



# Section 1

## Introduction

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### PREAMBLE

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*This section introduces the continued operation and proposed expansion of Dowe's Quarry ("the Proposal"). This section provides:*

- an outline of the scope and format of the document;*
  - an introduction to the Applicant;*
  - relevant background information about the Proposal;*
  - a summary of the existing approved quarrying operations;*
  - the intended approach to environmental management and documentation for the Quarry; and*
  - the personnel involved in the design of the Proposal, document preparation and specialist consultant investigations and assessments.*
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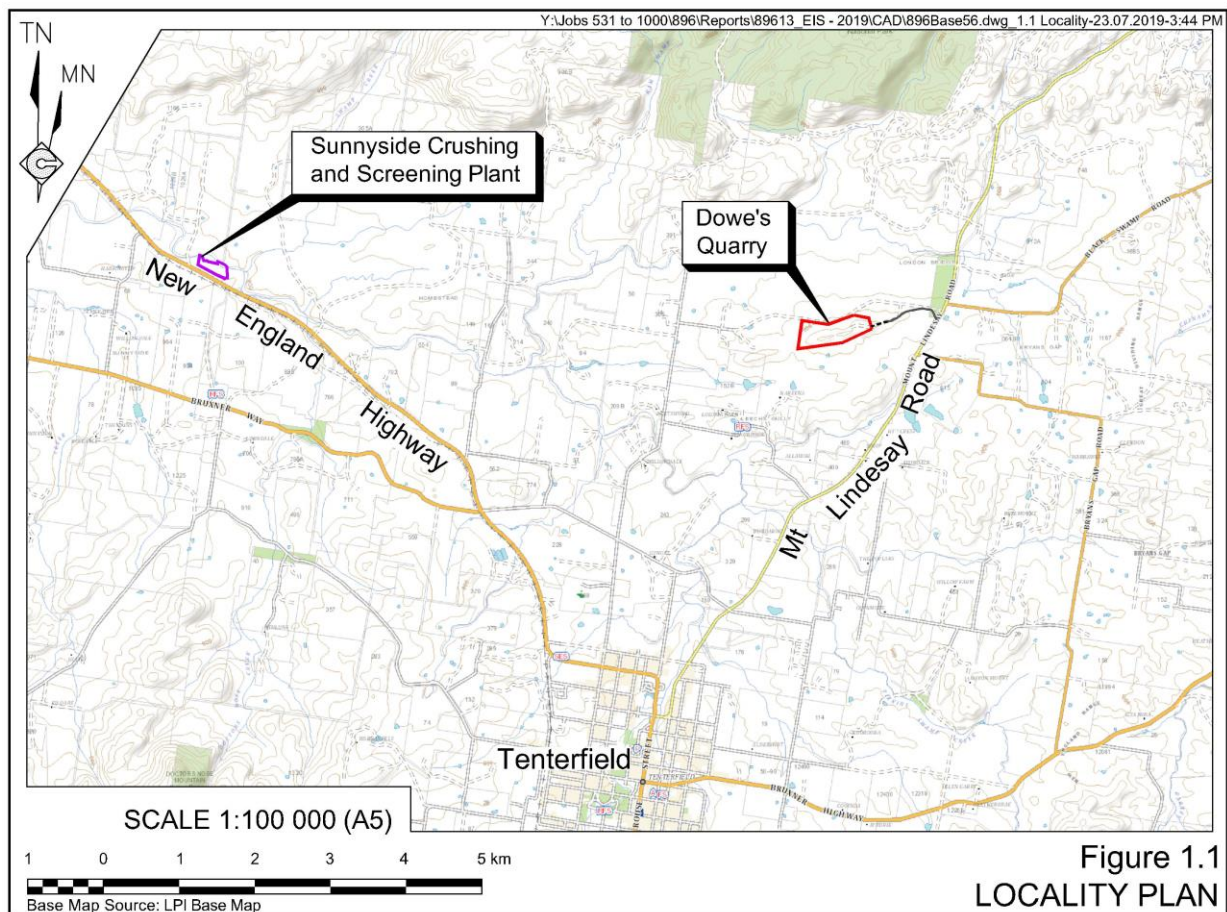


