RESPONSE TO SUBMISSION



For

Dalswinton Quarry

At Lot 72 DP 1199484 511 Dalswinton Road, Dalswinton

Prepared for Rosebrook Sand and Gravel Pty Ltd

> July 2022 Report 19/047 Rev B



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EXECUTIVE SUMMARY

This report has been prepared by HDB Town Planning and Design on behalf of Rosebrook Sand and Gravel Pty Ltd. 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 13 November 2022. The owners, Rosebrook Sand and Gravel Pty Ltd (Rosebrook), are seeking to vary the footprint and continue the extraction operation from this site 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 gravels extracted from the site are marketed in Sydney and Hunter Valley Regions for a range of uses including road base, stemming material, aggregates for the 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 Project is a State Significant Development (SSD) under the State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) and is subject to Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) which requires the preparation of an Environmental Impact Statement (EIS) in accordance with Secretary's Environmental Assessment Requirements (SEARs).

The EIS was placed on Public Submission from 15 December 2021 to 2 February 2022. During the exhibition, the general public, organisations, and various local and state agencies were invited to make submissions. A total of fourteen (14) submissions were received during this exhibition period with eight (8) being from government agencies, two (2) from organisations, and four (4) from the general public. Of the fourteen (14) submissions ten 10 have provided comments and four (4) have supported the project. No objection was received to the project.

This Submissions Report addresses the requirement to consider and respond to all submissions received. The report also describes minor clarification of the project details and description, amendments to proposed mitigation measures, and provides additional information to address the submissions.

In response to the submission received, the *Biodiversity Development Assessment Report* (*BDAR*), has been updated and response letters addressing *Surface-water Impact* Assessment, and Groundwater Impact Assessment have been included as Appendix C, Appendix D & Appendix E respectively.



1.0 INTRODUCTION

1.1 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. A modification application has been lodged to Muswellbrook Council seeking a one (1) year extension until 13 November 2023, to allow sufficient time to process the SSD. The owners, Rosebrook Sand and Gravel Pty Ltd (Rosebrook), are seeking to vary the footprint of the operation and continue the extraction for an additional twenty-five years post-approval.

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

1.2 APPLICATION DETAILS

1.2.1 PROPOSED DEVELOPMENT SITE DESCRIPTION

Lot 72 DP 1199484 511 Dalswinton Road, Dalswinton

1.2.2 APPLICANT DETAILS

Rosebrook Sand and Gravel Pty Ltd C/- HDB Town Planning & Design PO Box 40, Maitland NSW 2320

1.2.3 CONTACT DETAILS

Aprajita Gupta HDB Town Planning & Design PO Box 40, Maitland NSW 2320

P: 02 4933 6682 E: Aprajita@hdb.com.au

1.2.4 OWNERSHIP DETAILS

The property is currently owned by Rosebrook Sand and Gravel Pty Ltd.

1.3 PURPOSE OF THE REPORT

In accordance with *clause* 82 of the EP&A Regulation, the Planning Secretary has requested Rosebrook Sand and Gravel Pty Ltd (the proponent) to respond to



the submissions received during the public exhibition period. This Submissions Report documents and considers the issues raised in the community, government agency, organisation, and other submissions.

This report has been prepared in accordance with the requirements of *Appendix* C - *Preparing a Submissions Report* under State Significant Development Guidelines (DPIE 2021).

It provides additional information and clarification in relation to the proposal presented in the EIS. The report also indicates a final set of mitigation measures, which incorporates amendments in response to issues raised in the submissions and/or takes into consideration additional information and project refinements.

1.4 STRUCTURE OF THE REPORT

The report is structured as follows:

Chapter 1: Introduction – This chapter provides a general background of the project and defines the site, the current owner, and contact details.

Chapter 2: The Proposal – This chapter detailed the proposal including its objectives and justification as exhibited.

Chapter 3: Analysis of Submissions - This chapter provides an overview and analysis of the submissions received, including numbers, types of submitters, and any key issues.

Chapter 4: Action taken since exhibition - This chapter describes the actions that were undertaken during and following the exhibition period.

Chapter 5: Response to Submissions - This chapter responds to the issues raised as well as includes updated mitigation measures for the Project.

Chapter 6: Evaluation of the Project - This chapter provides an updated Project Evaluation incorporating any relevant issues raised in submissions.



2.0 THE PROPOSAL

2.1 LOCATION

Address:	Lot 72 DP 1199484
	511 Dalswinton Road, Dalswinton NSW 2328
Local Government:	Muswellbrook
Locality:	Denman
Area of site:	160ha
Zone:	RU1- Primary Production



Figure 1: Location Map Source: NSW ePlanning Portal



2.2 EXHIBITED PROPOSAL

The proposed development will occur across 89 hectares of the site including expansion towards the east as well as the 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 this 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 an 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 the 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.

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 on the environment and surrounding uses.
- Ensure compliance of the development with all relevant legislation and guidelines to minimise impacts.
- Progressively rehabilitate the site to return it to grazing land at the closure of extraction activities.

2.3 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 current completetion 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 gravels 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 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 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 slow down 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 was prepared and submitted to the department, in accordance with the requirements of the *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 mitigation measures adequately incorporated to reduce any detrimental impacts.



3.0 ANALYSIS OF SUBMISSIONS

This chapter provides a summary of the exhibition process and the submissions received, including a breakdown of the types and numbers of submissions and the key issues raised.

A register of submissions is included in *Appendix A* – *Submission Register*, listing the name of the submission bodies and providing reference to sections where the issues raised are addressed in this report.

3.1 SUBMISSIONS RECEIVED

The DPIE have received fourteen (14) submissions (including Agency Advice) in response to the EIS during the public exhibition period. These submissions are allocated to three (3) categories as shown in *Table 1* below. These categories are Public, Organisation, and Public Authority, with the majority being individuals.

