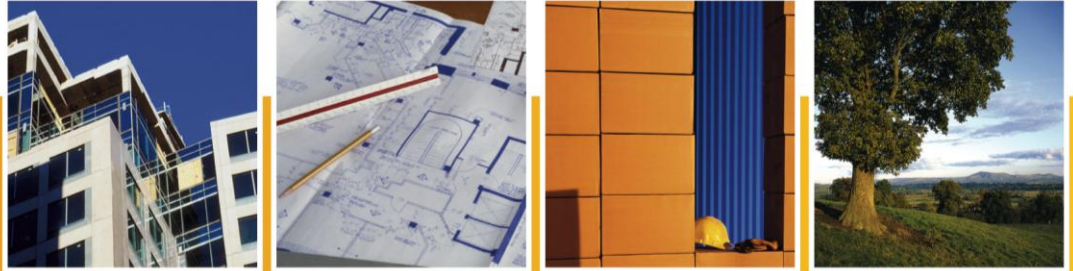


SEARs APPLICATION



For
**PROPOSED SAND AND GRAVEL EXTRACTION AND
ASSOCIATED OPERATIONS**

at
DALSWINTON QUARRY
Lot 72 DP1199484, 511 Dalswinton Road, Dalswinton

Prepared for
ROSEBROOK SAND AND GRAVEL PTY LTD

February 2018
Report 17/029 Rev B

Prepared by



First Floor
44 Church Street
(PO Box 40)
Maitland NSW 2320

P : 02 4933 6682
F : 02 4933 6683

www.hdb.com.au

Document History and Status

Issue	Revision	Issued To	Qty	Issue Date	Author	Reviewed
Draft	A	HDB	1	15.1.18	LS	KN
Draft	B	Client	1	15.1.18	LS	ME
Final	B	HDB	1	6.2.18	LS	ME
Final	B	Client	1	6.2.18	LS	ME
Final	B	DoPE	1 Electronic	6.2.18	LS	ME

**Hunter Development Brokerage Pty Ltd**

44 Church Street, Maitland NSW 2320

PO Box 40 Maitland NSW 2320

Tel: (02) 4933 6682, Fax: (02) 4933 6683, Email: admin@hdb.com.au

Printed: 6.2.18

File Reference: J:\2017\17029 - Rosebrook Sand & Gravel - Stage 1 EIS - Dalswinton
Quarry\Publications - Deliverables\Working

Applicant: Rosebrook Sand & Gravel Pty Ltd

HDB Project Manager: Mathew Egan

HDB Reference Number: 17/029

Project Manager
Date 6th February 2018***This document is for discussion purposes only, unless signed and dated by the person identified*****DISCLAIMER:**

This document is based on information available at the time and was prepared for a specific purpose. Any representation, statement, opinion or advice expressed or implied in this document is made in good faith, but on the basis that Hunter Development Brokerage Pty. Ltd., its agents or employees, are not liable (whether by reason of negligence, lack of care or otherwise) to any person and/or other legally recognised entity for any damage or loss whatsoever, which has occurred or may occur, in relation to that person and/or other legally recognised entity taking or not taking (as the case may be) action, in respect of any representation, statement or advice referred to in this document.

Persons and/or other legally recognised entities wishing to use any details provided in this document that may affect financial decisions are strongly urged to seek legal advice and contact relevant government authorities, and relevant specialist consultants to obtain current information and to verify the current status of the information contained herein this document.

© COPYRIGHT 2018 - HUNTER DEVELOPMENT BROKERAGE PTY LTD

All rights reserved. Hunter Development Brokerage Pty Ltd advises that this document and all information contained therein is protected by copyright under the Australian Copyright Act 1968. Reproduction of this document in part or whole and/or use without the written permission from Hunter Development Brokerage Pty Ltd constitutes a breach of copyright. The document may only be used for the purposes for which it was commissioned and in accordance with the Terms of Engagement for the commission. Any reference to the document must include the document in its entirety and also include reference to Hunter Development Brokerage Pty Ltd.

CONTENTS

1.0	Introduction	5
1.1	Development proposal	5
1.2	The proponent	5
1.3	The purpose of this document.....	5
1.4	Justification of the Project	6
2.0	Site Details.....	7
2.1	Location.....	7
2.2	Existing Site.....	7
2.3	Access and Traffic	8
2.4	Surrounding land use.....	8
2.5	Topography, vegetation and hydrology	9
2.6	Fauna	9
2.7	Archaeological and heritage	10
2.8	Constraints	10
3.0	Proposed Development	11
3.1	Extraction area	11
3.2	The extraction process.....	12
3.3	Hours of operation	12
3.4	Staffing	12
3.5	Traffic	12
4.0	Planning Controls	14
4.1	Commonwealth Legislation	14
4.1.1	Environment Protection and Biodiversity Act 1999.....	14
4.2	New South Wales Legislation	15
4.2.1	Environmental Planning and Assessment Act 1979	15
4.2.2	Protection of the Environment Operations Act	15
4.2.3	Threatened Species Conservation Act.....	16
4.3	Strategic Planning Document.....	16
4.3.1	The Hunter Regional Plan 2036.....	16
4.3.2	Upper Hunter Strategic Regional Land Use Plan (2012)	17
4.4	Environmental Planning Instruments.....	18
4.4.1	State Environmental Planning Policy (State and Regional Development) 2011 ..	18

4.4.2	State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.....	19
4.4.3	Muswellbrook Local Environmental Plan 2009.....	19
5.0	Preliminary Environmental Risk Analysis	20
5.1	Stakeholder consultation.....	20
5.2	Air quality.....	20
5.3	Soil and water	21
5.4	Flooding.....	21
5.5	Flora and fauna.....	21
5.6	Traffic and transport.....	21
5.7	Noise and vibration	22
5.8	Waste management.....	22
5.9	Bushfire	22
5.10	Visual amenity	22
5.11	Heritage (indigenous and non-indigenous).....	22
6.0	Conclusion.....	24

APPENDICES

Appendix A: Proposed expansion of Dalswinton Quarry

FIGURES

Figure 1: Location map	7
Figure 2: Aerial photo of the site	8
Figure 3: Topographic survey of the site	9
Figure 4: Bushfire mapping	10
Figure 5: Proposed expansion of Dalswinton Quarry	11
Figure 6: Strategic Regional Land Use Plan.....	18
Figure 7: Zoning map.....	19

1.0 INTRODUCTION

1.1 DEVELOPMENT PROPOSAL

Dalswinton Quarry is situated on Lot 72 DP1199484 and operates under Development Application 410/1995 which allows sand and gravel extraction on the site until 13th November 2019. The owners, Rosebrook Sand and Gravel Pty Ltd (Rosebrook), are seeking to vary the foot print and continue the extraction operation post 2019.

