# 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 extension) of Dowe's Quarry ("the Quarry") located approximately 8km northeast of Tenterfield. The Quarry is located on rural land, owned by Mr Rod Dowe and leased to the Applicant. Access to the quarry is provided by a 1.3km 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 to extend the life of the Quarry by 30 years.

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 Joint Regional Planning Panel (JRPP)). 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.

Planning and design of the Proposal has been undertaken in consultation with local landowners, Council, RMS and the EPA. The EIS has been prepared in accordance with Secretary's Environmental Assessment Requirements (EAR831) which included 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 1.3 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 activities for which the Applicant is seeking development consent would involve:

i) the ongoing extraction of quartzose rock within the existing extraction area and a 1.4ha extension of the extraction area, producing up to 100 000 tonnes of rock per year (but averaging 60 000 tonnes per year);

ii) transportation of extracted rock to the State road network for delivery principally to the Sunnyside Crushing and Screening Plant located adjacent to the New England Highway, 10km northwest of Tenterfield;

iii) backloading of clay fines and crusher fines from the Sunnyside Plant to Dowe's Quarry;

iv) progressive emplacement of overburden and returned clay fines within and adjacent to the extraction area;

v) storage of surplus crusher fines from the Sunnyside Plant awaiting sale and eventual transportation to customers in the New England region.

The main components and the respective approximate area of disturbance within the Project Site are displayed in **Figure A** and are summarised as follows.

- Area of existing disturbance including sediment dams (3.9ha).
- Area of proposed extension to extraction area (1.4ha).
- Area if additional internal roads (0.1ha).
- Area of clay fines storage (1.6ha).
- Area of remnant vegetation remaining within the Project Site (6.5ha).

The total area of the Project Site is approximately 13.5ha of which the total disturbance area would be 7ha.

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. At the maximum production level, it is expected that approximately 35 000 tonnes of by-product clay fines and crusher fines would be generated annually (at the Sunnyside Crushing and Screening Plant) which will be emplaced or stored within the Project Site.

Unprocessed quartzose rock would continue to be transported to the Sunnyside Crushing and Screening Plant in a manner consistent with current practices. The Applicant proposes to use the existing transport route for raw material transportation and back-loading of fines (displayed on **Figure B**). 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 Project Site to create a final landform that is suitable for nature conservation and a stock shelter for the landowner's use during periods of inclement weather. Emphasis would be placed upon progressive rehabilitation of completed areas within the Project Site.

## Assessment and Management of Key Environmental Issues

The components and features of the existing environment within and surrounding the Project Site have been studied in detail and the proposed extension to the existing extraction area and proposed overburden emplacement and fines emplacement area designed to avoid or minimise impacts on that environment. Independent specialist consultant input has been sought though assessments of various aspects of the local setting and potential impacts associated with the Proposal.

The principal source of potential adverse impacts associated with the Proposal relates to the management of transportation activities principally between Dowe's Quarry and the Sunnyside Crushing and Screening Plant. The Applicant has committed to the ongoing enforcement of a Driver's Code of Conduct to guide all transportation activities and would undertake construction works to increase the sealed section of the quarry access road to 400m and improve the quality of the intersection of this road with the Mount Lindesay Road. These measures and the proposed contribution to Council's road maintenance activities through the *Section 94 Development Contributions Plan* would limit impacts from road transportation as much as practically possible.

