



Executive Summary

Introduction

This *Environmental Impact Statement* (EIS) has been prepared by R.W. Corkery & Co. Pty Limited (RWC) on behalf of Darryl McCarthy Constructions Pty Ltd ("the Applicant") to support a development application submitted to the Tenterfield Shire Council ("Council") for the continued operation and expansion of Dowe's Quarry ("the Quarry") located approximately 8km northeast of Tenterfield. The Quarry is located on rural land, owned by R. and M. Dowe and leased to the Applicant. Access to the Quarry is provided by a Quarry access road that joins the Mount Lindesay Road.

The Applicant for the Proposal has been successfully operating Dowe's Quarry since 1987 and is now proposing to obtain development consent for the continued operation and expansion of extraction operations within Dowe's Quarry, which would also include an increase to the total area of disturbance, an increase to annual production and product despatch, campaign-based on-site processing for some products, the backloading of fines material from the Sunnyside Plant (Sunnyside Plant) and progressive backfilling of overburden and fines within the extraction void.

The continued operation and extension of Dowe's Quarry (the Proposal) is classified as "Designated Development" and as "Regional Development" and therefore requires development consent to be issued by Council (or by delegation under the Northern Regional Planning Panel). In order to obtain development consent, the development application for the Proposal needs to be accompanied by an EIS. The Proposal is also classified as "Integrated Development" as it would require an environment protection licence issued by the EPA.

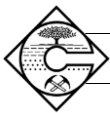
The EIS has been prepared in accordance with Secretary's Environmental Assessment Requirements (EAR1341) which were accompanied by additional assessment requirements provided by various government departments.

Description of the Proposal

The resource being quarried has been identified as an extremely wide (25m to 50m) quartzose intrusion located within undifferentiated granite or granodiorites. The Applicant conservatively estimates that 4.8 million tonnes of quartzose rock could be recovered from within the existing and extended extraction area. The main product produced at Dowe's Quarry is a graded fractured quartzose rock blend with all fragments typically less than 400mm.

The Applicant is seeking development consent for the following activities.

- i. Ongoing extraction of quartzose rock within the existing extraction area and a 4.4ha extension of the extraction area, producing up to 230 000tpa.
- ii. Campaign crushing and screening on site using mobile processing equipment. On-site processing would be undertaken in response to client requirements.
- iii. Ongoing transportation of fragmented and crushed rock to the State road network, (i.e. the New England Highway), for delivery to the Sunnyside Plant, and other destinations. Material would also continue to be delivered locally within Tenterfield for Council-managed road and infrastructure activities and directly to the local community.



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

The main components and the respective approximate area of disturbance within the Quarry Site are summarised as follows.

- Extraction area (Stage 1 – 6.9ha, Stage 2 – 10.1ha, Stage 3 – 11.4ha)
- Processing area (1.8ha)
- Bund (0.62ha)
- Overburden and fines stockpile (Stage 1 – 3.2ha, Stage 2 – 2.6ha, Stage 3 – 1.6ha)
- Overburden and fines emplacement (Stage 2 – 1.9ha, Stage 3 – 2.9ha)
- Quarry access road (1.7km)
- Sediment dams (0.24ha)

The total area of the Quarry Site is approximately 26.8ha of which the maximum area of disturbance would be 16.4ha.

The ongoing extraction operations would be undertaken in a manner consistent with existing operations i.e. involving progressive vegetation clearing, removal and stockpiling of soils and overburden (where present) and extraction of quartzose rock using conventional drill and blasting methods.

The Applicant proposes to increase the range of products produced from the quartzose material which would involve a proportion of the quartzose material being processed on site prior to despatch to the Sunnyside Plant or directly to customers. On-site processing would be undertaken using mobile crushing and screening plant to produce a range of 5mm to 24mm crushed rock products and crusher fines. Unprocessed quartzose rock would also continue to be transported to the Sunnyside Plant in a manner consistent with current practices. Despatch of quartzose rock from the Quarry Site would not exceed 230 000tpa.

The Applicant proposes to use the existing transport route for fragmented and crushed material transportation and back-loading of fines. This route has been used by the Applicant over the past 30 years. This route accesses the New England Highway through the northern outskirts of Tenterfield before travelling northwards. Trucks travelling in the direction of Dowe's Quarry (i.e. returning to the Quarry, some of which would be back-loading fines) would use Old Ballandean Road to access Mount Lindesay Road and Dowe's Quarry.

The Applicant proposes to rehabilitate the Quarry Site to create a final landform that is suitable for biodiversity conservation. Emphasis would be placed upon progressive rehabilitation of completed areas within the Quarry Site.