The proposed development is expected to extract approximately 15-20 million tonnes of material over an expected life of twenty five years. The quarrying operation will expand across 89ha of the site, with an estimated annual maximum production capacity of 500,000 tonnes per year. The proposed development will also include reworking of the previous Stages 1 and 2 to recover fine aggregates previously discarded.

Progressive rehabilitation will occur as part of site operations to return the land to grazing uses at the end of the operations.

The new application will adopt the existing method of operations, storage, and transfer of materials, the details of which are provided later in this report.

1.2 THE PROPONENT

HDB Town Planning and Design (HDB) has been engaged by “Rosebrook” to prepare a preliminary environmental assessment to accompany an application for Secretary’s Environmental Assessment Requirements (SEARs) for the proposed sand and gravel extraction and associated operations at the Dalswinton Quarry.

Rosebrook owns three quarries in the Hunter Valley, which supply quality aggregates and decorative gravel for construction and landscaping purposes in the Hunter and Sydney regions.

Current market demand has increased for fine aggregates and there is the potential to re-work the previous extract in areas, as well as expand the operations to the eastern part of the site to supply this market.

The proponents are therefore preparing to lodge a new DA which would include a comprehensive assessment of the proposed development and environmental management measures for this project.

1.3 THE PURPOSE OF THIS DOCUMENT

State Environmental Planning Policy (State and Regional Development) 2011 nominates thresholds for development to be considered to be State or Regionally significant. Schedule 1 provides for general uses including Extractive Industry (Clause 7). Under the provisions of this clause development that exceed the following are considered to be State or Regionally significant:

(1) Development for the purpose of extractive industry that:

- (a) extracts more than 500,000 tonnes of extractive materials per year, or*
- (b) extracts from a total resource (the subject of the development application) of more than 5 million tonnes, or*
- (c) extracts from an environmentally sensitive area of State significance.*

As this development is expected to exceed the 5 million tonnes threshold it is considered to be State or Regionally significant and therefore requires the submission of an EIS as part of the assessment process.

To facilitate this process the following SEARs application has been prepared. The document provides the following information in accordance with Department issued circulars and guidelines:

- Introduction;
- Site Description;
- Legislation Review;
- Preliminary Environmental Assessment; and
- Conclusion

1.4 JUSTIFICATION OF THE PROJECT

The site has a long history of quarrying and the operations have been undertaken on the site with minimal impacts.

The site's suitability for the development is justified by the estimated reserves, its established quarrying infrastructure and the ability to continue the operations without any adverse impact on the environment. No other alternative sites were considered for the proposal.

2.0 SITE DETAILS

2.1 LOCATION

Address:	Lot 72 DP 1199484, 511 Dalswinton Road, Dalswinton
Local Government:	Muswellbrook
Locality:	Denman
Area:	160ha
Zone:	RU1 Primary Production

Figure 1 shows the location of the subject site.

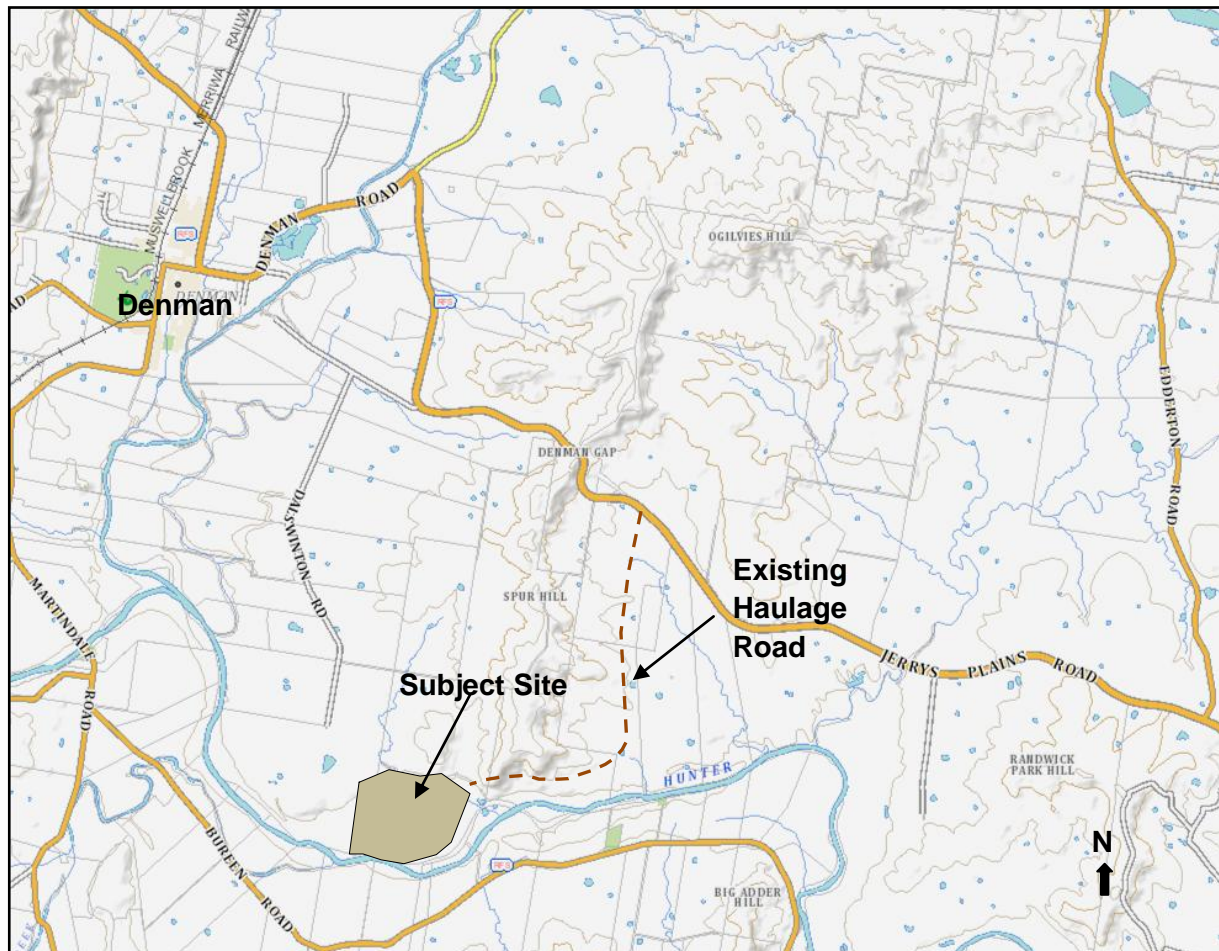


Figure 1: Location map

Source: Six Maps, accessed November 2017

2.2 EXISTING SITE

The site is an irregular parcel of land adjacent to the Hunter River located 7.5 km to the south-east of Denman. A small scale quarrying was approved in the south-east corner

of the lower terrace of the Hunter River in July 1988, to extract 15,000 tonnes of sand and gravel annually. This operation closed in about 1995 and the current approval (DA410/1994) was obtained in November 1995 to extract up to 150,000 tonnes of materials per annum from the western part of the site. Reference is made to **Figure 2** below.

