

DMC Community Update: Dust Management Dowes Quarry and Sunnyside Processing Plant, Tenterfield

DMC is committed to the health and safety of our workforce and community, demonstrated through our compliance with all environmental and workplace health and safety laws for the running of Dowes Quarry.

In considering any expansions to the quarry, DMC has undertaken a rigorous assessment to ensure that any future expansion continues to deliver the utmost safe work environment and air safety compliance for the surrounding community.

What workplace health and safety monitoring is in place for the quarry?

The NSW government has developed workplace health and safety standards for silica to protect workers who are in direct contact with, and exposed to, silica-containing materials for extended periods. Workplaces are regularly monitored by the Resources Regulator and SafeWork NSW to ensure strict compliance to these legislative standards. An example of this is the annual Personal Airborne Dust Monitoring undertaken by the NSW Department of Planning Industry and Environment at:

- Dowes Quarry; and
- Sunnyside Crushing Facility

Results

The results of all monitoring carried out to date have been:

- below the workplace exposure limit for respirable dust; and
- below the workplace exposure limit for respirable silica.

We are committed to ensuring the health and safety of the community we operate in, as well as our people. We regularly undertake individual health checks on our staffs' health and wellbeing.

What Environmental Monitoring is being undertaken by DMC?

Air quality monitoring is undertaken in accordance with the specific requirements detailed in the Environmental Protection Licence for each site issued by the NSW Environmental Protection Authority.

Result of environmental monitoring

- Dust deposition gauges are installed and operational at six locations surrounding the quarry and crushing facility.
- The outcomes of this dust monitoring indicate that deposited dust levels remain well below the

adopted assessment criteria of $4.0\text{g}/\text{m}^2/\text{month}$ (based on a 12-month rolling average) and that significant levels of nuisance dust are not being experienced at the locations monitored. This is consistent with current predictions of air quality modelling.

- A meteorological station has also been installed to provide real time data to inform management measures. This station directly measures parameters such as wind speed, wind direction and ambient temperature. The data also allows for other parameters such as atmospheric stability and mixed layer height to be determined indirectly. Alerts are set for wind speed, rainfall and temperature. This allows the Quarry Manager to make informed decisions during operations so as to determine whether to curtail or cease operations during adverse weather conditions.

What Dust mitigation measures are DMC implementing?

We implement the same dust controls as would be applied at a large quarrying and crushing operation to what is a small-scale operation at DMC. Effective dust management measures consistent with industry best practice are currently implemented including:

- misting water sprays are used on all crushing and screening equipment that includes a polymer injection system (Polo Citrus) to increase dust suppression effectiveness;
- limiting or ceasing dust generating activities during periods of high winds or extremely dry weather;
- applying water and dust suppressant to haul roads, processing equipment and stockpiles at the sites in accordance with accepted best practice;
- unsealed internal roads are appropriately constructed and graded where necessary to limit dust lift-off from transportation activities;
- adoption of suitable speed limits on unsealed roads;
- restricted load size to ensure materials do not extend above truck sidewalls and ensure all loads leaving the sites are fully covered;
- public roads are inspected each day at main entry and exit points to and from areas where construction activities are taking place and regular road sweeping is undertaken to clean any tracked material;
- dust management training and awareness is undertaken with site team including distribution of Dust Management Environmental Awareness Notes;
- appropriately assessing on-site weather conditions prior to undertaking blasting to ensure no blasts occur in unfavourable conditions (such as high winds) so dust emissions are effectively minimised; and
- adhering to progressive disturbance and progressive stabilisation processes, where achievable.

What is DMC's ongoing commitment to the community and continual improvement plan?

