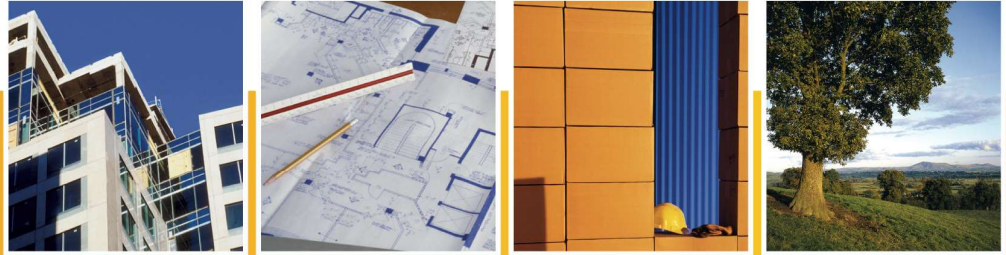


Environmental Impact Statement



For
Dalswinton Quarry
Lot 72 DP 1199484
511 Dalswinton Road, Dalswinton

Prepared for
Rosebrook Sand and Gravel

November 2021
Report 19/047 REV E



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Project Manager:**Date: 24 November 2021***This document is for discussion purposes only, unless signed and dated by the person identified.***DISCLAIMER:**

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ENVIRONMENTAL IMPACT STATEMENT CERTIFICATION

For submission of an Environmental Impact Statement (EIS) under Part 4 of the *NSW Environmental Planning and Assessment Act 1979*.

EIS PREPARED BY

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PROPONENT

Rosebrook Sand and Gravel Pty Ltd

PROPOSED DEVELOPMENT

Expansion of Dalswinton Quarry and its ongoing operations until 2047. A detailed description of the proposed development is included in Section 2 of this document.

LAND TO BE DEVELOPED

Lot 72 DP 1199484, 511 Dalswinton Road, Dalswinton.

CERTIFICATION

In relation to this EIS (18.12.2020) we certify that:

- *It has been prepared in accordance with Schedule 2, Clauses 6 and 7 of the NSW Environmental Planning and Assessment Regulation 2000.*
- *It has been prepared with all available information that is relevant to the environmental assessment of the development to which this EIS relates; and*
- *The information contained in this EIS is neither false nor misleading.*

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GLOSSARY AND ABBREVIATION

Definition	Term
NSW Department of Planning, Industry and Environment	DPIE
Rosebrook Sand and Gravel Pty Ltd	Rosebrook
<i>Environmental Planning and Assessment Act 1979</i>	EP & A Act
Environmental Planning and Assessment Act Regulations 2000	the Regulation
Local Environmental Plan	LEP
Ecologically Sustainable Development	ESD
Water Sharing Plan	WSP
Biodiversity Assessment Method	BAM
HDB Town Planning & Design Pty Ltd	HDB
Development Control Plan	DCP
Development Application	DA
Environmental Impact Statement	EIS
Planning Secretary's Environmental Assessment requirements	SEARs
Section 96 Modification (now Section 4.55 modification)	S96 modifications
State Environmental Planning Policy	SEPP
Office of Environment and Heritage	OEH
Biodiversity Assessment report	BDAR
Environmental Protection Agency	EPA
Rural Fire Service	RFS
Transport for New South Wales	TfNSW
Department of Planning, Industry and Environment – Division of Resources and Geosciences	DPIE DRG
Hunter New England Health	HNEH
Aboriginal Heritage Information Management System	AHIMS
<i>Environment Protection and Biodiversity Conservation Act 1999</i>	EPBC Act
National Environment Significance	NES
State Significant Development	SSD
<i>Protection of the Environment Operational Act 1997</i>	POEO Act
<i>Water Management Act 2000</i>	WMA 2000
Upper Hunter Strategic Regional Land Use Plan 2012	UHSRLUP
Land Use Conflict Risk Assessment	LUCRA
Aboriginal Heritage Impact Permit	AHIP

1.0 EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) has been prepared by HDB Town Planning and Design to support a Development Application (DA) for the expansion of Dalswinton Quarry and its ongoing operations beyond the current consent period.

Dalswinton Quarry is situated on Lot 72 DP1199484 and operates under DA 410/1995 which allows sand and gravel extraction on the site until 13th November 2022. The owners, Rosebrook Sand and Gravel Pty Ltd (Rosebrook), are seeking to vary the footprint and continue the extraction operation for an additional twenty-five years post 2022, therefore until 13 November 2047.

At present the quarrying activities are confined to the western part of the site and extraction occurs at an average production rate of 80,000 tonnes per annum. Sand and gravel extracted from the site are marketed in Sydney and Hunter Valley Regions for a range of uses including road base, stemming material, aggregates for concrete mix and decorative gravel for landscaping.

1.1 THE PROPOSAL

The proposed development will occur across 89 hectares of the site including expansion towards the east as well as reworking of the previously extracted areas to recover the discarded fines and larger aggregates.

Materials will be produced on demand at an average rate of 250,000 tonnes per year. During peak periods, the production rate may increase to a maximum of 500,000 tonnes per year, based on which it is estimated to extract up to 12.5 million tonnes of material over an expected life of twenty-five years.

The proposed quarry expansion will involve up to 5 hectares of excavation area at any given time for improved workability and safety of the operations. Approximately 60,000 tonnes of stockpiled materials of different grades/sizes will be stored on site to keep up with the higher production rate and market demand.

No other changes are anticipated for the extended operations and the proposal will adopt the existing method of operations, storage, and transfer of materials, the details of which are provided later in this report.

The proponent proposes progressive rehabilitation to minimise the extent of disturbed area at any given time. Extraction pits will be backfilled, reshaped, top soiled and sown with pasture species for grazing purposes at the end of the operations.

Figure 1 shows the context and location of Dalswinton Quarry.

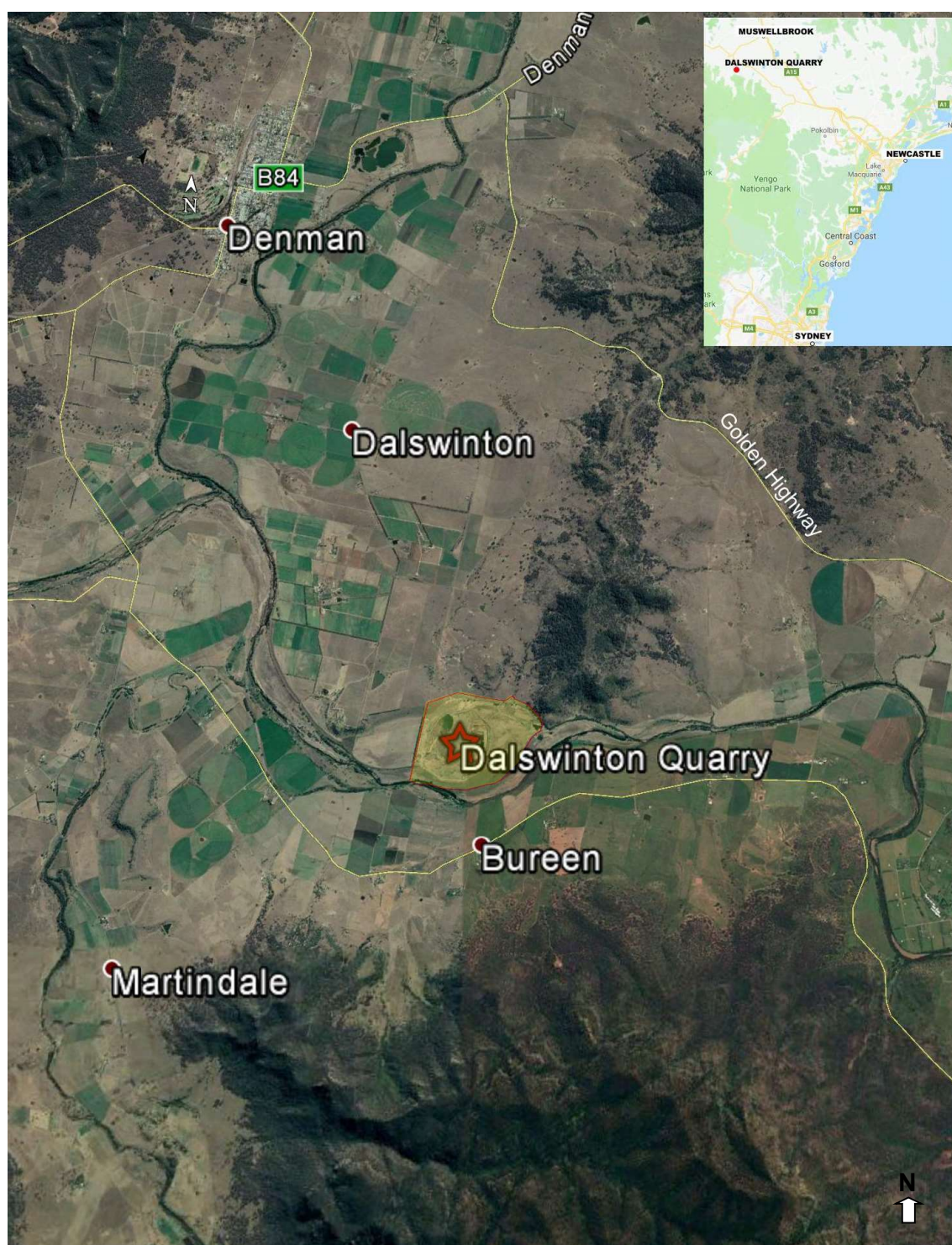


Figure 1: Site Context

Source: Google Earth, accessed December 2019

1.2 OBJECTIVES OF THE PROPOSAL

The objectives of the proposal are to:

- Ensure ongoing supply of aggregates and decorative gravel to support infrastructure development, construction, landscaping, and mining activities until in-situ reserves are depleted.
- Ensure extraction operations can continue with minimal impacts to the environment and surrounding uses.
- Ensure compliance of the development with all relevant legislations and guidelines to minimise impacts.
- Progressively rehabilitate the site to return it to grazing land at the closure of extraction activities.

1.3 SITE SELECTION

The proposal seeks to continue the supply of sand and gravel to mining, landscaping, and construction sectors. Dalswinton Quarry is a low impact operation with plenty of reserves to last an extended timeframe and as such there are no real benefits in considering alternative sites for a new quarry.

Sand and gravel extraction business in our country are challenged by high capital outlay and moderate returns, therefore making use of the established quarry infrastructure for ongoing service is considered as the most pragmatic approach to meeting the demand for aggregates. Discarding an operational quarry for a new location is not considered as a viable way of achieving the project objective. Due to these reasons, and to eliminate the additional impacts from starting up elsewhere, no other sites were considered for the proposal.

1.4 CONSIDERATION OF ALTERNATIVES AND JUSTIFICATION OF THE PROPOSAL

The site has long been engaged in extractive operations and as such has limited capability for agriculture or other alternative uses. Extracting the available geological resources in an environmentally responsible manner to support other economies is therefore considered as the most productive and economic use of the land.

Sand and gravel are vital raw materials for the Australian construction industry. Besides their use in concrete mixes, crushed aggregates are an integral component of asphalt surfaces, road base and sub- base and have a wide range of applications in infrastructure development and maintenance. With the current construction of the Scone Bypass, and the proposed Singleton Bypass and Muswellbrook Bypass, the demand for aggregates in the region is expected to increase substantially over the coming years.

Dalswinton Quarry is one of the few producers of red decorative gravel used in landscaping which are only found on sites along the Goulburn River or those located downstream of confluence of the Goulburn and Hunter Rivers.

Due to the site's easy access to Singleton, Muswellbrook and Upper Hunter Areas, the coal mines in the region source crushed gravel from Dalswinton Quarry for use as stemming materials in blasting holes.

Dalswinton Quarry is located on a rural site surrounded by cropped areas, grazing lands and sparsely distributed rural dwellings. The quarry has co-existed with these uses for the past 30 years. Given this scenario of a low impact operation on a site with well-established infrastructure and abundant geological resources, continuing the operations within the site boundaries is considered as the best way of meeting the demand for aggregates.

Closing down of operations at the end of the current consent period will leave significant reserves of un-extracted materials on a site that has stood the test of time in regard to environmentally sustainable operations. It may also slowdown the supply of materials to the mining, construction and landscaping industries creating undue pressures on other existing quarries and hence undesirable impacts.

Due to the potentially offensive nature of mining and transfer facilities, air quality modelling and noise assessments were undertaken to identify any potential adverse impacts on neighbouring sensitive land uses, and suggest amelioration works, should they be needed. Other specialist studies including traffic and transport studies, flood studies, biodiversity impact studies, Aboriginal Archaeological studies, groundwater impact assessments and stormwater assessments were also undertaken. In all instances the site was assessed as being able to operate with minimal impacts and therefore is considered suitable for the purpose.

The EIS has been prepared in accordance with the requirements of *Environmental Planning and Assessment Act 1979* (EP&A Act) and EP&A Regulations with due regard to the advice contained in the SEARs (Secretary's Environmental Assessment Requirements), all issues have been identified and any mitigation measures adequately incorporated to reduce any detrimental impacts.

2.0 INTRODUCTION

2.1 BACKGROUND

Dalswinton Quarry operates on Lot 72 DP1199484 under DA 410/1995 which permits sand and gravel extraction on the site until 13 November 2022. The owners, Rosebrook Sand and Gravel Pty Ltd (Rosebrook), are seeking to vary the footprint of the operation and continue the extraction period for an additional twenty-five years post 2022, therefore, until 13 November 2047.

At present the quarrying activities are confined to the western part of the site and extraction has occurred at an average production rate of 80,000 tonnes per annum. Sand and gravel extracted from the site is marketed in Sydney and Hunter Valley Regions for a range of uses including road base, stemming material, aggregates for concrete mix and decorative gravel for landscaping.

The extraction of material has not occurred at the previously predicted rate and previous methods and markets left a high proportion of usable material behind. The resource has therefore not been exhausted and a continuation of the current extraction is required to recover this valuable resource.

The current owner wishes to continue the existing operation that has been undertaken on the site since prior to 1995.

Figure 1 above shows the context and location of Dalswinton Quarry.

2.2 OBJECTIVES OF THE PROPOSAL

The objectives of the proposal are to:

- Ensure the ongoing supply of aggregates and decorative gravel to support infrastructure development, construction, landscaping, and mining activities until in-situ reserves are depleted.
- Ensure extraction operations can continue with minimal impacts to the environment and surrounding uses.
- Ensure compliance of the development with all relevant legislations and guidelines to minimise impacts.
- Progressively rehabilitate the site to return the site to grazing land at the closure of extraction activities.

2.3 PROJECT HISTORY

Dalswinton Quarry operates on the broad terraces of a cut-off meander of the Hunter River. Quarrying on the site dates back to the late 1980's, when extraction and processing operations occurred in the south-eastern part of the site. Subsequently, the operations were relocated to the upper terrace in the western part of the site under the current consent, DA 410/1994. This approval was issued on 13 November 1995, to extract approximately 1.87 million tonnes over 23 years at an average rate of 80,000 tonnes per annum.

The extraction area involved two stages, and three different plant sites were identified to facilitate processing closer to the excavation area as the footprint of extraction progressed through these stages.

Through subsequent s96 modifications in 2001, 2006, 2009, 2014 and 2019, the extraction areas were re-aligned, and the life of the quarry was extended to 13 November 2022.

The approved hours of operation, as amended, are:

- Monday to Friday - 5:00 am to 12:00 am.
- Saturday - 5:00 am to 1:30 pm.
- No quarrying to be undertaken on Sundays.

The consent limits the excavation area to 2 hectares at any given time and the stockpile quantities are restricted to 30,000 tonnes with a maximum height of 5 metres.

Dalswinton Quarry has changed hands several times before its ownership was taken over by *Rosebrook Sand and Gravel Pty Ltd* in 2010. This has resulted in varying levels of production and intermittent shutdowns since the commencement of operations. Past operations targeted only the 10mm aggregates and the rest of the excavated materials were used for backfilling the extraction void. Due to these reasons, the forecast tonnages have not been reached and significant reserves of materials remain in the currently approved quarry site and the undisturbed area to the east. With the current market demand for fines and aggregates larger than 10mm, there is the opportunity to rework the older areas to recover the previously discarded materials. Access to the site is via a private access road to the Golden Highway via an approved intersection.