The western part of the site is currently used for the extraction operation and contains the processing plant, site office and ancillary infrastructure. The eastern half remains vacant. The Hunter River forms the southern boundary of the property.

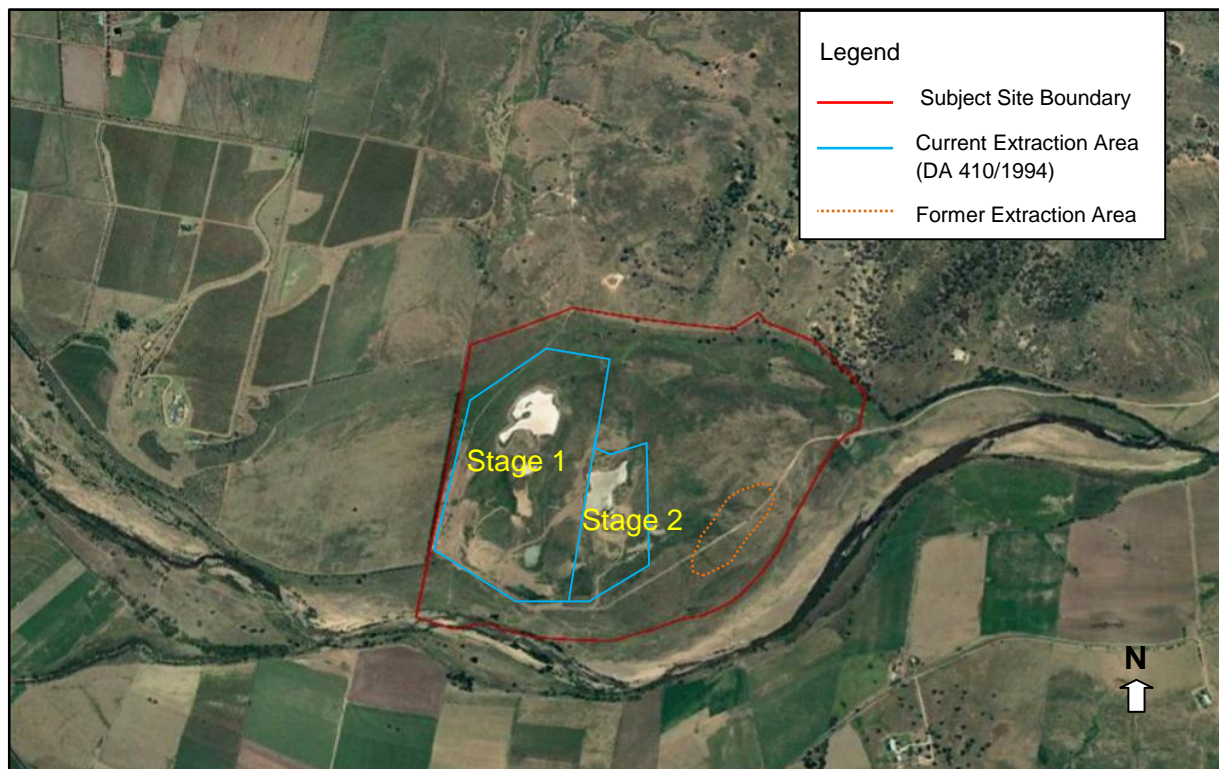


Figure 2: Aerial photo of the site

Source: Google maps

2.3 ACCESS AND TRAFFIC

Dalswinton Quarry is accessed from the Golden Highway via a private haul road over several privately owned parcels. An easement is in place to ensure lawful access to the quarry.

2.4 SURROUNDING LAND USE

The site and broader areas are rural in nature with agriculture, equine, viticulture and quarrying/mining being the major economic activities in this part of the LGA. The properties surrounding the site are used for limited agriculture. Two dwellings on Bureen Road on the opposite side of the Hunter River to the south-east are the closest sensitive uses at approximately 600 m from its boundary and 1km from the proposed operation.

2.5 TOPOGRAPHY, VEGETATION AND HYDROLOGY

The site lies at the south of a hill and is predominately flat with a slight fall towards the Hunter River in a south-easterly direction. The levels drop from 98 m AHD at its northern boundary to 92 m AHD at the south-eastern boundary (approximately 0.5%). A low point at the base of the hill diverts stormwater away from the extraction site into the river.

Past quarrying activities have resulted in a heavily disturbed environment on the site. The site generally lacks any vegetation with the exception of a few scattered trees and some mature clusters along the bank of the Hunter River. The topographic survey plan of the site is provided in **Figure 3**.