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## 1.1 SCOPE

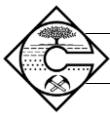
This *Environmental Impact Statement* (EIS) has been prepared by R.W. Corkery & Co. Pty Limited (RWC) on behalf of Darryl McCarthy Constructions Pty Ltd (“the Applicant”) to support a development application submitted to the Tenterfield Shire Council (“Council”) for the continued operation and extension of Dowe’s Quarry (“the Quarry”) located approximately 8km northeast of Tenterfield. A copy of the development application is provided as **Appendix 1**. **Figure 1.1** presents the location of the Quarry in relation to Tenterfield and the Sunnyside Crushing and Screening Plant (the Sunnyside Plant) that is the destination of raw materials currently extracted at the Quarry and where this material is currently processed for despatch to its final destination.



The Quarry has been operating in this location since 1987. The existing operations are approved under Development Consent 2014.078 (DA 2014.078), granted in March 2015. A modification to DA 2014.078 was approved in January 2016.

The Applicant is seeking 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 and progressive backfilling of overburden and fines within the extraction void. These activities are collectively referred to as “the Proposal” and the site of the development referred to as the Quarry Site.

The Quarry is located on rural land, owned by Mr Rod Dowe and leased to the Applicant.



## 1.2 APPROVALS REQUIRED

Based upon the current design and understanding of relevant environmental issues, the Proposal would require the following approvals.

1. Development consent in accordance under Part 4 of the *Environment Planning and Assessment Act 1979* (EP&A Act).

The Proposal is classified as “Designated Development” given it is categorised as an “Extractive Industry” and, under Schedule 3(19) of the *Environmental Planning & Assessment Regulation 2000* (EP&A Reg), the annual threshold for extractive material (30 000m<sup>3</sup>/year) would be exceeded. As Designated Development for the purpose of extractive industry, the Proposal is also classified as “Regional Development” under Schedule 7(7) of the *State Environmental Planning Policy (State and Regional Development) 2011* (State and Regional Development SEPP) and therefore determination of the application will be by the Northern Regional Planning Panel (RPP). In order to obtain development consent, the development application for the Proposal needs to be accompanied by an EIS.

This development consent would supersede DA 2014.078, which would be formally surrendered to Council upon commencement of activities proposed under a new development consent.

2. A variation to Environment Protection Licence 20598 (EPL 20598) approved under the *Protection of the Environment Operations Act 1997*.

The Proposal is also classified as “Integrated Development” under Section 91 of the EP&A Act because it would require an environment protection licence issued under the *Protection of the Environment Operations Act 1997* (POEO Act). The issuing authority would be the Environment Protection Authority (EPA).

Assessment requirements for the Proposal were sought from the Department of Planning, Industry and Environment (DPIE) and provided on 28 May 2019 under EAR Number 1341. A copy of the SEARs are provided in **Appendix 2**. The EIS has been prepared to address the requests from DPIE, Council and other government agencies. A list of the assessment requests and a cross-reference to where they have been addressed in the document is provided as **Appendix 3**.

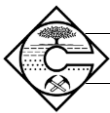
## 1.3 FORMAT OF THE REPORT

The information presented in this document covers all aspects of the proposed development, operation, rehabilitation and environmental monitoring of the Proposal. The document has been structured to address the assessment requirements nominated by the Secretary of the Department of Planning, Industry and Environment (DPIE), Tenterfield Shire Council and other State government agencies.

This *Environmental Impact Statement* has been assembled in a single volume with seven sections of text, as well as a glossary, references section and a set of appendices. The format of the *Environmental Impact Statement* is as follows.