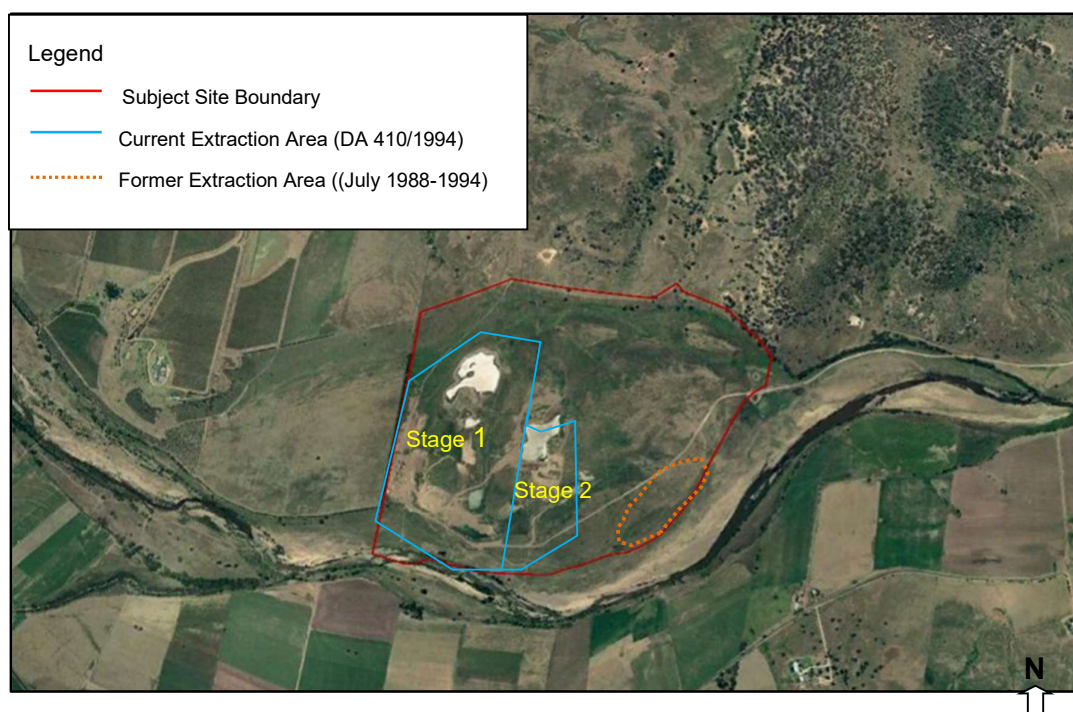


Figure 2: History of site operations

Source: Google maps

2.4 PLANNING PATHWAY

The proposal sets a maximum production rate of 500,000 tonnes per year to cater for the occasional peak demand periods generated by the mining and construction sectors. This exceeds the thresholds for State Significant Developments set forth in Schedule 1, clause 7 of State Environmental Planning Policy (State and Regional Development) 2011, as below:

“Schedule 1 State significant development—general

Clause 7 Extractive Industries

- (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.”*

At this proposed production rate, the development will exceed the threshold of 5 million tonnes in clause 7(1)b and hence is classified as a State Significant Development under SEPP 2011.

Clause 4.12(8) of the EP&A Act requires all Development Applications for State Significant Development to be accompanied by an Environmental Impact Statement (EIS) in a form prescribed in the Regulations. Consultation with other State Agencies, stakeholders and Council is also a requirement for the preparation of the EIS. Initial consultation with Department of Planning, Industry and Environment (DPIE) was undertaken via a SEARs (Secretary’s Environmental Assessment Requirements) application and their requirements have been addressed in this EIS.

The SEARs for the project were first issued by the DPIE on 2 March 2018 and was subsequently amended on 14 August 2018 to delete the requirement for a Community Consultative Committee. A copy of the revised SEARs is attached in **Appendix A**.

As the proposal related to an existing quarry, it was necessary to undertake further consultation with the State Agencies to clarify and refine the scope of works for those components where the proposal could rely on the previous investigative studies or those areas where the expansion would affect minimal changes.

2.5 SEARs REQUIREMENTS

Table 1 provides a brief summary of the requirements and the reference to the relevant information in this report.

Item	Details	Section in the EIS
General Requirements	Executive Summary	Section 1.0
	Full description of the development, including:	Section 4.0 <i>Appendices N,</i>

	<ul style="list-style-type: none"> - resource assessment - site layout and extraction plan - production process and activities - waste/overburden management strategy - water management strategy - rehabilitation strategy - likely interactions between the development and any existing or proposed development in the vicinity of the site 	<i>O, Q and S</i>
	Site selection	Section 4.11
	Justification of the development	Section 4.12
	List of approvals and licenses	Section 7.0 <i>Appendix T</i>
	Description of existing environment	Section 3.2
	Mitigation measures	Section 8.0
	Summary of all the proposed environmental management and monitoring measures	Section 6.0
	Consideration of the development against all relevant environmental planning instruments	Section 5.0
	Reasons why the development should be approved having regard to matters for consideration under the EP&A Act including principles of ESD.	Section 9.0
	A signed declaration from the author of the EIS	Page 3
	In addition to the matters set out in Schedule 1 of the Regulation, the development application must be accompanied by a signed report from a suitably qualified expert that includes an accurate estimate of the capital investment value.	<i>Appendix AC</i>
Key Issues	Water –including: <ul style="list-style-type: none"> - site water balance - licensing requirements and approvals - description of measures to ensure that the 	<i>Appendices M, T, U and V</i>

	<p>development can operate in accordance with any relevant WSP</p> <ul style="list-style-type: none"> - assessment of likely flooding impacts - assessment of likely impacts on the quantity and quality of surface water - assessment of likely impacts on the quantity and quality of groundwater - assessment of likely impacts on aquifers, riparian land, water related infrastructure and other water users - detailed description of proposed water management plan including sewage, water monitoring program and other measures to mitigate surface and groundwater impacts 	
	<p>Noise –including:</p> <ul style="list-style-type: none"> - detailed assessment of likely construction and operational and off-site traffic noise impacts - mitigation measures to minimise noise emission - monitoring and management 	<i>Appendix X</i>
	<p>Air Quality –including:</p> <ul style="list-style-type: none"> - detailed assessment of potential construction and operational impacts - an assessment of potential dust and other emissions from the operational activities including transportation of quarry products - reasonable and feasible mitigation measures - monitoring and management 	<i>Appendix Y</i>
	<p>Biodiversity –including:</p> <ul style="list-style-type: none"> - accurate predictions of vegetation to be cleared - detailed assessment of the likely biodiversity impacts using in accordance with BAM - offset strategy 	<i>Appendix H</i>
	<p>Heritage –including:</p> <ul style="list-style-type: none"> - assessment of potential impacts on aboriginal heritage including evidence of consultation with relevant communities/parties - identification of historic heritage in the vicinity of 	<i>Appendix I, J and K</i>

	the development and assessment of likely impacts	
	Traffic & Transport –including: <ul style="list-style-type: none"> - accurate predictions of road traffic generated during construction and operation including types of vehicles used - detailed assessment of potential traffic impacts on the capacity, condition, safety and efficiency of local and State road network - description of measures to mitigate any identified impacts 	<i>Appendix R</i>
	Land Resources –including: <ul style="list-style-type: none"> - assessment of available resources on site - potential impacts on soil and land capability including potential erosion and land contamination - potential impacts on landforms with particular attention to long term geotechnical stability and any new landforms 	<i>Appendix Q</i>
	Waste –including: <ul style="list-style-type: none"> - estimates of quantity and nature of waste streams - waste management and disposal methods 	<i>Appendix V</i>
	Hazards –including: <ul style="list-style-type: none"> - assessment of likely risks to public safety, paying particular attention to bushfire risks and the transport, handling and use of any hazardous or dangerous goods 	Section 6.0
	Visual – including: <ul style="list-style-type: none"> - detailed assessment of the likely visual impacts of the development on private landowners in the vicinity, key vantage points and public domain 	<i>Appendix AA</i>
	Social and economic – including: <ul style="list-style-type: none"> - social impact of the development on local and regional community in accordance with the guidelines for State significant mining, petroleum production and extractive industry development - economic impacts from the development paying attention to significance of the resource, and costs 	<i>Appendix Z</i>

	and benefits of the development	
	Rehabilitation –including: <ul style="list-style-type: none"> - proposed rehabilitation strategy including objectives, methodology and monitoring programs - nominated final land use having regard to any relevant strategic land use plans or policies 	<i>Appendix S</i>
Consultation	Consultation with relevant local, State and Commonwealth Government Authorities, service providers, aboriginal stakeholders, community groups and affected landowners is required during the preparation of the EIS. Any issues raised must be addressed in the EIS.	Section 2.8

Table 1: SEARs Requirements*Source: HDB Town Planning & Design*

2.6 PROPONENT DETAILS

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

Past operations at Dalswinton produced only 10mm aggregates and the rest of the extracted materials were returned to the pits. With the current market demand for fines and larger aggregates, the proponents see the opportunity to re-work the previous extraction areas to recover these resources as well as to expand the operations to the eastern part of the site to maintain a steady supply of sand and gravel for another 25 years to 13 November 2047, and to ensure that the site has been remediated to a suitable standard at the closure of the operations.

The proponents are therefore seeking to continue the existing extraction operations under a new DA, which would include a comprehensive assessment of the impact from the proposed development and environmental management measures to minimise impacts.

2.7 APPLICATION DETAILS

2.7.1 PROPOSED DEVELOPMENT SITE DESCRIPTION

Lot 72 DP 1199484

511 Dalswinton Road, Dalswinton

2.7.2 APPLICANT DETAILS

Rosebrook Sand and Gravel Pty Ltd

ABN 74 002 230 346

2 St Andrews Street

MAITLAND NSW 2320

All correspondence to be addressed to:

HDB Town Planning & Design

PO Box 40

MAITLAND NSW 2320

2.7.3 CONTACT DETAILS

Mathew Egan

HDB Town Planning & Design

PO Box 40

MAITLAND NSW 2320

PH: 02 4933 6682

FX: 02 4933 6683

E: mathew@hdb.com.au

2.7.4 OWNERSHIP DETAILS

Rosebrook Sand and Gravel Pty Ltd

ABN 74 002 230 346

2 St Andrews Street

MAITLAND NSW 2320

Refer *Appendix B*- Title Search

2.8 CONSULTATION

As required by the SEARs, extensive consultation has occurred during the process of drafting this EIS. Letters and documents that have been utilised as part of the consultation process are attached in *Appendices C and D*.

2.8.1 GOVERNMENT AGENCIES

Agency	Date received	Issues / Comments
Email from Crown Lands	8/11/2018	Haulage Road bisects Crown Land, being Lot 101 DP 39576, therefore requires lease, licence or easement/right of way.
Email from Crown Lands	23/4/2019	Confirmation that the Haulage Road does not in fact cross Crown Land. Refer to <i>Appendix C</i> .
Email from Office of Environment and Heritage (OEH)	8/1/2020	<p>Advising that OEH had issued SEARs for this project and had no further issues to raise. Their response is attached within <i>Appendix C</i>.</p> <p>The letter advised that there are no project-specific SEARs provided for the SEARs.</p> <p>The advice received was that the project is to be assessed according to the Biodiversity Assessment Method (BAM, dated 25 August 2017). Details of the assessment is attached as <i>Appendix J</i>. A BDAR Waiver Application has been prepared by MJD Environmental and lodged with DPIE for their consideration.</p> <p>In regard to Aboriginal Cultural Heritage, OEH advised that an assessment would be required to meet the current OEH Aboriginal cultural heritage guidelines. An Aboriginal and Archaeological Assessment has been prepared by RPS and is included as <i>Appendix K</i>.</p>
Email from Environment Protection Agency (EPA)	16/1/2020	<p>Advising that EPA had issued SEARs for this project and had no further issues to raise. Their response is attached within <i>Appendix C</i>.</p> <p>The SEARs letter advised of the EPA recommendations for the project and is attached within <i>Appendix C</i>.</p>
Email from NSW RFS	23/01/2020	Noting that the subject land is part mapped bush fire prone, however the NSW RFS has no objection to the proposal providing the EIS addresses section 8.3.6 of Planning for Bush Fire Protection 2019.

		Their response is attached within <i>Appendix C</i> .
Letter from Department of Planning, Industry and Environment – Division of Resources & Geosciences (DPIE DRG)	05/02/2020	Advising that DPIE DRG had issued SEARs for this project and had no further issues to raise. They reiterated the requirements from the SEARs letter, refer to <i>Appendix C</i> .
Letter from Transport for NSW (TfNSW)	11/02/2020	Advising that TfNSW (previously Roads and Maritime Services) had issued SEARs for this project and had no further issues to raise. They reiterated the requirements from the SEARs letter, refer to <i>Appendix C</i> .
Letter from Hunter New England Health District	02/10/2020	Advising that HNEH had issued SEARs for this project and further to this, added the following: <ul style="list-style-type: none"> • Stakeholder Consultation to be community engagement and stakeholder consultation. • EIS to include a human health risk assessment; and • Advice regarding potable water supply and drinking water. They reiterated the requirements from the SEARs letter, refer to <i>Appendix C</i> .

Table 2: Government Agency Consultation Results*Source: HDB Town Planning & Design*

2.8.2 PUBLIC CONSULTATION

On 28 January 2020 Title Searches were completed for surrounding properties to ensure consultation documents were addressed correctly. A map showing the extent of the Title Searches and Receiver Table is included as *Appendix E*, with the Receiver Table also included as *Table 3* below.

Receiver Number	Address	Receiver Number	Address
1	4971 Jerrys Plains Road Denman	18	4483 Jerrys Plains Road Denman
2	4931 Jerrys Plains Road Denman	19	4245 Jerrys Plains Road Denman
3	4883 Jerrys Plains Road Denman	20	4063 Jerrys Plains Road Denman
4	4952 Jerrys Plains Road Denman	21	91 Bureen Road Bureen
5	4954 Jerrys Plains Road Denman	22	159 Bureen Road Bureen
6	4902 Jerrys Plains Road Denman	23	602 Dalswinton Road Dalswinton
7	4372 Jerrys Plains Road Denman	24	1216 Edderton Road Jerrys Plains
8	25 McKellvies Road Dalswinton	25	284 Bureen Road Bureen
9	393 Dalswinton Road Dalswinton	26	1700 Bureen Road Bureen
10	4481 Jerrys Plains Road Denman	27	359 Bureen Road Bureen
11	4479 Jerrys Plains Road Denman	28	478 Bureen Road Bureen
12	420 Dalswinton Road Dalswinton	29	570 Bureen Road Bureen
13	470 Dalswinton Road Dalswinton	30	660 - 701 Bureen Road Bureen
14	463 Dalswinton Road Dalswinton	31	810 Bureen Road Bureen
15	4243 Jerrys Plains Road Denman	32	910 - 914 Bureen Road Bureen
16	3 Bureen Road Martindale	33	974 Bureen Road Bureen
17	530 Dalswinton Road Dalswinton		

Table 3: Surrounding Property Receiver Table*Source: HDB Town Planning & Design*

Letters to adjoining landowners for the proposed development and haul road were issued to the owners on 28 November 2019.

The content of the letter inviting comment on the proposal and a brief outline of the proposal including proposed development site plan. Copies of these documents are included as **Appendix D** of this report.

Prior to this Public Consultation had been sought in November 2018. The results of these consultations are outlined in **Table 4** below.

Public comments	Date received	Issues
Telephone call from neighbour	12/11/2018	The owner of numerous homesteads at Bureen. Truck noise in the early hours of the day and higher noise intensity in winter were of main concerns. Also pointed out that the development should maintain the visual amenity of the area. Additional planting and other measures such as keeping the stockpiles low and using sensible colours to diminish the visual effect of the development were some of his suggestions to maintain the scenic quality of the area.

Table 4: Public Consultation Results*Source: HDB Town Planning & Design*

A drop-in session was held on Tuesday 30 June 2020 in Denman, to engage the community and discuss the proposed expansion and any issues that they were concerned about. The session was advertised through direct mailings to neighbouring properties, on the Denman Community Facebook Page and on the Denman Community Noticeboard. Notification for this drop-in session was also sent to The General Manager of Muswellbrook Shire Council and all the current Councillors via email on 10 June 2020. These consultation documents are included as **Appendix D**.

A total of five people attended the drop-in session, and the results are outlined in **Table 5** below.

Respondent	Issues/Comments
1 – Councillor from Muswellbrook Shire Council	None
2 & 3 – Neighbours to the north of the subject site	Concerned with easement running down western side boundary to the Hunter River and its maintenance. Requested it gets cleaned-up and any equipment or items that may be impeding the access be removed.
4 – Neighbour to east	None
5 – Neighbour to east	Concerned regarding intersection with Golden Highway and the maintenance and upkeep of the Haul Road.

Table 5: Public Drop-in Session Results

Source: HDB Town Planning & Design

3.0 THE LOCATION

3.1 SITE DETAILS

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

Figure 3 shows the location of the subject site.

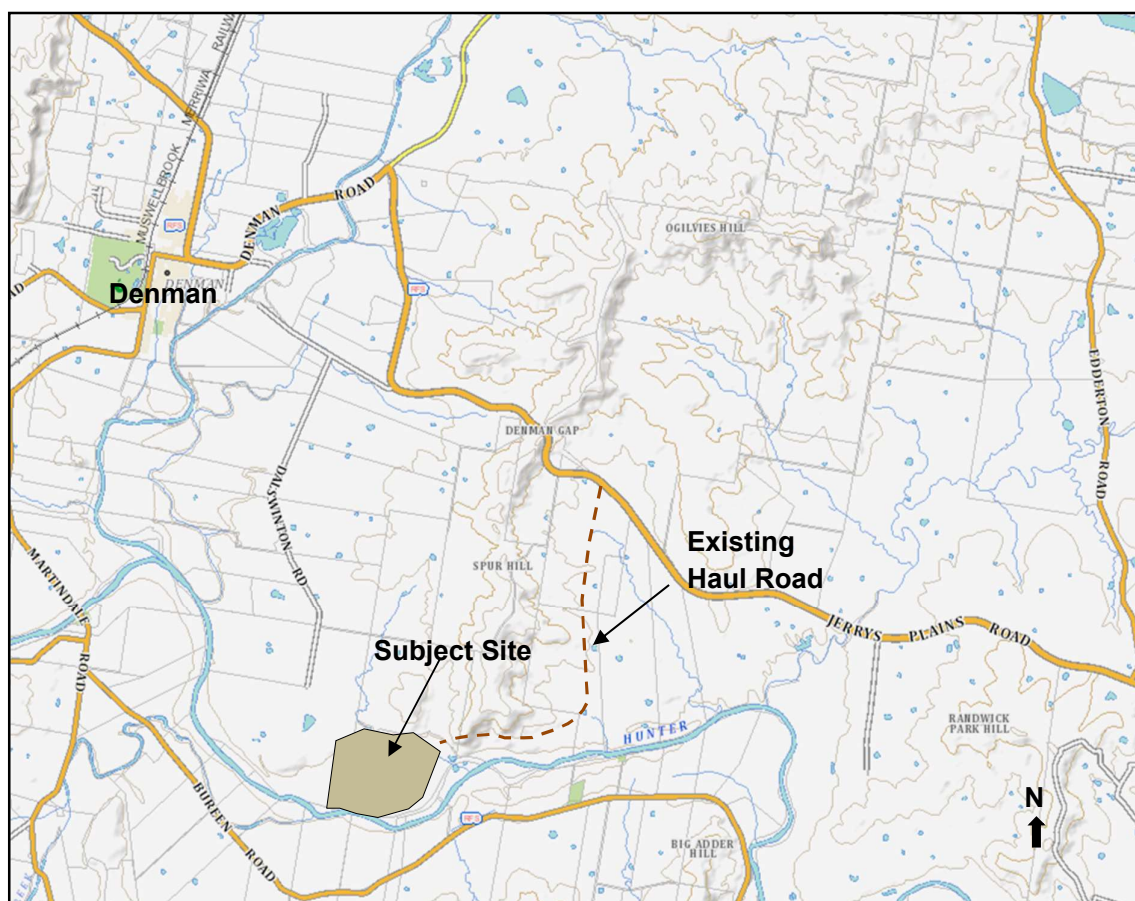


Figure 3: Location Map

Source: Six Maps, accessed November 2017

3.2 EXISTING SITE

The site is an irregular parcel of land along the Hunter River, located 7.5 km to the south-east of Denman. A small-scale quarrying operation to extract 15,000 tonnes of sand and gravel annually was approved in the south-east corner of the site in July 1988. Refer to Deposited Plans included as *Appendix F*.