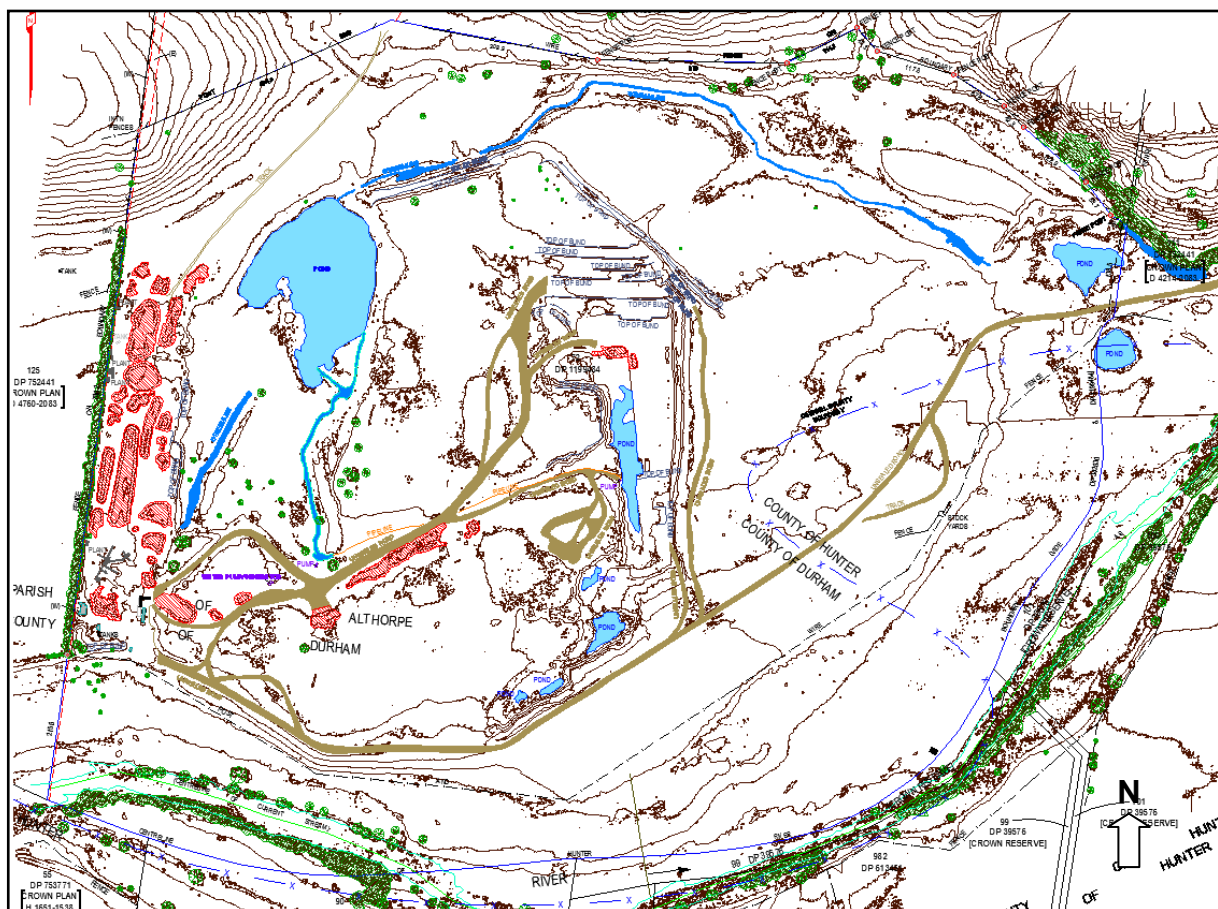


Figure 3: Topographic survey of the site

Source: FYFE

2.6 FAUNA

The site's long history of quarrying activity and sparse vegetation cover indicate very low habitat value.

2.7 ARCHAEOLOGICAL AND HERITAGE

A preliminary search of the Aboriginal Heritage Information Management System (AHIMS) did not reveal any previously recorded sites or places on the development site.

The site does not contain any listed items of European Heritage significance.

2.8 CONSTRAINTS

Bushfire mapping for the site shows some minor bushfire buffers along the fringe, and some isolated areas within the central part where no vegetation is present. Given the industrial use associated with the site, this is not considered to be a risk that needs any further investigation.

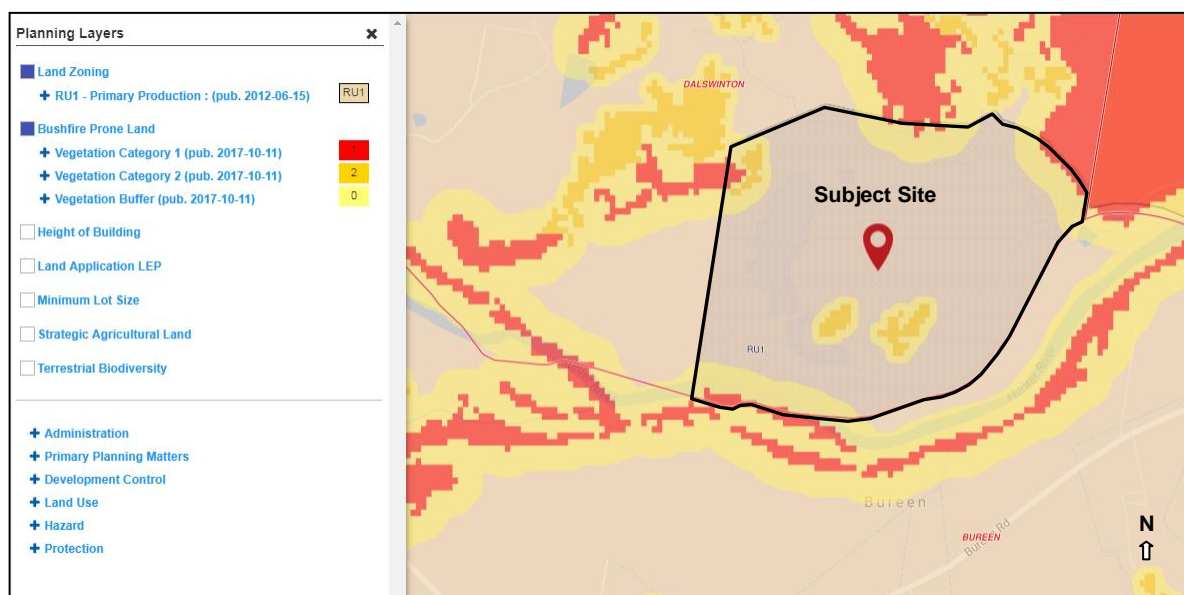


Figure 4: Bushfire mapping

Source: DoPE

3.0 PROPOSED DEVELOPMENT

Dalswinton Quarry has been extracting decorative gravel and aggregates from the western part of the subject site under previous consents since 1986. As the quarry approaches the end of its approval period the owners see the potential to expand the operations to the eastern part of the site. With the recent changes in the market demand there is also the opportunity to re-work the previously extracted areas to recover the fine aggregates (less than 10 mm), which were returned to pits as reject materials.

Rosebrook estimates significant quantities of reserves in the existing footprint as well as adjoining areas within the site boundaries to continue the operations for another 25 years. Therefore consent is sought to continue sand and gravel extraction, under a new approval, over an expanded footprint on the site.

The extraction rate will depend on the market dynamics and it is anticipated that a maximum of 500,000 tonnes of materials per annum will be produced during peak demand periods. **Figure 5** provides an indicative layout of the proposed development. An accurate footprint of the quarry site will be determined during the preparation of the EIS once a more detailed constraints analysis and feasibility assessment are undertaken.

3.1 EXTRACTION AREA

It is proposed to have two working areas within the site. Reworking over approximately 50 ha of land within Stages 1 and 2 of the current DA will constitute Work Area 1. Approximately 39 ha of unmined land to the east of this footprint will form Work Area 2 (refer to **Figure 5**). Each area will be worked continuously and followed by rehabilitation.