- Section 1:** introduces the Proposal and the Applicant and provides background information relevant to the application, the Quarry Site, existing operations and approvals required. The section concludes with information on the management of investigations undertaken during the preparation of the EIS.
- Section 2:** provides a description of the Proposal including the objectives of the Proposal, an overview of the proposed activities, need for the Proposal and reviews the local geology, resources and Quarry products. Section 2 also describes the proposed operations including extraction and processing operations, associated overburden emplacement and transportation operations including the back-loading of fines from the Sunnyside Plant. Finally, an overview is provided of the progressive rehabilitation strategy and indicative final landform and use.
- Section 3:** reviews the planning and legislative requirements of the Proposal including State Environmental Planning Policies and local planning instruments.
- Section 4:** presents the environmental setting of the Site, including information on topography, geology, meteorology, land ownership, surrounding residences and land uses.
- Section 5:** describes the existing environment, proposed management, assessment of potential impact and maintenance/monitoring requirements for the various environmental issues identified.
- Section 6:** provides a compilation of the environmental management and monitoring measures for the entire Proposal.
- Section 7:** evaluates the Proposal in terms of biophysical, economic and social considerations, and the goals and guidelines of Ecologically Sustainable Development and the Objects of the *Environmental Planning and Assessment Act 1979*. A conclusion is provided for the EIS.
- Section 8:** lists the various source documents referred to for information and data used during the preparation of the EIS.
- Appendices:** present the following additional information and the specialist consultant technical assessments undertaken to support the application.
1. A copy of the application for development consent.
  2. The Secretary's Environmental Assessment Requirements (SEARs) and requirements of the consulted government agencies.
  3. The coverage of requirements listed in the SEARs and provided by government agencies.
  4. Vegetation Clearing Protocol for the Dowe's Quarry.
  5. Driver's Code of Conduct for the Dowe's Quarry
  6. Traffic Impact Assessment prepared by Constructive Solutions Pty Ltd.
  7. Air Quality Assessment prepared by Northstar Air Quality Pty Ltd.
  8. Noise and Vibration Assessment prepared by Spectrum Acoustics Pty Limited.
  9. Sediment Basin Storage Requirement Calculations – R.W. Corkery & Co. Pty Limited.



10. Biodiversity Development Assessment Report prepared by EcoLogical Australia Pty Ltd.
11. Aboriginal Cultural Heritage Assessment prepared by McCardle Cultural Heritage Pty Ltd.

## 1.4 THE APPLICANT AND THE SITE

### 1.4.1 THE APPLICANT

Darryl McCarthy Constructions Pty Ltd, the Applicant for the Proposal, has been successfully operating Dowe's Quarry since 1987. The Company has been established for over 40 years, operating principally throughout Tenterfield Shire with construction projects and the supply of construction and industrial materials. The Applicant has operated the Sunnyside Plant since 1977 where processing of the quartzose rock from Dowe's Quarry currently occurs and from where final products are despatched.

### 1.4.2 THE QUARRY SITE

The existing Quarry Site is located on rural land within Lots 308 and 309 DP 751540, Lots 3 and 4 DP 42044 and Lots 239 and 260 DP 751540. Under the Proposal, the Quarry Site would extend into Lots 1 and 2 DP1092215 and Lot 244 DP751540. Quarry Site access would be provided by a Quarry access road which traverses parts of Lots 3 and 4 DP1092215, Lot 246 DP751540 and Lot 245 DP751540 prior to entering the Quarry Site. Lot 245 DP751540 is Crown land dedicated as a travelling stock route. Access across this lot is permitted in accordance with Section 75 of the *Local Land Services Act 2013*. The boundary of the Quarry Site has been determined principally to define an area within a polygon in which all activities are proposed, recognising that not all land within the Quarry Site would be disturbed. The Quarry Site which covers approximately 26.8ha of land owned by R. and M. Dowe is leased by the Applicant. A total of approximately 16.4ha of land is proposed to be disturbed throughout the life of the Quarry. The northern boundary of the Quarry Site coincides with a Crown Road that traverses Lot 308 DP 751540. **Figure 1.2** displays the land titles within and adjacent to the Quarry.