Following the closure of this quarry, the current approval (DA 410/1994) to extract up to 150,000 tonnes of materials per annum from the western part of the site was obtained in November 1995, reference is made to **Figure 2**. The old quarry area has been rehabilitated and has remained undisturbed since that time.

The existing quarry is located in the western part of the site while the eastern half remains vacant. The Hunter River forms the southern boundary of the property. A 3m wide easement for water supply runs along the western boundary of the site. Refer to **Appendix G** and **Figure 4**.

At the western end of the quarry site is the processing area which contains a screening and crushing plant, and stockpile areas. Other structures within this area include a weighbridge, ATCO offices with staff amenities, a storage shed, a workshop and car parking spaces. Refer to **Figure 5** for details.

The processing area is screened off by an earth bund to the south and a line of trees along the western boundary. Post and wire fencing is provided around the quarry site to prevent cattle entry. **Figures 5, 6, 7 and 8** show details of the existing quarry.

A low levee bank is located parallel to the Hunter River at the southern end of the quarry area to minimise the impact of flood waters and to maintain the stability of the river. Refer to **Figure 5**. Similarly, an earth bank is located at the northern end of the extraction area to divert clean water away from quarry site.

The current extraction area is the last stage of the approved footprint, and the operations are expected to continue to the east under the new DA.

The extracted materials have a range of uses depending on their size and quality, including:

- road base
- stemming materials on the mines
- aggregates for concrete mixes
- decorative gravel for landscaping

There are no residential buildings erected on the site.

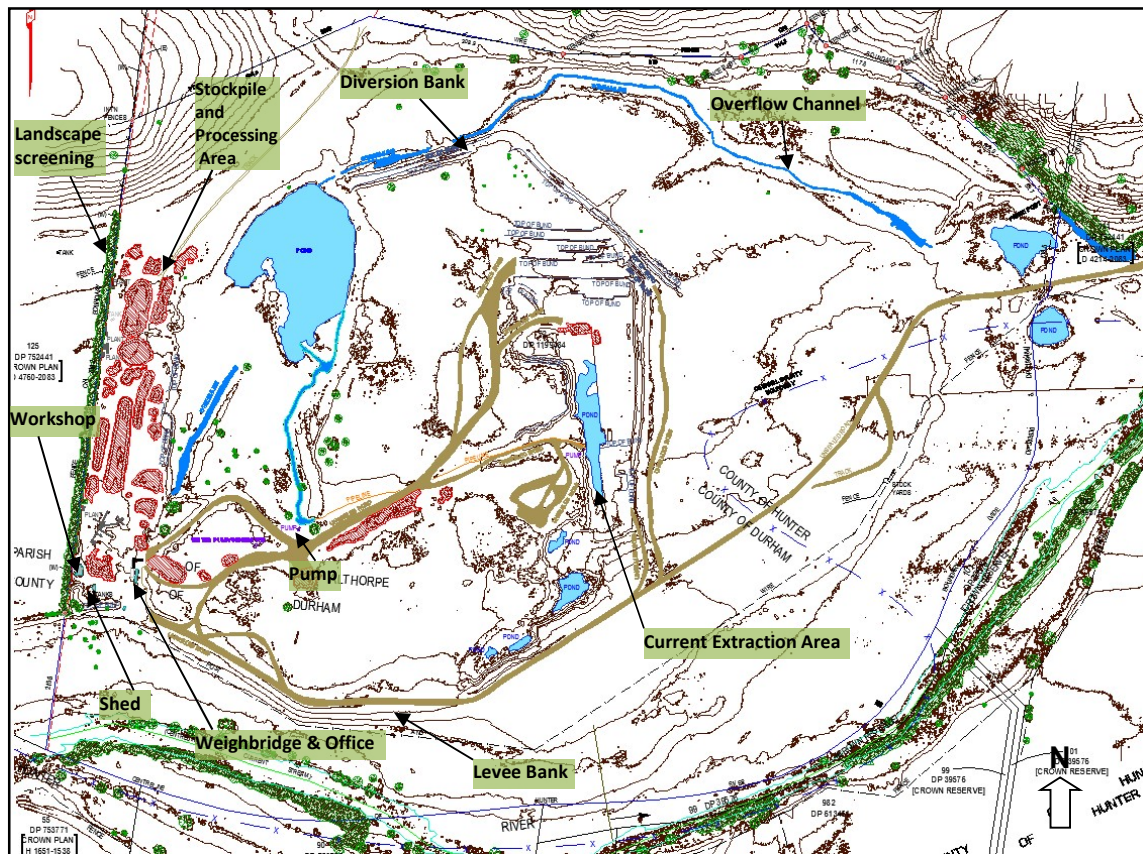


Figure 4: Topographic survey of the site

Source: FYFE



Figure 5: Haul Road leading to the Processing Area

Source: HDB Town Planning and Design



Figure 6: Current Extraction Area

Source: HDB Town Planning and Design



Figure 7: Screening vegetation along the western boundary

Source: HDB Town Planning and Design



Figure 8: Visual bund to the south of the processing area

Source: HDB Town Planning and Design

3.3 ACCESS

Dalswinton Quarry is accessed from the Golden Highway via a private haul road over several privately owned parcels of land. An easement is in place to ensure lawful access to the quarry for the life of its operation. The Deposited Plans confirming the boundaries and access are provided in *Appendix F*.

3.4 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 the Muswellbrook LGA. Surrounding parcels are large rural parcels with limited agricultural activities. The closest dwelling to the quarry is located across the river, approximately 600m from the south-eastern boundary of the site.

3.5 TOPOGRAPHY, VEGETATION, AND HYDROLOGY

The site lies at the bottom of a hill and falls gently towards the Hunter River in a south-easterly direction. The levels drop from 98m AHD at its northern boundary to 92m AHD at the south-eastern boundary (approximately 0.5%). A drainage depression 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 line of trees along the western boundary and the riparian vegetation along the banks of the Hunter River. The topographic survey plan of the site is provided in *Figure 4 and Appendix G*.

The Hunter River forms the southern boundary of the site. A drainage depression running parallel to the northern and eastern boundaries join the river at the downstream end.

A 1.5m levee bank in the southern part of the site assists in minimising the impact of floodwater from the Hunter River and maintaining the current alignment and stability of the river. Another levee at the upper end in the northern part of the site diverts clean water away from the extraction area.

The water management on the site acts as a closed system wherein the water from the extraction pit is pumped into a centrally located collection pond for use in the screening and processing operations. Reference is made to **Figures 9 and 10**. Water generated from these operations drain into a pond (Northern Pond) in the northern part of the quarry site and recirculates back into the central pond. Any water that is not returned through this circuit will infiltrate into the soil, back into the groundwater system. This system maintains steady supply of water for all site operations including dust suppression. During heavy rainfall events, the overflows from the northern pond are managed through a diversion stream in the northern part of the site.

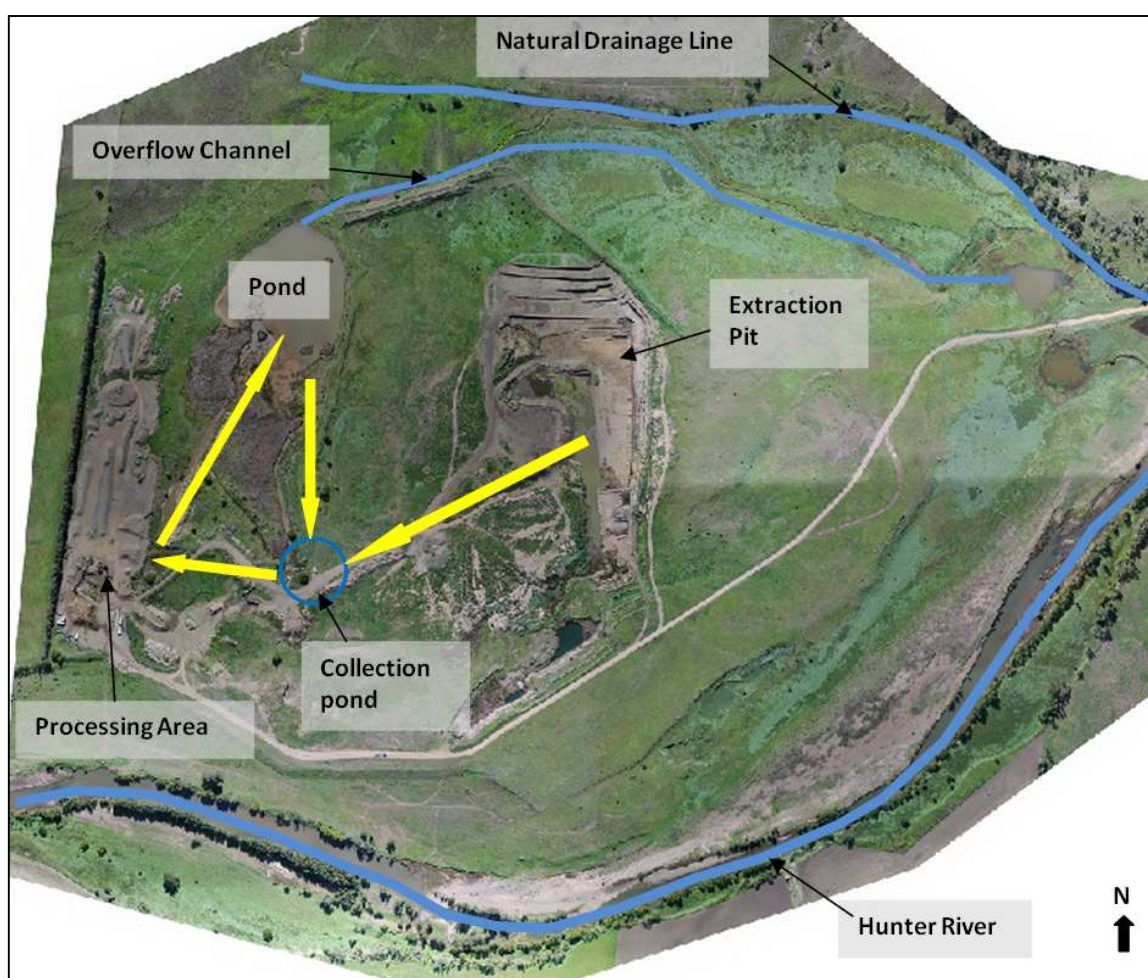


Figure 9: Existing water management on the site

Source: HDB Town Planning and Design



Figure 10: Existing water management on the site

Source: HDB Town Planning and Design

3.6 FLORA AND FAUNA

Decades of active quarrying has resulted in a heavily disturbed environment with sparse vegetation cover, indicating very low biodiversity value on the site. Apart from some scattered trees, the site is generally void of any significant vegetation cover. A line of trees along the western boundary and riparian vegetation along Hunter River are the only noteworthy mature vegetation on the site.

Notwithstanding this, a Biodiversity Assessment has been undertaken by Biosis Pty Ltd to identify any flora and fauna significance associated with the site and the likely impact of the development on the biodiversity values of the site and surroundings, refer to *Appendix H*.



Figure 11: Riparian corridor along Hunter River

Source: HDB Town Planning and Design

3.7 ARCHAEOLOGICAL AND HERITAGE

A preliminary search of the Aboriginal Heritage Information Management System (AHIMS) revealed 3 recorded sites or places within 50m of the development site, refer *Appendix I*.

The site does not contain any items of European Heritage significance. The closest heritage listed item is the Rumbo Bush School located approximately 1.2km to the north-east of the site. However, there is large separation distance between this site and the proposed development site. Details on Rumbo Bush School are found in *Appendix J*.

An Aboriginal Cultural Heritage Assessment Report has been prepared by RPS and is included as *Appendix K* and discussed in Section 6.11 of this report.

3.8 SERVICES TO SITE

The site is serviced by on-site generators, telecommunications, and on-site effluent disposal systems. Drinking water is supplied by a stand-alone Neverfail Water dispenser in the staff room.

It is proposed to connect to the mains power that is available to the site.

Please refer to *Appendix L* for location of existing services and infrastructure.

3.9 BUSHFIRE

Bushfire mapping for the site shows some minor bushfire buffers along the fringe, and some isolated areas within the central part where no mature vegetation is present, refer *Figure 12* below.

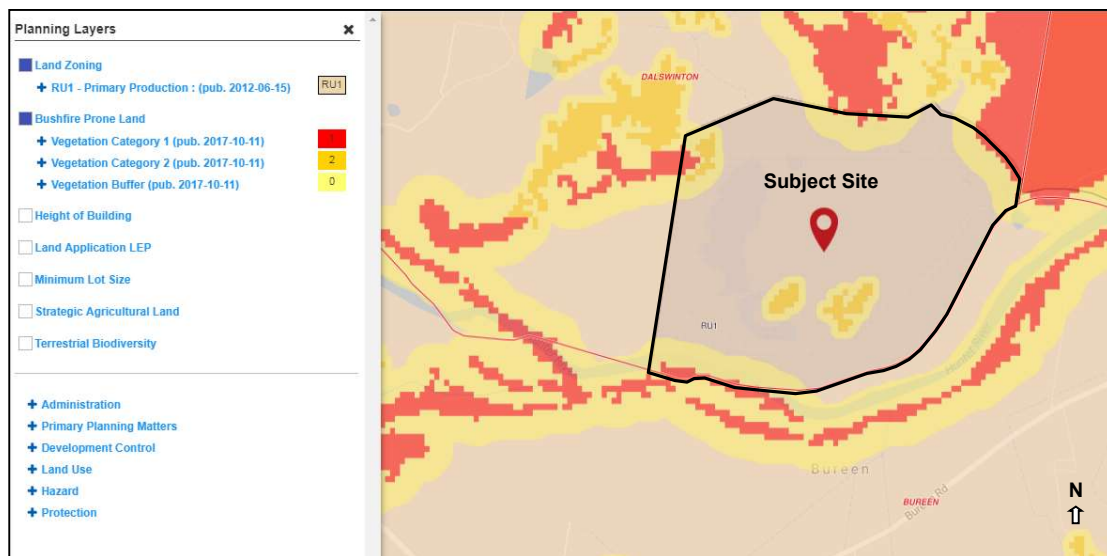


Figure 12: Bushfire mapping

Source: DoPE, accessed September 2020

3.10 FLOODING

The entire site is in a 1% AEP flooding area. A Flood Impact Assessment has been undertaken by Royal HaskoningDHV and is attached as *Appendix M* and discussed further in Section 6.16. This report outlines the:

- Impact of flooding on the site (water quality – among others).
- Predicted flood heights.
- Effect of the quarry infrastructure and stockpiles on flood flow.
- Risk of erosion in the quarry due to flooding.
- Risk of the river diverting its current course should the quarry be subject to flooding and erosion.
- Risk of quarry equipment being washed away and polluting the downstream environment during floods.
- Demonstrates that the current flood extent will not increase to neighbouring properties due to the proposed; and
- Demonstrates that the development will not increase the flood heights either upstream or downstream of the development.

4.0 THE PROPOSAL

4.1 DESCRIPTION OF THE PROPOSAL- QUARRYING OPERATIONS

The proposed development involves extraction of sand and gravel from the eastern part of the site, and material recovery from previously backfilled areas. There will be two working areas within the site, namely Work Area 1 and Work Area 2. Approximately 50ha of land in the currently approved extraction footprint will constitute Work Area 1, and approximately 39ha of unmined land to the east will form Work Area 2 (refer to **Figure 13** and **Appendix N**).

