

STATEMENT OF ENVIRONMENTAL EFFECTS

for

Proposed Modification No 2 (MOD 2) to DA 344-11-2001 (Wallerawang Quarry)

Prepared by:



R.W. CORKERY & CO. PTY. LIMITED

October 2018

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Proposed Modification No 2 (MOD 2) to DA 344-11-2001 (Wallerawang Quarry)

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LIST OF ABBREVIATIONS

AHD	Australian Height Datum
DA	Development Consent
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EL	Exploration Licence
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ML	Mining Lease
RWC	R.W. Corkery & Co Pty Limited
SEE	Statement of Environmental Effects

EXECUTIVE SUMMARY

This *Statement of Environmental Effects* has been prepared by R.W. Corkery & Co. Pty. Limited to support an application by Walker Quarries Pty Ltd (“the Applicant”) to modify development consent DA 344-11-2001 for the Wallerawang Quarry (“the Quarry”). The Quarry is located on land adjoining the Great Western Highway to the south of Wallerawang, approximately 8km northwest of Lithgow, within the Lithgow City Local Government Area.

Condition 2(5) of DA 344-11-2001 limits quarrying operations on the Quarry Site to 15 July 2019. The proposed modification (MOD 2) seeks to extend the limit on quarrying operations by 12 months to 15 July 2020. The application is being made under Section 4.55(1A) of the *Environmental Planning & Assessment Act 1979* (EP&A Act), as a modification involving minimal environmental impact, as an interim measure whilst environmental studies are completed for a more significant modification to DA 344-11-2001.

On review of the proposed operations over the extended term of DA 344-11-2001, it has been established that the additional 12 months operation would not require any changes to the approved operations and could be undertaken in accordance with the existing Mining Operations Plan. The extended term of DA 344-11-2001 would not result in any additional impacts on the biophysical environment.

In addition, the Applicant contacted 35 surrounding residents via mail and email advising them of this application and requesting registrations of interest. Three responses were received requesting more information. Each of the respondents were contacted by phone and email and only one returned the call. Once it was explained to that landholder that the Proposed Modification would not change any aspects of the approved activities, the landowner confirmed no objection subject to the management of visual impacts. In light of the general acceptance of this application, it is concluded that MOD 2 would not result in any additional or increased impacts on the socio-economic setting.

On balance, it is assessed that the MOD 2 would have minimal environmental impact and the benefits to the employees of the Quarry and local economy of the continued operation of the Quarry weigh in favour of the approval of an interim extension to the term of Condition 2(5) whilst additional environmental studies are completed on a more significant modification to DA 344-11-2001.

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1. INTRODUCTION

1.1 SCOPE

This *Statement of Environmental Effects* (SEE) has been prepared by R.W. Corkery & Co. Pty. Limited (RWC) to support an application by Walker Quarries Pty Ltd (“the Applicant”) to modify development consent DA 344-11-2001 for the Wallerawang Quarry (“the Quarry”). The Quarry is located on land adjoining the Great Western Highway to the south of Wallerawang, approximately 8km northwest of Lithgow, within the Lithgow City Local Government Area (LGA) (see **Figure 1**).

Condition 2(5) of DA 344-11-2001 limits quarrying operations on the Quarry Site to 15 July 2019. The proposed modification (MOD 2) seeks to extend the limit on quarrying operations by 12 months to 15 July 2020. The application is being made under Section 4.55(1A) of the *Environmental Planning & Assessment Act 1979* (EP&A Act) as a modification involving minimal environmental impact.

1.2 FORMAT

The format of the SEE is as follows.

Section 1: introduces MOD 2, describes the Quarry Site and operations, provides information the Applicant and discusses the need for MOD 2 and future modifications. Information on the format of the document and management of investigations is also included.

Section 2: describes the consultation undertaken and identifies any issues requiring consideration.

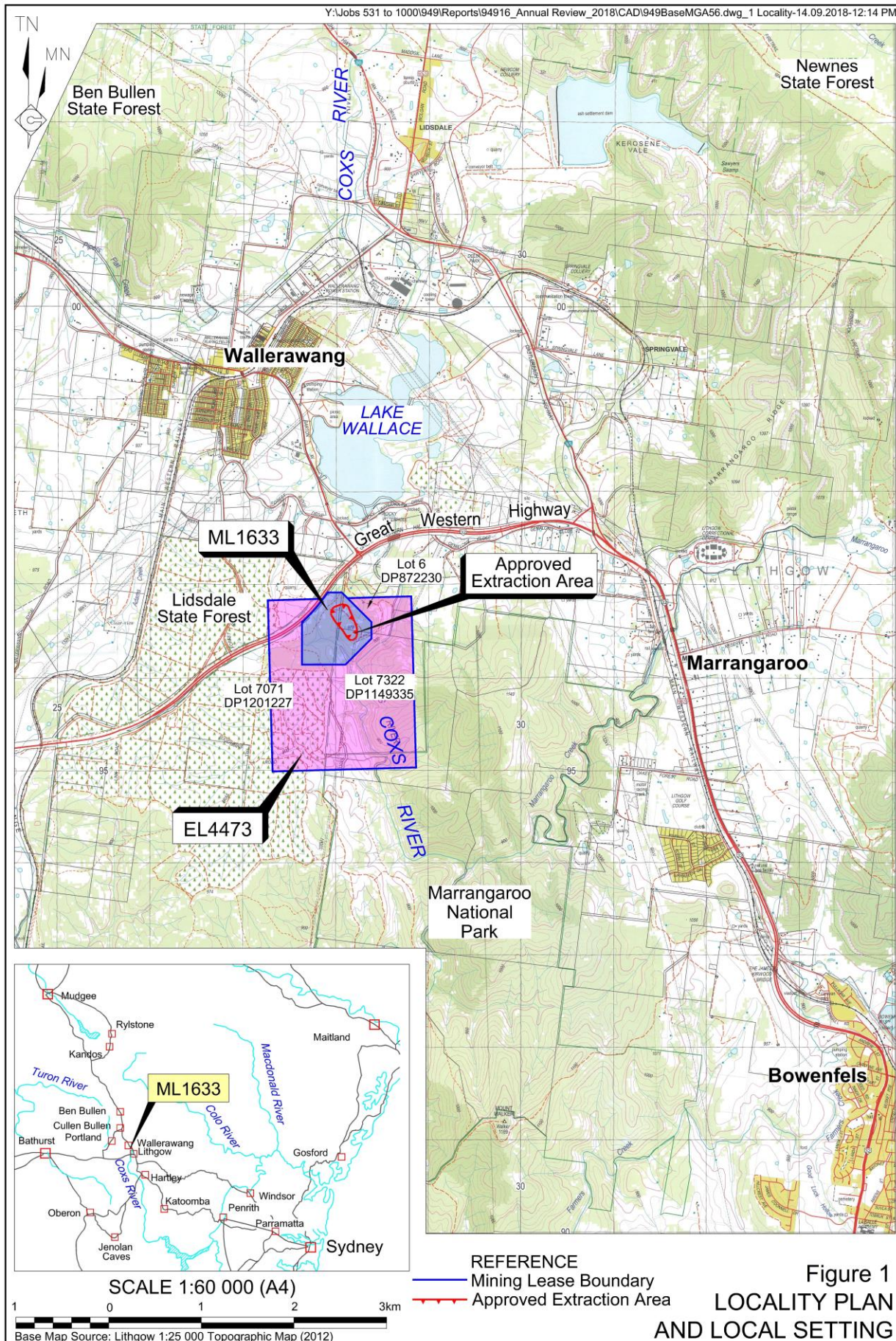
Section 3: describes the Applicant’s objectives of MOD 2 and reviews the Quarry operations in the context of the issues identified in Section 2.

Section 4: identifies, describes and evaluates any potential impacts of MOD 2 on the local environment.

References: lists the various source documents referred to for information and data used during the preparation of the *Environmental Assessment*.

Appendices: present the following additional information.

1. DA 344-11-2001.
2. Community consultation record.
3. Government agency consultation record.



1.3 APPROVED QUARRY SITE AND OPERATIONS

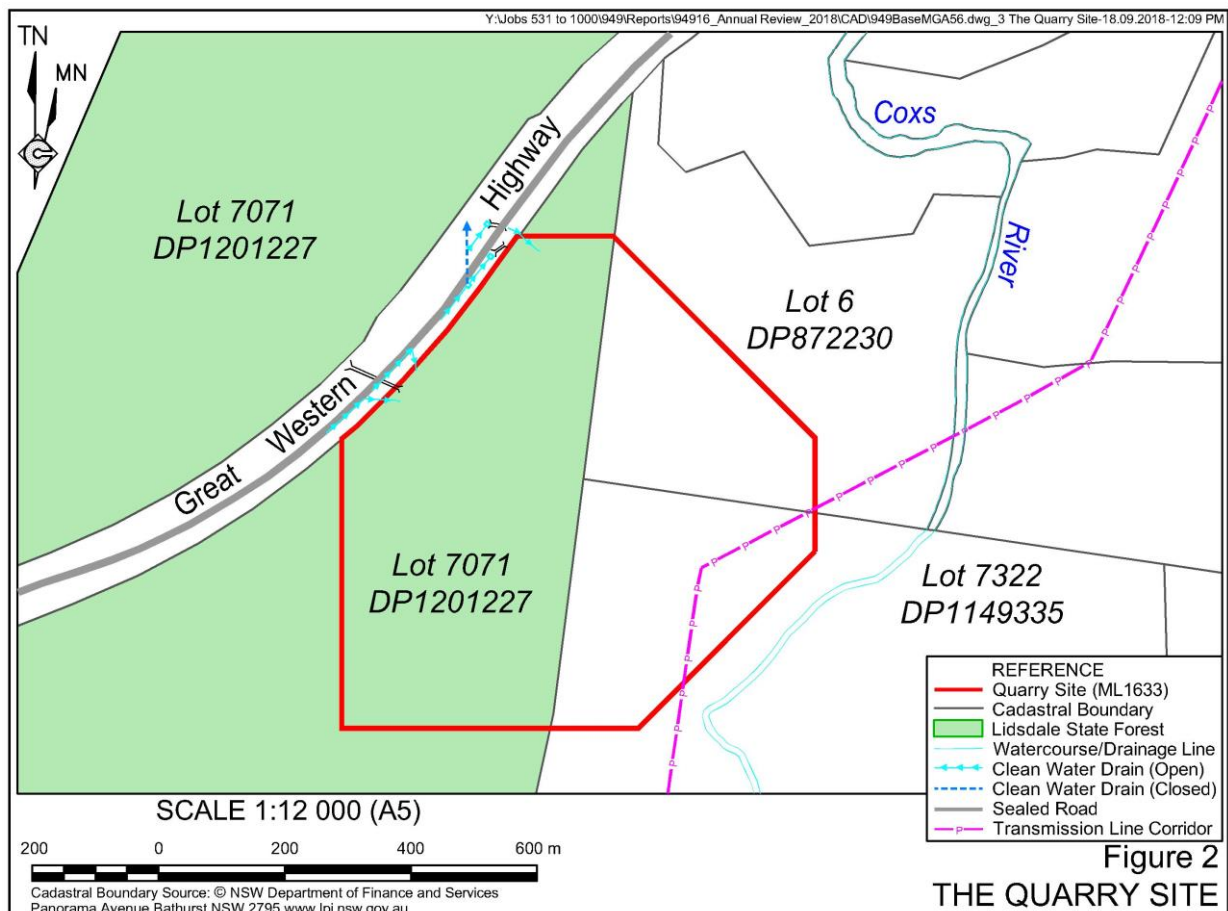
1.3.1 The Quarry Site

The Quarry is located over three parcels of land adjoining the Great Western Highway to the south of Wallerawang (see **Figure 2**).

- Lot 6 DP872230: freehold title owned by Sitegoal Pty Ltd.
- Lot 7322 DP1149335: Crown Land which is managed by the Department of Industry – Crown Lands and Water Division (DI-CLWD).
- Lot 7071 DP1201227: Crown Land which forms part of Lidsdale State Forest managed by Forestry Corporation of NSW (FC NSW).

Other key features of the Quarry Site identified on **Figure 2** are as follows.

- At its closest point, the Coxs River is located approximately 50m from the southeastern boundary of the Quarry Site.
- A transmission line traverses the Quarry Site with all activities have been designed to remain at least 40m from this.
- Some drainage from and to the north of the Great Western Highway discharges onto the Quarry Site.



1.3.2 Quarry Operations

DA 344-11-2001 approves the mining and processing of quartzite to a depth of 930m AHD from a single open cut extraction area. The approved layout of the Quarry is presented in **Figure 3**.