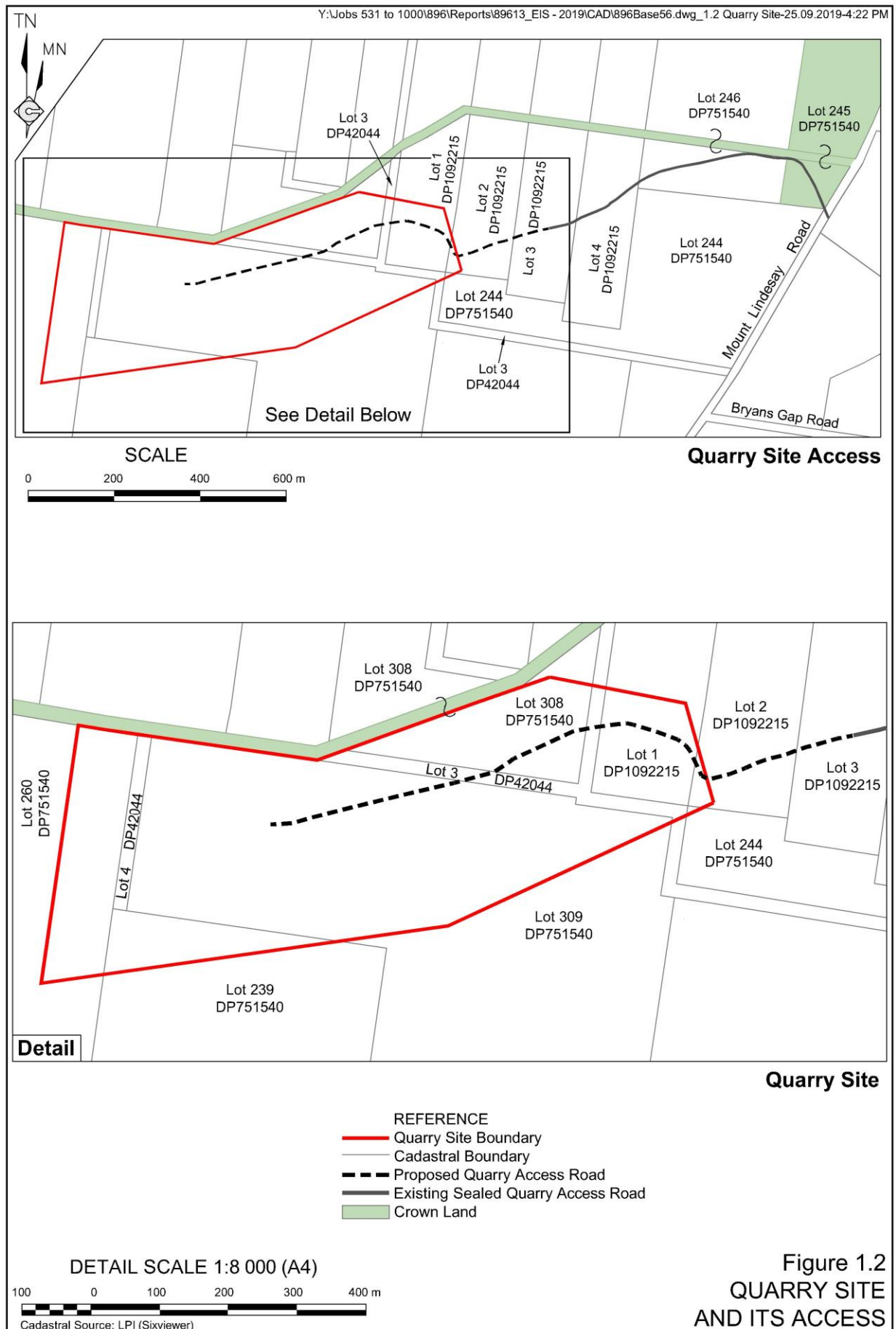
## 1.5 BACKGROUND TO THE PROPOSAL

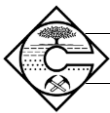
The Quarry originally commenced operations in 1987 and is currently operating under a development consent issued by the Joint Regional Planning Panel on 19 March 2015 and subsequently modified on 21 January 2016. The Quarry has approval to extract up to 150 000tpa of quartzose material, disturb a total area of 6.7ha and store a range of fine materials generated during the processing of the material at the Applicant's processing plant at Sunnyside, located approximately 10km northwest of Tenterfield (see **Figure 1.1**). The existing development consent allows a maximum of 28 truck loads of quartzose material to be transported daily from Dowe's Quarry to Sunnyside with no more than 120 truck loads per week. Transportation operations occur principally Monday to Friday with a contingency allowed for product despatch on no more than 10 Saturdays per calendar year.