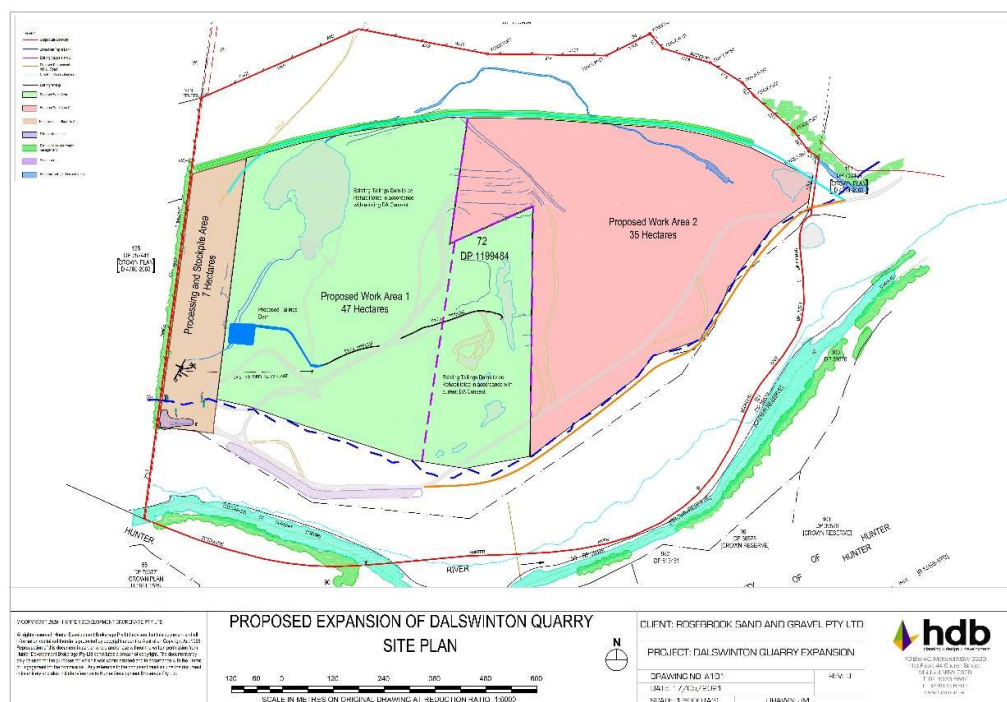


Figure 13: Proposed expansion of Dalswinton Quarry

Source: HDB Town Planning and Design

Work Area 1 will be re-worked to recover fines and larger aggregates that were previously discarded, whilst Work Area 2 will yield a range of aggregate sizes, including fines. Each area will be worked continuously, depending on the product specified by the customers.

The existing water management system within Work Area 1 will be partially rehabilitated to reduce the stagnant tailings dam significantly and will be maintained for the extended life of the operations. It will pump water through tailings drains and existing pipelines in a closed-circuit set-up as shown in **Figure 14** below and **Appendix O**.

A new sand washing treatment plant is to be supplied and installed as an upgrade and improvement to the site. This will include new sump and pump, sand wash system, and stockpile conveyors. Dalswinton Quarry is in the short term, intending to extend and increase to diversification of the mains power to site, allowing for the purchase of 'Green Power' into the future.

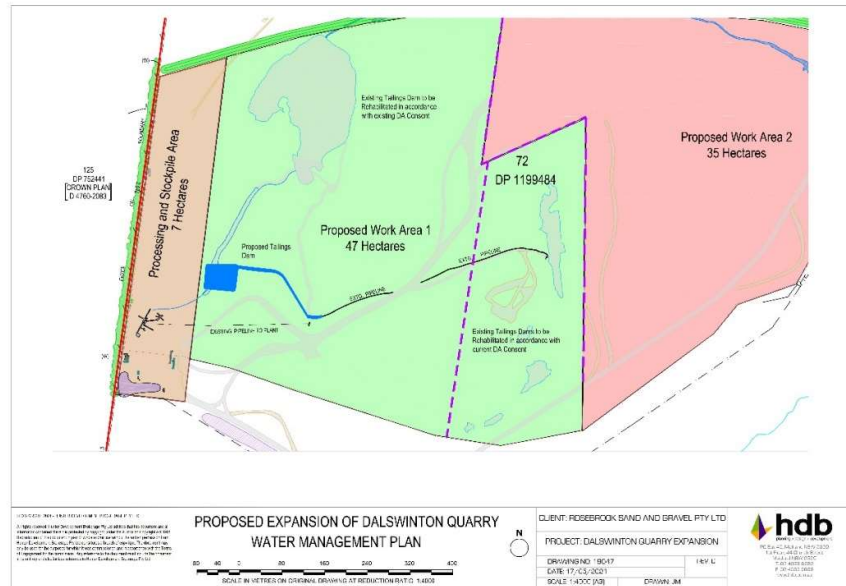


Figure 14: Proposed Water Management Plan

Source: HDB Town Planning and Design

Rehabilitation, as required by the current DA Consent, has begun to regrade the area around the existing ponds shown within the current survey to ensure there is no groundwater left on the subject site and the land is returned to its grazing purposes at the completion of the quarrying operations. For photographs showing the site in its current state refer to **Appendix P**.

As the extraction progresses towards the northern pond, a new pond will be constructed to the immediate south of the existing one as indicated in Section 3.5 and **Figure 9** above for management of stormwater.

The extraction rate will vary depending on the market dynamics. The average production rate is estimated to be 250,000 tonnes/year, although the proposal sets a maximum limit of 500,000 tonnes/year to account for peak demand periods.

4.2 RESERVES AND EXTRACTION LIFE

A Resource Assessment was undertaken by *Fluvial Systems Pty Ltd* to estimate the reserves on site. A copy of this assessment is attached in **Appendix Q** which estimates approximately 14,387,901 tonnes on site. Given varying rates of production (with a maximum of 500,000 tonnes/per annum), the available resources on site are estimated to be available in excess of the proposed 25-year extraction of a maximum of 12,500,000 tonnes.

Although progressive site rehabilitation of the extraction area is proposed, grading and site works to establish the final landform, can only be undertaken after the decommissioning of the infrastructure, plant, and machinery. This will be followed by sowing of pasture species to return the entire land for grazing purposes. The requested duration of 25 years will allow sufficient time for site rehabilitation works to be carried out in a satisfactory manner once the extraction works are completed.

4.3 EXTRACTION AREA

At the commencement of the operations, approximately 3ha of land in the northern part of the Work Area 2 will be excavated, and the overburden material will be used for extending the levee bank in the north and backfilling the currently active extraction pit where the operations are anticipated to be complete by then. An additional 2ha of land in Work Area 1 (to the immediate west of the current extraction area) will be opened for material recovery and overburden materials will be used for backfilling. There may be variation in the area of excavation within the two work areas, however the total area of extraction at any given time will not exceed 5ha.

The existing water management system within Work Area 1 will be partially rehabilitated to reduce the stagnant tailings dam significantly and will be maintained for the extended life of the operations, refer to **Figure 14** above and **Appendix O**. It will pump water through tailings drains and existing pipelines in a closed-circuit set-up as outlined in Section 4.1 above.

The extent of extraction to the north will be defined by the levee bank in this location and the limit to the south is set by a 200m buffer to the bank of the Hunter River.

4.4 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-west part of the site. Screening and crushing to produce a full range of decorative gravel, crushed aggregate, and road base material and other products will occur in this area. The operation will make use of mobile and fixed machinery for crushing and screening, however the fixed machinery will be confined to the boundaries of the processing area.

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 various grades of material in the stockpile area to meet the market demand. The height of the stockpile will be limited to 6m and run parallel to the Hunter 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 within the southern part of the site will be required to allow extraction in the eastern part of the site. A second option for product haulage within the site will be provided by a haul road on the top of the existing earth bank to the north, as shown in the proposed site plan.

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.

The following is a list of the machinery and equipment that will be used on the site:

- 2 x Hydraulic Excavator
- 2 x Mobile processing plant
- 2 x Fixed Screening and Processing Plant
- Water Treatment Plant
- 2 x Dump Trucks

- 1 x Water Cart (40,000L)
- 2 x Loaders

4.5 HOURS OF OPERATION

There will be no changes to the operating hours of the quarry. It will maintain the currently 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.

4.6 STAFFING

It is expected that the development will require no new staff in addition to the eight employees on site at present. The staff levels will be determined by the market dynamics and under no circumstances will it exceed 12 employees, as in the original proposal.

4.7 TRAFFIC

On average the site operations generate 20 truckloads (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. A Traffic Impact Assessment has been undertaken by Intersect Traffic, to identify the impact of the development on the local road network and traffic flows. A copy of this report is attached as *Appendix R* and discussed in Section 6.3 of this report.

4.8 SITE PREPARATION WORKS TO ESTABLISH THE QUARRY

The development will make use of the existing site infrastructure; there will, however, be some additional works to support quarrying in the eastern part of the site as well as to enhance the production rates as discussed below:

- To prevent inundation of the quarry site by the flood waters, the existing levee in the southern part of the site will be extended as shown in the proposed Site Plan (*Figure 13*) This will also serve as a visual and acoustic barrier between the dwellings located to the south across the Hunter River and the site. Similarly, the earth bank in the northern part will be extended towards the east to prevent clean water from entering the extraction area.
- The haul road in the southern part of the proposed Work Area 2 will need to be realigned to allow for extraction in this area.

4.9 FUTURE USE AND REHABILITATION

It is proposed to progressively rehabilitate the site during its twenty-five-year life to return it to grazing land at the closure of extraction activities.

The Site Rehabilitation Strategy is set out in *Appendix Q*.

Returning the land to grazing land at the end of its life is consistent with the current and projected future uses of the properties in the vicinity of Dalswinton Quarry.

4.10 SITE SELECTION

The proposal seeks to continue the supply of sand and gravel to mining, landscaping, and construction sectors. Dalswinton Quarry is a low impact operation with plenty of reserves to last an extended timeframe and as such there are no real benefits in considering alternative sites for a new quarry.

Sand and gravel extraction business in our country are challenged by high capital outlay and moderate returns. Therefore, making use of the established quarry infrastructure for ongoing service is considered as the most pragmatic approach to meeting the demand for aggregates.

Discarding an operational quarry for a new location is not considered to be a viable way of achieving the project objective. Due to these reasons and to eliminate the additional impacts from starting up elsewhere, no other sites were considered for the proposal.

4.11 CONSIDERATION OF ALTERNATIVES AND JUSTIFICATION OF THE PROPOSAL

The site has long been engaged in extractive operations and as such has limited capability for agriculture or other alternative uses. Extracting the available geological resources in an environmentally responsible manner to support other economies is therefore considered the most productive and economic use of the land.

Sand and gravel are vital raw materials for the Australian construction industry. Besides their use in concrete mixes, crushed aggregates are an integral component of asphalt surfaces, road base and sub-base and have a wide range of applications in infrastructure development and maintenance. With the proposed construction of the Singleton Bypass and Muswellbrook Bypass, the demand for aggregates in the region is expected to increase over the next five years and beyond.

Dalswinton Quarry is one of the few producers of red decorative gravel used in landscaping which are only found on sites along the Goulburn River or those located downstream of the confluence of the Goulburn and Hunter Rivers.

Due to the site's easy access to Singleton, Muswellbrook and Upper Hunter Areas, the coal mines in the region source crushed gravel from Dalswinton Quarry for use as stemming materials in blasting holes.

Dalswinton Quarry is located on a rural site surrounded by cropped areas, grazing land and sparsely distributed rural dwellings. The quarry has co-existed with these uses for the past 30 years. Given this scenario of a low impact operation on a site with well-established infrastructure

and abundant geological resources, continuing the operations within the site boundaries is considered to be the best way of meeting the demand for aggregates.

Closing down of operations at the end of the current consent period will leave significant reserves of un-extracted materials on a site that has stood the test of time in regard to environmentally sustainable operations. It may also slowdown the supply of materials to the mining, construction and landscaping industries creating undue pressures on other existing quarries and hence undesirable impacts.

Sand and aggregates are critical inputs for concrete mixes used in the construction industry. Development and maintenance of roads, and other critical infrastructure such as hospitals, schools etc is dependent on a steady supply of these raw materials and is required for the construction and maintenance of houses, buildings, and other critical infrastructure such roads, bridges, schools, hospitals etc which are directly linked to growth and development.

Dalswinton Quarry has recently been chosen as a supplier for the materials to provide Newcastle City Council for the beach erosion mitigation works at Stockton Beach, and the supply of various materials for the construction of the new Maitland Hospital.

The economic viability of the project has been proven through Rosebrook's longstanding business with the mines and infrastructure development companies in the region.

5.0 LEGISLATIVE CONSIDERATION

5.1 COMMONWEALTH LEGISLATION

5.1.1 ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION 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 for the subject site 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:	28
Listed Migratory Species:	13

The wetland identified in the above table is the Hunter Estuary Wetland, which is approximately 100 km away from the site. Due to this large separation distance, the development site is not anticipated to have any adverse impacts on the listed wetland.

A Biodiversity Assessment Report for the site has been undertaken by Biosis Pty Ltd to identify any critically endangered species that are likely to be affected by the proposal, a copy of which is attached as **Appendix H**.

5.2 NEW SOUTH WALES LEGISLATION

5.2.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

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

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

- *Co-ordination and orderly development and economic use of land.*
- *Protection of the environment and socio-economic welfare of the community.*
- *Promotion of good design, amenity, and safety of the built environment.*
- *Adoption of ecologically sustainable development.*
- *Provision for public involvement and participation in environmental planning and assessment; and*
- *Sharing of the responsibility of environmental planning and assessment between various levels of the government in the State.*

This proposal will be submitted under Part 4 of the Act which sets out the assessment requirements for development applications. In accordance with cl 4.12(8), a development application for a State Significant Development (SSD) should be accompanied by an EIS.

Cl 4.36 of the Act specifies developments that are declared as SSD (previous Section 89C) as below:

Cl 4.36 Development that is State Significant Development (previous Section 89C)

- (1) For the purposes of this Act, State significant development is development that is declared under this section to be State significant development.*
- (2) A State environmental planning policy may declare any development, or any class or description of development, to be State significant development.*
- (3) The Minister may, by a Ministerial planning order, declare specified development on specified land to be State significant development, but only if the Minister has obtained and made publicly available advice from the Independent Planning Commission about the State or regional planning significance of the development.*

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

Schedule 3, clause 19 Extractive industries

- (1) Extractive industries (being industries that obtain extractive materials by methods including excavating, dredging, tunnelling, or quarrying or that store, stockpile, or process extractive materials by methods including washing, crushing, sawing or separating):*

- (a) that obtain or process for sale, or reuse, more than 30,000 cubic metres of extractive material per year, or*
- (b) that disturb or will disturb a total surface area of more than 2 hectares of land by:*
 - (i) clearing or excavating, or*
 - (ii) constructing dams, ponds, drains, roads or conveyors, or*
 - (iii) storing or depositing overburden, extractive material or tailings, or*
 - (c) that are located—*
 - (i) in or within 40 metres of a natural waterbody, wetland or an environmentally sensitive area, or*
 - (ii) within 200 metres of a coastline, or*
 - (iii) in an area of contaminated soil or acid sulphate soil, or*
 - (iv) on land that slopes at more than 18 degrees to the horizontal, or*
 - (v) if involving blasting, within 1,000 metres of a residential zone or within 500 metres of a dwelling not associated with the development, or*
 - (vi) within 500 metres of the site of another extractive industry that has operated during the last 5 years.*
 - (2) This clause does not apply to—*
 - (a) extractive industries on land to which the following environmental planning instruments apply—*
 - (i) Sydney Regional Environmental Plan No 11—Penrith Lakes Scheme,*
 - (ii) Western Division Regional Environmental Plan No 1—Extractive Industries, or*
 - (b) maintenance dredging involving the removal of less than 1,000 cubic metres of alluvial material from oyster leases, sediment ponds or dams, artificial wetland or deltas formed at stormwater outlets, drains or the junction of creeks with rivers, provided that—*
 - (i) the extracted material does not include contaminated soil or acid sulphate soil, and*
 - (ii) any dredging operations do not remove any seagrass or native vegetation, and*
 - (iii) there has been no other dredging within 500 metres during the past 5 years, or*
 - (c) extractive industries undertaken in accordance with a plan of management (such as river, estuary, land or water management plans), provided that—*
 - (i) the plan is prepared in accordance with guidelines approved by the Planning Secretary and includes consideration of cumulative impacts, bank and channel stability, flooding, ecology and hydrology of the area to which the plan applies, approved by a public authority and adopted by the consent authority and reviewed every 5 years, and*
 - (ii) less than 1,000 cubic metres of extractive material is removed from any potential extraction site that is specifically described in the plan, or*
 - (d) the excavation of contaminated soil for treatment at another site, or*
 - (e) artificial waterbodies, contaminated soil treatment works, turf farms, or waste management facilities or works, specifically referred to elsewhere in this Schedule, or*
 - (e1) artificial waterbodies located on relevant irrigation land, or*

Note.

*The term **relevant irrigation land** is defined in clause 38.*

(f) *(Repealed)*

(g) *maintenance dredging of alluvial material from oyster leases and adjacent areas in Wallis Lake, but only if the dredging is undertaken in accordance with the document entitled Protocol for Wallis Lake Oyster Lease Maintenance Dredging approved by the Planning Secretary and published in the Gazette, as amended by the Planning Secretary from time to time by publication of an amended Protocol in the Gazette.*

Comment:

For the purposes of EP & A Act, the proposal is nominated as a State Significant Development by the State Environmental Planning Policy (State and Regional Development) 2011 pursuant to cl 4.36(2). This requires an EIS to be submitted as part of the DA.

The proposal is also considered as a Designated Development in accordance with Schedule 3 of the Regulations as:

- It extracts more than 30,000 tonnes of material per year: and
- The total area of disturbance from the operations exceeds 2ha.

5.2.2 PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) is the key piece of environment protection legislation administered by the EPA (Environment Protection Authority). 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.

Schedule 1, clause 19 of POEO Act lists any land-based extraction activity involving extraction, processing, or storage of more than 30,000 tonnes of materials per annum, as a Scheduled Activity, requires an Environment Protection License (EPL).

Comment:

As the proposal seeks to extract up to 500,000 tonnes of material per annum, the operation is a Scheduled Activity requiring an EPL. The current operation operates under EPA Licence 12709, refer to *Appendix T*.