It is noted however, that the Applicant determined that the Drying Cell shown in **Figure 3** and proposed in Section 2.4.2 of the *Environmental Assessment for Modification to Operations at the Wallerawang Quarry* (MOD 1) (RWC, 2017) was not required. As described in the approved Mining Operations Plan (RWC, 2018) and in Section 3.3.6 of this document, the Applicant reached this conclusion because silty residues washed from the sand are collected in the Silt Cells shown in **Figure 3**, and the silt is periodically excavated and transferred to drying cells on the Eastern Stockpile Area. As a result, the area referenced on Figure 3 as the “Drying Cell” has been constructed as a stockpile area where extracted material with excess water is stockpiled and allowed to dry. Moisture from this stockpile area drains to the Bottom Working Dam (SB2) to the northeast.

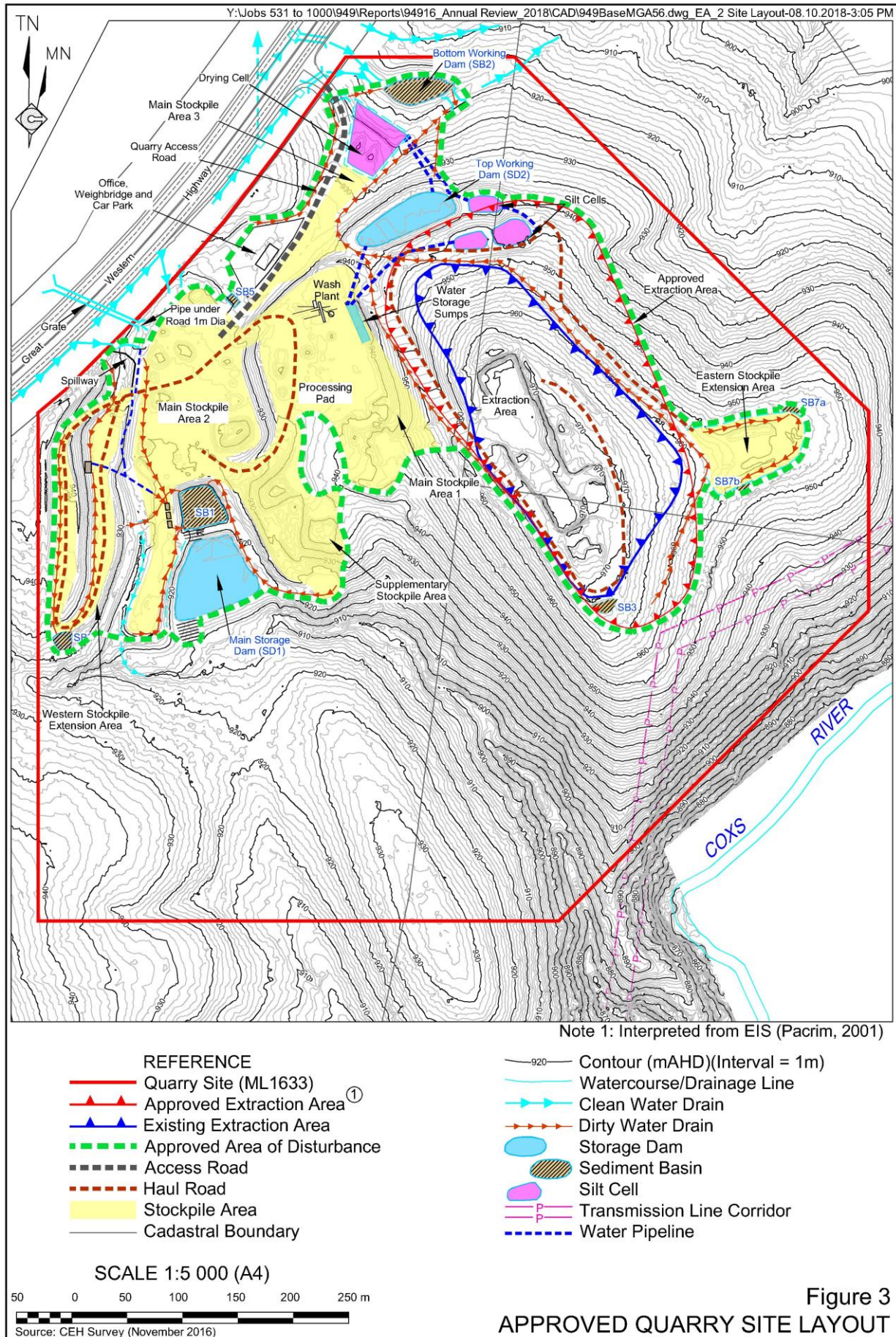
The location of the Crushing and Screening Plant (the Plant) shown in **Figure 2** of MOD 1 was indicative only and reflected its location at the time of the application for MOD 1. The Plant is mobile and is moved from one location to another frequently depending on factors such as the type of product required to be sold, whether drilling is required, and whether blasting is taking place. As such, the location of the Plant is not shown in **Figure 3**.

No changes to the area of disturbance, annual production limit, hours of operation or approach to rehabilitation of the Quarry Site are proposed. Quarry operations will continue to be undertaken in accordance with the following.

- The conditions of DA 344-11-2001.
- The commitments made in the following documents.
 - *Environmental Assessment for Modification to Operations at the Wallerawang Quarry* (DA 344-11-2001) (RWC, 2017).
 - Wallerawang Quarry Mining Operations Plan (MOP), for the period 15 May 2018 to 14 December 2019 (RWC, 2018).
- The Wallerawang Quarry *Environmental Management Strategy* and management plans approved by the Secretary of the DPE, namely:
 - *Soil and Water Management Plan*;
 - *Noise Management Plan*;
 - *Blast Management Plan*;
 - *Air Quality Management Plan*;
 - *Biodiversity Management Plan*;
 - *Rehabilitation Management Plan*;
 - and
 - *Bushfire Management Plan*.

Walker Quarries Pty Ltd is a fully owned subsidiary of Sitegoal Pty Ltd, to whom the original development consent was granted in 2004, created to carry out mining, processing, transport and other ancillary activities at the Quarry.

Sitegoal Pty Ltd was formed in 1994 to identify and develop mineral resources in New South Wales. The Company Directors maintain a hands-on management style and are either Lithgow- or Sydney-based.



Walker Quarries Pty Ltd is committed to operating the Quarry in a manner that complies with relevant environmental legislation and is environmentally responsible.

1.4 THE APPLICANT

Walker Quarries Pty Ltd is a fully owned subsidiary of Sitegoal Pty Ltd, to whom the original development consent was granted in 2004, created to carry out mining, processing, transport and other ancillary activities at the Quarry.

Sitegoal Pty Ltd was formed in 1994 to identify and develop mineral resources in New South Wales. The Company Directors maintain a hands-on management style and are either Lithgow- or Sydney-based.

Walker Quarries Pty Ltd is committed to operating the Quarry in a manner that complies with relevant environmental legislation and is environmentally responsible.

1.5 BACKGROUND TO THE PROPOSED

1.5.1 Development History

DA 344-11-2001, which was originally granted to Sitegoal Pty Ltd by the Minister for Infrastructure and Planning on 19 October 2004, approving the mining of quartzite (a mineral under Schedule 1 of the *Mining Regulation 2016*) to a depth of approximately 930m AHD and production of up to 500 000tpa. Quarry operations were limited to a period of 10 years from the issue of a mining lease. Mining Lease (ML) 1633 was granted by the NSW Minister for Mineral Resources on 15 July 2009.

Operations at the Quarry commenced in 2014 with the construction of a new intersection on to the Great Western Highway. Mining operations commenced later in 2014, however, less than 20% of the 3.5Mt approved resource has been mined.

DA 344-11-2001 was modified on 25 August 2017 to regularize several constructed components of the Quarry and formalise the approval of production of a more extensive range of quarry products. The modified conditions of DA 344-11-2001 confirm the period of approved operations (defined as the extraction, processing, stockpiling and transportation of extractive materials) to 15 July 2019, noting rehabilitation of the Quarry may continue beyond this date.

1.5.2 Development of the Proposed Modification

On confirmation of the modification of 25 August 2017, the Applicant commenced geological investigations to assess the extent of the quartzite resource beyond the currently defined extraction area limit (see **Figure 3**). These investigations (of Rangott Mineral Exploration Pty Limited [RME]) confirmed the quartzite extended at depths exceeding 850m AHD, dipping at approximately 50° from east to west (RME, 2018). On confirmation of this extended resource, the Applicant commenced the planning of a modification to:

- Extend the limit of quarrying operations beyond July 2019;

- extend the extraction area (both laterally and vertically); and
- increase the area available for stockpiling to the southwest and south of the Western Stockpile Area.

An application to extend the term of ML 1633 was lodged with the Division of Resources & Geoscience (DRG) on 8 May 2018. The Applicant was advised that the term of ML 1633 was to be extended by 20 years (to 15 July 2040) on 24 July 2018.

Consultation with the Department of Planning & Environment (DPE), Lithgow City Council (Council), other government agencies and the surrounding community was commenced in April 2018 seeking information on key issues and assessment requirements.

On receipt of assessment requirements and advice from the DPE and government agencies, a number of specialist environmental assessments have been commissioned with several of these requiring extended periods to complete (see below).

Biodiversity

On completion of initial field survey, vegetation and habitat mapping completed in accordance with the Biodiversity Assessment Methodology (BAM), further targeted field survey for several species of threatened flora and fauna was identified as required (Ecoplaning, 2018). This field survey cannot be completed until October (to coincide with critical activity or breeding periods for some species).

At least one species requiring targeted field survey is listed under the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). Referral to the Commonwealth Department of Energy and the Environment (DEE) may be required to determine whether the proposed extension of the disturbance footprint represents a controlled action against a listed Matter of National Environmental Significance.

On the basis of the above, it is considered unlikely that a Biodiversity Development Assessment Report (BDAR) could be finalised until November or December 2018. Should the proposed modification be referred to the DEE, further delays in the completion of the BDAR would be likely.

Groundwater

After completing a preliminary groundwater impact assessment was undertaken using a 2D analytical element groundwater modelling program (AnAqSim), the DI-CLWD and National Resources Assessment Regulator (NRAR) was consulted to confirm this approach would address the assessment requirements of the agencies. The advice provided by DI-CLWD and NRAR was that 3D modelling of the potential hydrogeological effects of the extraction area extension would be required.

This approach requires the construction and monitoring of several groundwater bores, with the required acquisition of approvals delaying the completion of this until very recently. As a result, a groundwater assessment report to be completed is unlikely before November or December 2018.

Conclusion

On the basis of the extended periods required for the completion of these specialist studies, and the possibility that the results of these may require further modifications to the proposed layout of the Quarry Site, it is considered unlikely that an application to modify DA 344-11-2001 as originally planned could be placed on exhibition before February or March 2019.

With only three to four months between the likely exhibition of the application to modify and expiry of the DA 344-11-2001, assessment, determination and implementation of any subsequent conditional requirements of the modification (as originally proposed) could extend beyond the expiry date of DA 344-11-2001. Noting this, a separate application for a short-term (12 month) extension to the limits imposed by *Condition 2(5)* is proposed.

1.5.3 Need for the Modification

A significant proportion of the 3.5Mt quartzite resource approved for extraction and processing remains in situ. To allow quarry operations to cease on 15 July 2019 would prevent these resources from being recovered with there being no guarantee that they would be recovered in the future. This is contrary to the policy of the Department of Industry to exploit the resources of NSW for the benefit of the state and supports an extension to the limits imposed on DA 344-11-2001 by *Condition 2(5)* is required.

The delays in completing a SEE to support the larger modification noted in Section 1.5.2 risks a period of enforced care and maintenance on the Quarry which could be detrimental to the long-term viability of the operation and the short-term prospects of Quarry employees, suppliers and customers. As such, a short-term extension to the limits imposed by *Condition 2(5)* of DA 344-11-2001 is needed to allow time for the key environmental assessment to be completed.

By obtaining a short-term extension to the limits imposed by *Condition 2(5)*, more time will be available for the assessment of the more significant modification referenced in Section 1.5.2. Approval of a longer term quarry extension will not only allow the recovery of NSW's mineral resources to be maximised, it would provide for a continuation of the benefits to the Quarry's employees, suppliers, customers and others within the local area generated by the Quarry. It is noted that the DRG recognises the significance of the quartzite resource of the Quarry with ML 1633 recently extended until 15 July 2040.

