, O2.10 and O4.3, to ensure the wording of these conditions are clear. The EPA agrees with the proposed rewording as the proposed changes do not alter the intent or outcome of the conditions.

The EPA has decided to remove GTA condition O4.3 relating to roads as this issue is outside the EPL premises boundary. The EPA recommends Council consider the need to seal access roads to minimise dust generation from truck movements.

Modified GTAs have been included in Attachment A. All other GTAs as previously provided by the EPA on the 27 May 2020 remain unchanged.

If you have any questions, or wish to discuss this matter further, please contact Daniel Stokes on 4908 6804 or via email to: armidale@epa.nsw.gov.au.

Yours sincerely



REBECCA SCRIVENER
Head Regional Operations Unit - Armidale
Environment Protection Authority

ATTACHMENT A

Modified Conditions of Approval:

***L3.3** Clay and crusher fine products from the licensee's 'Sunnyside Crushing and Screening Plant' that have been produced during the processing of raw quarry product may be received at the premises for storage and/or disposal purposes.

***L5.8** Blasting at the premise is limited:

- a) to 1 blast each day on which blasting is permitted and
- b) to a maximum of 24 blasts per 12-month reporting period.

Note: Additional blasts are permitted where it is demonstrated to be necessary for compelling safety reasons and the EPA and neighbours have been notified of the intended blast prior to the additional blast being fired.

***L6.2** Activities at the premises may only be carried out at the times specified in the table below.

Activity	Monday to Friday	Saturday	Sunday	Public Holidays
Extraction Activities	7am to 5pm	7am to 5pm	Nil	Nil
Processing Activities	7am to 5pm	7am to 1pm	Nil	Nil
Dispatch of trucks to haul quarry product or arrival of trucks delivering products	7am to 5pm	7am to 5pm	Nil	Nil
Arrival and loading of trucks to haul quarry product	7am to 5pm	7am to 5pm	Nil	Nil
Light vehicle traffic associated with employees or light service vehicles entering or leaving the site	24 hours a day	24 hours a day	24 hours a day	24 hours a day
Maintenance of plant and equipment including workshop activity	24 hours a day	24 hours a day	24 hours a day	24 hours a day
Stockpiling operations	7am to 5pm	7am to 5pm	Nil	Nil
Drilling	7am to 5pm	7am to 5pm	Nil	Nil
Rock hammering	7am to 5pm	Nil	Nil	Nil

***L7.1** No more than 230,000 tonnes per annum can be extracted and processed at the site.

***L7.2** On-site crushing and screening activities must not exceed 470 tonnes per hour or 230,000 tonnes per annum.

***L7.3** No more than 120 loaded trucks are to be dispatched per week (averaged over four consecutive weeks) with a maximum of 28 loaded trucks on any one day.

***O2.7** During peak daily activities (470 tonnes per hour), overburden removal or overburden transportation must not be undertaken while fresh rock is being removed and transported within the premises.

***O2.10** The maximum height of all processed product stockpiles at the premises is 10 metres.