5.2.3 BIODIVERSITY CONSERVATION ACT 2016

The *Biodiversity Conservation Act 2016* came into effect on 25 August 2017 and applies across NSW. The Act aims to maintain a healthy, productive, and resilient environment for the wellbeing of the community and for future generations. It makes provision for conserving biodiversity values, maintaining the diversity and quality of ecosystems and their capacity to provide for the needs of future generations in an environmentally sustainable manner.

The Act introduced a new Biodiversity Assessment Methodology (BAM) based on the principle of ‘no net loss’ where the impacts of a development are to be offset through improving the condition of a vegetation or habitat at a Biodiversity Stewardship Site. Under this scheme, a development can only proceed, if it is satisfactorily demonstrated that impacts have been

avoided, minimised, and mitigated through reasonable measures prior to the offset's arrangements being made.

Comment:

A Biodiversity Assessment Report for the site has been undertaken by Biosis Pty Ltd to identify any critically endangered species that are likely to be affected by the proposal which is attached as **Appendix H**.

5.2.4 WATER MANAGEMENT ACT 2000

The *Water Management Act 2000* (WMA 2000) came into effect in 2000 and it applies to all land across NSW. The objectives of the Act are to provide for a sustainable and integrated management of water sources for the State for the benefit of both present and future generations.

Comment:

As part of the scoping and as required by the amended SEARs for the project, a Flood Study, Groundwater Impact Assessment and Surface Water Assessment were completed. These reports are attached as **Appendices M, U and V** and further discussed in **Sections 6.6, 6.10 and 6.16**.

RSG have the appropriate licenses required by the WMA 2000, refer **Appendix T**.

The proposal and any mitigation measures recommended by sub-consultants show its consistency with the *Water Management Act*.

5.2.5 AQUIFER INTERFERENCE POLICY

The NSW Aquifer Interference Policy (the Policy) was drafted by Department of Primary Industries – Office of Water, being published in September 2012.

The purpose of the Policy is defined as:

The purpose of this Aquifer Interference Policy (“this Policy”) is to explain the role and requirements of the Minister administering the Water Management Act 2000 (“the Minister”) in the water licensing and assessment processes for aquifer interference activities under the Water Management Act 2000 and other relevant legislative frameworks.

This Policy:

1. clarifies the requirements for obtaining water licences for aquifer interference activities under NSW water legislation; and

2. establishes and objectively defines considerations in assessing and providing advice on whether more than minimal impacts might occur to a key water-dependent asset.

Importantly, this Policy will assist proponents of aquifer interference activities in preparing the necessary information and studies to be used by the Minister in the assessment of project proposals that have some level of aquifer interference.

Comment:

A Groundwater Impact Assessment was undertaken by hydrogeologists.com and is included as *Appendix U*. It includes details of the Water Licenses that the proponent has in existence and how the proposed activity will affect the aquifer. This is further discussed in Section 6.6.

5.2.6 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.

The policy requires land use compatibility assessment for new mining/extractive industries as well as for proposed developments in the vicinity of these uses. Key issues and areas of concern as outlined in this policy include surface and groundwater resources, biodiversity, and threatened species. The policy also warrants an assessment of the impact of greenhouse gas emissions and preparation of a site rehabilitation strategy as part of the development application.

CI 7(3) of this SEPP specifies areas where extractive operations can be undertaken, as provided below:

7 Development Permissible with consent

3) Extractive industry Development for any of the following purposes may be carried out with development consent:

- (a) extractive industry on land on which development for the purposes of agriculture or industry may be carried out (with or without development consent),*
- (b) extractive industry in any part of a waterway, an estuary in the coastal zone or coastal waters of the State that is not in an environmental conservation zone.*

All matters for consideration in determining an application for extractive industries are provided in cl 13(2) as below:

13 Compatibility of proposed development with mining, petroleum production or extractive industry

(2) Before determining an application to which this clause applies, the consent authority must:

- (a) consider:*
 - (i) the existing uses and approved uses of land in the vicinity of the development, and*
 - (ii) whether or not the development is likely to have a significant impact on current or future extraction or recovery of minerals, petroleum or extractive materials (including by limiting access to, or impeding assessment of, those resources), and*
 - (iii) any ways in which the development may be incompatible with any of those existing or approved uses or that current or future extraction or recovery, and*

- (b) *evaluate and compare the respective public benefits of the development and the uses, extraction and recovery referred to in paragraph (a) (i) and (ii), and*
- (c) *evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii).*

Comment:

Pursuant to CI 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. Schedule 1 of this policy identifies sites where all forms of mining and extraction activities are prohibited. The subject site is not identified as a prohibited site and its RU1 zoning complies with the requirements of CI 7(3) where the development can be undertaken with consent.

In respect to the matters outlined in C13(2), it is noted that:

- The development site is not in the vicinity of an existing mine or quarry.
- It is understood that preliminary exploration works are underway for a potential underground coal project by Maxwell, on the site adjoining the northern boundary of Jerrys Plain Road. However, this site is approximately 4km away from Dalswinton Quarry and the two activities are independent of each other, therefore will avoid any land use conflicts.
- This document provides an assessment of the cumulative impacts to eliminate any land use incompatibility and contains an evaluation of the benefits to the community as required in this clause.

5.2.7 STATE ENVIRONMENTAL PLANNING POLICY (PRIMARY PRODUCTION AND RURAL DEVELOPMENT) 2019

This SEPP aims to protect rural lands and facilitate their orderly development for primary production purposes.

Comment:

This application relates to the extension of an existing quarry on a site which lacks any agricultural value. It is, therefore, considered to be consistent with the objectives of this policy.

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

Certain types of developments owing to their size, capital investment values or the potential impacts they may have, are considered to be State Significant Developments (SSDs). Schedule 1 of State and Regional Development SEPP identifies the classes of developments which are considered as SSD. Each class includes thresholds, such as capital investment value or some other quantifiable criteria or location requirement.

Minister of Planning is the consent authority for SSDs, unless in special circumstances, where the developments are referred to the Independent Planning Commission for determination.

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. As such, a Development Application for an SSD should be accompanied by an EIS as required in Cl 4.12(8) of the EP&A Act.

5.2.9 STATE ENVIRONMENTAL PLANNING POLICY NO 33- HAZARDOUS AND OFFENSIVE DEVELOPMENT

This Policy applies to all developments that are considered potentially offensive or hazardous as per described below:

potentially hazardous industry means a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:

(a) to human health, life, or property, or

(b) to the biophysical environment,

and includes a hazardous industry and a hazardous storage establishment.

potentially offensive industry means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment.

Comment:

There is no handling or processing of hazardous materials in the proposed quarrying works. The quarry has risk management measures in place to minimise injury and risks at workplace which are provided in **Appendix W**. Further to this, sand and gravel extraction is not listed as a potentially hazardous industry in the Department's document 'Application Guidelines Applying SEPP 33', therefore no further investigation on the hazardous nature of the development is required.

The site has a good track record of operating without any incidents or complaints, which evidences the safe and low impact nature of the development. However, as excavation and processing of materials have the potential to generate dust and noise, specialist investigations were undertaken to assess impact of the expansion on the air quality and

amenity of the area. These studies are enclosed in *Appendices X* and *Y* respectively which concluded that the existing environmental management measures on the site and their ongoing implementation in the proposed expansion will ensure that no offensive emissions are generated from the site.

There will be no significant risk to human health, life, or property or to the biophysical environment as a result of the proposal.

5.3 LOCAL PLANNING INSTRUMENT

5.3.1 MUSWELLBROOK LOCAL ENVIRONMENTAL PLAN 2009 (MUSWELLBROOK LEP)

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, see *Figure 15* below.



Figure 15: Zoning Map

Source: NSW Planning Portal, accessed September 2020

Zone RU1 Primary Production

1 Objectives of zone

- *To encourage sustainable primary industry production by maintaining and enhancing the natural resource base.*
- *To encourage diversity in primary industry enterprises and systems appropriate for the area.*
- *To minimise the fragmentation and alienation of resource lands.*
- *To minimise conflict between land uses within this zone and land uses within adjoining zones.*
- *To protect the agricultural potential of rural land not identified for alternative land use, and to minimise the cost to the community of providing, extending and maintaining public amenities and services.*
- *To maintain the rural landscape character of the land in the long term.*

- *To ensure that development for the purpose of extractive industries, underground mines (other than surface works associated with underground mines) or open cut mines (other than open cut mines from the surface of the flood plain), will not:*

(a) destroy or impair the agricultural production potential of the land or, in the case of underground mining, unreasonably restrict or otherwise affect any other development on the surface, or

(b) detrimentally affect in any way the quantity, flow and quality of water in either subterranean or surface water systems, or

(c) visually intrude into its surroundings, except by way of suitable screening.

- *To protect or conserve (or both):*

(a) soil stability by controlling development in accordance with land capability, and

(b) trees and other vegetation, and

(c) water resources, water quality and wetland areas, and their catchments and buffer areas, and

(d) valuable deposits of minerals and extractive materials by restricting development that would compromise the efficient extraction of those deposits.

2 Permitted without consent

Extensive agriculture; Home occupations; Intensive plant agriculture

3 Permitted with consent

*Air transport facilities; Airstrips; Animal boarding or training establishments; Aquaculture; Camping grounds; Caravan parks; Cellar door premises; Cemeteries; Community facilities; Crematoria; Depots; Dwelling houses; Eco-tourist facilities; Educational establishments; Environmental facilities; Environmental protection works; **Extractive industries**; Farm buildings; Flood mitigation works; Forestry; Function centres; Group homes; Hazardous industries; Health consulting rooms; Heavy industrial storage establishments; Helipads; Highway service centres; Home-based child care; Home businesses; Home industries; Industrial retail outlets; Information and education facilities; Intensive livestock agriculture; Kiosks; Landscaping material supplies; Open cut mining; Places of public worship; Plant nurseries; Recreation areas; Recreation facilities (indoor); Recreation facilities (major); Recreation facilities (outdoor); Research stations; Restaurants or cafes; Roads; Roadside stalls; Rural industries; Rural supplies; Rural worker's dwellings; Secondary dwellings; Service stations; Sewerage systems; Signage; Storage premises; Take away food and drink premises; Tourist and visitor accommodation; Transport depots; Truck depots; Turf farming; Veterinary hospitals; Waste disposal facilities; Water supply systems*

Comment:

The site is zoned RU1 Primary Production where extractive industries are permissible with consent (refer to **Figure 15**). The objective of the zone is to encourage primary production activities and enterprises that are appropriate for the area.

Muswellbrook Shire is a well renowned centre for mining and extractive industries and the proposed quarry expansion is considered to be in keeping with the major economic activities in the LGA.

Primary production activities including extractive industries are supported in an RU1 zone provided they do not affect the agricultural potential or land use compatibility.

Developments for the purpose of extractive industries are to maintain the visual amenity of the area and have environmental safeguards in place to maintain the integrity of surface and groundwater resources.

The proposed quarry expansion is based on a suite of specialist studies and investigations to assess the impact of the development and to ensure that appropriate management measures are adopted to maintain the quality of the bio-physical environment. Dalswinton Quarry has proved its ability to co-exist with the surrounding uses and its ongoing use in an environmentally responsible manner is consistent with the objectives of RU1 zone.

The proposed activity is therefore not contrary to the objectives of the RU1 zone.

5.4 STRATEGIC PLANNING DOCUMENT

5.4.1 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 by developing plans that respond to the lifecycle of extractive resource areas.

Investment in rural and resource industries underpin the sustainable growth and ongoing productivity of the Hunter Region. Preventing the expansion of urban and rural housing into these resources area is a key consideration when preparing local strategies to prevent land use conflicts and support economic growth in the region.

Comment:

The proposed development is an extension of an existing extraction operation 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. There are no issues of land use conflict or urban sprawl into the resource land and the proposal demonstrates ongoing investment in the resource industry for sustainable growth of the region as envisaged in the Plan

5.4.2 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 enhance future opportunities for sustainable mining.

Comment:

The existing site is highlighted as a key mineral resource within the UHSRLUP, as shown in **Figure 16**.

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

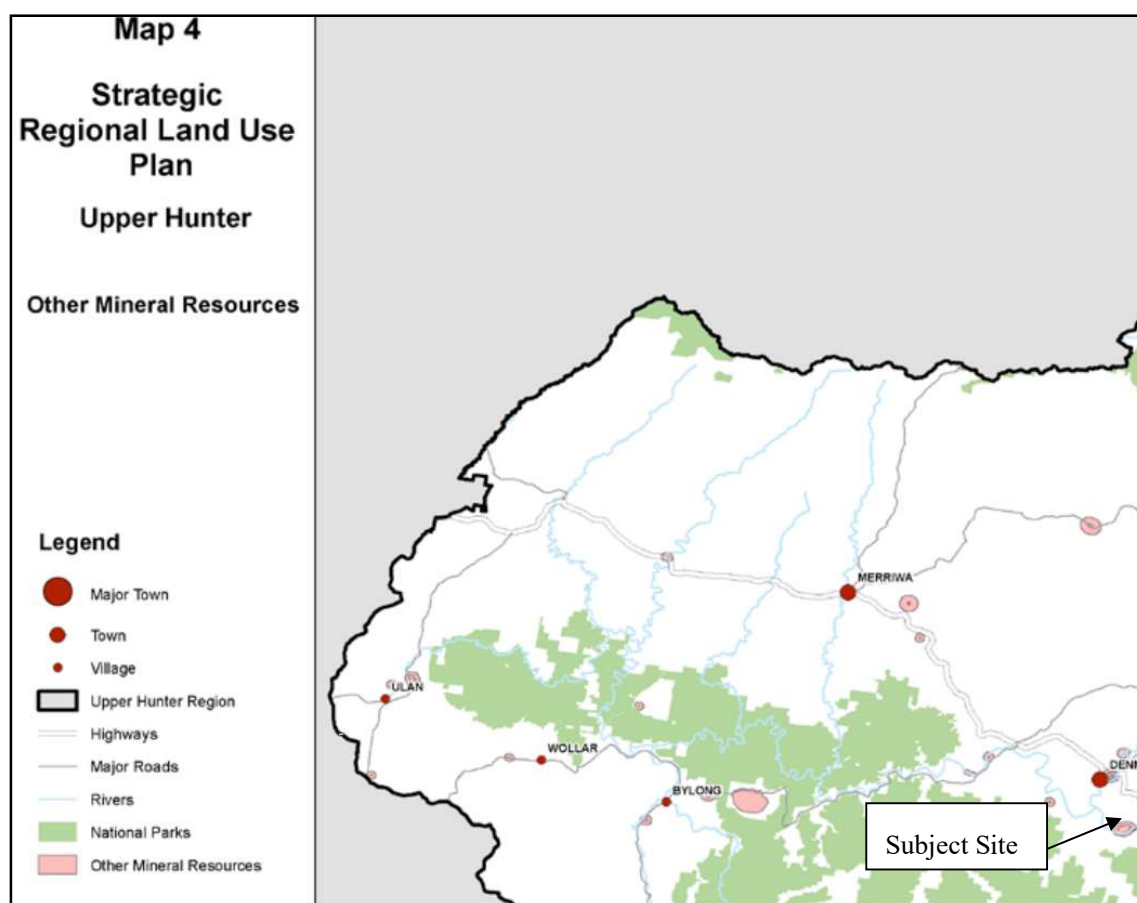


Figure 16: Strategic Regional Land Use Plan

Source: UHSRLUP 2012

5.5 MUSWELLBROOK SHIRE DEVELOPMENT CONTROL PLAN 2009

The following table provides an assessment of the proposal against the requirements of the Development Control Plan. Where a variation is sought, due to the nature of the development/site, the potential impacts have been considered and justified in the following section.

5.5.1 JUSTIFICATION OF ANY NON-COMPLIANCE WITH DCP

The proposal has demonstrated compliance with the majority of the relevant DCP provisions and the respective requirements.