**DARRYL MCCARTHY CONSTRUCTIONS PTY LTD**

Expansion of the Dowe's Quarry via Tenterfield





The Applicant has identified a total of 4.8 million tonnes of quartzose material within and adjacent to the current approved extraction area. In order to efficiently access and extract the approved and identified resource, it is proposed that a new development application be sought that would supersede the existing development consent. It is not proposed to extend the life of the Quarry which is currently approved until 25 March 2045.

It is noted that existing operations have inadvertently proceeded beyond the approved boundary in the eastern section of the extraction area. This area would be incorporated within the proposed area of disturbance to normalise approved operations.

## 1.6 NEED FOR THE PROPOSAL

The need for the ivory-coloured products produced from the quartzose rock extracted from Dowe's Quarry has already been demonstrated through the sale of products since operations commenced in 1987. Material from the Quarry is highly valued for the production of decorative concrete and in landscaping. In addition, the fine material that is considered a by-product would be suitable for blending with other material to produce road base or other fill materials. It is anticipated that the Quarry would continue to supply market requirements throughout Northern New South Wales and South-East Queensland, with this revenue sourced mostly outside the Tenterfield Local Government Area and therefore bringing this investment into the region.

## 1.7 EXISTING OPERATIONS

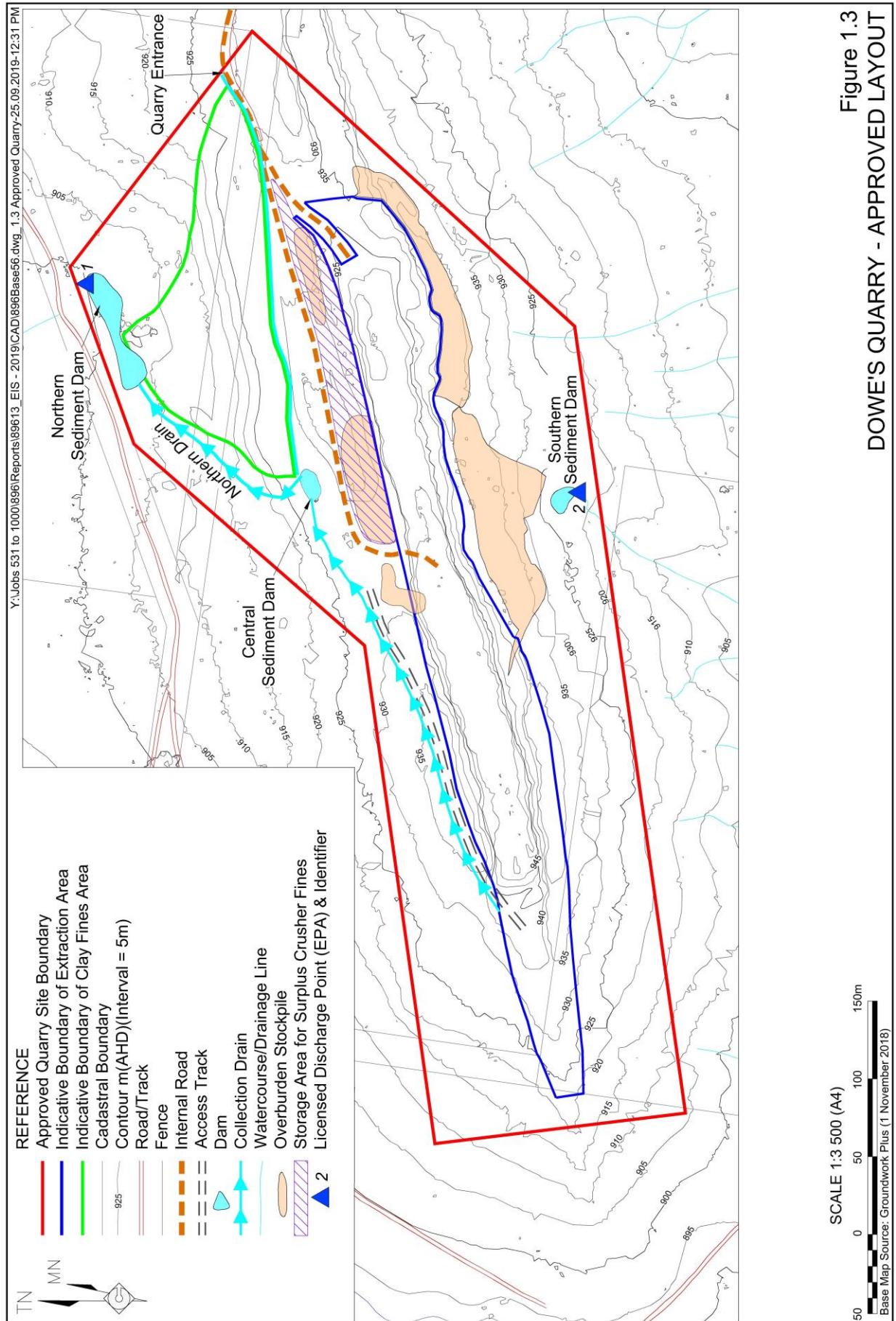
The existing approved Quarry layout is presented in **Figure 1.3** and incorporates an extraction area, storage areas for overburden, clay and crusher fines as well as internal roads for access and water management structures (three dams and diversion drain).