1.6 MANAGEMENT OF INVESTIGATIONS

This document has been prepared by Mr Alex Irwin (B.Sc (Hons)), Senior Environmental Consultant with R.W. Corkery & Co Pty. Limited (RWC). Information on current and future operations at the Quarry was provided by Mr Paul Hensley (Director/Compliance Manager) and Mr Kerry Burke (Director) of Walker Quarries Pty Ltd.

2. CONSULTATION

2.1 CONSULTATION

2.1.1 Overview

Consultation commenced in April 2018 when the Applicant was confident that an application for an extension to the extraction and stockpile areas of the Quarry Site could be completed and lodged in 2018. As it became evident that this would risk the temporary closure of the Quarry from July 2019, consultation was repeated to reference the minor Section 4.55(1A) application to be made. A summary of the consultation undertaken with government agencies and the local communities is provided in Sections 2.1.2 and 2.1.3 respectively. Copies of correspondence related to this consultation is included in **Appendices 2** (government agency consultation) and **3** (community consultation).

2.1.2 Government Agency

The potential for this application for a short extension to the term of DA 344-11-2001 was first raised with the DPE on 30 April 2018 when requesting assessment requirements for the proposed extension to the extraction and stockpiling areas of the Quarry. The DPE confirmed a modification to extend the term of DA 344-11-2001 was, with appropriate justification, an option.

After identifying the required scope of the specialist environmental assessments required to assess the quarry extension proposal would extend into November or December 2018, the DPE was consulted again regarding assessment requirements for a short-term extension to the terms of *Condition 2(5)* on 24 August 2018. In response, the DPE requested the SEE justify the modification is within the scope of Section 4.55(1A) of the EP&A Act. The DPE also requested that the Applicant consult with Forestry Corporation NSW (FC NSW), the Division of Resources & Geoscience within the Department of Industry and nearby affect landowners.

On 10 September 2018, the Applicant informed FC NSW and DRG of the intention to lodge the application to modify DA 344-11-2001 and requested comment on any assessment requirements. No formal response was received from either agency and in lieu of a response on this minor modification, the Applicant referenced the assessment requirements provided by these agencies when consulted earlier in the year regarding the quarry extension proposal. The assessment requirements are identified as follows.

Division of Resources & Geoscience (Resources Regulator)

The primary interest of the Resources Regulator with respect to future modifications of the Quarry referred to the rehabilitation of the Quarry Site in accordance with the 'Mining Development - Rehabilitation Standard Assessment Requirements'. Notably, the proposed modification does not seek to make any changes to the proposed rehabilitation of the Quarry Site from that approved as part of the Quarry Mining Operations Plan (MOP) (RWC, 2018).

The Resources Regulator also requested any assessment document how issues raised by FC NSW with regards to post mining rehabilitation outcomes are addressed.

Forestry Corporation NSW

FC NSW confirmed no specific requirements for assessment, however, reiterated previous comments on rehabilitation and final landform. FC NSW would like the final landform to mirror the pre-quarry environment, with natural drainage re-instated, a minimized final void, internal roads to be rehabilitated and the former Hoskins Quarry site also rehabilitated. FC NSW recognises that these issues are beyond the scope of the current application. As noted above, the proposed modification does not seek to make any changes to the proposed rehabilitation of the Quarry Site from that approved as part of the MOP (RWC, 2018).

Department of Industry – Crown Lands and Water Division

On 1 August 2018, the Applicant met with representatives of the DI-CLWD in Orange to discuss the proposed Quarry extension proposal and the interests and assessment requirements of DI-CLWD as the owner of Lot 7322 DP1149335. This followed assessment requirements received from DI-CLWD on 2 July 2018 which identified key requirements for assessment as including:

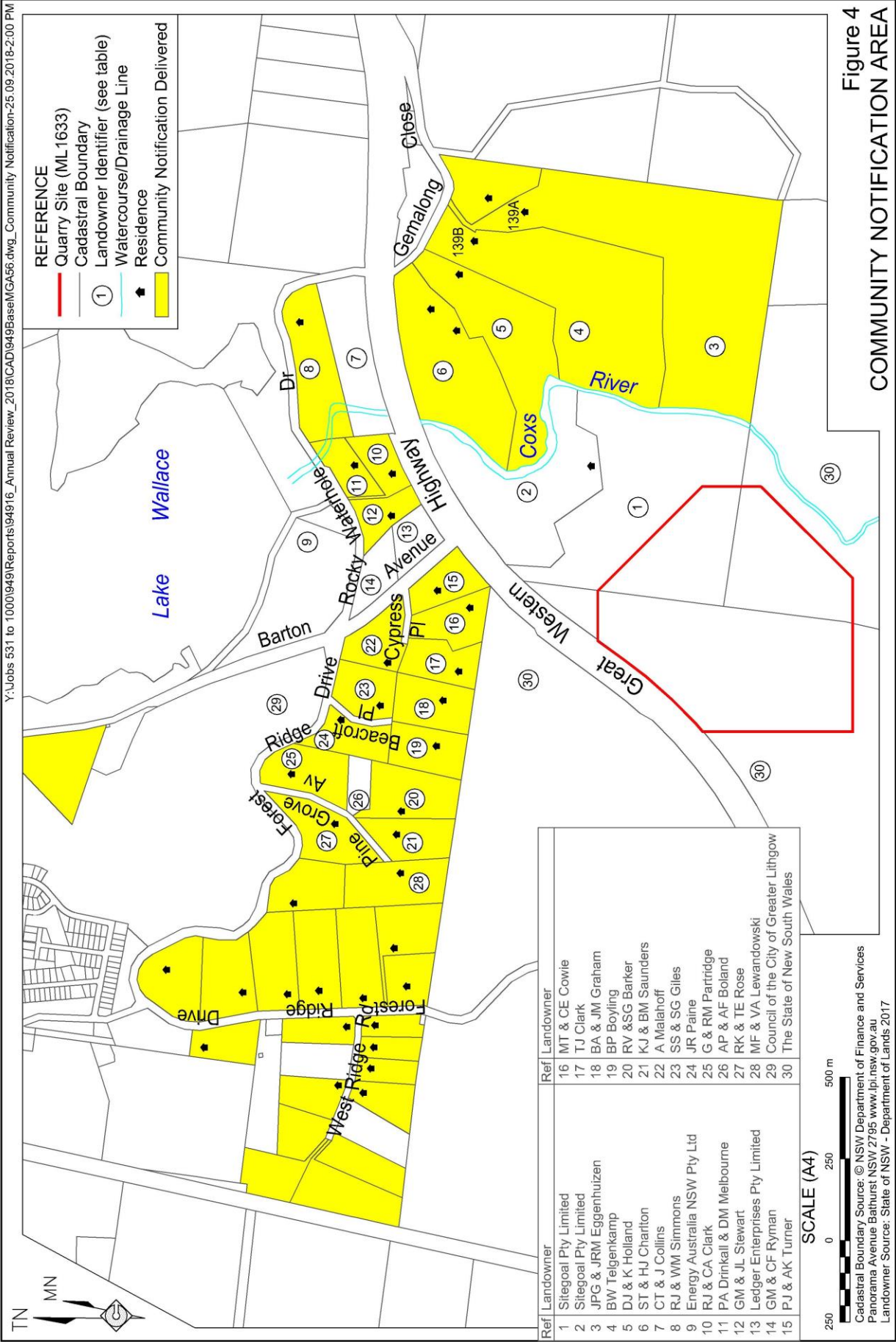
- confirmation of tenure over the land;
- consideration of matters associated with aboriginal heritage;
- management of drainage and runoff;
- minimisation of impacts on native vegetation; and
- rehabilitation of the land to ensure there is no ongoing maintenance greater than the surrounding bushland.

At the meeting of 1 August 2018, it was confirmed application for an occupation licence had been lodged by the Applicant for Lot 7322 DP1149335. The various assessment requirements of DI-CLWD were discussed and minutes which were prepared following the meeting summarise the content of these discussions. The possibility of an interim application to modify DA 344-11-2001 was raised with the DI-CLWD indicating no objection to this subject to satisfaction of their existing assessment requirements.

On 14 September 2018, correspondence was sent to DI-CLWD confirming the intention to proceed with the interim application to modify DA 344-11-2001 and requesting any specific assessment requirements related to this application. No correspondence has been received from DI-CLWD to this request.

2.1.3 Community Consultation

On 21 June 2018, a letter notifying local landowners of the proposal of Walker Quarries to modify DA 344-11-2001 to extend the extraction area and stockpile areas was hand delivered to 35 properties to the northwest, north and east of the Quarry Site (see **Figure 4**). The landowners were invited to register their interest to be consulted further. In total three landowners registered and these were contacted during the week of 10 September 2018 (by phone and email).



Only one landowner, of 42 Rocky Waterhole Drive, responded by phone and referenced a meeting of several property owners to the north of the Great Western Highway. The primary concerns held by this landowner respect to the Quarry operations were as follows.

- The visual impact of the Quarry. He noted it was just visible now and was concerned it would become even more visible in the future. The landowner understood the Quarry was to remain on the southern side of the hill and therefore no the visible to properties to the north.
- The potential devaluation of his property
- The vibration associated with blasting.

The landowner noted that his concerns reflected those of other landowners to the north of the Quarry Site.

When it was noted that this proposed interim modification would not change any aspects of the approved operations, the landowner confirmed no objection subject to the management of visual impacts.

2.2 ISSUE IDENTIFICATION

Based on the consultation undertaken, the key assessment matter relates to a demonstration that the mining operations and rehabilitation of the Quarry may be undertaken in accordance with existing requirements. These are best summarised in the Quarry MOP and hence, the key issue associated with MOD 2 is demonstrating that no change to the activities documented in the MOP is required.

Following from the above, a secondary issue is demonstrating that the proposed extension to the term of *Condition 2(5)* would not result in any additional or unacceptable impacts on the amenity of properties within the local area.

3. OBJECTIVES AND REVIEW OF OPERATIONS

3.1 OBJECTIVES OF MOD 2

The objectives of MOD 2 are as follows.

- To allow for continued operations at the Quarry beyond 15 July 2019
- To continue to operate the Quarry in accordance with the conditions of DA 344-11-2001, including all management plans.
- To continue to minimise impacts on the local community and other stakeholders.

3.2 OVERVIEW OF THE MODIFICATION

MOD 2 proposes an extension to the term of *Condition 2(5)* to 15 July 2020.

All other operations and activities undertaken on the Quarry Site would remain unchanged, including the proposed rehabilitation of the Quarry.

3.3 QUARRY OPERATIONS

3.3.1 Exploration

No exploration activities are planned.

3.3.2 Construction

The only construction to be undertaken on the Quarry Site is the installation of a new 11kV pole substation will be constructed to the north of the site office. This construction is identified in the MOP. This construction is independent of DA 34-11-2001 and does not require rehabilitation at the conclusion of the MOP term.

3.3.3 Land Preparation and Soil Management

Only the 1.3ha surrounding the existing void identified in the MOP would be cleared and stripped of soil during the proposed modified term of DA 344-11-2001. Clearing and stripping would be implemented in accordance with the key principles identified in the MOP, as well as the following measures identified in the following management plans.

- *Biodiversity Management Plan.*
- *Soil and Water Management Plan.*

3.3.4 Extraction Activities

The Applicant will continue to mine from the approved extraction area using conventional drill and blast, load and haul methods. Blasting will be carried out in accordance with the approved *Blast Management Plan*.

Extraction faces will generally be limited to between 10m and 15m in height, with 3m to 5m benches maintained between faces where required (only at the southern end of the void during the term of the proposed extension). The southern and western extraction faces will be constructed at an angle of between 70° and 80°. The eastern face will be developed at an angle of 55° which follows the contact with the underlying geology. The northern face will daylight behind retained or restored native woodland vegetation at 950m AHD. As nominated in the MOP, mining would continue in a generally north to south direction over the term of the proposed modification.

Over the term of the proposed modification, the extraction will extend no further to the north and west than identified in the MOP, however, some extension to the east and south may be undertaken (see **Figure 5**). This extraction area remains within the limits approved by DA 344-11-2001 and identified in the MOP.

Over the term of the proposed modification, the floor level of the void will be reduced, as nominated in the MOP, to 950m AHD.

The Applicant intends on making an application to amend the MOP following the approval of the proposed modification to extend the term of the MOP to July 2020 and account for any minor changes to the extraction area.

3.3.5 Overburden Management

No overburden emplacements are required as the limited overburden which may be encountered would continue to be used to sheet internal roads and hardstands, maintain bund walls or blended to produce specialty products to customer specifications.