Section 11 – Extractive Industries			
Item	DCP Requirement	Proposed	Compliance
11.5 - Community Participation	<p>Community participation is invited by Council during the assessment of development applications concerning Extractive Industries.</p> <p>To facilitate this participation applicants are encouraged to interact with neighbouring or adjacent residents and the local community during the development application process and also during the ongoing operation of the industry.</p> <p>If deemed to be appropriate and/or necessary by Council, a proponent may be required to support a Community Review Committee. A Community Review Committee would be established and operated in accordance with Council's 'Guidelines for Community Consultative Committees for Mining Operations, Extractive Industries and Power Generation'.</p>	As required by the SEARs, extensive consultation has occurred during the process of drafting this EIS. Refer to Section 2.8 – Consultation and Appendix Z – Social and Economic Impact Assessment for more information.	Yes
11.6 - Transport	<p>Details regarding the extraction and transportation of material to and from the proposed site must be included in the environmental assessment lodged with a development application for an extractive industry.</p> <p>This information must include the following:</p> <ul style="list-style-type: none"> • a report in relation to a traffic survey and study undertaken by a suitably qualified person regarding any potential impacts of the proposed development. • proposed methods of haulage of material within the site. • proposed haulage routes of material from the site to markets within and outside the Shire, including a map. • specifications of the internal haulage road and access intersection to be established and/or maintained, including a site plan drawn to scale. • method of extraction and stockpiling of material. 	<p>Details regarding the extraction process and transportation are provided in Section 4 – The Proposal.</p> <p>Intersect Traffic have undertaken a Traffic Assessment which is attached as Appendix R.</p> <p>A Site Plan showing the existing and proposed internal haulage roads is included as Appendix N. Any haul roads are a minimum 10 metres from site boundaries, 50 metres from environmentally sensitive areas or watercourses and 500 metres from any existing residences.</p>	Yes

	<ul style="list-style-type: none"> • maximum capacity of haulage vehicles. • frequency of heavy vehicle movements to and from the site. • Proposed safety controls to be implemented. • Proposed method and location of a weighbridge or similarly suitable weighing device. <p>The design and development of access and haulage roads must be consistent with the relevant requirements of the following standards:</p> <ul style="list-style-type: none"> • Austroad - Guide to Traffic Engineering Practice. • RTA - Road Design Guide. • RTA - Guide to Traffic Generating Developments. • Or other designs agreed to by the Roads & Traffic Authority (RTA). <p>Internal access and haulage routes associated with Extractive Industries should be set back no less than:</p> <ul style="list-style-type: none"> • 10m from adjoining property boundaries. • 50m from environmentally sensitive areas including water courses and habitats of threatened species. • 100m from residences not associated with extraction. <p>The location of any internal haulage or access routes may be flexible and may be subject to change depending upon alternative routes, environmental and physical constraints, and the nature & value of the underlying resource.</p>		
11.7 - Water Resources	<p>The management of water resources (including ground and surface) within and around the site must be detailed by a comprehensive Water Strategy which must be submitted to Council at the time of development application.</p> <p>This Strategy may be incorporated into the environmental assessment and must include (but is not limited to) the following:</p> <ul style="list-style-type: none"> • the drainage patterns of water before and those expected after the 	<p>The SEARs requirements for Water, include:</p> <ul style="list-style-type: none"> - site water balance. - licensing requirements and approvals. - description of measures to ensure that the development can operate in accordance with any 	Yes

	<p>development of the proposal.</p> <ul style="list-style-type: none"> • water quality parameters of the groundwater and surface water located on or adjacent to the site prior to the development of the site. • any proposed capture devices such as dams, tanks etc including the associated capacity and use. • calculations of the surface water catchment associated with the site and the proposed management of this flow. • any proposals to extract or discharge surface or ground water. • Controls to be implemented to ensure the maximisation of water reuse onsite, maintenance of water quality and the ongoing provision of water resources to users which are located downstream from the proposed extractive industry site. • Risks, safeguards and contingency plans for extreme climatic conditions or operational hazards including breach or contamination. <p>Prior to the commencement of operations, a Water Management Plan will be required to be completed and submitted to Council for approval which must incorporate the details and undertakings of the Water Strategy.</p>	<p>relevant WSP.</p> <ul style="list-style-type: none"> - assessment of likely flooding impacts. - assessment of likely impacts on the quantity and quality of surface water. - assessment of likely impacts on the quantity and quality of groundwater. - assessment of likely impacts on aquifers, riparian land, water related infrastructure and other water users; and - detailed description of proposed water management plan including sewage, water monitoring program and other measures to mitigate surface and groundwater impacts have all been addressed in various sub-consultants' reports attached as Appendices, including Flood Study, Groundwater Assessment Report and Surface Water Assessment. Existing water licenses are included as Appendix R. 	
11.8 – Visual Amenity & Landscaping	<p>Extraction industry operations must, where appropriate, provide setbacks (as detailed by 11.16) capable of minimising the visual impact of extraction and processing sites, particularly when viewed from surrounding private and public places. These setbacks must be established and maintained by the proponent.</p> <p>In some areas the setbacks must be adequately vegetated to the satisfaction of Council in order to maintain or enhance the visual amenity of the surrounding area, in particular to nearby properties and road users. This landscaping should utilise native plant species that must be established and maintained by the proponent.</p> <p>The environmental assessment submitted to Council as supporting</p>	<p>The proposed development allows for the extension of the southern levee bank which will also provide visual relief to those properties to the south of the site.</p> <p>The western boundary has a line of existing mature trees that provide visual relief.</p> <p>A Site Plan is submitted as Appendix N with the required landscaping details.</p> <p>Refer to Appendix AA – Visual Impact Assessment for further detail.</p> <p>A full Site Rehabilitation Strategy is included as Appendix S outlining the extent of the rehabilitation plan for the site over</p>	Yes

	<p>documentation for a development application must include a proposed Landscaping Plan which must include the following:</p> <ul style="list-style-type: none"> • Site plan for the entire site drawn to scale indicating setbacks, visual screens and landscaping areas. • Location of proposed vegetated screens to address all identified sight lines. • Proposed species list. • Proposed planting density. • Proposed method of maintenance. • Timeline as to the planting of screens and their expected period of establishment. <p>A Rehabilitation Plan must also be developed prior to the commencement of operations which must be submitted to Council for approval as part of the Environmental Management Plan.</p> <p>Following the completion of extraction operations, the site must be fully rehabilitated to an approved final landform and as per the approved Rehabilitation Plan. The final landform must be consistent with the biodiversity of the surrounding landscape having regard to the proposed post- extraction land use.</p>	its 25-year operation and beyond.	
11.9 – Flora & Fauna	<p>A flora and fauna study and report completed by a suitably qualified person must be included in the completion of the environmental assessment for an extractive industry. This flora and fauna study and subsequent report must detail information regarding the matters listed in Council’s Guidelines for Flora and Fauna Assessment and include an assessment of significance prepared in accordance with Section 5A of the <i>Environmental Planning & Assessment Act 1979</i>. Any identification of a significant impact will also warrant the completion of a Species Impact Statement (SIS).</p> <p>An extractive industry operation will be required to also provide and maintain suitable buffer distances and setbacks around the site</p>	<p>A complete Biodiversity Study has been undertaken by Biosis which is attached as Appendix H.</p> <p>Appropriate setbacks acting as buffers have also been provided as outlined in point 11.6 above.</p>	Yes

	<p>as per section 11.16 above.</p> <p>Proponents should refer to the requirements of the <i>Environmental Planning & Assessment Act 1979</i>, <i>Native Vegetation Act 2003</i>, <i>Threatened Species Conservation Act 1995</i> and <i>Environmental Protection and Biodiversity Conservation Act 1999</i>.</p>		
11.10 – Heritage & Archaeology	<p>The environmental assessment completed for an extractive industry must include an Aboriginal and European heritage study and report. This study and report must be completed in compliance with Section 15 of the Muswellbrook Shire Council DCP.</p> <p>This study and report must encompass the entire site of a proposed extractive industry and not be limited to the proposed area of extraction.</p> <p>If during the process of archaeological and heritage assessment sites or items are identified for ongoing management, a Plan of Management must be completed by the proponent and approved by Council prior to the commencement of operations. This plan must detail the location, state and significance of an artefact or site and provide a commitment to the ongoing management of the item.</p> <p>If the site or artefact is proposed to be removed or destroyed, the appropriate recommendations and/or permits must be obtained from the relevant authorities (such as the Department of Environment and Climate Change) and organisations such as the Wanaruah Land Council or the National Parks and Wildlife Service.</p> <p>Reference should also be made to the National Parks & Wildlife Service's Aboriginal Heritage Information Management System (AHIMS).</p>	<p>A thorough Aboriginal and European Heritage Study was conducted, and the findings attached as Appendix K.</p> <p>An AHIMS online search was also carried out and can be viewed as Appendix I.</p>	Yes
11.11 – Erosion and Sediment Control	<p>The conservation of soil resources must be adequately managed by an Extractive Industry operator, in particular those soil resources which are not the extraction material. The proponent is also responsible for the maintenance of soil resources which may not be limited to the boundary of the operation, such as adjacent banks of a water course that may be eroded through the runoff or discharge</p>	<p>Prior to the commencement of operations, a Sediment and Erosion Control Management Plan will be submitted for approval.</p> <p>Haulage roads and the access point will be managed by the proponent to ensure minimal erosion and dust suppression. The access will be stabilised in accordance with Council's</p>	Yes

	<p>from an extractive industry operation.</p> <p>The management of soil erosion and sedimentation matters must be undertaken in a manner which is in compliance with Council's DCP Section 20 and other recognised standards such as the Soils and Construction – Managing Urban Stormwater (Bluebook) produced by Landcom 2004.</p> <p>The basic elements of the conservation of soil resources is to minimise the extent of cleared areas, implement controls on those areas which are cleared or disturbed and rehabilitate all areas as soon as possible.</p> <p>Prior to the commencement of operations at an extractive industry site a Sediment and Erosion Control Management Plan must be submitted to and approved by Council. This Management Plan must include the proposed timeline of clearing on the site, the controls to be implemented, diversion of water flows and the proposed rehabilitation of the areas disturbed. A program of ongoing maintenance and onsite supervisor details must also be provided.</p> <p>Haulage roads and site access points must also be managed so as to minimise the opportunity for erosion and dust to occur. Site accesses must be stabilised in accordance with Council's DCP Section 20 and other recognised standards. Haulage roads must be adequately maintained and sealed and/or wetted down to ensure that dust and soil does not migrate from the site.</p>	<p>requirements.</p> <p>The Haulage roads will be maintained and wetted down when required to ensure that dust and soil does not migrate from the site.</p>	
11.12 – Acoustic Management	<p>The acoustic environment of an area must be maintained in regards to the introduction of an extractive industry. An impact assessment of the identified noise sources and modelled noise emissions prepared by a suitably qualified person must be included in the environmental assessment submitted with the development application.</p> <p>This assessment must also indicate the proposed measures which may be introduced to address the acoustic amenity of the area.</p>	<p>Advitec have undertaken a Noise Impact Assessment which is attached as <i>Appendix X</i>.</p> <p>This includes mitigation measures to address any acoustic issues.</p>	Yes

	<p>These measures may include (which may also be imposed by Council) but are not limited to the following:</p> <ul style="list-style-type: none"> • effective acoustic buffers to residences and public places not associated with the operation. • effective noise control measures where noise emissions exceed maximum average background noise level. • appropriate noise barriers to address equipment noise emissions. • use of noise attenuated equipment. • limitation of the hours of operation between 8.00 am and 6.00 pm Monday to Friday with no operations to occur on weekends of public holidays (this may be flexible depending on suitable site details). <p>Noise emissions from extractive operations should achieve the minimum acoustic criteria & standards set down by the Department of Environment and Climate Change (Environmental Protection Authority) and the Industrial Noise Policy. As a basis, proponents should ensure that the maximum average noise emission level of extraction is no more than 5 dB(A) above the maximum average background noise levels.</p> <p>The proposed controls to be implemented by an extractive industry operation must be detailed in the environmental assessment submitted to Council at the time of development application submission. Those controls approved by Council must then be further detailed in the Management Plan prepared for the site prior to the commencement of operations.</p>		
11.13 – Blasting	<p>If blasting activities are proposed as part of the activities associated with the development a blasting assessment and report must be produced by an appropriately qualified person. This report must be included as part of the environmental assessment submitted to Council in support of the development application.</p> <p>If approval is granted by Council a comprehensive Blasting Plan must be developed and included for approval as part of the</p>	There are no blasting activities proposed as part of this development.	Not Applicable

	<p>Environmental Management Plan prepared prior to the commencement of operations.</p> <p>The Blasting Plan must include, but is not limited to the following:</p> <ul style="list-style-type: none"> • reason for blasting. • number and size of proposed blasts. • frequency of proposed blasts. • license, experience and contact details of the blasting contractor. • potential impacts of blasting. • potential receptors of blasting impacts. • safety controls to be implemented. • other permits or approvals required. • notification process of blast events. • complaints process operated by the company. • monitoring system of blasts as approved by the Department of Environmental and Climate Change. • reporting process of blasting results. 		
11.14 – Air Quality and Dust Management	<p>Air quality associated with an extractive industry must be managed by the proponent. During the preparation of an environmental assessment for a proposed operation, the sources, and potential impacts of emissions to the atmosphere must be identified and control measures proposed. This section of the environmental assessment must be prepared as per the standard criteria of Department of Environment and Climate Change (Environmental Protection Authority).</p> <p>Additionally, once these controls have been approved by Council through the development application process, the Management Plan prepared for the operation prior to the commencement of extractive activities must detail the management of air quality in particular dust emissions.</p> <p>To address air quality proponents must implement effective</p>	An Air Quality Assessment has been prepared by Todorovski, refer <i>Appendix Y</i> . The report concluded that with the implementation of an Air Quality Management Plan the project would not cause any significant air quality impacts to the surrounding environment.	Yes

	<p>measures capable of controlling air pollution caused by dust, particularly during dry and windy weather conditions and machinery emissions. These controls must also be extended to the transportation of material from the site, requiring the coverage of all loads leaving the operation.</p> <p>Potential sources of air emissions may include but are not limited to:</p> <ul style="list-style-type: none"> • blasting. • removal of overburden. • site clearing. • extraction and haulage. • stockpiles. • mobile earthmoving equipment. • loading and transport vehicles. • crushing and screening operations. 		
11.15 – Waste	<p>Waste generated by the development must be managed in an environmental responsible manner. The potential waste streams and management of the streams must be identified and reported as part of the environmental assessment prepared for the development application submission.</p> <p>If approval is granted by Council for the development, a Waste Management Plan must be completed, submitted, and approved by Council as part of the Environmental Management Plan prepared prior to the commencement of extractive operations. This Waste Management Plan must be prepared in accordance with Council's Development Control Plan Section 24.</p>	A Waste Management Plan will be prepared and submitted to Council as part of the Environmental Management Plan prior to the commencement of extractive operations.	Yes
11.16 – Setbacks	<p>Setbacks associated with extractive industry operations are required to be established and maintained by the proponent, which are designed to accommodate the following:</p> <ul style="list-style-type: none"> • Provision of habitat and corridors for the movement of wildlife 	As shown on the attached Site Plan (<i>Appendix N</i>), the setbacks required within this section and outlined in DCP Section 22 Land Use Buffers, Table 22.1 have been adhered to.	Yes

	<p>throughout the Shire.</p> <ul style="list-style-type: none"> • Maintenance or enhancement of the visual and acoustic amenity within the local area. • setbacks to roads and adjacent property boundaries capable of maintaining a landscape buffer to enhance the visual environment of road users and residents. • provision of setbacks to electricity transmission lines capable of maintaining an effective buffer for safety and access for maintenance purposes. <p>Setback Requirements:</p> <p>(a) Extraction operations should be setback no less than the buffers provided for in section 22 of this DCP or the following, whichever is the greater:</p> <ul style="list-style-type: none"> • 10m from adjoining property boundaries. • 30m from a public road. • 40m from any boundary to a National Park, State Forest or Crown Land. • 40m from any site or relic of heritage, archaeological, geological, cultural significance. • 40m from the top bank of a watercourse or otherwise to the requirements of the Department of Water & Energy. • 100m from a residence not associated with extraction. <p>The above setbacks may vary depending upon the nature and location of extractive industries.</p>		
11.17 – Extraction Program	<p>The program of extraction must be detailed in the environmental assessment submitted to Council as support of a Development Application. This program must be prepared (including drawings) in an orderly sequence which provides for the progressive rehabilitation of extracted areas and the minimisation of disturbed areas.</p> <p>Following approval by Council the approved extraction program must then be detailed as part of the ongoing Management Plan for</p>	<p>The program of extraction is outlined in Section 4.0 – The Proposal.</p> <p>A full Resource Availability Report has been prepared by Fluvial Systems Pty. Ltd. and is included as Appendix Q. This outlines available resource estimation, location and quantity of resources and overburden stockpiles, remaining extraction period, timing, and area available for progressive rehabilitation and includes relative diagrams and cross sections.</p>	Yes

	<p>the operation. This extraction program must include the following:</p> <ul style="list-style-type: none"> • extraction timeline indicating the progression of extraction activities throughout the approved extraction area. • scaled diagrams and cross sections indicating the visual representation of the area for regular intervals of the consent period (e.g., 1 year, 5 years, 10 years etc). • available resource estimation and remaining extraction period. • timing and area available for progressive rehabilitation. • management of water as extraction activities progress. • location and quantity of resource and overburden stockpiles. 		
11.18 – Rehabilitation	<p>The rehabilitation of extraction areas must be undertaken progressively throughout the life of an operation. Rehabilitation activities must be commenced as soon as area becomes available for stabilisation and revegetation.</p> <p>During the preparation of a site prior to extraction, the topsoil must be stripped and stockpiled for use during rehabilitation works. Permanent ground cover should be established on areas (including stockpiles) which are proposed to be disturbed for more than 30 days.</p> <p>This rehabilitation must be integrated with the surrounding area incorporating shape, form, contour, land use, drainage characteristics, topography, landscape quality and biodiversity. All materials used for the backfilling of an extraction void must only include earth and rock sourced as a method of extraction. No waste materials may be used.</p> <p>A strategy of rehabilitation must be included in the environmental assessment submitted to Council as support of a development application. This plan must include the timing of progressive rehabilitation, vegetation species to be used (endemic native species should be used where appropriate), methods, maintenance, weed control, final landform, and drainage. Diagrams must also be</p>	A full Site Rehabilitation Strategy is included as Appendix S outlining the extent of the rehabilitation plan for the site over its 25-year operation and beyond.	Yes

	<p>included detailing the progressive works proposed.</p> <p>The type, composition, application rates and expected growth of proposed vegetation species or seed mixes proposed for use must be consistent with the requirements of the NSW Department of Primary Industry and Department of Environment and Climate Change.</p> <p>Once the proposed rehabilitation strategy has been approved by Council and relevant government authorities it must be included in the Management Plan prepared for the operation prior to the commencement of operations.</p>		
11.19 – Social and Economic Assessment	<p>An environmental assessment prepared for an extractive industry must incorporate a social and economic assessment. This assessment may include but is not limited to the following:</p> <ul style="list-style-type: none"> • consultation with neighbouring residents, landholders, and community groups. • potential impacts on the community such as emissions and haulage route impacts. • employment sources. • resource markets. • benefits to the local community. 	<p>A Social and Economic Impact Assessment has been prepared by HDB Town Planning & Design, refer to Appendix Z.</p> <p>The report includes details of consultation, impacts on the community, employment sources, resource markets and benefits to the community.</p>	Yes
11.20 – Ecologically Sustainable Development (ESD)	<p>Appropriate principles and objectives of the National Strategy for Ecologically Sustainable Development, 1992 prepared by the Commonwealth Government (particularly the objectives relating to mining, environmental impact assessment, biodiversity, environmental protection, and waste minimisation) should be identified and implemented by the proponent.</p> <p>In this regard applicants should justify the carrying out of an extractive industry under the principles of ESD. This assessment must be included in the environmental assessment submitted as supporting documentation of a development application.</p>	<p>Section 9.0 of the EIS addresses the principles of ESD and justification of this proposal under these principles and objectives.</p>	Yes