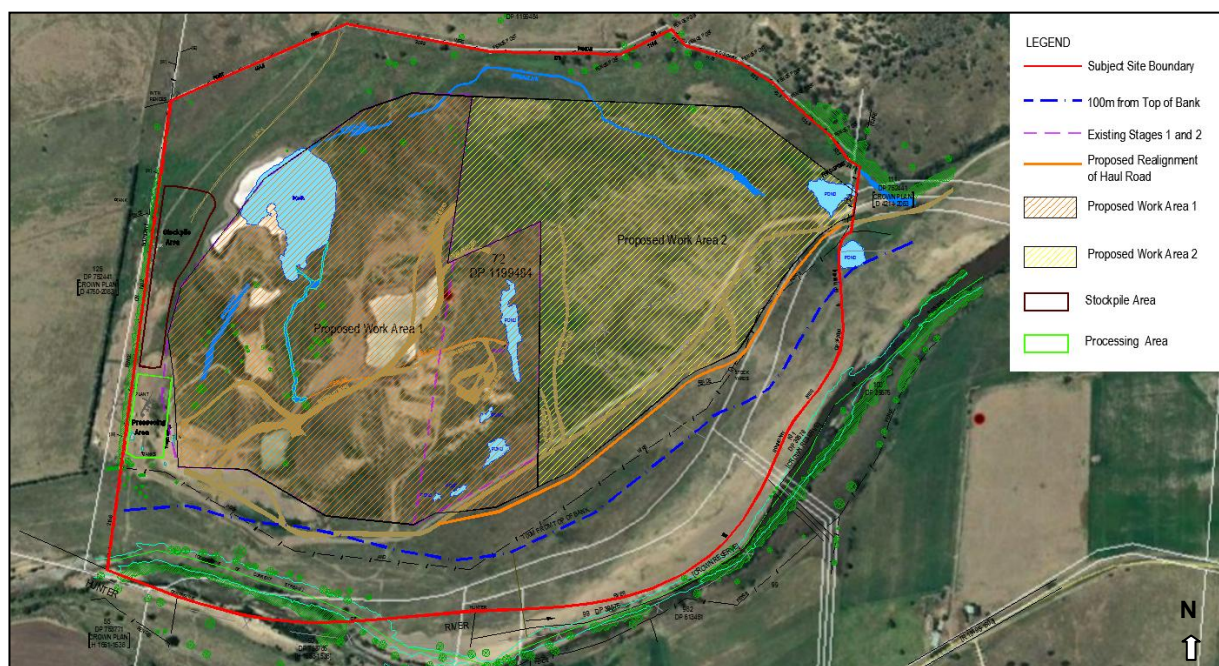


Figure 5: Proposed expansion of Dalswinton Quarry

Source: HDB Town Planning and Design

3.2 THE EXTRACTION PROCESS

Gravel will be extracted by a hydraulic excavator and loaded into haul trucks for transfer to the existing processing plant located in the south-east part of the site.

Extracted materials will undergo primary screening prior to being transported to the processing area for secondary screening and crushing to produce a full range of decorative gravel, crushed aggregate, and road base material.

The products are then stockpiled on site before being loaded into trucks for delivery to markets in the Hunter Valley and Sydney regions. It is anticipated to have approximately 60,000 tonnes of materials in the stockpile area to meet the market demand. The height of the stockpile will be limited to 6m and run parallel to the River.

The product haulage will be along the existing haul road to the north-east of the site, which connects to the Golden Highway. A minor realignment to the haul road in the southern part of the site will be required to allow extraction in the eastern part of the site.

The proposed extraction will be undertaken to the depth of bedrock and final landform following the rehabilitation will be 2m above the median flow in the Hunter River.

3.3 HOURS OF OPERATION

The operational hours of the proposed development will be unchanged from the current approved hours, as below:

- Monday to Friday - 5:00 am to 12:00 am;
- Saturday - 5:00 am to 1:30 pm.

There will be no quarrying operations on Sundays and public holidays.

3.4 STAFFING

The proposed development is expected to provide direct employment to 12 people. The existing office, amenities and parking spaces on the site will be maintained for this purpose.

3.5 TRAFFIC

On average the site operations generate 20 truck loads (average weight range between 27- 33 tonnes) of materials per day under the current consent. The increase in annual production from 150,000 to 500,000 tonnes will generate additional truck movements from the site. The development is also anticipated to use larger trucks (PBS vehicles with a capacity up to 50t) for the operations. Hourly vehicle movements will be electronically controlled by the weighbridge.

A traffic assessment will be undertaken to identify the impact of the additional traffic and the larger trucks on the traffic flows on the Golden Highway, as well as the level of service of the intersection.

4.0 PLANNING CONTROLS

4.1 COMMONWEALTH LEGISLATION

4.1.1 ENVIRONMENT PROTECTION AND BIODIVERSITY ACT 1999

The Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places, defined in the EPBC Act as matters of National Environmental Significance (NES). Matters of NES identified in the Act include:

- World heritage properties;
- National heritage places;
- Wetlands of international importance (listed under the Ramsar Convention);
- Listed threatened species and communities;
- Migratory species protected under international agreements;
- Commonwealth marine areas; and
- The Great Barrier Reef Marine Park.

Under the EPBC Act actions that have, or are likely to have, a significant impact on a matter of NES, require approval from the Australian Government Minister for Sustainability, Environment, Water, Population and Communities (the Minister).

Comment:

A search of the EPBC protected matters has returned the following results:

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	1
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	3
Listed Threatened Species:	23
Listed Migratory Species:	13

The identified Ramsar wetland being the Hunter estuary wetland is located 100 kms away from the site. Due to the heavily disturbed nature of the site, the likely occurrence of threatened ecological communities and species as provided in the search results is considered to be minimal. Nevertheless, a Flora and Fauna Assessment will be included in the EIS to investigate this matter further.

Therefore the preliminary search undertaken for the site does not identify any EPBC matter that may be detrimental to the proposed development.

4.2 NEW SOUTH WALES LEGISLATION

4.2.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

The Environmental Planning and Assessment Act 1979 (the Act) and the associated Environmental Planning and Assessment Regulation 2000 (the Regulation) provide the planning framework for land use planning and development assessment within New South Wales.

The Act seeks to encourage (amongst other aspects) the:

- Co-ordination and orderly development and economic use of land;
- Protection of the environment;
- Adoption of ecologically sustainable development; and
- Provision for public involvement and participation in environmental planning and assessment.

Part 4 of the Act sets out the assessment requirements for development applications. The proposal will be submitted under Part 4 for assessment and approval.

Schedule 3 of the Regulation nominates prescribed developments as Designated, and thus requiring an Environmental Impact Statement (EIS) based on a range of key threshold tests.

Comment:

The proposed development is listed under Schedule 3 of the Regulations as a Designated Development. Clause 19(a) requires an EIS for extractive industries that obtain, or process for sale or reuse, more than 30,000 m³ of material per year. Another applicable threshold is provided in Clause 19(b) which sets a limit of 2 ha to the disturbed surface area.

The proposal exceeds the thresholds in Clauses 19(a) and 19(b); hence this document is prepared as the first and foremost step in addressing the Designated Development requirements. The SEARs obtained in the process will inform and guide the preparation of an Environmental Impact Statement.

4.2.2 PROTECTION OF THE ENVIRONMENT OPERATIONS ACT

The Protection of the Environment Operations Act 1997 (POEO Act) is the key piece of environment protection legislation administered by the EPA. The Act aims to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development.

Comment:

Land based extractive activity involving extraction, processing, or storage of more than 30,000 tonnes of materials per annum is considered as a scheduled activity in Schedule 1, Clause 19 of POEO Act which requires an EPA license.

The proposed operation will require licensing under the POEO Act.

4.2.3 THREATENED SPECIES CONSERVATION ACT

The NSW Threatened Species Conservation Act 1995 (TSC Act) provides for the protection and management of threatened species, populations and ecological communities listed under the Schedules 1, 1A and 2 of the Act.