Туре	Object	Support	Comment	Total
Public	_	3	1	4
Public Authority (Agency)	-	-	8	8
Organisation	-	1	1	2
Total	-	4	10	14

Table 1: Submission ReceivedSource: HDB Town Planning & Design

Table 1 shows that of all the fourteen (14) submissions received, four (4) submissions 29% have supported the project and the other ten (10) 71% have submitted their comment. No objections, petitions, or form letters were received for the project.

Of the above submissions, three (3) of the submissions are from local submitters, including a submission from Muswellbrook Shire Council (MSC). The other submissions are from outside of the LGA and other State Agencies.

3.2 SUBMISSIONS ANALYSIS

3.2.1 CATEGORISING THE ISSUES RAISED

Each submission was reviewed, summarised, and categorised according to the issues raised. The analysis of submissions involved identifying the issues raised and categorising the issues into key issue and sub-issue categories. These categories and sub-categories are formed in accordance with *Appendix C* -



Preparing a Submissions Report under State Significant Development Guidelines (DPIE 2021).

Table 2 below, summarises the categories and the key issues identified in the submissions received. As some of the submissions raised more than one issue, the number of issues identified is greater than the total number of submissions (comment/recommendations) received.

Key Issue	Sub-Issues	Number of Submissions
The Project	Timing	1
Procedural Matters	Approval and Assessment	2
Economic,	Air Quality/Dust	1
Environmental, and Social Impacts	Noise	2
	Heritage	2
	Biodiversity	2
	Flooding	2
Project Evaluation	Project need and justification	0
Beyond the scope of the Project	Out of Scope	0

Table 2: Summary of the Key Issues Identified

Source: HDB Town Planning & Design

Due to the small number of submissions received, the client has chosen to respond to each submission individually. Please refer to *Chapter 5: Response to Submissions*.

3.2.2 KEY STAKEHOLDER SUBMISSIONS

Public Authorities/Agencies are considered to be the primary stakeholder for the project (for this report). Submissions were received from the following public agencies:

- Biodiversity and Conservation Division (BCD)
- Environment Protection Authority (EPA)
- Heritage NSW (HNSW ACH)
- Transport for NSW (TfNSW)
- Crown Lands
- Muswellbrook Shire Council (MSC)
- Department of Planning and Environment:Water (DPE Water)
- Resources Regulator



EPA have supported the proposed development with positive feedback. While there were no comments received from Crown Lands as well as the Resources Regulator.

The response to the other submissions and the key issues raised within them are included in *Chapter 5: Response to Submissions* of this report.

3.2.3 COMMUNITY SUBMISSIONS

The proposal has received six (6) community submissions in total. This includes four (4) (individual) public submissions and two (2) submissions from local organisations/groups.

Four (4) out of these six (6) submissions have supported the proposal. The other two submissions have raised the following concerns:

- Project Impact Dust & Noise
- Proposed Operational Hours of the development.

The response to these comments/recommendations is included within *Chapter* 5: *Response to Submissions*.



4.0 ACTIONS TAKEN SINCE EXHIBITION

The Environmental Impact Statement (EIS) for the proposal was on Public Exhibition from 15 December 2021 to 2 February 2022. During this period the project has received feedback/recommendations from a total of fourteen (14) submitters including four (4) community, two (2) and eight (8) agency submissions. The analysis of these submissions is included in the previous chapter i.e., *Chapter 3: Analysis of Submissions* of this report.

Following the public exhibition, the following actions to address the issues raised in the submissions:

- Reviewed the Submissions.
- Consultation with Sub consultants; and
- Project Refinement.

Reviewed the Submissions

The first action undertaken post-exhibition was reviewing and analysing the received submissions. This process involved identifying the key issues raised within the submissions, and grouping/categorising them for better understanding. This process has been explained in *Chapter 3: Analysis of Submissions* of this report.

Consultation with expert consultants

After identifying and analysing the issues raised in the submissions, appropriate sub-consultants were consulted for their advice in addressing the matter raised. The following provides an outline of the sub-consultants consulted in the process:

<u>Biosis</u>

The comments from Biodiversity and Conservation Division (BCD) raised concerns regarding the previously submitted BDAR. Consultation with our subconsultant Biosis was conducted to address these concerns and an updated BDAR has been included in *Appendix* C - BDAR with this report.

Umwelt (Australia) Pty Ltd and Hydrogeologist.com.au

Advice received from NRAR/Water DPE asks for some clarification regarding Water Take and Licensing, Groundwater Impact Assessment, and Surface-water Impact Assessment. The consultants previously involved in the assessments were consulted to review and address the comments. Discussions were held and the assessments have been updated. Please see Appendix D – Letter Surface-water Impact Assessment and Appendix E – Letter Groundwater Impact Assessment.



Project Refinement

General clarifications, minor errors, and discrepancies were identified. Most of these discrepancies were identified in the submission by Muswellbrook Shire Council (MSC).

Actions taken to address any inconsistencies are detailed under *Chapter 5: Response to Submissions* of the report.



5.0 **Response to Submissions**

5.1 **KEY STAKEHOLDER SUBMISSIONS AND RESPONSE**

5.1.1 **BIODIVERSITY AND CONSERVATION DIVISION (BCD)**

The advice letter from BCD includes a list of recommendations addressing information gaps and improvements to the Biodiversity Development Assessment Report (BDAR). A revised BDAR has been prepared and attached as *Appendix C –BDAR*.

Table 3 below, summarises the response to the BCD recommendations. A detailed response has been included in *Appendix 6* of the updated BDAR attached as **Appendix C**.