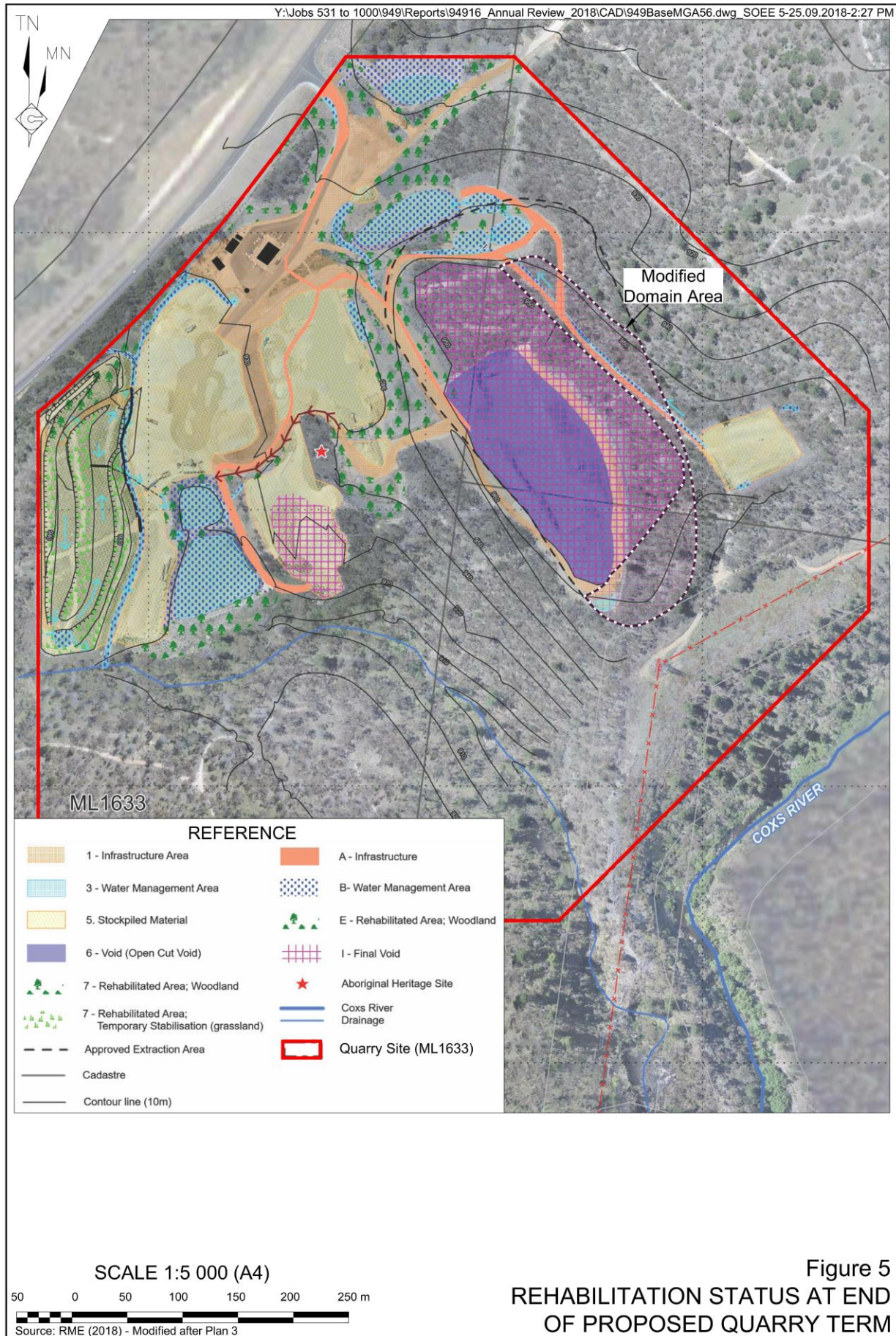
3.3.6 Processing Waste

The only processing waste generated by the Quarry would continue to be the silty residues washed from the sand and collected in the silt cells. No change to the management of silt is proposed from that nominated in the MOP, namely:

- periodic excavation from the silt cells and transfer to drying cells on the Eastern Stockpile Area; and
- excavation of the dried silt for combination with overburden (see Section 3.3.5) or blending with soils prior to use in rehabilitation¹.

No additional silt or drying cells would be required.

¹ The silts, due to their increased mineral content and better water holding capacity, can enhance the value of the soil for rehabilitation



3.3.7 Waste Management

As documented in the MOP, all non-production waste generated across this MOP period would continue to be collected on the Quarry Site and removed for disposal or recycling by a suitably qualified contractor.

3.3.8 Decommissioning and Demolition Activities

As operations are planned to continue beyond July 2020 (subject to a further modification to extend the extraction area, stockpile areas and term of DA 344-11-2001), there are no areas or permanent structures that would be decommissioned or demolished.

3.3.9 Temporary Stabilisation

Following stabilization of the Western Stockpile Area, batters of water storages and silt cells (as nominated in the MOP), the only features of the Quarry Site to require stabilization would be soil stockpiles. Temporary stabilization and soil stockpile management includes the following practices.

- Minimising, as far as practicable, the operation of machinery on soil stockpiles to minimise compaction.
- Leaving the surface of the soil stockpile with an even but roughened surface to assist in erosion control and seed germination and emergence.
- Establishing an appropriate vegetative cover on any soil stockpile that is retained for more than three months.

In the event groundcover cannot be quickly established using the methods nominated above, hydroseeding would be the preferred method used to temporarily stabilize steeper slopes greater than 30°. As documented in the most recent Annual Review for the Quarry, hydroseeding was used to stabilize the batter slopes of the Western Stockpile Area, water storages and silt cells (see **Plates 1 to 4**).

3.3.10 Material Production Schedule during MOP Term

Table 1 presents the material production schedule for the term of the proposed modification.

Table 1
Material Production Schedule during the MOP term

Material	Unit	16 June 2018 – 15 July 2019	16 June 2019 – 15 July 2020	Average Monthly
Stripped soil	m ³	10,000	5,000	N/A ¹
Rock / Overburden	bcm	0	0	0
Quarried Material (ROM)	m ³	100 000	100 000	7 700
Reject Material (oversize, undersize / fines)	t	<1 000	<1 000	<100t
Product	t	260 000	260 000	20 000
Note 1: Soil Stripping undertaken in periodic campaigns				
Source: Modified after RWC (2018) – Table 7				



Plate 1: View of Hydroseeded batters of the Western Stockpile Area and Amenity Bund (Ref: IMG_3565)

Plate 2: Hydroseeded batter above Silt Cells (Ref: IMG_3572)



Plate 3: Aggregate Stockpiles (Main Stockpile Area 2) and Main Storage Dam (SD1) (Ref: IMG_3581)

Plate 4: Tube stock and hydroseed batter of the Amenity Bund and Erosion Controls (Ref: IMG_3583)



3.4 TRANSPORT OPERATIONS

No change to transport operations are proposed.

3.5 HOURS OF OPERATION

No change to the approved hours of operation presented in **Table 2** is proposed.

Table 2
Approved Hours of Operation

Activity	Permissible Hours
<ul style="list-style-type: none">• Extraction Operations• Processing Operations• Overburden Management• Stockpile Management	<ul style="list-style-type: none">• 7:00am to 6:00pm Monday to Friday• 8:00am to 1:00pm Saturday• At no time on Sundays or public holidays
<ul style="list-style-type: none">• Drilling and Blasting	<ul style="list-style-type: none">• 9:00am to 5:00pm Monday to Friday• 9:00am to 1:00pm Saturday• At no time on Sundays or public holidays
<ul style="list-style-type: none">• Loading and Despatch	<ul style="list-style-type: none">• Any time, provided that such activities meet the noise criteria set out in Table 2 of DA 344-11-2001
<ul style="list-style-type: none">• Maintenance	<ul style="list-style-type: none">• Any time, provided that such activities are not audible at any privately-owned residence
Source: DA 344-11-2001 – Condition 2.2	

3.6 QUARRY REHABILITATION

3.6.1 Introduction

The Applicant would continue to implement a progressive approach to the rehabilitation as described in the MOP. As far as practical, a progressive approach to rehabilitation would be adopted, i.e. whereby areas of the Quarry no longer required for operations are quickly shaped and vegetated to provide a stable landform. It is noted however, that the nature of Quarry operations requires that only limited areas for rehabilitation would be available until much closer to the exhaustion of the quartzite resource.

The following description of rehabilitation reviews rehabilitation against the land use goals, objectives, methods and performance criteria nominated in the current MOP.

3.6.2 Post Mining Land Use Goal

The proposed modification would not change the post-mining land use goals for the Quarry which area identified in the MOP as being:

- to implement successful design and rehabilitation of landforms to ensure structural stability, revegetation success and prevention of pollution;

- to ensure rehabilitation and revegetation is self-sustaining and follows the principles of sustainable development; and
- to return the Quarry Site to an area of passive conservation, i.e. sustainable native woodland with management requirements no greater than the surrounding landforms.

3.6.3 Objectives

In order to achieve the nominated post-mining land use goals, no change to the objectives of rehabilitation activities as presented in the MOP would be required. These objectives are reproduced as **Table 3**.

Table 3
Rehabilitation Objectives

Feature	Objective
Land Use	Produce a sustainable native woodland community with management requirements no greater than the surrounding landforms.
	Minimise adverse socio-economic outcomes following mine closure.
Landform	Provide a low maintenance, geotechnically stable and safe, non-polluting landform and provides land suitable for the proposed final land use.
	Construct the final landform such that it is self-sustaining.
	Provide rehabilitated woodland communities which adjoin conserved and improved native vegetation remnants to create a contiguous corridor of woodland vegetation.
Biodiversity	Establish a native ecosystem over the Quarry Site (excluding the access tracks and water management features to be retained) to develop a landform that is self-sustaining, low maintenance, and closely resembles the ecosystem surrounding the Quarry Site.
Surface Infrastructure	Decommission and remove all surface infrastructure (unless required for a lawful post mining land use).
Final Voids	Ensure the final void are safe, stable and secure.
Other	Allow for the relinquishment of the Mining Lease and the return of the security lodged over the Mining Lease within a reasonable time after the end of the mine life.

More detailed rehabilitation objectives specific to specific features of the Quarry Site, identified as 'domains', are provided in Section 3.6.4.1 and **Table 4**.

3.6.4 Planning and Management

3.6.4.1 Rehabilitation Domains

The rehabilitation domains (primary and secondary) would remain unchanged from the descriptions provided in the MOP. **Figure 5** identifies the minor change to domain status (from the MOP) proposed at the end of the modified term of DA 344-11-2001.

Table 4 presents the rehabilitation objectives for each primary / secondary domain combination identified on **Figure 5**.

Table 4
Rehabilitation Domain Objectives

Primary Domain	Secondary Domain	Rehabilitation Objective
1 – Infrastructure Area	A – Infrastructure	<ul style="list-style-type: none"> Site entrance and sealed access road retained. Safe and free from contamination. Retained infrastructure suitable for a lawful final land use.
	E – Woodland	<ul style="list-style-type: none"> All buildings and infrastructure (excluding site entrance and sealed access road) decommissioned and removed. Safe and free from contamination. Stable and permanent landform established. Soil properties are suitable for the establishment and maintenance of selected vegetation species. Vegetation: <ul style="list-style-type: none"> contains a diversity of species comparable to that of the local remnant vegetation; is maturing and/or naturally regenerating and trending towards that of local remnant vegetation; and is developing in structure and complexity comparable to that of the local remnant vegetation.
3 – Water Management Areas	B – Water Management Areas	<ul style="list-style-type: none"> Retain selected water storages for future land use and/or fire fighting purposes. Landform non-polluting. Stable and permanent landform established.
	E – Woodland	<ul style="list-style-type: none"> Stable and permanent landform established. Landform non-polluting. Soil properties are suitable for the establishment and maintenance of selected vegetation species. Vegetation re-establishment objectives as for 1E.
5 – Processing and Stockpile Areas	E – Woodland	<ul style="list-style-type: none"> All plant decommissioned and surplus stockpiles removed. Stable and permanent landform established. Landform non-polluting. Soil properties are suitable for the establishment and maintenance of selected vegetation species. Vegetation re-establishment objectives as for 1E.
6 – Void	I – Final Void	<ul style="list-style-type: none"> Final landform safe and secured. Stable and permanent landform established. Landform non-polluting. Soil properties are suitable for the establishment and maintenance of selected vegetation species. Native Vegetation established. Vegetation re-establishment objectives as for 1E.
9J – Conservation and Biodiversity Offset Areas		<ul style="list-style-type: none"> Maximise preservation of remnant native vegetation

Source: Modified after RWC (2018) – Table 15

3.6.4.2 Rehabilitation Phases and Activities over the Modified Term of DA 344-11-2001

Successful rehabilitation is best considered in terms of logical steps or phases. That is, the successful achievement of objectives for one phase is the precursor for progression to the next phase, and so on until all rehabilitation objectives and criteria are complete. The use of rehabilitation phases in this manner allows the progress of rehabilitation to be clearly managed and monitored. The proposed rehabilitation phases would remain the same as nominated in the MOP.