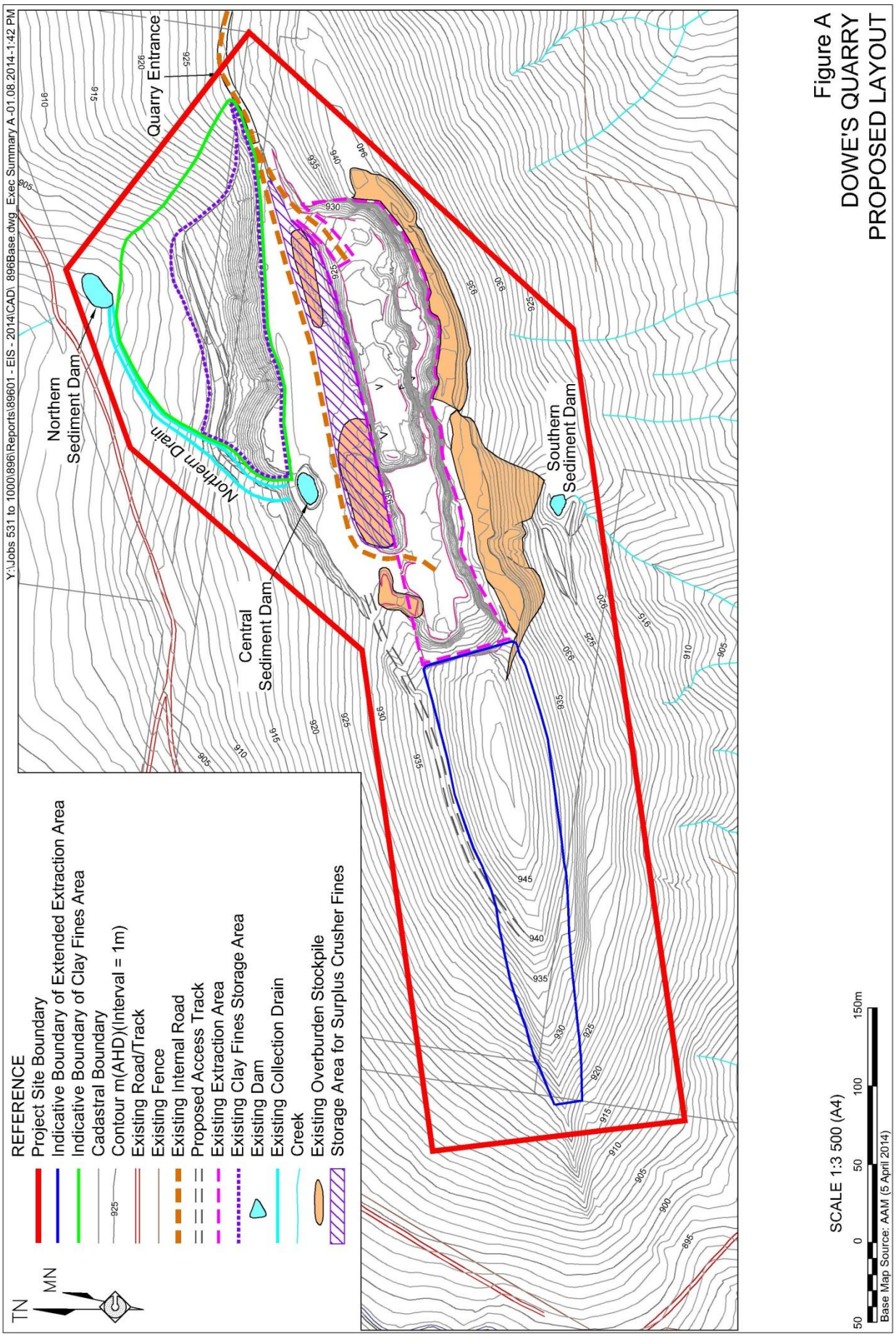
Figure A
DOWE'S QUARRY
PROPOSED LAYOUT
Quarry Entrance
Northern Sediment Dam
Northern Drain
Central Sediment Dam
Southern Sediment Dam
REFERENCE
Project Site Boundary
Indicative Boundary of Extended Extraction Area
Indicative Boundary of Clay Fines Area
Cadastral Boundary
Contour m(AHD)(Interval = 1m)
Existing Road/Track
Existing Fence
Existing Internal Road
Proposed Access Track
Existing Extraction Area
Existing Clay Fines Storage Area
Existing Dam
Existing Collection Drain
Creek
Existing Overburden Stockpile
Storage Area for Surplus Crusher Fines
TN
MN
SCALE 1:3 500 (A4)
0
50
100
150m
Base Map Source: AAM (5 April 2014)
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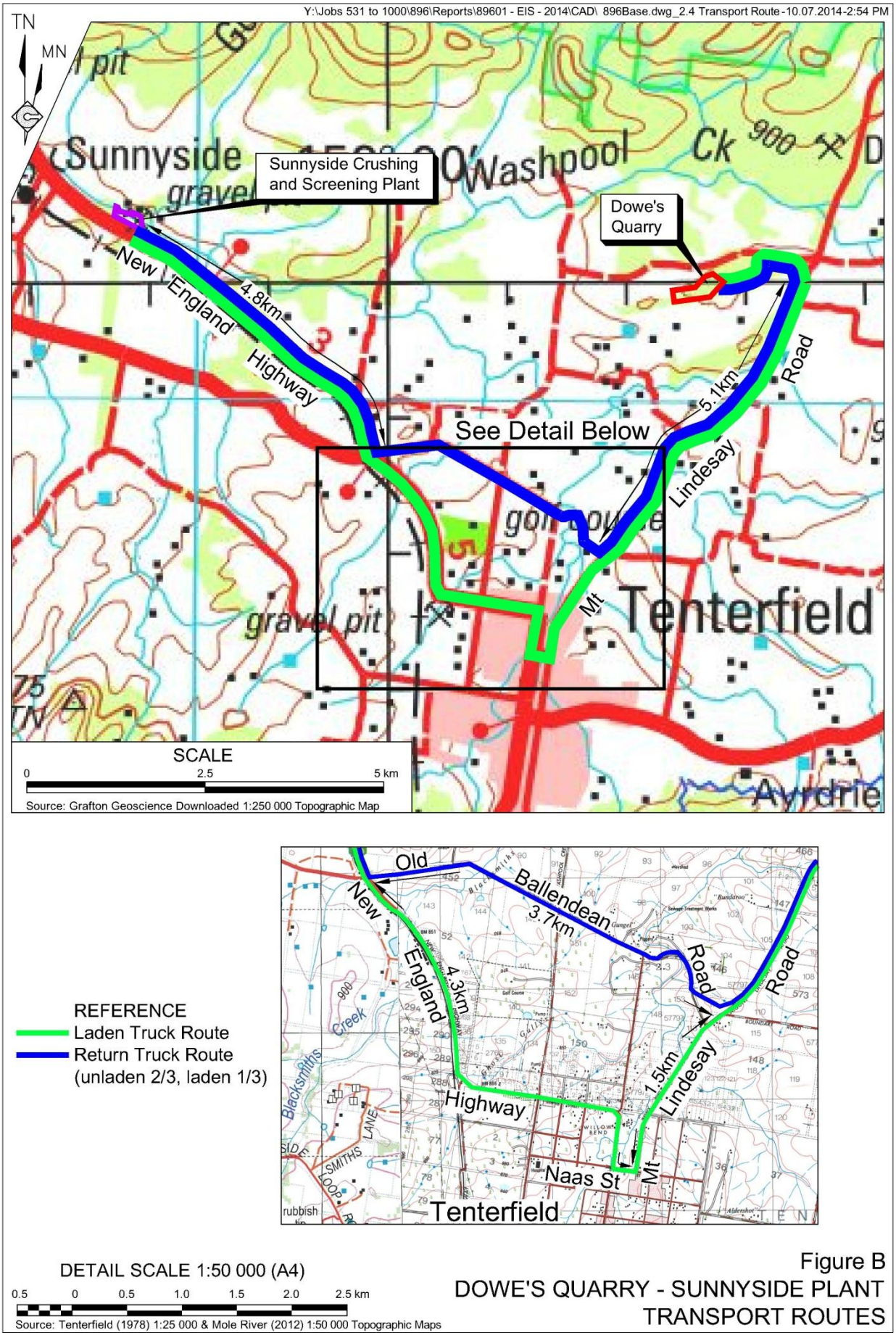