S. No.	BCD Recommendations	Response
1.	The BDAR should provide further information to justify the inconsistency of PCT 1071 with the two associated TECs. This could be achieved through addressing each of the points in the NSW Scientific Committee final determinations under Part 3, Schedule 1 of the BC Act.	Sydney Freshwater Wetlands in the Sydney Basin Bioregion are restricted to sand dunes or low-nutrient sandplains in coastal areas and contain woody mid and upper strata. These habitats and characteristics are absent from the subject land. This TEC does not occur, and these findings are incorporated into <i>Sections 3.5-3.6</i> and <i>Table 5</i> of <i>Appendix</i> <i>C –BDAR</i> .
		Point 4 of the Freshwater Wetlands on Coastal Floodplains Scientific Determination precludes artificial wetlands on previously dry land created for water management processes. A status supported by the categorisation of the development footprint as Category 1 – exempt land under the LLS Act (Figure 4, Section 3.1.2). Detailed discussion is included in <i>Sections 3.5-3.6</i> and <i>Table 5</i> of <i>Appendix C –BDAR</i> .
2.	The BDAR should include evidence of consultation with a species expert and a response from BCD for each species determined to be a vagrant in the IBRA subregion pursuant to 4.4.2 of the BAM 2020 Operational Manual – Stage 1.	Candidate species assessment has been revised to remove vagrant status in the calculator and rationale based on 5.2.1 of the BAM (Table 38 and Table 39). Species are unlikely to occur based on the constructed nature of the waterbody, lack of opportunity to propagate into the waterbody and lack of known local populations for the species to have propagated from. As supported by the



		Category 1 – exempt land category of the land.
3.	The BDAR should include evidence to support the exclusion of species due to degraded habitat.	Land within the development footprint is classified as Category 1 – exempt which is not required to be assessed for ecosystem credits under the BAM.
		Habitat degradation rationale for species is based on their potential to occupy a simplified, constructed habitat. Which, in the case of threatened aquatic flora, provides very limited potential to facilitate propagation of threatened species into the site from external sources.
		Additional field surveys, undertaken in December 2021/January 2022 further support exclusion of species.
		Refer to Appendix 1 and Appendix 2 for species considerations of Appendix $C - BDAR$.
4.	The assessment of prescribed impacts should include information on the dependency of the threatened entities on the	Green and Golden Bell Frog was ruled out via survey and does not require further habitat assessment. Refer to <i>Section 6.3</i> of <i>Appendix C</i> –
	human-made structures, artificial habitat and waterbodies and the impacts on these entities with the proposed expansion.	BDAR , for expanded prescribed impact assessment regarding dependency of threatened species on artificial habitat.
5.	The BDAR's figures should be updated to meet the minimum requirements of BAM 2020.	Figure 3, Figure 5 & Figure 8 have been updated accordingly. Please refer <i>Appendix C –BDAR</i> .
6.	Tables should be updated to meetupdated to minimum requirements of BAM 2020.	Table 11 (now Table 12) & Table 12 (now Table 13) have been updated. Please refer <i>Appendix C –BDAR</i> .
7.	All shapefiles and field data sheets must be provided in accordance with Table 24 of the BDAR.	Shapefiles have been included in the response package. Plot field data is collected electronically, and data sheets included in <i>Appendix 3 Flora</i> , <i>Table 40</i> and <i>Table 41</i> of <i>Appendix C –BDAR</i> . Weather observations are included in <i>Table 16</i> , which is now expanded to accommodate additional summer survey.



		Microbat and frog survey equipment specifics are provided in <i>Section 4.2.1</i> and <i>Appendix 1</i> . Photos of vegetation zones are included in <i>Table 4</i> to <i>Table 7</i> in <i>Section 3.4</i> . BAM plot transect photos have been added to <i>Table 42</i> . Please refer <i>Appendix C –BDAR</i> .
8.	The inconsistent water management documents should be reviewed and the EIS updated to show consistent water management methods and dam locations.	The Water Management Plan prepared by Umwelt dated 2020 has been updated as shown in <i>Figure 1</i> of the response letter addressing the Surface-water Impact Assessment, and is consistent with the Water Management Plan submitted with the EIS. Please refer to <i>Appendix D – Letter Surface-water</i> <i>Impact Assessment.</i>
9.	Flood evacuation and equipment protection protocols will need to be developed for the site. These should form part of the risk management manual for the site and be updated and reviewed on a regular basis.	 Flood evacuation and equipment protection protocols of the proposal do not pose an increased risk to ecology values above those associated with the existing operation. Improved risk management will result in a similar or reduced potential of on and offsite contamination of soil and water by fuels and oils associated with operations. Subject to implementation of risk management plan. Refer to Section 6.3 for prescribed/indirect impact assessment, Appendix C -BDAR.
10.	Stockpiles should not be located in areas impacted by high velocity or in floodways. The area of exposed disturbance should be minimised by development of a progressive rehabilitation plan.	Indirect impacts are addressed in <i>Section</i> 6.2 and Impacts are considered uncertain in <i>Section</i> 6.4. Application of a progressive rehabilitation plan being supported as a risk mitigation measure for potential ecological impacts to the Hunter River in times of flood. Please refer to <i>Appendix C –BDAR</i> .
11.	The proponent is requested to provide Upper Hunter Shire Council with digital copies of the flood report and flood	Noted. The required package will be submitted to the department post-determination.



model files in accordance with
the agreements made.

 Table 3: Recommendations from BCD
 Source: HDB Town Planning & Design

5.1.2 ENVIRONMENT PROTECTION AUTHORITY (EPA)

The EPA has advised that they do not object to the proposed development. The EPA advises that they have reviewed the proposal and it adequately addressed the requirements by SEARs (issued August 2018).

EPA has also considered that there will be no significant increase in environmental impacts or other adverse impacts if appropriate controls and mitigation measures are implemented in the proposal. These controls have been appropriately conditioned in the existing Environment Pollution Licence (EPL). The EPA does not propose to include any additional license conditions at this stage and will directly contact the proponent post the development assessment process should the EPL be required to be updated.

5.1.3 HERITAGE NSW

Heritage NSW has supported the implementation of three (3) out of four (4) recommendations included in the submitted Aboriginal Cultural Heritage Assessment Report (ACHAR).