With the exception of a slightly enlarged extraction area (Domain 6), the proposed rehabilitation activities through each phase would remain equivalent to that described in the MOP. The following provides an overview of the rehabilitation activities that would be undertaken over the term of the proposed modification.

Domain 1 – Infrastructure Area

No rehabilitation activities would be undertaken in this area during this MOP term.

Domain 3 – Water Management Area

As nominated in the MOP, all components of this domain would remain active. The Applicant would continue activities associated with the stabilization of both internal and external walls of storage dams and sediment basins, and the channels of internal drains (principally through the establishment and retention of groundcover over these).

Domain 5 – Stockpile Areas

As nominated in the MOP, all stockpile areas would remain active throughout the term of this MOP. During the term of this MOP, the Applicant would continue activities associated with the stabilization on batter slopes between tiered sections of these individual stockpile areas.

Supplementary seeding or tube-stock planting would be undertaken as required to promote the establishment and sustainable growth of groundcover, tree and shrub species on bunds and batter slopes.

Domain 6 – Void Areas

As nominated in the MOP, rehabilitation activities during the term of this MOP would be restricted to the stabilization of the southern face which will have been developed to its maximum (lateral) extent. A safety bund would be constructed and maintained above this section of the final void. The bund would be constructed to a height at least half that of the larger tyre diameter used on the Quarry Site, covered with available growth media and seeded with a native grass and shrub species mix.

No other rehabilitation activities would be undertaken in this area during this MOP term as the void will not have reached the final lateral or vertical extends approved by DA 344-11-2001.

Domain 9 - Conservation and Biodiversity Offset Areas

Management of this domain will be as described in the Quarry *Biodiversity Management Plan*.

3.6.4.3 Summary of Rehabilitation During the Approved MOP and Extended Term of DA 344-11-2001

Table 5 presents a summary of the rehabilitation that would be implemented during the life of the extended term of DA 344-11-2001. Changes from that included in Table 19 of the MOP are identified in *italics*.

Table 5
Summary of Rehabilitation

Primary Domain	Secondary Domain	Rehabilitation Phase	Start of MOP (ha)	End of MOP (ha)	End of Extended Term
1 – Infrastructure Area	A – Infrastructure	Active	0.3	0.3	0.3
		Total	0.3	0.3	0.3
	E – Woodland	Active	2.0	2.0	2.0
		Ecosystem Establishment (temporary stabilization)	0.4	0.4	0.4
		Total	2.4	2.4	2.4
3 – Water Management Area	B – Water Management Area	Active	1.5	1.5	1.5
		Landform Establishment	0.2	0	0
		Growth Medium Development	0	0	0
		Ecosystem Establishment (temporary stabilization)	0.2	0.4	0.4
		Total	1.9	1.9	1.9
	E – Woodland	Active	0.4	0.4	0.4
		Total	0.4	0.4	0.4
5a – Main Stockpile Areas (1-3)	E – Woodland	Active	4.1	4.1	4.1
		Ecosystem Establishment (temporary stabilization)	0.6	0.6	0.6
		Total	4.7	4.7	4.7
5b – Western Stockpile Area	E – Woodland	Active	1.7	1.7	1.7
		Ecosystem Establishment (temporary stabilization)	0.2	0.2	0.2
		Total	1.9	1.9	1.9
5c – Eastern Stockpile Area	E – Woodland	Active	0.5	0.5	0.5
		Total	0.5	0.5	0.5
5d – Supplementary Stockpile Area	E – Woodland	Active	0.9	0.9	0.9
		Total	0.9	0.9	0.9
6 – Open Cut Voids	I – Final Void	Active	0.6	1.0	2.0
		Total	0.6	1.0	2.0
	E – Woodland	Active	2.1	3.0	2.0
		Total	2.1	3.0	2.0
9 – Conservation and Biodiversity Offset Areas	J – Conservation and Biodiversity Offset Areas	Active	28.6	27.3	26.3
		Total	28.6	27.3	26.3
Grand Total			44.3	44.3	45.3
Source: Modified after RWC (2018) – Table 19					

Source: Modified after RWC (2018) – Table 19

The Applicant intends on seeking an amendment to the MOP following determination of the proposed modification to account for the changes identified in **Table 4**.

4. ASSESSMENT AND EVALUATION

4.1 ASSESSMENT OF IMPACTS

4.1.1 Introduction

The only change to the environmental impact of the Quarry generated by the proposed modification relates to an extension in the period over which the impacts occur. The following reviews the key environmental impacts associated with the Quarry operation and assesses the significance (if any) of this extended period of impact.

4.1.2 Biodiversity

The Quarry operations would remain within the approved disturbance footprint of DA 344-11-2001 and would continue to be undertaken in accordance with the Quarry *Biodiversity Management Plan* and *Biodiversity Offset Strategy*.

Subject to implementation of the management measures nominated in the *Biodiversity Management Plan* and *Biodiversity Offset Strategy*, the proposed 12 month extension to the term of *Condition 2(5)* would not result in any additional impacts to local biodiversity.

4.1.3 Water Resources

On the basis that any further disturbance within the approved impact footprint of DA 344-11-2001 is undertaken in accordance with the Quarry Soil and Water Management Plan, no additional impact on surface water resources would result from the proposed extension to the term of *Condition 2(5)*.

Groundwater resources would remain unaffected by the proposed modification as extraction would not extend below the approved limit of 930m AHD which is well-above the local groundwater table.

4.1.4 Noise and Air Quality

Noise and air quality monitoring undertaken in accordance with the Quarry *Noise Management Plan* and *Air Quality Management Plan* respectively confirms the Quarry operates in compliance with the limits imposed by DA 344-11-2001 and EPL 13172.

While noise and air quality emissions would continue for an additional 12 months as a result of the proposed modification, there would be no change to operations on the Quarry Site and so subject to the implementation of the management measures contained within the relevant managements plans, compliance with the nominated limits is expected.

4.1.5 Visual Amenity

The potential for the Quarry to be visible from vantage points to the north and northeast of the Quarry Site, and the concerns raised by the owners and residents of properties in this direction from the Quarry, is acknowledged.

It is noted that the approved area of disturbance on the Quarry Site would remain unchanged from that which is currently approved. This includes limiting the northern and eastern perimeters of the extraction area to the 950m AHD contour. In doing so, views from the properties to the north and northeast of the Quarry Site, which are generally located at an elevation of 900m AHD or lower, would be screened by the retained northern and eastern hill slope.

Revegetation and landscape planting on the Quarry Site is also ongoing to reduce the visual impact of features such as water storages, silt cells, bunds and associated batter slopes. Significant efforts were made during the last Annual Review period to establish vegetation on the exposed components of these structures (see **Plates 1 to 4**), with the Applicant committed to maintaining and improving the vegetation cover of these to reduce visual impacts.

As was always planned, the visibility of the Quarry operations will be progressively reduced as the extraction area is developed to depths below 950m AHD and vegetation becomes established on the Quarry Site. The current visibility of the Quarry reflects the fact that the commencement of extraction and production was delayed following the issue of ML 1633 and therefore the Applicant remains in the initial years of a 10 year quarry development and rehabilitation sequence.

On the basis of the above, the proposed extension to the term of Condition 2(5) would not result in any increased visibility of the Quarry from that which is approved. It would, however, allow for continued operation, and therefore a continuation of the activities noted above to reduce the visibility of the Quarry, beyond July 2019.

4.1.6 Rehabilitation

While the 12 month extension could result in a minor extension to the extraction area (over that nominated in the MOP) necessitating an amendment to the MOP (see **Table 5**), the proposed modification would not require any significant variation to the planning, implementation or sequence of rehabilitation at the Quarry.

Final Landform

The final landform presented in **Figure 5** remains the same as that approved by DA 344-11-2001 and *Plan 4* of the MOP.

Final Land Use

The Proposed Modification does not propose to modify the intended final land use of the Quarry (management for the conservation of native vegetation) from that approved by DA 344-11-2001 and included in the MOP.

The proposed extension to the term of *Condition 2(5)* would ensure the continuation of mining activities beyond July 2019 and rehabilitation beyond December 2015 (the end date of the current MOP) aimed at producing the final landform. This mitigates any risk of the rehabilitation being adversely affected by a period of inactivity ('care and maintenance') on the Quarry Site should the term of *Condition 2(5)* expire.

4.1.7 Socio-economic Impacts

An increase in the period of operations at the Quarry increases the period over which adjoining landowners are exposed to the impacts of the Quarry. Residents to the north of the Quarry have expressed some concern over the visual impact of the Quarry, how this affects the amenity of their property and how this could affect the value of their properties.

On the basis that the Applicant does not extend disturbance beyond the limits imposed by DA 344-11-2001, completes and maintains Quarry Site revegetation and ensure the retention of the northern and eastern hill slopes from the 950m AHD contour, the visual impacts of the Quarry will reduce over time and be no greater than the impacts already approved. Furthermore, it is assessed that the visual impact of the Quarry will be no greater than will be experienced over the period to July 2019. A noticeable reduction in visual impacts from July 2019 is expected as extraction is developed below the 950m AHD elevation.

Therefore, any impacts of the extended term of quarrying operations would be within the limits approved for the Quarry, temporary and reversible through Quarry Site rehabilitation.

It is important to note as that a positive outcome of the proposed extension to the term of *Condition 2(5)* would be a continuation of the employment and economic contributions (through payment of wages and purchase of goods and services) provided by the Quarry within the Lithgow LGA for an additional 12 months. This mitigates the risk of a temporary or permanent closure of the Quarry should operations continue to July 2019 without a further modification to DA 344-11-2001.

On balance, by providing employment locally and minimising impacts on surrounding landowners, the impact of the proposed modification on the social-economic setting would be neutral to beneficial

4.1.8 Conclusion

As is demonstrated in Sections 4.1.2 to 4.1.7, the proposed modification would not require any extension to the disturbance area of the Quarry, production limit of hours of operations. The proposed modification would not introduce any new activities or require any change to the approach to rehabilitation of the Quarry Site.

On balance, the modification represents one which would result in minimal impact to the environment.

4.2 EVALUATION OF IMPACTS

4.2.1 Introduction

This SEE has been prepared to assist in the assessment of the likely environmental impacts associated with a proposed modification to extend the term of *Condition 2(5)* by 12 months. The potential impacts have been identified and carefully assessed following consideration of the design features, operational controls and management measures currently in place or proposed.

On the basis of the assessment of each potential impact, the proposed modification can be justified as the residual impacts on the biophysical environment are either understood and determined to be acceptable, or can be predicted and appropriately managed, there would be no notable additional socio-economic impacts and the consequences of not proceeding are considered more adverse than proceeding. Each of these factors considered in the justification of the Proposal are presented below.

4.2.2 Biophysical Considerations

The proposed modification involves no additional impact on the biophysical environment. All potential impacts on the local environment would continue to be managed in accordance with the conditions of DA 344-11-2001 and the approved Quarry management plans.

4.2.3 Socio-economic Considerations

As discussed in Section 4.1.7, any adverse impacts on local amenity would be within the limits of the approved Quarry operation, temporary and reversible. On balance, by providing employment locally and minimising impacts on surrounding landowners, the impact of the proposed modification on the social-economic setting would be neutral to beneficial.

4.2.4 Consequence of Not Proceeding

Should, the proposed modification not proceed, there is a significant risk that the Quarry would have to be placed on care and maintenance after 15 July 2019. This would be contrary to the objectives of the DRG who by issuing an extension to ML 1633 until July 2040 recognise the significance of the resource of the Quarry.

This would jeopardise the employment of the six full-time equivalent personnel are currently employed at the Quarry and contributions to the local, regional and state economies. This would delay and potentially also jeopardise the achievement of the nominated final land form and land use goals, as well as delay the mitigation of visual impacts associated with the development of the extraction area below the 950m AHD contour.