11.21 – Post-Extraction Land Use	<p>The final landform proposed to remain following the completion of extraction activities must be consistent with the surrounding landform and proposed land use. The site must be suitably rehabilitated (see section 11.19) and designed to be usable for other permissible land uses.</p> <p>The potential uses of the site must be identified and detailed by the Environmental Assessment and Management Plan prepared for the operation. Proponents should ensure that post extractive land uses do not sterilise or conflict with the extraction operations on adjoining lands.</p>	<p>A full Site Rehabilitation Strategy is included as <i>Appendix S</i> outlining the rehabilitation plan and proposed land use post extractive land use for the site over its 25-year operation and beyond.</p> <p>The final landform is shown as <i>Appendix AB</i>.</p>	
11.22 – Environmental Management Plan	<p>Prior to the commencement of extractive operations an Environmental Management Plan must be prepared and submitted to Council (and other appropriate government authorities) for approval. An Environmental management Plan must include (but is not limited to) the following Plans:</p> <ul style="list-style-type: none"> • Water Management Plan • Landscaping Plan • Rehabilitation Plan • Erosion and Sediment Control Plan • Noise and Blasting Management Plan • Extraction Plan • Air Quality and Dust Management Plan • Waste Management Plan • Post Extraction Land Use Plan • Flora and Fauna Management Plan • Heritage Management Plan (if relevant) <p>The preparation of the Environmental Management Plan must include all commitments and undertakings indicated by the environmental assessment submitted to Council for the support for the Development Application.</p>	<p>An Environmental Management Plan will be prepared and submitted to Council and other relevant government authorities prior to the commencement of the operations under this proposal.</p>	Yes

11.23 – Bank Guarantee	A Bank Guarantee may be required to be paid to Council as a condition of consent, for the insurance of appropriate rehabilitation works following the cessation of works onsite.	Noted.	Yes
11.24 – Section 94 Contributions	<p>The payment of Section 94 contributions is required by Council to provide for the ongoing maintenance of the local road network utilised by the operation for the haulage of material. The subject roadways are not only limited to those directly adjacent to the extraction operation but also those throughout the Shire which receive increased traffic from the quarry operation.</p> <p>Section 94 contributions must be paid to Council on a quarterly basis in accordance with the Muswellbrook Development Contributions Plan. The current Section 94 levy is based upon a per tonnage rate, payable for material transported from extraction sites.</p>	Noted.	Yes
11.25 – Annual Reports	<p>The completion and submission of annual reports must be undertaken at the end of each financial year or as conditioned by Council. An annual report must include but is not limited to the following topics:</p> <ul style="list-style-type: none"> • The performance of the operation. • The production types and quantities. • Resource markets. • The implementation and effectiveness of environmental controls and conditions relating to the development. • Results of any environmental monitoring undertaken. • Production and mining operations undertaken during the preceding 12 months. • Workforce characteristics. • Any modifications to the work activities or practises as outlined by the EIS introduced to mitigate any adverse environmental impacts. • Copies of relevant licences and approvals from relevant 	Noted.	Yes

	authorities.		
11.26 – Council Advisory Committees	<p>In regards to the operation of extractive industries within the Shire, Muswellbrook Council facilitates an Extractive Industry Committee which involves community representatives, Councillors and Council staff. The Extractive Industry is an advisory committee which manages the operation of extractive industries within the Shire through the maintenance of consent conditions and regular site inspections. Any application made to Council to undertake or modify an extractive industry is considered by the Extractive Industry Committee prior to being reported to Council.</p> <p>Additional to this Committee, some appropriate operations are also required to conduct Community Review Committees. Community Review Committees (CRC's) involve representatives from local residents (often neighbours impacted by the development), representatives from the operator, Council staff and Councillors. These meetings are held to discuss and resolve local issues which may arise during the operation of the development.</p> <p>The formation and operation of the Extractive Industry and Community Review Committees are facilitated as per Council's 'Guidelines for Community Consultative Committee for Mining Operations, Extractive Industries and Power Generation', adopted by Council in 2005.</p>	Noted.	Yes
11.27 – Council Audits	<p>Muswellbrook Shire Council undertakes annual audits of extractive industry operations in regards to the compliance with environmental controls, EIS obligations and consent conditions.</p> <p>The audits are generally undertaken during October/ November period by Council officers. The audit recommendations and outcomes are then reported to the next available meeting of Council's Extractive Industry Committee for consideration.</p>	Noted.	Yes

Table 6: DCP Compliance Table*Source: HDB Town Planning & Design*

6.0 ENVIRONMENTAL IMPACT ASSESSMENT

6.1 IDENTIFICATION AND PRIORITISATION OF ISSUES

The SEARs require that in addition to the legislative review and assessment already undertaken, the proposal must be assessed to determine the potential impacts on the environment. Where impacts are identified, appropriate mitigation measures need to be put forward to address these impacts.

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

In undertaking assessing the impacts and in accordance with the SEARs the following issues have been considered:

- Stakeholder Consultation
- Site Contamination
- Archaeology and Heritage
- Biodiversity/Ecological significance
- Stormwater and Water
- Transport, Access, and Parking
- Flooding
- Noise and Vibration; and
- Socio-economic impacts.

6.2 STAKEHOLDER CONSULTATION

The proponent has undertaken stakeholder and community consultation in accordance with the SEARs issued in preparation of the EIS.

The outcomes of the consultation and the recommendations are considered as part of the Social Impact Assessment (see *Appendix Z*). Where nominated the respective subconsultants have also engaged with the nominated government agency/department. The outcomes of this engagement are provided in the respective reports.

6.3 ACCESS, TRANSPORT AND TRAFFIC

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 has been undertaken by Intersect Traffic, refer *Appendix R*, 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. The assessment was based on the maximum production rates proposed and resulted in an average peak hourly traffic volume increase of 8 vehicle trips per hour.

They concluded that the proposed development with additional traffic volumes is able to be serviced by the existing intersection and road arrangements without requiring any upgrades. The existing quarry access is suitable for the use by the additional traffic generated by the proposal and there is sufficient space within the property boundary for the provision of on-site car parking and manoeuvring areas for employees and heavy vehicles.

6.4 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 topsoil, 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.

An Air Quality Assessment has been completed by Todorovski Air Sciences in November 2020 that includes dust management measures to reduce and limit the emissions from the quarry – refer *Appendix Y*.

The report concludes that, with appropriate dust suppression measures and the implementation of an Air Quality Management Plan, the project can operate without causing significant air quality impacts at receptors in the surrounding environment. These measures focus on the on-site operations including weather monitoring, vehicle maintenance and monitoring, stockpile management, material handling and haulage activities.

The report's findings were based on the maximum annual production rates, being 500,000 tonnes per annum.

6.5 NOISE AND VIBRATION

Dalswinton Quarry has been operational for over twenty years and has shown to be compliant with relevant Noise Management Level standards for a site in its location.

The current approved operational times are:

- Monday to Friday - 5:00 am to 12:00 am.
- Saturday - 5:00 am to 1:30 pm.
- No quarrying to be undertaken on Sundays.

A standalone Noise Impact Assessment (NIA) has been prepared by Advitec Environmental and is included as *Appendix X*.

The modelling indicates that the predicted noise levels would comply with the nominated PNTL criteria at each receiver location, provided that construction of the internal haulage road and processing or crushing of material is undertaken during standard working hours (Monday to Friday 7.00 am to 6.00 pm and Saturday 8.00 am to 1.00 pm).

Mitigation measures recommended which are proposed to be implemented include:

- Re-orientation of stockpiles to the south of the site to serve as an acoustic buffer to the nearest receivers along Bureen Road.
- Limiting the use of water carts along the south-east corner of the site.
- Mobile crushing within the extraction areas will not be commenced until the pit has been constructed and the plant is operable below the natural ground levels.
- Regular maintenance of the internal Haul Roads.
- Adherence to speed limit along the external and internal Haul Roads, being 60km per hour and 30km per hour respectively.
- Limiting compression breaking.
- Inclusion of noise effects and quiet work practices within regular toolbox talks.

It concludes that with the minimal mitigation measures above, the construction and continued operation will be fully compliant in relation to noise emissions.

6.6 WATER

The quarry will operate as a closed system water management. Rosebrook has access to 20ML 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. A Surface Water Report was prepared by Umwelt and is included as *Appendix V*.

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.

A Groundwater Impact Assessment was completed by hydrogeologists.com.au in July 2020 and is included as *Appendix U*.

Both reports conclude that the project can operate with negligible effects on the groundwater and surface water runoff and providing appropriate mitigation measures and monitoring requirements to ensure this is the case.

6.7 SOIL

An Assessment of Available Resource was completed by Fluvial Systems in October 2020 and is included as *Appendix Q*. Utilising information sourced from geological maps of the area, previous stratigraphic descriptions, surface topography data and final landform data, the report was able to assess and confirm the availability of the resources to support the proposal.

6.8 WASTE AND CHEMICALS

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 as it currently does.

6.9 SERVICES

The site is serviced by on-site generators, telecommunications, and on-site effluent disposal systems. Drinking water is provided by way of a Neverfail water dispenser in the staff room.

It is proposed to connect into the available electricity service.

6.10 STORMWATER

All surface runoff from the quarry site will be diverted back into the extraction pond. A Surface Water Report was prepared by Umwelt and is included as *Appendix V*.

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

It concluded that the project is able to operate with negligible effects on the surface water runoff providing appropriate mitigation measures and monitoring of the quality and quantity of surface water occur during the entire operation of the quarry.

6.11 HERITAGE

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 was undertaken by RPS in May 2020, refer to *Appendix K*.

The Report includes requirements and mitigation measures to be undertaken prior to commencement of works and during operation, including the need for application of an AHIP induction for all site workers and the inclusion of an Unexpected Finds Procedure into RSG's policies and procedures manual.

6.12 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 BDAR has been undertaken by Biosis, refer to **Appendix H**. Part of this assessment included extensive site surveys in accordance with section 4.3.4 of the BAM. The surveys resulted in the Southern Myotis and Green and Golden Bell Frog being “assumed present” due to lack of appropriate surveys. It is intended to carry out the complete surveys for these species over the coming months.

The report concludes that with appropriate mitigation measures and the offsetting of biodiversity credits, the development proposed will not have any severe negative effects on the flora and fauna on the site or neighbouring habitats.

6.13 VISUAL IMPACT ASSESSMENT

A standalone Visual Impact Assessment (VIA) has been prepared by HDB Town Planning & Design and is included as **Appendix AA**.

It concludes that the proposal is similar to the existing site uses and therefore will have minimal visual impacts. Additional management and mitigation measures, such as stockpile height limits, extension of the southern visual bund and maintenance of the existing vegetation on the western are to be provided to minimise these impacts as outlined in the VIA.

6.14 BUSHFIRE

Bushfire mapping for the site shows some minor bushfire buffers along the fringe, and some isolated areas within the work areas where no vegetation is present.

When consulted, the NSW RFS responded with their concurrence that they had no objection to the proposal and required the EIS to address section 8.3.6 of Planning for Bushfire Protection 2019, which states:

“Where mining and associated activities are carried out on BFPL, consideration should be given to any hazards and risks associated with bush fire. It may be necessary to implement measures to control and manage any identified hazards and risks.

Petroleum exploration and production may also be a consideration in bush fire prone areas. Petroleum includes coal seam gas (CSG). As a minimum, a 10m APZ should be provided around any infrastructure associated with mining and petroleum production.

Given the potential hazard and risks, a Bush Fire Emergency Management and Operations Plan should be prepared to cover any mining activities and petroleum production undertaken on BFPL, with consideration to the same provisions detailed in section 8.3.5 for wind and solar farms.”

The proposal is not for petroleum exploration or production. The proponent will prepare a Bushfire Emergency Management and Operations Plan prior to the commencement of the operations.

6.15 FLOODING

The entire site is in a 1% AEP flooding area. A Flood Impact Assessment has been undertaken by Royal HaskoningDHV and is attached as **Appendix M**. This report outlines the:

- Impact of flooding on the site (water quality – among others).
- Predicted flood heights.
- Effect of the quarry infrastructure and stockpiles on flood flow.
- Risk of erosion in the quarry due to flooding.
- Risk of the river diverting its current course should the quarry be subject to flooding and erosion.
- Risk of quarry equipment being washed away and polluting the downstream environment during floods.
- Demonstrates that the flood extent will not increase within the surrounding area due to the proposed; and
- Demonstrates that the development will not increase the flood heights either upstream or downstream of the development.

The Flood Impact Assessment advised that the flood considerations for the proposed development is largely the same as that for the existing operations. Mitigation measures surrounding the placement of stockpiles and storage of vehicles and plant (especially fuel stores) were recommended as shown in **Section 8.0**.

6.16 SAFETY AND SECURITY

The site of Dalswinton Quarry is a relatively isolated rural property accessed via one haul road from the Golden Highway. It is fully fenced with rural type fencing along all boundaries and has a lockable gate at the entrance to the site. The entry to the property and the Haul Road from the Golden Highway is clearly signposted as shown in **Figure 17** below. Due to the current operations and the isolation of the site, it is considered that there will not be any security issues created by the proposal.



Figure 17: Photo Site Entrance

Source: HDB Town Planning & Design

Rosebrook Sand and Gravel Pty Ltd have a complete Mine Safety Management Plan (MSMP) inclusive of their Risk Management, Work Procedures, Safe Work Methods, Inspections, Incident Reporting and Health Surveillance and Hygiene. A complete Index of the MSMP is included as *Appendix W*.

These policies and systems are constantly reviewed and updated as required to ensure they are consistent with the current standards and operations of the quarry.

6.17 SOCIO-ECONOMIC IMPACTS

A standalone Social & Economic Impact Statement (SIA) has been prepared by HDB Town Planning & Design and is included as *Appendix Z*.

The need for the extension to this operation is substantiated by the RSG's current workload and awarding of contracts to supply upcoming construction projects in the region. The operation will provide job security for local employees in time of an increase in unemployment.

The SIA shows that the proposed extension to the existing quarry operations will have a positive socio-economic effect to the local community and economy.

6.18 AGRICULTURAL IMPACT ASSESSMENT

The site is located in a predominantly farming area with the majority of the workforce in Dalswinton (82%) and Bureen (35%) engaged in agriculture, forestry and the fishing industry. The alluvial plains along the river have been traditionally used for cultivating lucerne and oats to support dairy and beef cattle grazing. Many of these pastures are irrigated using water from the Hunter River.

The locality is also well known for the extractive industries operating on the less fertile river terraces where the sand gravelly soils have low water holding capacity and poor structural properties to support agriculture. The property to the immediate west of

Dalswinton Quarry, operated the Collins Exposed Aggregates in the past. Other quarries near Denman include the Dolwendee Quarry and Cawsey Park Quarry.

In the Muswellbrook LGA, agriculture, forestry, and fishing businesses account for 15% of businesses as at 2019 (source: Australian Bureau of Statistics website).

Recent events, including the ongoing drought situation, 2019 bushfire activity and COVID-19 pandemic, have resulted in agricultural businesses being negatively impacted.

Dalswinton Quarry site was once part of the larger rural parcel to its north, which was subdivided in 2014 to isolate the extraction operations from the grazing area. Therefore, with regard to land use, the site has always been engaged in sand and gravel extraction and there is no evidence of any other pre-existing uses.

Quarrying activity presently occurs over 50ha of the site and the proposal seeks to expand over 35ha to the east without disturbing the existing buffers to the west, south and north. Farmlands in the vicinity of the quarry are located across the river which will have a minimum separation of 200m from the extraction area.

The expansion will occur within the site boundaries without necessitating other ancillary uses in its vicinity or creating a large influx of population into the area, to cause an agricultural decline or land use transformation in the locality. The usage of groundwater will be within the currently approved limits and there are no additional impacts that will affect the neighbouring land uses or result in conflicts.

A Land Use Conflict Risk Assessment (LUCRA) has been undertaken in accordance with the Land Use Matrix provided in DPI's Handbook for managing land use conflict issues as detailed below.

The Risk Ranking Matrix, refer **Table 7** below, yields a risk ranking from 25 to 1. It covers a probability level, refer **Table 8** below and a consequence level, refer **Table 9** below.

A rank of 25 is the highest magnitude of risk, with a rank of 1 being the lowest magnitude or the risk is almost impossible.