They have included their advice regarding *Recommendation 1* provided under the submitted report. Heritage NSW understands that Aboriginal Heritage Impact Permit (AHIP) is not required for the proposed development if it is approved. The action under *Recommendation 1* can be managed post-approval through the development of the Aboriginal Cultural Heritage Management Plan (ACHMP).

An Aboriginal Cultural Heritage Management Plan (ACHMP) will be prepared to manage the development post-approval, as conditioned by Department.

5.1.4 TRANSPORT FOR NSW (TFNSW)

Transport for NSW have raised no objections to the proposed development subject to requesting the inclusion of the following recommendations in the conditions of the Development Consent:

- *a)* A left turn deceleration lane and lighting.
- b) As road works are required on the Golden Highway (HW27), TfNSW will require the developer to enter into a Works Authorisation Deed (WAD) with TfNSW. TfNSW would exercise its powers and functions of the road authority, to undertake road works in accordance with Sections 64, 71, 72 and 73 of the Roads Act, as applicable, for all works under the WAD letter.



- c) All road works under the WAD shall be completed prior to issuing any Occupation Certificate / commencement of intensified operation for the development.
- d) All works associated with the subject development shall be undertaken at full cost to the developer and at no cost to TfNSW or Council, and to Council's requirements.

Additionally, in a supplementary submission dated 12 April 2022, TfNSW has requested road widening and the construction of a dedicated right-turn lane off the Golden Hwy into the quarry access road.

Subsequently, a meeting was held with TfNSW representatives on 19th July 2022 to discuss their requirements. It is understood that the left turn deceleration lane is no longer required based on the turning warrants provided. The lighting of the intersection has also been reviewed and is not considered necessary based on the excellent site distances exceeding 500m and no crash history.

TfNSW have advised that they will reassess the right-turn lane requirement having regard to updated traffic data and a risk assessment.

The proponent notes the above recommendations from TfNSW and awaits the final advice from the planning department.

5.1.5 CROWN LANDS

Crown Lands has no comments regarding the Project.

5.1.6 **RESOURCE REGULATORS**

Resource Regulators have provided no specific comments regarding the proposed development.

They have advised that they may undertake assessments of the mine operators as well as other WHS regulatory obligations, once approved.

5.1.7 DEPARTMENT OF PLANNING AND ENVIRONMENT: WATER AND THE NATURAL RESOURCES ACCESS REGULATOR (NRAR)

The department have asked to provide additional details regarding water take to determine if any water license is required. They have also included a number of Pre-determination and Post Approval recommendations. *Table 4* below provides a summary of the comments from DPE Water and the steps taken by the proponent to address them.

Please refer to Appendix D – Letter Surface-water Impact Assessment and Appendix E – Letter Groundwater Impact Assessment for additional information and Clarification.

Recommendations Response

WATER TAKE AND LICENSING



Prior to Determination:

The proponent should provide clarification of the maximum groundwater and surface water take, site water demands and the ability to obtain additional water entitlement where required for the project.

Following completion of the SWIA the water management system (WMS) proposed for the Project was revised to include a new Water Storage Dam (WSD). Figures 1 and 2 (attached) present the current proposed WMS plan and schematic drawings respectively. The WSD was included to fulfill the functionality of the existing Northern Pond and has a lower storage volume and significantly lower surface area to volume ratio to limit evaporative losses. The WSD will be the primary water storage for supplying Quarry demands (i.e., sand and gravel processing, dust suppression), capturing runoff from the Process Plant and Stockpile area. The Northern Pond will remain as an environmental protection area but will not receive any inflows from operational areas of the Quarry or be used to supply Quarry water demands.

The revision of the proposed WMS has required updates to the site water balance and the groundwater model (prepared by hydrogeologist.com.au) to enable a revised estimate of future Quarry alluvial water source groundwater take to be predicted.

The predicted groundwater take has been estimated based on:

• Water balance modelling that calculates the required groundwater import to supplement any predicted shortfall in captured surface water runoff to meet operational water demands.

• Output from the groundwater model which predicts groundwater take based on the difference between evaporative losses from the undisturbed Quarry extraction area and the proposed Quarry extraction area.

The predicted groundwater take is estimated by summing the groundwater import demand calculated by the water balance and the evaporative losses from the extraction area



calculated by the groundwater model. *Table 1* presents the revised maximum groundwater take predictions for the Project. The groundwater take predicted by the revised water balance is lower than the groundwater take of 36.2 ML/year presented in the SWIA (Umwelt, 2020) as a consequence of the lower evaporative losses associated with WSD relative to those from the Northern Pond.

There will be no licensable surface water take associated with the Project as all runoff captured within the WMS is to prevent pollution of the downstream receiving environment.

Table	1	Maximum	Predicted	Groundwater
Take				

Model	Groundwater Take (ML/year)
Water Balance	32.9
Groundwater	42.5
Total	75.4

Please refer to Appendix D – Letter Surfacewater Impact Assessment.

Post Approval:

The proponent should ensure that:

a. sufficient water entitlement is held in a Water Access Licence/s (WAL) to account for the maximum predicted take for each water source prior to take occurring during the project operational period and post closure unless an exemption under the Water Management (General) Regulation 2018 applies.

b. relevant nomination of work dealing applications for WALs proposed to account for water take *Table 2* presents the water access licences (WALs) and associated works approvals (WAs) currently held by RSG within the area governed by the Water Sharing Plan (WSP) for the Hunter Unregulated and Alluvial Water Sources.

Table 2 RSG Water Access Licences andWorks Approvals

W	Asso	Water Source	Entitl
A	ciate		ement
L	d WA		(ML)
36	20WA	Hunter Regulated	20
47	2128	River Alluvial Water	
4	19	Source	



by the project have been completed prior to the water take occurring.	18 37 2	20WA 2084 68	Lower Goulburn River Water Source	50
		ulated	the WSP rules for t River Alluvial wate	er source
into the water		at entitlement cannot ter source. As such,	RSG will	
purchase additional entitlen Regulated River Alluvial			source to	
	take	for the	Project (refer to <i>Tab</i> all required work	ble 1) and
	appl	ications	prior to groundw the existing licenced	ater take

Please refer to Appendix D – Letter Surfacewater Impact Assessment.