The purpose of the TSC Act is to:

- Conserve biological diversity and promote ecologically sustainable development;
- Prevent the extinction and promote the recovery of threatened species, populations and ecological communities;
- Protect the critical habitat of those species, populations and ecological communities that are endangered;
- Eliminate or manage certain processes that threaten the survival or evolutionary development of threatened species, populations and ecological communities;
- Ensure that the impact of any action affecting threatened species, populations and ecological communities is properly assessed; and
- Encourage the conservation of threatened species, populations and ecological communities through cooperative management.

Comment:

Neither the site condition nor its sparse vegetation appears to be conducive to the existence of any threatened species as listed under the TSC Act. A flora and fauna investigation will be undertaken with due consideration to the impact on threatened species, populations and ecological communities to address this legislation and any mitigating measures, if required, will be incorporated in the EIS.

4.3 STRATEGIC PLANNING DOCUMENT

4.3.1 THE HUNTER REGIONAL PLAN 2036

The Hunter Regional Plan 2036 provides the strategy for the future of the Hunter region and calls all levels of government, the private sector and the community to work together to deliver the vision for the Hunter region. The Plan reflects upon the productive value of the Upper Hunter both in terms of agricultural and mining extractive industry. The Plan highlights the need for both forms of industry and importantly the need to provide greater certainty in respect to land use.

Comment:

The proposed development is an extension of the current extractive operation that exists on the site. In proposing to rework the existing spoil along with new areas the operation will continue to operate in an area that is associated with extractive industry and that does not presently represent a workable/viable agricultural activity.

4.3.2 UPPER HUNTER STRATEGIC REGIONAL LAND USE PLAN (2012)

The Upper Hunter Strategic Regional Land Use Plan (UHSRLUP) puts in place a framework to enable the protection of valuable agricultural land while facilitating the sustainable management of our natural resources. The Upper Hunter region faces particular challenges to minimise land use conflicts arising from the rapid growth of coal mining activities and the potential impact on equine and viticulture operations.

Chapter 3 of the UHSRLUP specifically addresses this conflict issue. With a strong focus on the protection of strategic agricultural land, and the water resources it relies on, the chapter also reflects on the need to enhanced future opportunities for sustainable mining.

Comment:

The existing site is highlighted as a key mineral resource within the UHSRLUP, as shown in **Figure 6**.

As noted previously the operation will continue to operate in an area that is associated with extractive industry and that does not presently represent a workable/viable agricultural activity.

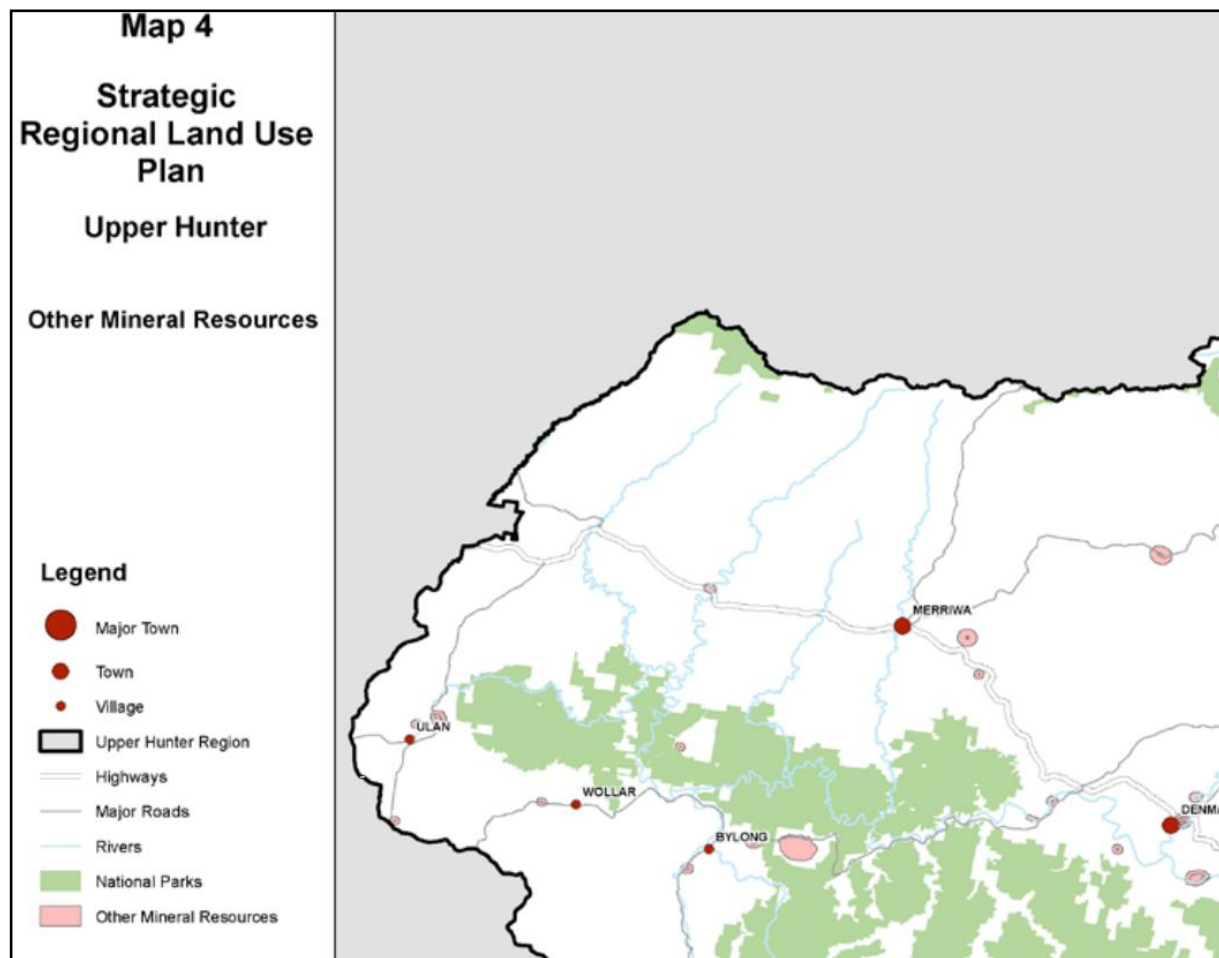


Figure 6: Strategic Regional Land Use Plan

Source: UHSRLUP 2012

4.4 ENVIRONMENTAL PLANNING INSTRUMENTS

4.4.1 STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

The State and Regional Development SEPP sets out development that is considered to be of State Significant Development (SSD) due to its size, economic value or potential impacts that a development may have. Schedule 1 of the SEPP identifies classes of development which are SSD. Each class includes thresholds, such as capital investment value or some other quantifiable criteria or location requirement.

Comment:

Under this legislation, extractive industry that produces more than 500,000 tonnes of material per year or which extracts from a total reserve of 5 million tonnes, is considered as a State Significant Development.