Probability	A	B	C	D	E
Consequence					
1	25	24	22	19	15
2	23	21	18	14	10
3	20	17	13	9	6
4	16	12	8	5	3
5	11	7	4	2	1

Table 7: LUCRA Risk Ranking Matrix

Source: HDB Town Planning & Design

Level	Descriptor	Description
A	Almost Certain	Common or repeating occurrence
B	Likely	Known to occur, or 'it has happened'
C	Possible	Could occur, or 'I've heard of it happening'
D	Unlikely	Could occur in some circumstances, but not likely to occur
E	Rare	Practically impossible

Table 8: LUCRA Probability Table*Source: HDB Town Planning & Design*

Level: 1	Descriptor: Severe
Description	Severe and/or permanent damage to the environment Irreversible Severe impact on the community Neighbours are in prolonged dispute and legal action involved
Example/Implication	Harm or death to animals, fish, birds or plants Long term damage to soil or water Odours so offensive some people are evacuated or leave voluntarily Many public complaints and serious damage to Council's reputation Contravenes Protection of the Environment & Operations Act and the conditions of Council's licences and permits. Almost certain prosecution under the POEO Act
Level: 2	Descriptor: Major
Description	Serious and/or long-term impact to the environment Long-term management implications Serious impact on the community Neighbours are in serious dispute
Example/Implication	Water, soil or air impacted, possibly in the long term Harm to animals, fish or birds or plants Public complaints. Neighbour's disputes occur. Impacts pass quickly Contravenes the conditions of Council's licences, permits and the POEO Act Likely prosecution
Level: 3	Descriptor: Moderate
Description	Moderate and/medium-term impact to the environment and community Some ongoing management implications Neighbour disputes occur
Example/Implication	Water, soil or air known to be affected, probably in the short term No serious harm to animals, fish, birds or plants Public largely unaware and few complaints to Council May contravene the conditions of Council's Licenses and the POEO Act Unlikely to result in prosecution
Level: 4	Descriptor: Minor
Description	Minor and/or short-term impact to the environment and community Can be effectively managed as part of normal operations Infrequent disputes between neighbours

Example/Implication	Theoretically could affect the environment or people, but no impacts noticed No complaints to Council Does not affect the legal compliance status of Council
Level: 5	Descriptor: Negligible
Description	Very minor impact to the environment and community Can be effectively managed as part of normal operations Neighbours disputes unlikely
Example/Implication	No measurable or identifiable impact on the environment No measurable impact on the community or impact is generally acceptable

Table 9: LUCRA Measure of Consequence Table*Source: HDB Town Planning & Design*

Potential Conflict	Management Strategy	Risk Rating	Performance Target
Noise	Advitech Environmental prepared a Noise Impact Assessment in and recommended the following mitigation measures to reduce the noise impacts the proposed development would have on the surrounding properties: Construction of internal Haul Road is undertaken during standard working hours. Regular maintenance of vehicles, machinery and plant to ensure operations stay below standard required noise levels. Place stockpiles to act as localised noise barriers.	A3 = 20	A4 = 16
Access	The Traffic Impact Assessment prepared by Intersect Traffic has shown that the proposal can be serviced by the existing road network and will not have an adverse impact on the local or state road networks near the site.	A5 = 11	A5 = 11
Dust	Dust abatement measures will be implemented to ensure the proposal allows for minimal migration of dust from the site due to the quarry's operations. An Air Quality Assessment was completed by Todorovski Environmental in November 2020 and recommended mitigation measures as follows: Implement an Air Quality Management Plan for the project. Existing bunds to be extended to form a physical barrier to airborne dust particles. Usage of water cart during dry days of high winds to wet down the areas being utilised.	B3 = 17	C4 = 8

Visual	A Visual Impact Assessment was prepared by HDB Town Planning & Design which noted that any visual impacts associated by the proposed development could be appropriately managed and mitigated by landscaping, limiting the stockpile heights and the realignment/extension of the existing levee bank/bund along the southern boundary.	A3 = 20	B4 = 12
Stormwater	The flow of any surface water will be altered as the operations continue and move around the proposed site. A Surface Water Report has been prepared by Umwelt and concluded that the project will not result in off-site surface water discharges, other than seepage to the groundwater alluvial.	A4 = 11	B5 = 7
Groundwater	A Groundwater Impact Assessment was prepared by hydrogeologists.com which conclude that the proposal will have no impacts on groundwater. They have recommended a water management strategy of monitoring the groundwater during operation of the quarry.	B5 = 7	C5 = 4
Heritage	An Aboriginal Cultural Heritage Assessment Report was undertaken by RPS in May 2020. Based on their findings, the following recommendations were made to mitigate and minimise any adverse impacts: Prior to any works commencing within the identified locations, an AHIP must be issued. All site workers must be inducted and briefed on the possible identification of Aboriginal objects and their responsibilities accordingly. An Unexpected Finds Procedure is to be put into place for any Aboriginal object/s. An Unexpected Finds Procedure is to be put into place for any human remains.	D3 = 9	D4 = 5
Flora and Fauna	A Flora and Fauna Assessment was prepared by MJD Environmental and concluded that the expansion would have negligible effects on the existing flora & fauna on the site. There were no known threatened species discovered during on-site surveys.	D4 = 5	D4 = 5
Flooding	A Flood Investigation was undertaken by Royal Haskoning Australia in October 2020. It was concluded that the proposed expansion would remain largely the same in terms of flood considerations and the following recommendations made: Stockpiles are not to be placed in any floodway. All plant materials (especially fuel stores) are stored above the 1% AEP flood level.	C3 = 13	C4 = 8

	A Quarry Operations Management Plan be in place that includes consideration of flood conditions and inclusion of a flood evacuation plan.		
Bushfire	The subject site has minimal scattered areas mapped as Bushfire Prone land, mainly located along the vegetated area along the Hunter River. The risk of bushfire within the subject site is low.	D4 = 5	D4 = 5

Table 10: LUCRA Risk Ranking Table*Source: HDB Town Planning & Design*

The Risk Ranking Table, refer **Table 10**, shows that the current risk rankings range from 20 to 5, the highest risk being in the conflict areas of noise and visual impacts. Taking into consideration the mitigation measures and ongoing operational monitoring, performance targets of 16 to 4 are achievable.

7.0 APPROVALS AND LICENSES

Dalswinton Quarry currently holds all the required approvals and licenses to operate until November 2022. On approval of this application, the following licenses and approvals will be obtained prior to the commencement of the development:

- Water Supply Works for Excavation – Groundwater, issued by Water NSW.
- Water Supply Works for 150mm Centrifugal Pump, issued by Water NSW.
- Aboriginal Heritage Impact Permit (AHIP), issued by Department of Planning, Industry and Environment.
- Environmental Protection Authority Licence, issued by NSW EPA.

8.0 COMPILATION OF MITIGATION MEASURES

Mitigation Measure	Environmental Area	Recommended By
<p>A surface salvage of the three newly identified AHIMS sites (AHIMS# 37-2-6006, 37-2-6005 and 37-2-6004) is to be conducted under an approved Aboriginal Heritage Impact Permit (AHIP). A sub-surface archaeological investigation should also be undertaken to identify and salvage any potential sub-surface artefacts within the identified PAD.</p> <p>Rosebrook Sand & Gravel Pty Ltd (Dalswinton Quarry) must apply to the Department of Planning, Industry and Environment (DPIE) for an AHIP under s.90 of the <i>National Parks and Wildlife Act 1974</i> (NPW Act) prior to any impacts occurring in the eastern end of the existing Dalswinton Quarry.</p>	Aboriginal Archaeology	RPS Group
<p>All site workers and personnel involved in site impact works associated with the Project Area should be inducted and briefed on the possible identification of Aboriginal objects during construction and their responsibilities according to the provisions of <i>National Parks and Wildlife Act 1974</i> and the <i>Heritage Act 1977</i>.</p> <p>Aboriginal cultural heritage inductions led by Wanaruah LALC is recommended.</p>	Aboriginal Archaeology	RPS Group
<p>If suspected Aboriginal objects are identified during construction the following procedures must be followed (Appendix E):</p> <ol style="list-style-type: none"> 1) Immediately cease all activity at the location. 2) Ensure no further harm occurs, secure the area. 3) Notify Environment Protection Authority's Enviro Line, Wanaruah LALC and an archaeologist. 4) No further action to be undertaken until DPIE provides written consent to HDB. 	Aboriginal Archaeology	RPS Group
<p>All human remains in, on or under the land must not be harmed. If suspected human remains are located during any stage of the proposed works:</p> <ol style="list-style-type: none"> 1) Immediately cease all activity at the site. 2) Ensure no further harm occurs, secure the area to avoid further harm to the remains. 3) Notify the NSW Police 000. 4) Notify the Environment Protection Authority's Enviro Line, Wanaruah LALC and an archaeologist. 	Aboriginal Archaeology	RPS Group

<p>Consultation with registered Aboriginal stakeholders would continue throughout the life of the project. This would include circumstances where:</p> <p>a. There is an amendment to the Aboriginal Heritage Impact Permit, and</p> <p>b. An artefact is encountered and triggers the requirement of the 'Unexpected Finds Procedure'.</p>	Aboriginal Archaeology	RPS Group
Stockpiles are not placed in any floodway and all plant materials, especially fuel stores, are stored above the 1% AEP flood level.	Flooding	Royal HaskoningDHV
Quarry Operations Management Plan prepared to consider flood conditions and include a flood evacuation plan.	Flooding	Royal HaskoningDHV
Installation of groundwater monitoring bores upstream and downstream for ongoing monitoring of groundwater levels.	Groundwater and Ecology	hydrogeologists.com.au
Conduct groundwater quality sampling of both the monitoring bores and any groundwater present within the quarry pit, in order to detect any changes in groundwater quality during and post quarrying, on a quarterly basis.	Groundwater and Ecology	hydrogeologists.com.au
Stockpile amounts and heights to limit the amount of material to be stored on-site.	Visual Impact	HDB Town Planning & Design
Additional landscaping to be maintained along the western boundary and levee bank.	Visual Impact	HDB Town Planning & Design
Rosebrook Sand & Gravel are to ensure that the western boundary easement is maintained and free of equipment that may impede access to the river by a neighbour.	Social Impact	HDB Town Planning & Design
Truck loading and heavy vehicle movements to and from the site may take place prior to 7:00 am, but operation of the quarry and crushing plant, (or any other works outside of the pit) should take place between the hours of 7:00 am and 6:00 pm.	Noise Impact	Advitec Environmental
Efforts should be made to take advantage of localised barrier effects associated with material stockpiles and heavy vehicles during truck loading.	Noise Impact	Advitec Environmental
Rosebrook Sand and Gravel Pty. Ltd. continue to apply and update the required work safety methods and practices in place, which will be applied during all phases of the continuance of the operation on-site.	Safety	HDB Town Planning & Design

Ongoing consultation with the community, neighbours, Muswellbrook Council and other government agencies during the planning, development, construction, operation, and rehabilitation phases of the project.	Social Impact	HDB Town Planning & Design
Dust suppression methods applied during operations to minimise any potential excessive air emissions.	Air Quality	Todorovski Air Sciences
Implement an Air Quality Management Plan for the duration of the quarry operations.	Air Quality	Todorovski Air Sciences
Implement a Water Quantity Monitoring Program for the lifetime of the quarry operations.	Surface Water	Umwelt (Australia) Pty Limited
Implement a Water Quality Monitoring Program for the lifetime of the quarry operations.	Surface Water	Umwelt (Australia) Pty Limited
Rosebrook Sand and Gravel Pty Ltd to prepare and implement a Bushfire Emergency Management and Operations Plan.	Bushfire	HDB Town Planning & Design
Rosebrook Sand and Gravel Pty Ltd to settle species credit offsets for Green and Golden Bell Frog and Southern Myotis	Ecology	Biosis Pty Ltd
Implement an Adaptive Management Strategy during construction and operation	Ecology	Biosis Pty Ltd
Inspect tailings dam vegetation immediately prior to removal or infill by qualified ecologist	Ecology	Biosis Pty Ltd
Stage the relocation of tailings dam to final footprint	Ecology	Biosis Pty Ltd
Prepare a Vegetation Management Plan prior to clearing and construction	Ecology	Biosis Pty Ltd
Prepare a Construction Environmental Management Plan prior to clearing and construction, including stormwater and erosion control measures	Ecology	Biosis Pty Ltd
Monitoring of water bird population by qualified ecologist	Ecology	Biosis Pty Ltd

Table 11: Mitigation Measures Summary*Source: HDB Town Planning & Design*

9.0 COMPLIANCE OF THE PROPOSAL WITH THE PRINCIPLES OF ECOLOGICALLY SUSTAINABLE DEVELOPMENT (ESD)

ESD is a long-established, universally accepted concept which forms the underlying principle of the environmental legislations in Australia. In general terms, an ESD is described as a development that meets the needs of the present generation without compromising the ability of the future generation to meet their needs. Planning and implementation of a project should focus on sustainable outcomes where the natural ecosystems and processes are conserved for the prosperity of future generations. This initiative begins at the planning stage wherein the impacts of a development on the process and attributes of the bio-physical environment are investigated, and mitigation measures are incorporated to meet both the short-term and long-term environmental goals to ensure sustainability.

Australia's National Strategy for Ecologically Sustainable Development (1992) defines ecologically sustainable development (ESD) as:

'using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased'.

In formulating this proposal to continue the quarrying operations on the site, due diligence has been exercised to identify all areas of concern and specialist investigative studies were undertaken where required. All potential impacts have been identified and adequate mitigation/management measures have been incorporated in the proposal, with due consideration to the 4 Principles of Ecologically Sustainable Development as outlined in Clause 7(4) of Schedule 2 of the EP&A regulations as below:

Precautionary principle – Decision making should be guided by a careful evaluation of the risks and irreversible damage to the environment that can occur as result of a development. Where potential threats of severe environmental damage is likely, lack of scientific certainty should not be used as the reason for delayed actions to prevent such degradation.

There are no signs of negligence or environmental degradation on the site or surroundings from the decades –long extraction activity. Although this is a realistic representation of the impact of long-term quarrying on the site, a full suite of specialist investigations has been undertaken as part of this EIS to ensure that all risks and consequences are considered in the proposal.

A team of Planners, Specialist Engineers, Fluvial Geomorphologist, Environmental Scientists, Ecologists and Hydrologists have worked closely on this project to analyse the existing environment, identify all potential impacts, and incorporate environmental management measures to ensure that the quarrying operations are able to satisfy the regulatory requirements and operate in an environmentally sustainable manner. A conservative approach has been adopted in these investigative studies to account for the worst-case scenario and regular monitoring and maintenance are proposed as a precautionary measure to avoid any irreversible damage to the environment.

Inter-generational equity – All present operations should ensure that the health, diversity, and productivity of the environment are maintained or enhanced for the benefit of future generations.

This principle includes both intra-generational as well as inter-generational equity. The objective of the development is to continue the extraction of available site reserves to service the various economic sectors in an environmentally responsible way. Steady supply of materials is required for the development of infrastructure works and other services that benefit the society.

Environmental safeguards and regulatory standards adopted will make sure that attributes of the site and the locality are preserved for future needs. All site activities, from extraction through processing to transport of materials will comply with relevant legislations to minimise the level of impacts. The site infrastructure and operations will be contained within its boundaries and screened off where necessary to eliminate off site impacts. It is proposed to rehabilitate the site progressively to restore the disturbed areas until the closure of the operations when the entire site will be rendered suitable for grazing purposes. Due diligence will be exercised throughout the life of the quarry to maintain the environmental quality and neighbourhood amenity for the benefit of the present as well as the future generations.

Conservation of biological diversity and ecological integrity – Protection of biodiversity and conservation of all-natural ecosystems and processes that sustain life should be fundamental to any environmental planning and decision-making process.

This proposal is informed by a BAM undertaken in accordance with relevant legislative guidelines to preserve any biodiversity value associated with the site. The Ecologists concluded from their site surveys and assessments that there would be minimal of biodiversity values associated with the site by this proposal.

The development will maintain a significant buffer of 200m to the Hunter River to minimise the impact on the riparian corridor. Other surface water management measures and diversions banks are proposed to contain the runoff within the site for the sustenance of aquatic life and health of the riparian system. Sediment wash-off into the river is prevented by the flood levee bank and progressive site rehabilitation will aid in restoring disturbed surfaces to minimise dust emissions from the site. Management of the natural environment is prioritised to protect the integrity of the biotic and abiotic components on the site and its surroundings.

The installation of groundwater monitoring bores upstream and downstream for ongoing monitoring of groundwater levels, and regular groundwater quality sampling of both the monitoring bores, and any groundwater present within the quarry pit in order to detect any changes in groundwater quality during and post quarrying will ensure the proposal does not affect the quantity or quality of groundwater.

Improved valuation, pricing, and incentive mechanisms – This principle highlights the importance of social, economic, and environmental fairness in any decision making. Environmental factors are to be considered when valuing assets and services to reduce exploitation of resources.

The operational cost of the quarry includes implementation/maintenance of a number of environmental safeguards such as diversion banks, flood levee, water carts for dust suppression,

sediment and erosion control devices etc to maintain the quality of the natural environment within which it operates. Additionally, there are costs and conditions associated with the groundwater and EPL licenses. A number of monitoring programmes are included in the proposal to maintain the water and air quality. All these measures demonstrate the monetary value attached to the environment and the proponent's commitment to ensuring a sustainable operation.

10.0 CONCLUSION

This Environmental Impact Statement (EIS) prepared on behalf of Rosebrook Sand & Gravel and submitted to the NSW Department of Planning, Industry and Environment (DPIE) is seeking consent to continue the current quarry operations on the site and increase the allowable extraction of materials to a maximum of 500,000 tonnes per annum until November 2047.

The subject site has been utilised for quarrying operations since the late 1980's, when extraction and processing operations occurred in the south-eastern part of the site. Subsequent applications and modifications have allowed for the usage to continue within the current Work Area 1 until November 2022.

The expansion and continuance of the operation proposed by this application will enable a highly disturbed site to be utilised to its full extent, with minimal long-term environmental impacts. The site will be progressively restored to agricultural and grazing land for use at the end of its operations. This will have a positive effect on the local economy and workforce.

The EIS has demonstrated that the proposal is ideally suited to the site, having been utilised for similar operations for some years. The expansion will allow for the site to be utilised to its fullest extent, providing materials for some major projects in the Hunter Region and beyond.

Having addressed the requirements of the Acts, Regulations and SEARs, this application demonstrates that the proposal can be undertaken with minimal impact and significant public benefit. It is therefore considered that this development application can be considered favourably for approval.