4.3 JUSTIFICATION OF IMPACTS

The proposed modification can be justified as there would be no additional impacts on the biophysical environment and impacts on the socio-economic environment associated with the extension to the term of Quarry operation are understood, temporary and reversible.

The proposed modification would have minimal impacts on the environment (over that which is approved by DA 344-11-2001) with further justification provided by the fact that if the modification were not to proceed, the following detrimental effects would likely follow.

- Employment for six permanent staff would be lost after July 2019.
- The contribution of the Quarry to the local, regional and NSW economies would be foregone after July 2019.

- The achievement of the planned final landform and land use could be jeopardised by a temporary closure of the Quarry (if operations do not recommence in the future).

On balance therefore, the minimal environmental impacts associated with the proposed extension to the term of DA 344-11-2001 are justified when compared against the potential consequences of not proceeding.

5. REFERENCES

Ecoplanning Pty Ltd (2018). *Wallerawang Quarry Proposed modification – field survey update August 2018.* Unpublished letter report to RW Corkery & Co. Pty Limited, 30 August 2018.

Rangott Mineral Exploration Pty Ltd (RME) (2018). *Walker Quarries Pty. Ltd. Wallerawang Quarry Resources Study, April 2018.* Unpublished report to Walker Quarries Pty Limited, 20 April 2018.

RW Corkery & Co. Pty Limited (RWC) (2017). *Environmental Assessment for Modification to Operations at the Wallerawang Quarry (DA 344-11-2001), May 2017.*

RW Corkery & Co. Pty Limited (RWC) (2018). *Mining Operations Plan (incorporating Rehabilitation Management Plan) for the Wallerawang Quarry, March 2018.*

Appendices

(Total No. of pages including blank pages = 52)

- Appendix 1 Development Consent DA 344-11-2001 as
Modified 25 August 2017 (24 pages)
- Appendix 2 Correspondence with Government
Agencies (20 pages)
- Appendix 3 Community Consultation Invitation
– June 2018 (6 pages)

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Appendix 1

Development Consent DA 344-11-2001 as Modified 25 August 2017

(Total No. of pages including blank pages = 24)

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Notice of Modification

Section 75W of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I modify the development consent referred to in Schedule 1, as set out in Schedule 2.

Howard Reed

Howard Reed
Director Resource Assessments

Sydney *25 August* 2017

SCHEDULE 1

The Development Consent (DA 344-11-2001) for the Wallerawang Quarry granted by the Minister for Infrastructure and Planning on 19 October 2004.

SCHEDULE 2

1. Delete all words after Schedule 1 and replace with:

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DEFINITIONS

AHD	Australian Height Datum
Annual Review	The review required by condition 11 of Schedule 5
Applicant	Walker Quarries Pty Ltd, or any other person/s who rely on this consent to carry out the development that is subject to this consent
BCA	Building Code of Australia
CCC	Community Consultative Committee
Conditions of consent	Conditions contained in Schedules 2 to 5 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings covered by this consent
Council	Lithgow City Council
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development as described in the documents listed in condition 2(a) of Schedule 2
DPI Water	Department of Primary Industries - Water
DRG	Division of Resources and Geoscience of the Department
EIS	Environmental Impact Statement titled <i>Proposed Wallerawang Quarry</i> , dated November 2001 and the Applicant's Supplementary Report to the EIS, dated July 2002
EPA	NSW Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPL	Environment Protection Licence under the POEO Act
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build
FCNSW	Forestry Corporation NSW
Incident	A set of circumstances that: <ul style="list-style-type: none"> • causes or threatens to cause material harm to the environment; and/or • breaches or exceeds the limits or performance measures/criteria in this consent <i>NSW Industrial Noise Policy</i> (NSW EPA, 2000)
INP	
Land	As defined in the EP&A Act, except where the term is used in the noise and air quality conditions in Schedules 3 and 4 of this consent, where it is defined as the whole of a lot, or contiguous lots owned by the same landowner, in a current plan registered at the Land Titles Office at the date of this consent
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning, or delegate
Mitigation	Activities associated with reducing the impacts of the development
Negligible	Small and unimportant, such as to be not worth considering
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
OEH	Office of Environment and Heritage
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Privately-owned land	Land that is not owned by a public agency or the Applicant (or its subsidiary)
Public infrastructure	Linear and other infrastructure that provides services to the general public, such as roads, railways, water supply, drainage, sewerage, gas supply, electricity, telephone, telecommunications, etc.
Quarrying operations	The extraction, processing, stockpiling and transportation of extractive materials carried out on the site and the associated removal of vegetation, topsoil and overburden
Quarry products	Includes all saleable quarry products, but excludes tailings, other wastes and rehabilitation material
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The restoration of land disturbed by the development to a good condition and for the purpose of establishing a safe, stable and non-polluting environment
RMS	Roads and Maritime Services
Secretary	Secretary of the Department, or nominee
EA (Mod 1)	Environmental Assessment titled ' <i>Modification to Operations at the Wallerawang Quarry (DA 344-11-2001)</i> ' dated May 2017 and the Applicant's response to submissions documentation dated July 2017
Site	The land described in Schedule 1
WaterNSW	Water NSW
WSEA	Western Stockpile Extension Area



SCHEDULE 2
ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance measures and criteria established under this consent, the Applicant must implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation, or rehabilitation of the development.

TERMS OF CONSENT

2. The Applicant must carry out the development:
 - (a) generally in accordance with the EIS and EA (Mod 1); and
 - (b) in accordance with the conditions of this consent and Development Layout Plan.

Note: The Development Layout Plan is shown in Appendix 1.
3. If there is any inconsistency between the documents in condition 2(a), the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this consent shall prevail to the extent of any inconsistency.
4. The Applicant must comply with any written requirement/s of the Secretary arising from the Department's assessment of:
 - (a) any strategies, plans, programs, reviews, audits, reports or correspondence that are submitted in accordance with this consent (including any stages of these documents);
 - (b) any reviews, reports or audits undertaken or commissioned by the Department regarding compliance with this consent; and
 - (c) the implementation of any actions or measures contained in these documents.

LIMITS ON CONSENT

Quarrying Operations

5. The Applicant may carry out quarrying operations on the site until 15 July 2019.

Note: Under this consent, the Applicant is required to rehabilitate the site and carry out additional requirements and undertakings to the satisfaction of the Secretary. Consequently, this consent will continue to apply in all respects other than the right to conduct quarrying operations until the rehabilitation of the site and those requirements and undertakings have been carried out to the standard required by the applicable conditions.
6. The Applicant must not undertake quarrying operations below a level of 930 m AHD.

Note: Construction of drainage sumps may be constructed below this level with the agreement of the Secretary.
7. The Applicant must not extract and/or transport more than 500,000 tonnes of quarry products from the site in any calendar year.

STRUCTURAL ADEQUACY

8. The Applicant must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA.

Notes:

 - Under Part 4A of the EP&A Act, the Applicant is required to obtain construction and occupation certificates for the proposed building works; and
 - Part 8 of the EP&A Regulation sets out the requirements for the certification of the development or project.

DEMOLITION

9. The Applicant must ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

PROTECTION OF PUBLIC INFRASTRUCTURE

10. Unless the Applicant and the applicable authority agree otherwise the Applicant must:
 - (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and

- (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

Note: This condition does not apply to damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

- 11. The Applicant must ensure that all the plant and equipment used at the site, or to monitor the performance of the development is:
 - (a) maintained in a proper and efficient condition; and
 - (b) operated in a proper and efficient manner.

PRODUCTION DATA

- 12. The Applicant must:
 - (a) from the commencement of quarrying operations provide calendar year annual quarry production data to DRG using the standard form for that purpose; and
 - (b) include a copy of this data in the Annual Review.

COMPLIANCE

- 13. The Applicant must ensure that all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this consent relevant to their respective activities.

SCHEDULE 3
SPECIFIC ENVIRONMENTAL CONDITIONS

NOISE

Hours of Operation

- The Applicant must comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	Permissible Hours
Quarrying operations	<ul style="list-style-type: none"> 7 am to 6 pm Monday to Friday 8 am to 1 pm Saturday At no time on Sundays or public holidays
Loading and dispatch of trucks	<ul style="list-style-type: none"> May be conducted at any time, provided these activities comply with the noise criteria in Table 2
Blasting	<ul style="list-style-type: none"> 9 am to 5 pm Monday to Friday 9 am to 1 pm on Saturdays At no time on Sundays or public holidays
Maintenance	<ul style="list-style-type: none"> May be conducted at any time, provided that these activities are not audible at any privately-owned residence

- The following activities may be carried out outside the hours specified in condition 1 above:
 - delivery or dispatch of materials as requested by Police or other public authorities; and
 - emergency work to avoid the loss of lives, property or to prevent environmental harm.

In such circumstances, the Applicant must notify the Secretary and affected residents prior to undertaking the activities, or as soon as is practical thereafter.

Noise Impact Assessment Criteria

- The Applicant must ensure that the noise generated by the development does not exceed the criteria in Table 2 at any residence on privately-owned land.

Table 2: Noise criteria dB(A)

Receiver	Day <i>L_{Aeq} (15 minute)</i>	Evening <i>L_{Aeq} (15 minute)</i>	Night <i>L_{Aeq} (15 minute)</i>
Any residence on privately owned land	43	43	39

Noise generated by the development is to be measured in accordance with the relevant requirements and exemptions (including certain meteorological conditions) of the *NSW Industrial Noise Policy*. Appendix 3 sets out the meteorological conditions under which these criteria apply and the requirements for evaluating compliance with these criteria.

However, the noise criteria in Table 2 do not apply if the Applicant has an agreement with the relevant landowner to exceed the noise criteria, and the Applicant has advised the Department in writing of the terms of this agreement.

Operating Conditions

- The Applicant must:
 - implement best practice management to minimise the construction, operational and road transportation noise of the development;
 - minimise the noise impacts of the development during meteorological conditions when the noise criteria in this consent do not apply (see Appendix 3);
 - carry out noise monitoring (at least every 3 months or as otherwise agreed with the Secretary) to determine whether the development is complying with the relevant conditions of this consent; and
 - regularly assess noise monitoring data and modify and/or stop operations on site to ensure compliance with the relevant conditions of this consent,

to the satisfaction of the Secretary.

Note: Required frequency of noise monitoring may be reduced if approved by the Secretary.

Noise Management Plan

5. The Applicant must prepare a Noise Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared in consultation with the EPA;
 - be submitted to the Secretary within three months of the determination of Modification 1, unless otherwise agreed by the Secretary;
 - describe the measures to be implemented to ensure:
 - compliance with the noise criteria and operating conditions of this consent;
 - best practice management is being employed; and
 - the noise impacts of the development are minimised during meteorological conditions under which the noise criteria in this consent do not apply (see Appendix 3);
 - describe the proposed noise management system; and
 - include a monitoring program to be implemented to measure noise from the development against the noise criteria in Table 2, and which evaluates and reports on the effectiveness of the noise management system on site.

The Applicant must implement the Noise Management Plan as approved from time to time by the Secretary.

BLASTING**Blasting Impact Assessment Criteria**

6. The Applicant must ensure that blasting on site does not cause any exceedance of the criteria in Table 3.

Table 3: *Blasting Criteria*

<i>Receiver</i>	<i>Airblast overpressure (dB(Lin Peak))</i>	<i>Ground vibration (mm/s)</i>	<i>Allowable exceedance</i>
Any residence on privately-owned land	120	10	0%
	115	5	5% of the total number of blasts over a period of 12 months
All public infrastructure	-	50	0%

However, these criteria do not apply if the Applicant has a written agreement with the relevant landowner or infrastructure owner to exceed the limits in Table 3, and the Applicant has advised the Department in writing of the terms of this agreement.

Property Inspections

7. If the Applicant receives a written request from the owner of any privately-owned land within 2 kilometres of the site for a property inspection to establish the baseline condition of any buildings and structures on their land, or to have a previous property inspection updated, then within 2 months of receiving this request the Applicant must:
- commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to:
 - establish the baseline condition of any buildings and other structures on the land, or update the previous property inspection report; and
 - identify measures that should be implemented to minimise the potential blasting impacts of the development on these buildings and structures; and
 - give the landowner a copy of the new or updated property inspection report.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the property inspection report, either party may refer the matter to the Secretary for resolution.

Property Investigations

8. If the owner of any privately-owned land within 2 kilometres of the site or any other landowner where the Secretary is satisfied an investigation is warranted, or claims in writing that buildings or structures on their land have been damaged as a result of blasting on the site, then within 2 months of receiving this written claim the Applicant must:
- commission a suitably qualified, experienced and independent person, whose appointment is acceptable to both parties to investigate the claim; and

- (b) give the landowner a copy of the property investigation report.