The proposed development is envisaged to extract up to 500,000 tonnes of materials per year for 25 years. This will involve extraction from a resource base exceeding 5 million tonnes and hence it is considered as a State Significant Development.

4.4.2 STATE ENVIRONMENTAL PLANNING POLICY (MINING, PETROLEUM PRODUCTION AND EXTRACTIVE INDUSTRIES) 2007

This SEPP recognises the importance of mining and extractive industries to New South Wales and provides for the orderly and economic use of land for such purposes. It seeks to establish planning controls to encourage ecologically sustainable development through the environmental assessment, and sustainable management of the development of extractive industries.

Comment:

Pursuant to Clause 7(3) of this policy, extractive industries are permissible with consent on land where developments for the purposes of agriculture or industry may be undertaken with or without consent. The RU1 zoning of the site complies with these requirements and the future Development Application (DA) must address all matters for consideration as provided in Part 3 of this SEPP.

4.4.3 MUSWELLBROOK LOCAL ENVIRONMENTAL PLAN 2009

Muswellbrook Local Environmental Plan 2009 is the principal planning document relating to the Muswellbrook Local Government Area. Under this plan the subject site is zoned RU1 Primary Production.

Comment:

The site is zoned RU1 Primary Production where extractive industries are permissible with consent (refer to **Figure 7**).

The proposal will be required to consider, and address, all the requirements of the Muswellbrook Local Environmental Plan 2009 as they apply to the development.

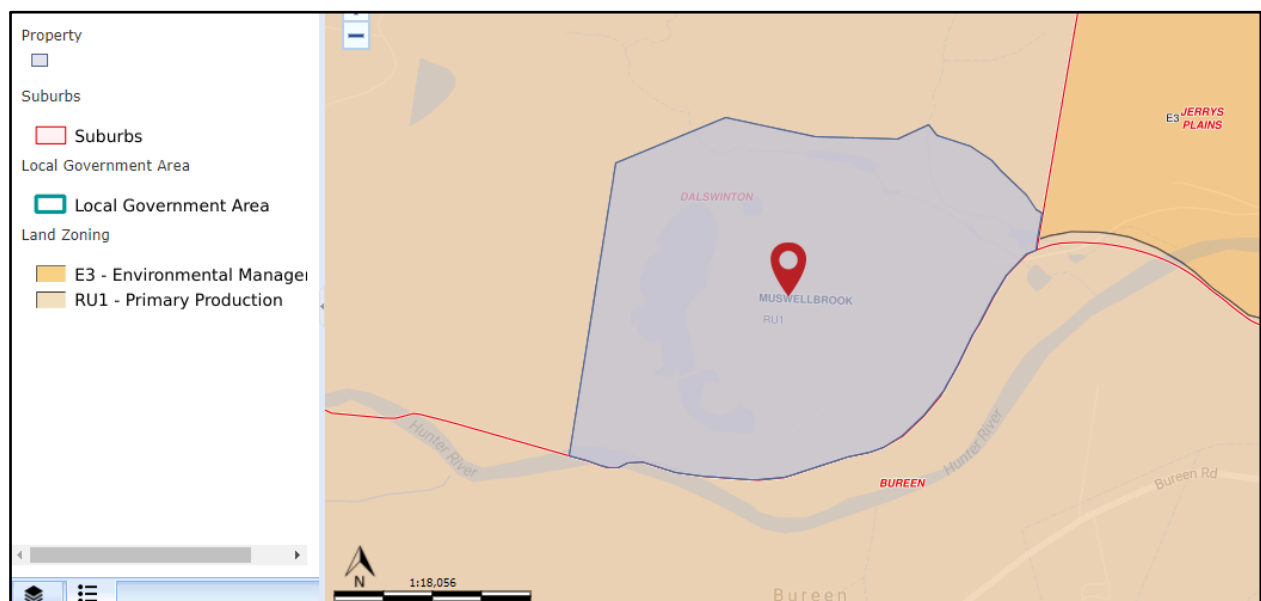


Figure 7: Zoning map

Source: DoPE

5.0 PRELIMINARY ENVIRONMENTAL RISK ANALYSIS

A Preliminary Environmental Risk Analysis (PERA) has been undertaken to assist in the identification of key issues that the subsequent Assessment is likely to need to consider or has potential to impact on the subject site or the surrounding area.

The analysis has been undertaken having regard to the proposal and environmental aspects of the site. This has been undertaken as a desktop exercise focusing on historic studies, relevant legislative review and the preliminary constraints analysis.

The PEA will form the basis of the subsequent Environmental Impact Statement. It is considered that the following issues will need to be considered:

- Stakeholder Consultation;
- Waste Management;
- Air Quality and Odour;
- Stormwater, Soil and Water;
- Flooding;
- Flora and Fauna;
- Transport and Access;
- Noise and Vibration; and
- Hazards and Dangerous Goods.

5.1 STAKEHOLDER CONSULTATION

The proponent proposes to undertake stakeholder and community consultation and adopt consultation processes in accordance with the SEARs issued in preparation of the EIS.

Based on the PEA it is envisaged that the proponent will need to consult with the following stakeholders:

- Environment Protection Authority;
- Roads and Maritime Services;
- Office of Environment and Heritage;
- Muswellbrook Shire Council; and
- Surrounding landowners and occupiers that may be impacted by the proposal.

5.2 AIR QUALITY

The majority of the extraction works will involve wet materials which minimise the potential for dust generation. The product stockpiles of coarse sand and aggregates are

not considered to be major sources of dust. Dust suppression methods, such as water carts, will be used during the stripping of top soil, overburden materials, and during vehicular movements within the site or along the haul road, as required.

Air quality is not likely to be a concern as the quarry has been operating without any complaints. The proposed operations do not involve any additional operations that cause any emissions. Dust management measures to reduce and limit the emissions from the quarry will be included in the EIS.

5.3 SOIL AND WATER

The quarry will operate as a closed system with regard to water management. Rosebrook has access to 20 ML of groundwater under the current Water License. The water from the extraction area will be used for processing of materials and dust management on site. All surface runoff from the quarry site will be diverted back into the extraction pond.

The depression along the northern boundary of the site will act as a diversion channel and prevent clean water from entering the quarry site.

A minor localised drawdown effect on groundwater could be anticipated from the proposed extraction; however this is not likely to be an issue to the high recharge rate from the Hunter River.

The EIS will provide an assessment of the water requirements and the proposed management systems with due regard to relevant water legislations.

5.4 FLOODING

From the available information, the extraction site does not appear to be flood affected.

5.5 FLORA AND FAUNA

As noted previously, the subject site is essentially devoid of any vegetation. While likely occurrence of species nominated under both the EPBC Act and TSC Act is noted on the site, it is not considered that the subject site would positively contribute to the conservation of the listed species. A flora and fauna assessment will be undertaken to confirm this.