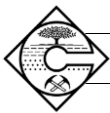
The existing extraction area has been developed within a small ridge aligned almost in an east-west direction (see **Figure 1.3**). The current elevation within the existing extraction area is approximately 910m AHD. Overburden and fines materials are currently stockpiled to the north of the approved extraction area. Sediment-laden runoff within the currently disturbed areas within the Quarry Site is directed to two sediment dams established near the northern and southern boundaries. A Central Sediment Dam provides temporary storage of potentially sediment-laden water.

The following activities are currently undertaken within the Quarry Site.

- Vegetation clearing and soil stockpiling (intermittently).
- Removal and stockpiling of any overburden and eventual use in rehabilitation.
- Drilling and blasting of quartzose rock.
- Oversize rock reduction through the use of a hydraulic hammer.
- Loading and despatch of extracted rock for transportation to the Sunnyside Plant for processing.
- Stockpiling of clay fines and any additional fines that are back-loaded from the Sunnyside Plant.
- Progressive and final rehabilitation.







## **1.8 CONSIDERATION OF ALTERNATIVES**

The Proposal would extend the existing approved operations at the Dowe's Quarry and provide for the professional and efficient operation of the Quarry to 2045. As the Quarry is based on the site of quartzose resource that is not plentiful in the local area, it is not possible to relocate the Quarry operations.

Alternatives were considered for overburden emplacement size and location, access road location and traffic levels and types. It was concluded that the Proposal as presented in Section 2 of this document provides for the efficient extraction of the identified quartzose resource while avoiding unnecessary impacts to native vegetation (through reduced overburden stockpile area and relocation of material into the pit as extraction is completed and through the chosen alignment of the access road). The Proposal would also permit the ongoing operation of the Quarry at an increased production rate while ensuring that traffic levels remain consistent with those currently approved.

## **1.9 EXISTING ENVIRONMENTAL MANAGEMENT**

### **1.9.1 ENVIRONMENTAL DOCUMENTATION**

The Applicant currently operates the Quarry in accordance with the existing development consent (DA 2014.078) and Environment Protection Licence (EPL 20598). In addition, a range of environmental management plans have been prepared and implemented to guide day-to-day operations at the Quarry. These documents include the following.

- Vegetation Clearing Protocol for the Dowe's Quarry (**Appendix 4**)
- Driver's Code of Conduct.
- Soil and Water Management Plan.
- Air Quality Management Plan.
- Pollution Incident Response Management Plan.

### **1.10 ENVIRONMENTAL PERFORMANCE**

Given the size and location of the operation and limited environmental impacts from operations within the Quarry Site, formal monitoring programs have not been required. The following monitoring commitment have been made under DA 2014.078 and associated environmental management plans.