GROUNDWATER AND IMPACT ASSESSMENT AND MANAGEMENT

(WAL 36474).

Prior to Determination:

The proponent should:

a. Review the conceptualisation and how the conceptualisation is transferred to the numerical model to ensure aquifer interference activities and their impacts are represented in the groundwater model and have the ability to predict potential impacts on the river and aquifer (and other groundwater values) during and post closure of the quarry operation.

b. Assess the proposal against the Aquifer Interference Policy (AIP) requirements and include the summarised responses using the Aquifer Interference Assessment Framework Tool.

c. Review groundwater inputs to include the volume of groundwater take that includes evaporative groundwater loss from the voids; incidental take with quarried aggregates; and dewatering and take Additional numerical modelling has been carried out to address the recommendations provided in the DPE response.

This has been detailed in the letter from Hydrogeologist.com.au, attached as Appendix E – Letter Groundwater Impact Assessment.



for processing demands. This would also include the need to clarify whether post closure void (landform) intercepts aquifers, and if so, estimate the ongoing groundwater take post closure. d. Base the groundwater model on a complex modelling platform that is consistent with the Australian Modelling Guidelines; independently reviewed; and determined to be robust and reliable, and deemed fit for purpose.	
 Post Approval: The proponent should: a. Develop a monitoring plan to measure the groundwater inflow into the quarry to confirm take predictions, and the adequacy of mitigating measures and compliance for water take. b. Review annually the measured groundwater inflow into the quarry pits after quarry operation deepens into aquifers. This will ensure sufficient entitlement is held in the 	These post-approval matters are understood and the proponent is committed to providin the information as requested. Please refer to <i>Appendix E – Lette</i> <i>Groundwater Impact Assessment</i> for detailed response.
 sufficient entitlement is held in the WAL prior to take. c. Develop a water management plan that follows the Guidelines for Groundwater Documentation for NSW Major Projects (soon to be published on the DPE Water website). This should include the construction & placement of new monitoring bores, frequency of monitoring, water quality analyte suites and trigger action response plan. Performance against this plan should be reported annually. 	

SURFACE WATER AND IMPACT ASSESSMENT AND MANAGEMENT



 Prior to Determination: The proponent should: a. Detail whether or not there is a risk of erosion to the existing or final form of the quarry and if this will impact any watercourses, riparian land or water quality. b. Detail whether or not a failure of the levee/bund would lead to an increased risk of erosion or diversion of flow from the current watercourse and any associated impacts to watercourses, riparian land or water quality. 	 The following comments have been addressed in <i>section 6.4</i> of the Flood Impact Assessment submitted with the EIS. This section has addressed the impact of erosion for events greater than 10% AEP (1 in 10 yr ARI). In the event the bund is breached it could cause a scour to a width of 50 to 200m and may scour down to a depth of 92m AHD. This will be repaired back to the current condition should the bund be breached. Furthermore, it should also be noted that the chance of bund failure is same for the existing and future developed conditions. Please refer to <i>section 6.4</i> of previously submitted <i>Appendix M – Flood Impact Assessment</i>.
 c. Clarify the flow path of watercourses on-site and clarify whether the proposed work area is to cause any impacts to the third-order watercourse (that runs along the northern part of the site) and how these would be mitigated. d. Show consideration to the NRAR Guidelines for Controlled Activities including setbacks. 	As shown in <i>Figure 3.1</i> of the SWIA (Umwelt) an existing bund wall along the northern part of the site would appear to have previously intercepted the mapped hydroline of the 3rd order watercourse directing flows further to the east along what appears to be an existing drainage depression where it joins the 2nd order watercourse. From here, drainage continues easterly toward the culvert transferring streamflow from the northern side of the unsealed road to the southern side. <i>Figure 1</i> (as shown in <i>Appendix D – Letter Surface-water Impact Assessment</i>) indicates the current flow path of the 2nd and 3rd order watercourses in question. The Project will not result in any impact on or deviation to the current flow paths of the 2nd and 3rd order watercourses.
	Please refer to <i>Appendix D – Letter Surface-</i> <i>water Impact Assessment.</i>



5.1.8 MUSWELLBROOK SHIRE COUNCIL (MSC)

The Council have asked to address the following comments mentioned in *Table 5* below. MSC have also requested a table with key parameters of the project and their comparison with the approved development, which is attached as *Appendix G - Table of Key Parameters – Muswellbrook Shire Council* with the report.

Mitigation Measures have also been updated as per the council's advice, refer to Appendix F – Table of Proposed Mitigation Measures.

Recommendations	Response	
1.0 General		
1.1 Append a copy of existing consent DA 1994/410	A copy of the existing consent DA 1994/410 has been attached as <i>Appendix B - DA</i> 1994/410.	
1.2 Tabulate commitments from existing approval documents and show where each is addressed in SSD EIS	N/A	
1.3 Include a tabulated description of the following:	Consent for DA 1994/410 has been attached as <i>Appendix B - DA 1994/410</i> .	
• Current and required approvals and licences including duration of approval/licence. Include water licences; and	All other required approvals/licence as well as the construction schedule will be provided to the council once the development is approved.	
Construction schedule		
1.4 Site photographs (Appendix P) – show locations of photos and direction	Site Photographs have been updated as requested. Please refer to <i>Appendix H –Site Photographs</i> .	
2.0 Project Description		
2.1 Confirm processing rates for mobile and fixed crushing and screening plant, add to Table 1.	Materials will be produced on demand at an average rate of 250,000 tonnes per year, as described in the EIS.	
2.2 Clarify the disturbance area for the Project. Section 1.1 of the EIS states that the development will occur across 89 hectares (ha) while Section 8.4 of the BDAR states that 94.3 ha will be impacted (plus an additional 9.6 ha for	Section 8.4 of the BDAR details elements within the assessment which are not required to be offset in accordance with the BAM. Section 8.4 has been updated to better reflect the total and subset areas impacted within the development footprint. Please refer to Appendix C –BDAR for additional clarification.	