If this independent property investigation confirms the landowner's claim, and both parties agree with these findings, then the Applicant must repair the damage to the satisfaction of the Secretary.

If there is a dispute over the selection of the suitably qualified, experienced and independent person, or the Applicant or the landowner disagrees with the findings of the independent property investigation, then either party may refer the matter to the Secretary for resolution.

Operating Conditions

9. During blasting operations, the Applicant must:
- implement best practice management to:
 - protect the safety of people and livestock;
 - protect public or private infrastructure and property from damage; and
 - minimise the dust and fume emissions;
 - operate a suitable system to enable the local community to get up-to-date information on the proposed blasting schedule on site; and
 - carry out regular monitoring to determine whether the development is complying with the relevant conditions of this consent, to the satisfaction of the Secretary.

Blast Management Plan

10. The Applicant must prepare a Blast Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be submitted to the Secretary for approval within three months of the determination of Modification 1, unless otherwise agreed by the Secretary;
 - describe the measures to be implemented to ensure compliance with the blast criteria and operating conditions of this consent;
 - include measures to manage flyrock to ensure the safety of people and livestock and to protect properties;
 - include a monitoring program for evaluating and reporting on compliance with the blasting criteria in this consent;
 - include local community notification procedures for the blasting schedule, in particular to nearby residences; and
 - include a protocol for investigating and responding to complaints related to blasting operations.
- The Applicant must implement the Blast Management Plan as approved from time to time by the Secretary.

AIR QUALITY

Air Quality Impact Assessment Criteria

11. The Applicant must ensure that all reasonable and feasible avoidance and mitigation measures are employed so that particulate matter emissions generated by the development do not cause exceedances of the criteria in Table 4 at any residence on privately-owned land.
12. *Table 4: Air quality criteria*

<i>Pollutant</i>	<i>Averaging Period</i>	<i>Criterion</i>	
Particulate matter < 10 µm (PM ₁₀)	Annual	a,d 25 µg/m ³	
Particulate matter < 10 µm (PM ₁₀)	24 hour	b 50 µg/m ³	
Particulate matter < 2.5 µm (PM _{2.5})	Annual	a,d 8 µg/m ³	
Total suspended particulates (TSP)	Annual	a,d 90 µg/m ³	
^c Deposited dust	Annual	b 2 g/m ² /month	a,d 4 g/m ² /month

Notes to Table 4:

a Cumulative impact (ie increase in concentrations due to the development plus background concentrations due to all other sources).

^b Incremental impact (ie increase in concentrations due to the development alone, with zero allowable exceedances of the criteria over the life of the development).

^c Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.

^d Excludes extraordinary events such as bushfires, prescribed burning, dust storms, sea fog, fire incidents or any other activity agreed by the Secretary.

^e "Reasonable and feasible avoidance measures" includes, but is not limited to, the operational requirements in conditions 11, 12 and 13 to develop and implement an air quality management system that ensures operational responses to the risks of exceedance of the criteria.

Operating Conditions

13. The Applicant must:
- (a) implement best practice management to minimise the dust emissions of the development;
 - (b) regularly assess meteorological and air quality monitoring data and relocate, modify and/or stop operations on site to ensure compliance with the air quality criteria in this consent;
 - (c) minimise the air quality impacts of the development during adverse meteorological conditions and extraordinary events (see note d under Table 4);
 - (d) monitor and report on compliance with the relevant air quality conditions in this consent; and
 - (e) minimise the area of surface disturbance and undertake progressive rehabilitation of the site, to the satisfaction of the Secretary.

Air Quality Management Plan

14. The Applicant must prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be submitted to the Secretary for approval within three months of the determination of Modification 1, unless otherwise agreed by the Secretary;
 - (b) describe the measures to be implemented to ensure:
 - compliance with the air quality criteria and operating conditions of this consent;
 - best practice management is being employed; and
 - the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events;
 - (c) describe the proposed air quality management system;
 - (d) include an air quality monitoring program that:
 - is capable of evaluating the performance of the development;
 - includes a protocol for determining any exceedances of the relevant conditions of consent;
 - effectively supports the air quality management system; and
 - evaluates and reports on the adequacy of the air quality management system.

The Applicant must implement the approved Air Quality Management Plan as approved from time to time by the Secretary.

Meteorological Monitoring

15. For the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that complies with the requirements in the *Approved Methods for Sampling and Analysis of Air Pollutants in New South Wales* guideline.

SOIL AND WATER

Water Supply

16. The Applicant must ensure that it has sufficient water for all stages of the development, and if necessary, adjust the scale of operations under the consent to match its available water supply, to the satisfaction of the Secretary.

Water Discharges

17. The Applicant must comply with the discharge limits in any EPL, or with section 120 of the POEO Act.

Soil and Water Management Plan

18. The Applicant must prepare a Soil and Water Management Plan for the development to the satisfaction of the Secretary. This plan must:
- (a) be prepared by suitably qualified and experienced person/s approved by the Secretary;
 - (b) be prepared in consultation with the EPA, DPI Water and WaterNSW;
 - (c) be submitted to the Secretary for approval within three months of the determination of Modification 1, unless otherwise agreed by the Secretary; and
 - (d) include a:
 - Site Water Balance that includes:
 - details of:
 - sources and security of water supply;
 - water use and management on site;
 - any off-site water transfers; and
 - reporting procedures; and
 - measures to be implemented to minimise clean water use on site;
 - Surface Water Management Plan, that includes:
 - a program for obtaining detailed baseline data on surface water flows and quality in water bodies that could potentially be affected by the development;
 - a detailed description of the surface water management system on site including the:
 - clean water diversion system;
 - erosion and sediment controls;
 - dirty water management system; and
 - water storages; and
 - a program to monitor and report on:
 - any surface water discharges;
 - the effectiveness of the water management system,
 - the quality of water discharged from the site to the environment;
 - surface water flows and quality in local watercourses;
 - Groundwater Management Plan that includes:
 - a provision that requires the Applicant to obtain appropriate water licence(s) to cover the volume of any unforeseen groundwater inflows into the quarry from the quarry face or floor; and
 - a monitoring program to manage potential impacts, if any, on any alluvium and associated surface water source near the proposed extraction area that includes:
 - identification of a methodology for determining threshold water level criteria;
 - contingency measures in the event of a breach of thresholds; and
 - a program to regularly report on monitoring.

The Applicant must implement the approved Soil and Water Management Plan as approved from time to time by the Secretary.

TRANSPORT

Monitoring of Product Transport

19. The Applicant must keep accurate records of all laden truck movements to and from the site and publish a summary of records on its website every 6 months.

Operating Conditions

20. The Applicant must:
- (a) ensure that all laden trucks entering or exiting the site have their loads covered, with the exception of loads consisting solely of boulders greater than one tonne in weight;
 - (b) ensure that all laden trucks exiting the site are cleaned of material that may fall from vehicles, before leaving the site; and
 - (c) use its best endeavours to ensure that appropriate signage is displayed on all trucks used to transport product from the development so they can be easily identified by road users.

ABORIGINAL HERITAGE

21. The Applicant must not disturb the area marked "Aboriginal Heritage Stie" on the Development Layout Plan in Appendix 1.

22. Throughout the life of the development, the Applicant must protect and conserve the area subject to condition 20, in consultation with the Bathurst Local Aboriginal Land Council, and to the satisfaction of the Secretary.
23. If any item or object of Aboriginal heritage significance is identified on site, the Applicant must ensure that:
- all work in the immediate vicinity of the suspected Aboriginal item or object ceases immediately;
 - a 10 m buffer area around the suspected item or object is cordoned off; and
 - the OEH is contacted immediately.

Work in the immediate vicinity of the Aboriginal item or object may only recommence in accordance with the provisions of Part 6 of the *National Parks and Wildlife Act 1974*.

BIODIVERSITY AND REHABILITATION

Biodiversity Offset Strategy

24. By 28 February 2018, the Applicant must provide a Biodiversity Offset Strategy in accordance with the *Framework for Biodiversity Assessment - NSW Biodiversity Offsets Policy for Major Projects*, for the retirement of ecosystem and species credits as set out in Table 5, to the satisfaction of the Secretary and OEH.

Table 5: Biodiversity credits to be retired

Credit type	Number of Credits
Ecosystem Credits	
PCT 732 – Broad-leaved Peppermint - Ribbon Gum grassy open forest in the north east of the South Eastern Highlands Bioregion	120
PCT 1093 – Red Stringybark – Brittle Gum – Inland Scribbly Gum dry open forest of the tablelands, South Eastern Highlands Bioregion	34
Species Credits	
Purple Copper Butterfly	184

Security of Offsets

25. By 31 December 2018, unless otherwise agreed with the Secretary, the Applicant must make suitable arrangements to provide appropriate long-term security for the Biodiversity Offset Strategy, to the satisfaction of the Secretary. Any mechanism must remain in force in perpetuity.

Note: Mechanisms to provide appropriate long-term security to the land within the Biodiversity Offset Strategy in accordance with the NSW Biodiversity Offset Policy for Major Projects 2014.

Biodiversity Management Plan

26. The Applicant must prepare a Biodiversity Management Plan for the development to the satisfaction of the Secretary. This plan must:
- be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
 - be prepared in consultation with OEH;
 - be submitted to the Secretary within three months of providing a satisfactory Biodiversity Offset Strategy or by 31 March 2018, whichever is earlier;
 - describe the short, medium, and long term measures to be undertaken to manage the remnant vegetation and fauna habitat on the site a describe the short, medium and long term measures to be implemented to manage remnant vegetation and habitat on site, including within any biodiversity offset areas;
 - include a detailed description of the measures described in paragraph (d) to be implemented over the next 3 years (to be updated for each 3 year period following initial approval of the plan) including the procedures to be implemented for:
 - maximising the salvage of environmental resources within the approved disturbance area, including tree hollows, vegetative and soil resources, for beneficial reuse in the enhancement of any biodiversity offset areas or site rehabilitation;

- restoring and enhancing the quality of native vegetation and fauna habitat in any biodiversity offset and rehabilitation areas through assisted natural regeneration, targeted vegetation establishment and the introduction of fauna habitat features;
 - protecting vegetation and fauna habitat outside the approved disturbance area on-site;
 - minimising the impacts on native fauna, including undertaking pre-clearance surveys;
 - ensuring minimal environmental consequences for threatened species, populations and habitats, including the Purple Copper Butterfly;
 - collecting and propagating seed;
 - controlling weeds and feral pests;
 - controlling erosion; and
 - managing bushfire risk;
- (f) include a program to monitor and report on the effectiveness of these measures, and progress against the performance and completion criteria;
- (g) identify the potential risks to the successful implementation of the Biodiversity Offset Strategy, and include a description of the contingency measures to be implemented to mitigate these risks; and
- (h) include details of who is responsible for monitoring, reviewing, and implementing the plan.

The Applicant must implement the Biodiversity Management Plan as approved from time to time by the Secretary.

Conservation Bond

27. Within six months of the approval of the Biodiversity Offset Strategy, unless otherwise agreed by the Secretary, the Applicant must lodge a Conservation Bond with the Department to ensure that the Biodiversity Offset Strategy is implemented in accordance with the performance and completion criteria in the Biodiversity Management Plan. The sum of the bond must be determined by:
- (a) calculating the full cost of implementing the Biodiversity Offset Strategy at third party rates (other than land acquisition costs); and
 - (b) employing a suitably qualified, independent and experienced person to verify the calculated costs.

The calculation of the Conservation Bond must be submitted to the Department for approval at least 1 month prior to the lodgment of the bond.

28. The Conservation Bond must be reviewed and if required, an updated bond must be lodged with the Department within 3 months following:
- (a) an update or revision to the Biodiversity Management Plan;
 - (b) the completion of an Independent Environmental Audit in which recommendations relating to the implementation of the Biodiversity Offset Strategy have been made; or
 - (c) in response to a request by the Secretary.

If the Biodiversity Offset Strategy is completed generally in accordance with the completion criteria in the Biodiversity Management Plan to the satisfaction of the Secretary, the Secretary will release the bond.

If the Biodiversity Offset Strategy is not completed generally in accordance with the completion criteria in the Biodiversity Management Plan, the Secretary will call in all, or part of, the conservation bond, and arrange for the completion of the relevant works.

Rehabilitation Objectives

29. The Applicant must rehabilitate the site to the satisfaction of DRG. This rehabilitation must be generally consistent with the proposed rehabilitation activities described in the documents listed in condition 2 of Schedule 2 (and shown conceptually in the Rehabilitation Plan in Appendix 2), and comply with the objectives in Table 6.