- The quarry and crushing facility are heavily regulated by the EPA, the Resources Regulator and Council to ensure effective monitoring and management measures are appropriately implemented in accordance with accepted best practice.
- Since the SEE Group acquired DMC in 2019, significant investments have been made to improve operational management and impacts on the community. This includes an upgraded crushing and screening plant at Sunnyside and an upgraded fleet of trucks that are both quieter and have an improved safety rating.
- To show our commitment to continual improvement and the health and safety of all members of the community, we are currently working closely with a suitably qualified air quality scientist to undertake an Air Quality Study that further evaluates dust emissions and best practice monitoring processes at each site.
- DMC has been contributing to the local economy and employing local people for the past 50 years and SEE Group has inherited this history. The current DA is intended to minimise impacts on the community to greatest extent practicable (no increase in truck movements), whilst establishing a basis for operations and economic contributions to Tenterfield over the next 30 years.

What impacts is DMC considering in the expansion of the DA for the Dowes Quarry on the community?

- The Development Application for the Dowes Quarry is being carried out in accordance with relevant statutory processes that require consideration of community health and safety and consultation with the local community, the EPA, Council and Transport for NSW.
- The application will be determined by the Northern Regional Planning Panel (NRPP). The NRPP is an independent body that determines development matters of regional significance taking into account community submissions, agency advice and council recommendations. As part of a current Development Application for Dowes Quarry, and in recognition of the concern in the community regarding potential environmental exposures to Respirable Crystalline Silica (RCS), assessment of the potential risks to the local community was undertaken from **two** different perspectives:
 1. **Northstar Pty Ltd** were commissioned to undertake predictive modelling of particulate matter dispersion from the Quarry under the Project. Northstar predicted annual average PM_{2.5} and PM₁₀ levels at residences closest to the Quarry using air dispersion modelling that simulated prevailing meteorological conditions, topography, dust sources and intensity as well as mitigating factors such as the use of a water truck to dampen roads during dry conditions. The dispersion modelling assessment was undertaken using the NSW EPA approved CALPUFF atmospheric dispersion model. The modelling predicted that the highest incremental (Project-alone) outcome for annual average PM_{2.5} would be 0.2µg/m³ at Residence 3A to the west of the Quarry. When considered with the assumed background of 1.9µg/m³, a cumulative (total) concentration of 2.1µg/m³ of RCS is predicted. This is within the adopted guideline level of 3µg/m³, determining that no

impact from environmental exposure is expected.

2. **EnRisks** were commissioned to consider the human health risks associated with the Project. This assessment was undertaken by Dr Jackie Wright – Fellow of ACTRA (Australian College of Toxicology and Risk Assessment). This assessment considered Australian and International guidance regarding general health risks and the exposure predictions provided by Northstar in the Air Quality Assessment. The health risk assessment report concluded that the “health risks associated with environmental exposure to RCS are low and acceptable”.
- Considering the community concerns, the NRPP has recommended a further independent review of the potential risks due to RCS as a result of the quarry expansion. This review is currently underway and is managed by Tenterfield Council. We firmly support the outcomes of the Health Risk Assessment completed by Jackie Wright as well as the findings of NSW Health, and feel that any independent review can only support these findings.

Finally, we note that the Project is being assessed by Council with referral to NSW Government agencies including the EPA and NSW Health. The EPA regulates dust pollution in NSW and has recommended approval of the Project subject to strict conditions (similar to any Quarry development in NSW). NSW Health has assessed the Project and concluded in writing “There are no health risk issues of concern in relation to community exposures to RCS in dust that may be sourced from the quarry”.

We are aware of the unfortunate situation recently reported from a quarry in Victoria where an admin worker has been confirmed to have silicosis. Without further information on the working conditions and dust management, we are unable to comment on this case, this matter will be determined by the relevant workplace authority with Boral. We note however, that this is a workplace matter and does not necessarily reflect any community exposure risks.

Who to contact at DMC

If you have any concerns, questions or need further information about either Dowes Quarry or the Sunnyside Processing Plant, you can send an email to info@dmcquarries.com.au

DMC

Email: info@dmcquarries.com.au

Website: www.dmcquarries.com.au

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