The depth of the excavation is between 5- 14m. This has been addressed in section 4.3 - <i>Topography of the bedrock, top of the gravel,</i> <i>and existing ground surfaces</i> of Resource Availability Assessment previously submitted as <i>Appendix Q</i> with the EIS.
Appendix E has been updated to reflect the requested changes. Please see <i>Appendix I – Surrounding Properties Map</i> .
Table 3 has been updated to include the distance to the project from the properties and is included in <i>Appendix I –Surrounding Properties Map</i> .
This has been reviewed and it is confirmed that the selected receivers are consistent in all the submitted reports and are represented with the property addresses as well.
The site has been operating as a quarry since 1991. The Rumbo Bush School has located about 3 km from the site and was a highly disturbed non habitable structure.
A photo from the inspection held on 19 April 1996 has been included in <i>Appendix J</i> previously submitted with EIS which shows the highly damaged profile of the school structure.
Additionally, please see below the most recent photo taken by the proponent around March 2022 that explains the current dilapidated condition of the school.





Figure 2: Rumbo Bush School Source: Proponent

5.0 Aboriginal Culture Heritage	
5.1 Show the locations of the three impacted sites and management on a figure.	An ACHAR was previously submitted with the EIS as <i>Appendix K</i> . Figure 2 provided within the ACHAR shows the surrounding impacted sites/artefacts. The report also includes recommendations regarding their management.
	Moreover, comments from NSW Heritage have been obtained and addressed in <i>section 5.1.3</i> of this report.
5.2 Confirm that an Aboriginal Heritage Impact Permit is the correct approvals pathway for the surface salvage of the three identified AHIMS sites when Section 4.41 of the <i>Environmental</i> <i>and Planning and Assessment Act</i> 1979 provides that a permit of this type is not required for a	A submission from NSW Heritage has been received which confirms that an AHIMS is not required. Please refer to <i>section 5.1.3</i> of this report for a detailed response.



development that has been granted development consent.	
6.0 Flooding	
6.1 Show on a figure, relevant Project components, the 1% AEP flood level, and floodway.	Two figures have been included in <i>Appendix</i> $J - Flood Maps$ depicting the position of the project site/components within the flood level and floodway.
7.0 Dangerous Goods	
7.1 Confirm that there will be no dangerous goods used or stored onsite.	The proponent has confirmed that no dangerous goods will be used or stored on the site.
	There will only be diesel fuel on the site, which does not come under the category of hazardous goods as per the Australian Dangerous Goods Code.
8.0 Waste	
8.1 Include a tabulated description of waste streams (including tailings) and management strategies (including waste type, generating processes, classification, and indicative quantities).	As described in the EIS, all the unsaleable overburden materials will be returned to the pits as progressive rehabilitation occurs on the site. Accordingly, there will be no waste generated from the extraction area. The general waste from the office building will be disposed of offsite through private waste collection services as it currently does.
8.2 Tailings management – the EIS describes two existing and one proposed tailings storage facility. Although the site does not operate under a Mining Lease, Council recommends that the Proponent consult with the Resources Regulator to confirm expectations for tailings management.	The site does not operate under a Mining Lease. Moreover, the Resource Regulator have reviewed the project and provided no comments at this stage. Once approved, further consultation will be initiated with the Resource Regulator to discuss expectation for tailings management.
9.0 Water	
9.1 Proposed water management plan – the Proposed Water Management Plan provided in Appendix O does not include a sewage and water monitoring program or other measures to mitigate surface and groundwater impacts. Recommend that prior to	Noted. The proponent understands that this can be conditioned if necessary and that the detailed Water Management Plan will be provided post-approval.



the commencement of operations, a water management plan (or combined into an environmental management plan) be prepared and submitted to Department Planning Industry and Environment for approval.	
9.2 Show the extent of the existing levee and earth bund in comparison to the proposed extension on a figure.	The clarification regarding the existing levee and earth bund has been included in the response letter by Umwelt dated 8 July 2022 attached as Appendix D – Letter Surface- water Impact Assessment.
9.3 Confirm groundwater licencing requirements for the Hunter Unregulated and Alluvial Water Source Water Sharing Plan following the completion of quarrying.	The clarification regarding groundwater licensing requirements has been included in the response letter by Umwelt dated 8 July 2022 and hydrogeologist.com.au dated 14 June 2022 attached as Appendix D – Letter Surface-Water Impact Assessment and Appendix E – Letter Groundwater Impact Assessment, respectively.
9.4 Condition 35 from DA 1994/410 should be considered 'At cessation of operations, no groundwater is to be exposed unless significant flooding of the Hunter River is occurring, or it is part of a stock watering dam. Consistent with the original EIS, a buffer of 2 metres above groundwater is to remain after extraction has ceased. The groundwater benchmark for the determination of this level in the Departments' opinion is an AHD equivalent to the rated 98th percentile flow height in the Hunter River.	Noted. The proposed expansion will be operated in accordance with this condition of consent.
9.5 Confirm impacts described in the report 'Review of floodplain mining and risks' (Jacobs, 2014) specifically "pit capture" and subsequent river channel changes have been considered in the design for the Project.	Pit capture and subsequent river channel changes have been considered in the design for the project.
10 Noise	
-	The Noise Impact Assessment has not included all the receivers mentioned in