Figure B
DOWE'S QUARRY - SUNNYSIDE PLANT
TRANSPORT ROUTES

Additional impacts that would potentially result through operational activities include dust emissions and noise from the on-site mobile equipment and blasting activities. Standard management measures would be adopted to limit these impacts as much as practically possible.

The proposed development of the extended extraction area and clay fines emplacement would increase the areas that would be directly exposed to rainfall and increasing the likelihood of sediment-laden runoff. Existing sediment dams would be enlarged to provide adequate capacity for water storage and sediment settlement areas and appropriate drainage controls would be installed to manage any sediment-laden runoff.

Development of the Quarry would result in the removal of approximately 2.1ha of remnant native vegetation. Ecological field surveys of the Project Site have found evidence of three threatened fauna species and identified a further twelve fauna species likely or potentially likely to occur within the Project Site. No endangered ecological communities were identified.

It is assessed that any habitat loss for these threatened species would be sufficiently avoided or mitigated through the following measures.

- Limiting the extent of vegetation clearing to 2.1ha of the total Project Site area of 13.5ha.
- Retaining 6.5ha of remnant vegetation surrounding the various areas of disturbance.
- Implementing standard measures to guide vegetation clearing, topsoil management and weed control.
- Committing to rehabilitate the Project Site to a predominant use for nature conservation.

Assessment of potential impacts to soil and land resources, items or places of cultural heritage value, visual amenity and social amenity for surrounding residents and though-out the Tenterfield Shire, such as impacts to tourism, have concluded that only minor impacts would be expected given the implementation of standard controls and management measures.

## Conclusion

The Proposal has been designed to enable the continued efficient operation of Dowe's Quarry, to address the issues raised by surrounding residents and all levels of government and remain consistent with the principles of ecologically sustainable development. The Proposal for the continued extraction of quartzose material would be significant in extending employment opportunities and maintaining stimulus to the local economy of the Tenterfield Shire. The continued operation of Dowe's Quarry for a further 30 years would continue to provide a significant source of raw materials for the production of decorative aggregates and valuable landscaping materials.

In light of the assessments presented throughout the *Environmental Impact Statement*, it is concluded that the proposed continued operation and expansion of Dowe's Quarry 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 supply of the raw materials necessary for the continued operation of the Sunnyside Crushing and Screening Plant and to satisfy the demand for decorative aggregates and landscaping materials;

- 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 Project Site for nature conservation;
- promote continued economic growth in the Tenterfield Shire; and
- address the actual and perceived social impacts.