Assessment and Management of Key Environmental Issues

The components and features of the existing environment within and surrounding the Quarry Site have been studied in detail and the Proposal has been designed to avoid or minimise environmental risks and impacts as much as is considered reasonable and feasible. Many aspects of the Proposal have

**DARRYL MCCARTHY CONSTRUCTIONS PTY LTD**
Expansion of the Dowe's Quarry via Tenterfield

also been planned so that impacts would remain consistent with currently approved activities or would result in only minor changes.

Impacts within the Quarry Site

The key residual impact of the Proposal would be the removal of approximately 6.4ha of native vegetation (4.6ha in good condition and 1.8ha in poor condition). The area that would require clearing has been minimised as much as feasible through placement of the internal access road adjacent to existing disturbance and electing to store overburden and fines in the completed extraction area during later stages of development (reducing the space required for stockpiling). On-site impacts to native vegetation and potential fauna habitat have been assessed and predicted residual impacts would be offset to provide for in-perpetuity conservation through the dedication of land to Bald Rock National Park. There would be no Serious and Irreversible Impacts associated with the Proposal and assessment of potential impacts to Matters of National Environmental Significance has concluded there would not be a significant impact that would require referral the Commonwealth Department of the Environment and Energy, including for the Koala.

The Proposal includes the use of existing and proposed sediment basins and collection drains to manage potentially sediment-laden runoff. The dams would be designed to accommodate predicted runoff resulting from a 90th percentile 5-day rainfall event. Based on the proposed ongoing water management structures, the Applicant would continue to effectively manage surface water runoff to limit the potential for sediment-laden runoff to leave the Quarry Site.

No Aboriginal sites or potential archaeological deposits were identified within the Quarry Site and the Proposal would not impact listed historic heritage sites in the vicinity of the Quarry Site or

along the transport route. As a result, it has been concluded that the Proposal would not impact the archaeological record and would therefore not have any cultural heritage-related impacts.

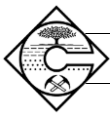
Assuming the implementation of appropriate soil management measures, the residual impacts associated with soil removal, handling, storage and re-use would be negligible. In addition, the Proposal would not alter the productive use of surrounding land.

Amenity Impacts

Other residual impacts associated with the Proposal include the generation of noise, dust and traffic on local roads as well as impacts from blasting. It is noted that the inclusion of mobile crushing activities at the Quarry Site would be likely to increase the generation of noise and dust from the operation.

The noise and vibration impact assessment undertaken by Spectrum (2019) indicates that operational noise attributable to activities within the Quarry Site and road traffic noise generated by product transport would be well within nominated limits and would have minimal impact on sensitive receivers. Blast noise would continue to be heard at surrounding residences, albeit predicted levels (and ground vibration) would be well within nominated limits.

The air quality assessment undertaken by Northstar (2019) concluded that the Proposal is predicted to comply with all impact assessment criteria for annual average concentrations of TSP, PM_{2.5}, PM₁₀ and deposited dust. The assessment of 24-hour average PM_{2.5} and 24-hour average PM₁₀ applying a Level 2 Contemporaneous Assessment has indicated that there would be no additional exceedances of the assessment criteria as a result of the Proposal.



Traffic levels under the Proposal would remain consistent with the existing operations and would not result in significant impacts to the local road network. Ongoing payment of contributions in accordance with the *Tenterfield Shire Council Section 94 Development Contributions Plan 2013* for road upgrade and maintenance would be made to the Tenterfield Shire Council to compensate for use of the roads by heavy vehicles.

The Proposal may also result in a range of additional negligible impacts at surrounding residences and within the Tenterfield community. These would principally relate to visual amenity, transportation activities and socio-economic impacts, including economic benefits from continued operation of the Quarry.

Conclusions

The Proposal has been designed to permit the ongoing efficient extraction of an important quartzose resource located within the Quarry Site, while ensuring that potential environmental impacts would continue to be mitigated and managed in a manner that is consistent with the requirements of the NSW government and reasonable community expectations. Strategic investment in equipment, including that involved in transportation, is intended to permit an increase to the existing approved annual extraction rate, while limiting additional environmental impacts. Traffic levels would remain generally consistent with peaks experienced for current operations.

Considering the assessments presented throughout the *Environmental Impact Statement*, it is concluded that the Proposal would be undertaken in a manner that would satisfy all relevant statutory goals and criteria, environmental objectives and reasonable community expectations.

This document and the range of specialist consultant studies undertaken have identified that the Proposal should proceed because it would:

- contribute towards an important supply of decorative aggregates and landscaping materials within South-East Queensland and northern New South Wales;
- promote continued economic growth in the Tenterfield Shire LGA;
- reduce risk levels associated with possible incidents and impacts on the environment to an acceptable level;
- have a minimal and manageable impact on the biophysical environment;
- satisfy sustainable development principles;
- provide for continuing and future use of the Quarry Site for biodiversity conservation; and
- address the actual and perceived social impacts.