(specifically IDs 24,15 and 10) shown in Appendix E of the EIS are not included in the NIA.	 Appendix E of the EIS. However, it has considered all the major receivers in the assessment. While ID 24,15 and 10 have not been included in the report it has included ID 23, 14, and 9 which are located at a similar distance from the operations. The receptors would experience similar noise impacts. The Noise Impact Assessment concluded that modelling of operational activities indicate that predicted noise levels would likely comply with the nominated Project Noise Trigger Levels (PNTL) criteria at each of the receiver locations providing the recommended noise management commitments are implemented as described in <i>section 6.5</i> of the EIS. The Assessment also concluded the closest receiver on Bureen Road may experiences some noise impact above the Noise Management Level during the construction of the internal haul road be undertaken during standard working hours – Monday to Friday 7am to 6pm and Saturday 8am to 1pm. It is noted that the EPA have raised no concerns regarding the Noise Impact.
11 Stakeholder Engagement	
11.1 Provide a consolidated table showing stakeholder engagement issues and were addressed in the EIS.	Stakeholder Consultation has been comprehensively included with the Socio-Economic Impact Assessment previously submitted as <i>Appendix Z</i> . The reference to the report has been included in all the relevant sections of the EIS.
11.2 Recommend that a community drop-in session is held following the end of the EIS exhibition period to present EIS results, clarify any Project refinements since early consultation activities, and to outline the planning process for the Project to the community.	A community session was held prior to the exhibition period of the project and the feedback provided has been included in the Socio-Economic Impact Assessment previously submitted as <i>Appendix Z</i> . Having regard to the relatively low number of submissions received, and noting there have been no objections raised, it is considered appropriate that a Project update



	be provided to the community submitters describing the project status, determination process and how they can view the responses to all matters raised during the exhibition period on the Planning Portal.
11.3 Ongoing stakeholder engagement – outline mechanisms that will be implemented to ensure effective ongoing engagement with Project stakeholders.	There is an existing sign at the front of the site which directs complaints to the EPA Hot Line. It is proposed to update this sign to include the local site contact information.
11.4 The Productivity Commission and Department of Planning, Industry and Environment have recently undertaken a review of the NSW Government's contributions system. As a result, the Environmental Planning and Assessment Amendment (Infrastructure Contributions) Regulation 2021 is expected to come into effect on 1 July 2022 (if it is passed into law). The new 'local levy conditions' to replace section 7.12 levies may be placed on a development that will increase demand for public services. Council has historically charged a levy on quarries based on tonnage of material extracted. To ensure consistency with other approved quarries, Council staff request a condition be placed on the development as a local levy or requirement for a planning agreement, to fund Council's costs for the provision of environmental management and monitoring including responding to community complaints, revision of management plans (where required), input to Independent Environmental Audit (where required), review of key Project documentation, general review of Project compliance during construction, operation and rehabilitation, community impacts and traffic movements generated by the project. Proportionate to contribution amounts for other	Noted. The proponent agrees to pay the current levy at the time of approval.



quarry and mining projects in the Shire, Council request a contribution of \$0.04/tonne of material removed from the site, to be paid annually subject to CPI indexation during quarrying operations.			
12 Rehabilitation			
12.1 MSC staff do not accept the Rehabilitation Strategy as set out in Appendix S and recommend that its structure be updated consistent with the 'Form and Way' (July 2021) documents implemented by the Resources Regulator. Council requests conditioning that involves preparation of a Rehabilitation Strategy in consultation with Council.	Noted. The proponent will submit the updated Rehabilitation Strategy post-approval.		
12.2 Recommend conditioning of a biodiversity and rehabilitation bond with the DPIE to ensure the Biodiversity and Offset Strategy and rehabilitation of the site is implemented in accordance with performance and completion criteria. The amount of the bond should be reviewed periodically and updated accordingly.	Noted.		
13 Management and Mitigation			
13.1 Recommend the Submissions Report include a revised commitments table that includes commitments shown in Section 8 of the EIS as well as additional recommended commitments shown in Table 2. Information shown in red text in Table 2 will need to be clarified/added.	Mitigation Measures have been updated to reflect the issues raised in the submissions as well as additional recommended commitments. Please refer to Appendix F – updated Mitigation Measures.		
Table 5: Submission by MSC			

 Table 5: Submission by MSC

 Source: HDB



5.2 COMMUNITY SUBMISSIONS AND RESPONSE

5.2.1 Sandra Wolfgang

The submitter has supported the proposal because of the local employment benefits associated with it.

5.2.2 Tim Mullaney

The submitter has appreciated the need for the project to deliver quarry products and to create local job opportunities and has supported the proposal.

5.2.3 Allan Davis

The submitter has generally supported the proposal for its commercial and economic benefits but commented on two (2) environmental issues, being noise and dust associated with the project.

Table 6 below describes the issues and the proponent comment addressing the issues:

S. No.	Issue Raised	Response
1.	Dust – Depending on the operations at the time and also wind speed and direction, dust has been and will continue to be an issue. This includes the operation of the quarry and also the transport of product from the quarry along the gravel road beside the Hunter River. Greater efforts to reduce fugiitve dust emissions should to be taken and these include making sure water spays are fitted effectively to crushing and screening operations and extra water carts are available to dampen internal haul roads and also the main access road from the quarry to the Golden Highway. The conditions of consent should reflect these requirements. In addition, a permanent dust monitor should be established at the "Metulla" property to monitor dust levels.	 Section 6.4 Air Quality of the EIS describes that the proposed operations will have a minimal impact on air quality provided the recommended mitigation measures are implemented. These controls are currently applied to the operations in the EPL. Mitigation Measure include the following: The extent of exposed surfaces and stockpiles is to be kept to a minimum. Exposed areas and stockpiles are either to be covered or are to be dampened with water as far as is practicable if dust emissions are visible, or there is potential for dust emissions outside operating hours. Dampen material when excessively dusty during handling. Use dust suppression for crushing and screening activity.