- Monitoring of pH, total suspended solids and for any oil and grease in water prior to any controlled discharge and within 24-hrs of any uncontrolled discharge, of water from the Northern Sediment Dam or Southern Sediment Dam.
- Retain records of rainfall at the Quarry.
- Deposited dust or particulate matter monitoring would be undertaken in response to any substantiated complaint.



To date has not been sufficient water captured in either of the Northern Sediment Dam or Southern Sediment Dam that would require monitoring.

Complaints have been received from time to time from members of the local community. The Applicant has proactively responded to all complaints to resolve any identified concerns and has provided feedback on actions taken in response to the complainant.

## **1.11 CONSULTATION**

### **1.11.1 SURROUNDING LANDOWNERS**

The Applicant maintains an open-door policy regarding complaints, questions and feedback to the local community. Throughout the life of the existing Quarry consultation with neighbours has been ad hoc which has been the preference of those landowners.

The Applicant will be visiting neighbours during the exhibition period for the EIS to discuss any concerns and allay any fears regarding the ongoing operations of the Quarry. Previous concerns regarding the Quarry operations expressed in submissions to the application and subsequent modification to DA 2014.078/1 have been taken into consideration in development of the Proposal. Principally, the Applicant has committed to retaining the current limits relating to daily and weekly traffic levels to ensure there are minimal changes to the community experience of the operations.

### **1.11.2 GOVERNMENT AGENCIES**

A background paper was prepared and distributed to the then Department of Planning and Environment with a request for assessment requirements for the Proposal. Assessment requirements were received from the following government agencies.

- Department of Planning and Environment
- Tenterfield Shire Council
- Department of Industry - Crown Lands
- Department of Primary Industries – Agriculture
- Division of Resources & Geoscience - Land Use
- Environment Protection Authority
- Natural Resources Access Regulator
- Office of Environment and Heritage
- Roads and Maritime Services
- Rural Fire Service

Further consultation was undertaken with Tenterfield Shire Council, the Environment Protection Authority and the Division of Resources & Geoscience during the preparation of the *Environmental Impact Statement* to provide an update on progress and matters being assessed.



## **1.12 MANAGEMENT OF INVESTIGATIONS**

The preparation of this document has involved a study team managed by Mr Nicholas Warren, M.Env.Sc., M.Bus, B.Sc. Principal Environmental Consultant with RWC, assisted by Mr Caiden O'Connor, B.Sc. (Geology), Environmental Consultant with RWC and Dr Mudassar Arsalan, Senior Cartographer / Spatial Analyst with RWC. Mr Rob Corkery, M.Appl.Sc., B.Sc (Hons), Principal of R.W. Corkery & Co. Pty. Limited provided internal peer review of the documentation.

Information concerning the existing and proposed operations was provided by Mr Darryl McCarthy as well as Mr Terry Woods and Mr Kane Whitelegg of Quarry Solutions Pty Ltd.

Quarry design and planning was managed by Mr Jim Lawler and Mr Rowan McKay of Groundwork Plus Pty Ltd.

A range of environmental investigations have been undertaken to assess the potential environmental impacts of the Proposal and identify operational safeguards and measures. These studies were undertaken by a team of specialist consultants managed by R.W. Corkery & Co. Pty Limited including the following key individuals and companies.

- Constructive Solutions Pty Ltd – Traffic Assessment  
Mr Michael Bloem B.Eng. (Civil)
- Spectrum Acoustics Pty Limited – Noise and Vibration Assessment  
Mr Neil Pennington B.Sc. (Physics), B.Math (Hons)
- Northstar Air Quality Pty Ltd – Air Quality Assessment  
Dr Martin Doyle PhD, AAQual, B.Sc. (Hons)
- EcoLogical Australia Pty Ltd – Ecology Assessment  
Mr Steve Jarman M.Sc. (Conservation Biology), B.Sc. (Hons) (Environmental Management)
- McCardle Cultural Heritage Pty Ltd – Aboriginal Cultural Heritage Assessment  
Ms Penny McCardle BA (Hons) (Archaeology and Palaeoanthropology)