5.6 TRAFFIC AND TRANSPORT

The site is accessed via a private haul road off the Golden Highway. The intersection at this access point was upgraded to RMS's requirements in 2010.

On average, 20 trucks leave the site daily in the current operations. The increase in annual production from 150,000 to 500,000 tonnes will generate additional truck movements from the site. The impact of the truck movements will be offset by the larger trucks (A - Doubles with a capacity of 50t) for the operations.

A traffic assessment will be undertaken to identify the impact of the additional traffic, and the larger trucks, on the traffic flows on the Golden Highway as well as the level of service of the intersection.

5.7 NOISE AND VIBRATION

The dwellings on Bureen Road are located as close as 600 - 700 m (1km from the extraction area) of the site and it is important that their amenity is not affected by the operating hours of the quarry. A report will therefore be produced as part of the EIS to consider the existing background noise levels and assess the proposal against the relevant noise/vibration criteria for the site, in consultation with relevant authorities/stakeholders.

The recommendation of the report will form part of the environmental management measures to ensure the amenity of surrounding uses.

5.8 WASTE MANAGEMENT

The overburden and unsaleable materials will be returned to the pits as progressive rehabilitation occurs on the site, therefore there will be no waste generated from the extraction area.

The general waste generated from the office building will be disposed of offsite through private waste collection services.

5.9 BUSHFIRE

The site is not considered to be associated with any bushfire risks.

5.10 VISUAL AMENITY

The quarry site is not visible from the Golden Highway. An existing bund to the south of the processing area and the vegetation along the Hunter River provide a visual barrier to the dwellings along Bureen Road. The proposed development will retain this visual bund, hence the site will not be prominently visible to private receptors and/or public vantage points.

A Visual Assessment will be completed to demonstrate the visual impact of the proposal upon private receptors and/or public vantage points as identified through consultation with Council.

5.11 HERITAGE (INDIGENOUS AND NON-INDIGENOUS)

The site has an extensive history of industrial use. There are no known, or listed, items of non-Indigenous heritage located on the subject site. It is considered that this does not require additional assessment.

A search of the Aboriginal Heritage Information Management System (AHIMS) did not reveal any previously recorded sites, or places, on the development site. Due to the

site's location adjoining the Hunter River it is considered that there is the potential for items or artefacts of Indigenous heritage. As such an Aboriginal Cultural Heritage Assessment will be undertaken as part of the EIS.

6.0 CONCLUSION

The SEARs application and associated preliminary environmental assessment has been prepared having regard to the available information and understanding of the conditions of the site.

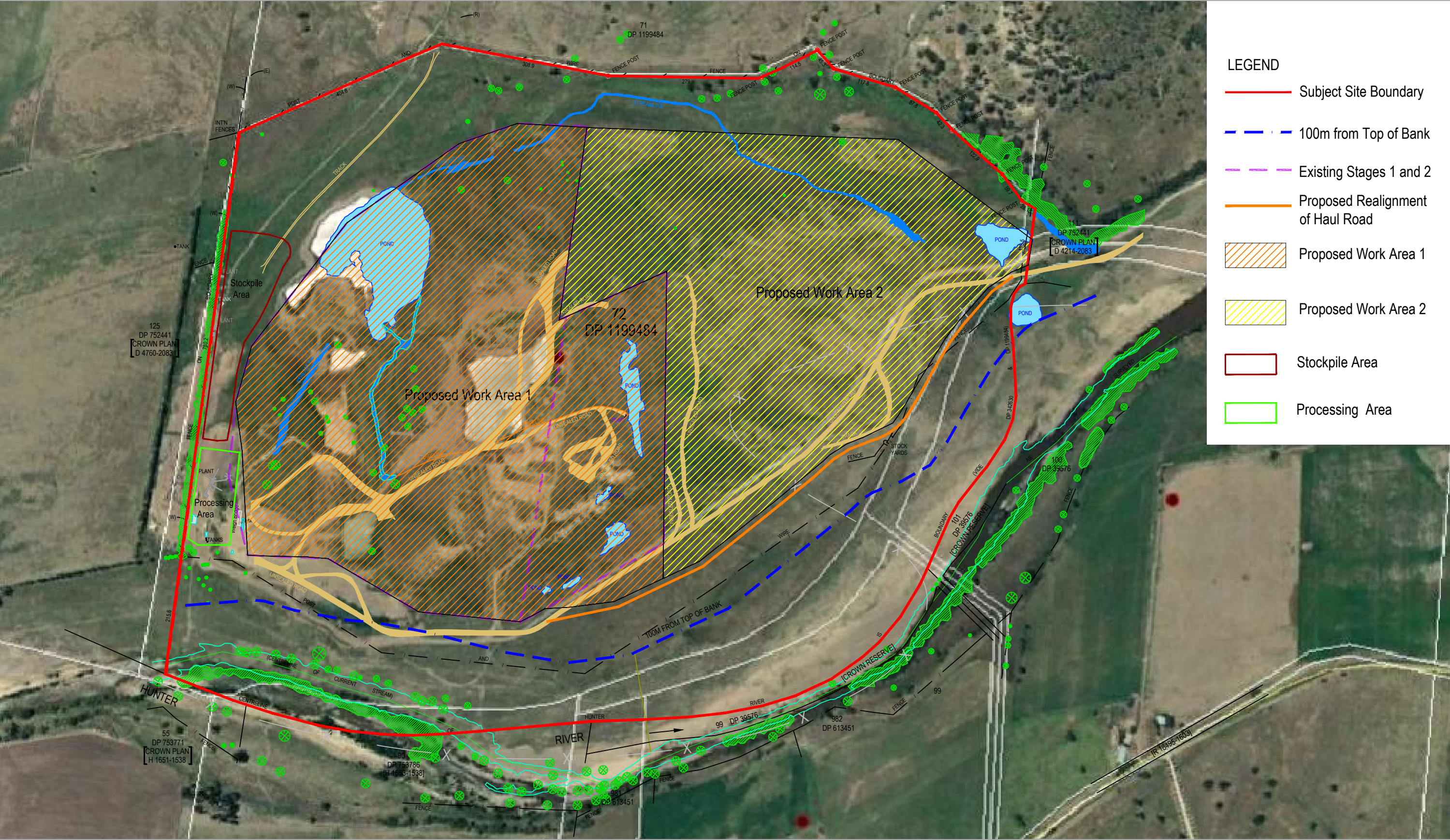
Further investigations will be undertaken in the preparation of the EIS in response to the comments received from the Department of Planning and Environment and the issued SEARs.

APPENDIX A

PROPOSED EXPANSION OF DALSWINTON QUARRY

APPENDIX A

PROPOSED EXPANSION OF DALSWINTON QUARRY



- LEGEND
- Subject Site Boundary
 - 100m from Top of Bank
 - Existing Stages 1 and 2
 - Proposed Realignment of Haul Road
 - Proposed Work Area 1
 - Proposed Work Area 2
 - Stockpile Area
 - Processing Area