	 Haul roads should be watered using water carts such that the road surface has sufficient moisture to minimise on-road dust generation but not so much as to cause mud/dirt track out to occur. There is no recommendation to establish a dust monitor on the Metulla property.
 2. Noise – Our properties are closest to the proposed development. On still mornings especially in winter, in the evenings plus when wind directions and speed are in the direction of our properties, noise is an issue for residents in the houses (5 in total). The noise source is mining equipment, reversing alarms, crushing equipment and also truck movements especially trucks entering the site from the Golden Highway down the slope onto the Hunter River flats. I have read the noise report and recommend the Department of Planning critically examines the assumptions used in this report. In my view, the noise events which I have personally experienced and which residents on our properties continue to experience are underestimated in the noise report. The only way to adequately determine if noise is the problem I suggest is to establish a permanent noise monitor at say "Metulla" adjacent the homestead. That way there can be no argument as to the magnitude of the noise during the work hours of the quarry. 	The Noise Impact Assessment has considered and assessed the impact of the project on nearby sensitive receptors and concluded that the predicted noise levels at these receptors would comply with the nominated criteria subject to the recommended mitigation measures described in <i>Section 6.5 Noise and</i> <i>Vibration and detailed in Appendix X</i> <i>Noise Impact Assessment.</i> There is no recommendation to establish a noise monitor on Metulla property. It is noted that EPA has reviewed the proposal and have no objection to it. Appropriate measures are included in the EPL to monitor noise, which will be implemented on the site.



respected and have their legitimate	
concerns dealt with appropriately.	

 Table 6: Issues Raised by Allan Davis

Source: HDB

5.2.4 Anonymous

The submitter has supported the proposed expansion.

5.2.5 Tamworth Landscape Supplies

Tamworth Landscape Supplies have supported the proposal because of its importance in providing raw materials to landscape as well as various other industries.

5.2.6 Kingstar Farm

Kingstar Farm have generally supported the proposal. They are only concerned with the operational time of the quarry. *Table 7* below describes the comment from the submitter and the response of the proponent.

Issue Raised	Response	
To Whom it may concern, We are supportive of the Dalswinton Sand and Gravel quarry expansion. However, being a sensitive receptor, we are very concerned with the proposed operation of hours being 5am- midnight. With our operation we have millions of dollars of thoroughbred breeding stock. These animals have a high flight instinct especially with loud noises and at night. In our experience this usually results in injuries and/or death and of course has significant financial and emotional consequences. Consideration to impose a condition on an approval to effect that loud noises/blasting are prohibited after 6pm. We are happy to discuss further and/or show you our operation.	The proposal is to expand the existing sand and gravel quarry. This quarry has worked from 5:00 am to midnight under its current consent since 1994. It has been operating for 30 years within the same operational hours and has no record of complaints from the neighbouring properties. As described in <i>section 5.1.2</i> of the report, Environmental Protection Authority (EPA) have no objection to the project. It is considered there will not be any significant environmental impacts associated with the proposal. Appropriate controls and mitigation measures have been conditioned in the EPL including noise control, air quality, operational limits, etc. The proposal does not include blasting. The noise impacts of the proposal have also been assessed and addressed in the submitted <i>Appendix X - Noise Impact Assessment</i> .	
Table 7: Submission by Kingstar Farm		


6.0 **EVALUATION OF THE PROJECT**

This section provides the final evaluation of the Project. It includes the Project justification and conclusion of the environmental impact assessment process. The project justifications as set out in this section have considered the updated reports and mitigation measures.

6.1 **PROJECT JUSTIFICATION**

No objections or major concerns were raised during the exhibition period of the EIS. The submissions received recommended minor clarifications and the addition of information to the project/proposal description. Most of these discrepancies were identified in the submission by Muswellbrook Shire Council (MSC).

Biodiversity Development Assessment Report(BDAR) and Mitigation Measures were updated to address these recommendations. These changes/updates are considered minor, that neither impact the project objectives (as described in the EIS) nor compromise the project justification. Rather, they provide clarification to the process to ensure that the proposed quarry expansion can operate in an environmentally responsible manner and respects its neighbours.

Therefore, the project justification remains unchanged from what has been considered in EIS and summarised in *section 2.3* of this report.

6.2 **CONCLUSION**

This Response to Submission report has been prepared on behalf of Rosebrook Sand & Gravel Pty Ltd and submitted to the NSW Department of Planning, Industry, and Environment (DPIE) in response to the submission received during the exhibition period for the EIS.

The EIS was on public display for two months from 15th December 2021 to 2nd February 2022. During the exhibition, a total of fourteen (14) submissions were received, from which ten (10) have provided the comment and four (4) have supported the project (including EPA). No objection was received during this process.

The report addresses all comments received and responds to them. The report also describes minor clarifications in Project Description and provides additional information to address submissions. The technical reports that have been updated as part of the process to address the submissions/recommendations are included in the Appendix.

Following the public exhibition of the EIS and after consideration of the issues raised in the submissions, Mitigation Measures have also been refined to reflect the supporting reports. A Submission Register has also been included with the report.



Having addressed the requirements/recommendations of the various Submissions, this report demonstrates that the proposal can be undertaken with minimal impact and significant public benefit. The DA is therefore considered suitable for approval.



APPENDIX A

SUBMISSIONS REGISTER



APPENDIX B

DA CONSENT



APPENDIX C

BIODIVERSITY DEVELOPMENT ASSESSMENT REPORT (BDAR)



APPENDIX D

LETTER SURFACE-WATER IMPACT ASSESSMENT



APPENDIX E

LETTER GROUNDWATER IMPACT ASSESSMENT



APPENDIX F

TABLE OF PROPOSED MITIGATION MEASURES



APPENDIX G

TABLE OF KEY PARAMETERS - MUSWELLBROOK SHIRE COUNCIL



APPENDIX H

SITE PHOTOGRAPHS



APPENDIX I

SURROUNDING PROPERTIES MAP



APPENDIX J

FLOOD MAPS