Table 6: Rehabilitation Objectives

Feature	Objective
All areas of the site affected by the development	<ul style="list-style-type: none"> • Safe • Hydraulically and geotechnically stable • Non-polluting • Fit for the intended post-mining land use(s) • Final landform integrated with surrounding natural landforms as far as is reasonable and feasible, and minimising visual impacts when viewed from surrounding land

Surface Infrastructure	<ul style="list-style-type: none"> Decommissioned and removed, unless otherwise agreed by the Secretary
Quarry benches and pit floor	<ul style="list-style-type: none"> Landscaped and vegetated using native tree and understorey species
Final Void	<ul style="list-style-type: none"> Minimise the size, depth and slope of the batters of the final void Minimise the drainage catchment of the final void

Progressive Rehabilitation

30. The Applicant must rehabilitate the site progressively, that is, as soon as reasonably practicable following disturbance. All reasonable and feasible measures must be taken to minimise the total area exposed for dust generation at any time. Interim stabilisation measures must be implemented where reasonable and feasible to control dust emissions in disturbed areas that are not active and which are not ready for final rehabilitation.

Note: It is accepted that parts of the site that are progressively rehabilitated may be subject to future re-disturbance.

Rehabilitation Management Plan

31. The Applicant must prepare a Rehabilitation Management Plan for the project to the satisfaction of DRG. This plan must:
- be prepared by suitably qualified and experienced persons whose appointment has been endorsed by the Secretary;
 - be prepared in consultation with the Department, DPI Water, FCNSW, OEH, DPI, and Council;
 - be submitted to DRG for approval within three months of the determination of Modification 1, unless the Secretary agrees otherwise;
 - be prepared in accordance with any relevant DRG Guideline;
 - describe how the rehabilitation of the site would achieve the objectives identified in Table 6 and be integrated with the Biodiversity Offset Strategy described in condition 27;
 - include a detailed soil and growing medium balance for the development;
 - include a detailed plan for the reinstatement and review of the proposed rehabilitated woodland areas and fauna habitat, including a protocol for periodic trials to demonstrate that the target vegetation community is being achieved;
 - include detailed performance and completion criteria for evaluating the performance of the rehabilitation of the site, and for triggering remedial action (if necessary);
 - describe the measures to be implemented to ensure compliance with the relevant conditions of this consent, and address all aspects of rehabilitation including mine closure, final landform (including final voids), final land uses;
 - include procedures for the use of interim stabilisation and temporary vegetation strategies, where reasonable to minimise the area exposed for dust generation;
 - include a program to monitor, independently audit and report on the effectiveness of the measures in paragraph (h) above, and progress against the detailed performance and completion criteria in paragraph (g) above; and
 - build on to the maximum extent practicable and integrate with the other Management Plans required under this consent.

VISUAL

32. The Applicant must implement all reasonable and feasible measures to minimise the visual and off-site lighting impacts of the development to the satisfaction of the Secretary.
33. Prior to utilising the WSEA, the Applicant must construct a visual bund between the north-western boundary of the WSEA and the Great Western Highway, as described in EA (Mod 1). The visual bund must be maintained to the satisfaction of the Secretary.
34. The Applicant must install bunds at strategic locations around the site and plant additional trees along the boundary of the development site to screen, so far as is reasonable and feasible, the development from external viewers, to the satisfaction of the Secretary.

WASTE

35. The Applicant must:
- manage on-site sewage treatment and disposal in accordance with the requirements of its EPL, and to the satisfaction of the EPA and Council;
 - minimise the waste generated by the development;
 - ensure that the waste generated by the development is appropriately stored, handled, and disposed of; and

(d) report on waste management and minimisation in the Annual Review, to the satisfaction of the Secretary.

36. Except as expressly permitted in an EPL, the Applicant must not receive waste at the site for storage, treatment, processing, reprocessing or disposal.

LIQUID STORAGE

37. The Applicant must ensure that all tanks and similar storage facilities (other than for water) are protected by appropriate bunding or other containment, in accordance with the relevant Australian Standards.

DANGEROUS GOODS

38. The Applicant must ensure that the storage, handling, and transport of dangerous goods is done in accordance with the relevant Australian Standards, particularly AS1940 and AS1596, and the *Dangerous Goods Code*.

BUSHFIRE

39. The Applicant must:
- (a) ensure that the development is suitably equipped to respond to any fires on site; and
 - (b) assist the Rural Fire Service and emergency services to the extent practicable if there is a fire in the vicinity of the site.
40. The Applicant must prepare a Bushfire Management Plan for the site, in consultation with FCNSW, to the satisfaction of the Rural Fire Service.

SCHEDULE 4 ADDITIONAL PROCEDURES

NOTIFICATION OF LANDOWNERS

1. As soon as practicable, and no longer than 7 days, after obtaining monitoring results showing:
 - (a) an exceedance of any criteria in Schedule 3, the Applicant must notify the affected landowners in writing of the exceedance, and provide regular monitoring results, at least every 3 months, to each affected landowner until the development is again complying with the relevant criteria; and
 - (b) an exceedance of any air quality criteria in Schedule 3, the Applicant must send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and current tenants of the land (including the tenants of land which is not privately-owned).

INDEPENDENT REVIEW

2. If an owner of privately-owned land considers the development to be exceeding the relevant criteria in Schedule 3, then he/she may ask the Secretary in writing for an independent review of the impacts of the development on his/her land.

If the Secretary is satisfied that an independent review is warranted, then within 2 months of the Secretary's decision, the Applicant must:

- (a) commission a suitably qualified, experienced and independent person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - conduct monitoring to determine whether the development is complying with the relevant criteria in Schedule 3; and
 - if the development is not complying with these criteria, then identify measures that could be implemented to ensure compliance with the relevant criteria; and
- (b) give the Secretary and landowner a copy of the independent review; and
- (c) comply with any written requests made by the Secretary to implement any findings of the review.

VISUAL IMPACT MITIGATION

3. If an owner of privately-owned land located to the west or north-west of the site, considers that the visual impacts of the development at his/her land could be minimised, then he/she may ask the Secretary in writing for a review of the visual impacts of the development on his/her land.

If the Secretary is satisfied that a review is warranted, then within 2 months of the Secretary's decision, the Applicant must:

- (a) commission a suitably qualified and experienced person, whose appointment has been approved by the Secretary, to:
 - consult with the landowner to determine his/her concerns;
 - investigate ways to minimise the visual impacts of the development on land; and
 - prepare a visual mitigation report detailing the outcomes of the investigation and the proposed mitigation measures.
- (b) give the Secretary and landowner a copy of the review; and
- (c) comply with any written requests made by the Secretary to implement any findings of the review.

SCHEDULE 5
ENVIRONMENTAL MANAGEMENT, REPORTING AND AUDITING

ENVIRONMENTAL MANAGEMENT

Environmental Management Strategy

1. The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Secretary. This strategy must:
 - (a) be submitted to the Secretary for approval within 6 months of the Secretary requiring preparation of the strategy by notice to the Applicant;
 - (b) provide the strategic framework for environmental management of the development;
 - (c) identify the statutory approvals that apply to the development;
 - (d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;
 - (e) describe the procedures to be implemented to:
 - keep the local community and relevant agencies informed about the operation and environmental performance of the development;
 - receive, record, handle and respond to complaints;
 - resolve any disputes that may arise during the course of the development;
 - respond to any non-compliance;
 - respond to emergencies; and
 - (f) include:
 - copies of any strategies, plans and programs approved under the conditions of this consent; and
 - a clear plan depicting all the monitoring to be carried out under the conditions of this consent.

The Applicant must implement any Environmental Management Strategy as approved from time to time by the Secretary.

Evidence of Consultation

2. Where consultation with any public authority is required by the conditions of this consent, the Applicant must:
 - (a) consult with the relevant public authority prior to submitting the required document to the Secretary for approval;
 - (b) submit evidence of this consultation as part of the relevant document;
 - (c) describe how matters raised by the authority have been addressed and any matters not resolved; and
 - (d) include details of any outstanding issues raised by the authority and an explanation of disagreement between any public authority and the Applicant.

Management Plan Requirements

3. The Applicant must ensure that the management plans required under this consent are prepared in accordance with any relevant guidelines, and include:
 - (a) detailed baseline data;
 - (b) a description of:
 - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
 - any relevant limits or performance measures/criteria; and
 - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;
 - (c) a description of the measures that to be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria;
 - (d) a program to monitor and report on the:
 - impacts and environmental performance of the development; and
 - effectiveness of any management measures (see (c) above);
 - (e) a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;
 - (f) a program to investigate and implement ways to improve the environmental performance of the development over time;
 - (g) a protocol for managing and reporting any:
 - incidents;
 - complaints;
 - non-compliances with statutory requirements; and
 - exceedances of the impact assessment criteria and/or performance criteria; and

- (h) a protocol for periodic review of the plan.

Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for particular management plans.

Application of Existing Management Plans

4. The Applicant must continue to apply existing approved management plans, strategies or monitoring programs that have most recently been approved under this consent, until the approval of a similar plan, strategy or program under this consent.

Revision of Strategies, Plans & Programs

5. Within 3 months of the submission of an:
- (a) incident report under condition 9 below;
 - (b) Annual Review under condition 11 below;
 - (c) audit report under condition 12 below; and
 - (d) any modifications to this consent;
- the Applicant must review the strategies, plans and programs required under this consent, to the satisfaction of the Secretary. The applicant must notify the Department in writing of any such review being undertaken. Where this review leads to revisions in any such document, then within 6 weeks of the review the revised document must be submitted for the approval of the Secretary.

Note: The purpose of this condition is to ensure that strategies, plans and programs are regularly updated to incorporate any measures recommended to improve environmental performance of the development.

Updating and Staging of Strategies, Plans or Programs

6. To ensure that strategies, plans or programs required under this consent are updated on a regular basis, and that they incorporate any appropriate additional measures to improve the environmental performance of the development, the Applicant may at any time submit revised strategies, plans or programs for the approval of the Secretary. With the agreement of the Secretary, the Applicant may also submit any strategy, plan or program required by this consent on a staged basis.

The Secretary may approve a revised strategy, plan or program required under this consent, or the staged submission of any of these documents, at any time. With the agreement of the Secretary, the Applicant may prepare the revised or staged strategy, plan or program without undertaking consultation with all parties nominated under the applicable condition in this consent.

While any strategy, plan or program may be submitted on a staged basis, the applicant will need to ensure that the operations associated with the development are covered by suitable strategies, plans or programs at all times.

If the submission of any strategy, plan or program is to be staged; then the relevant strategy, plan or program must clearly describe the specific stage/s of the development to which the strategy, plan or program applies; the relationship of this stage/s to any future stages; and the trigger for updating the strategy, plan or program.

Adaptive Management

7. The Applicant must assess and manage development-related risks to ensure that there are no exceedances of the criteria and/or performance measures in Schedule 3. Any exceedance of these criteria and/or performance measures constitutes a breach of this consent and may be subject to penalty or offence provisions under the EP&A Act or EP&A Regulation.

Where any exceedance of these criteria and/or performance measures has occurred, the Applicant must as soon as becoming aware of any exceedance:

- (a) take all reasonable and feasible steps to ensure that the exceedance ceases and does not reoccur;
 - (b) consider all reasonable and feasible options for remediation (where relevant);
 - (c) within 14 days of the exceedance occurring, submit a report to the Secretary describing these remediation options and any preferred remediation measures or other course of action; and
 - (d) implement remediation measures as directed by the Secretary;
- to the satisfaction of the Secretary.

COMMUNITY CONSULTATIVE COMMITTEE

8. The Applicant must establish and operate a Community Consultative Committee (CCC) for the development to the satisfaction of the Secretary. The CCC must be operated in general accordance with the Department's *Community Consultative Committee Guidelines, November 2016* (or later version).

Notes:

- The CCC is an advisory committee. The Department and other relevant agencies are responsible for ensuring that the Applicant complies with this consent.
- In accordance with the guidelines, the Committee should comprise an independent chair and appropriate representation from the Applicant, Council and the local community.

REPORTING

Incident Reporting

9. The Applicant must immediately notify the Secretary (using the contact name, email address and phone number provided by the Department from time to time) and any other relevant agencies of any incident.
10. Within 7 days of the date of the incident, the Applicant must provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested. This report must include the time and date of the incident, details of the incident, measures implemented to prevent re-occurrence and must identify and non-compliance with this consent.

Regular Reporting

11. The Applicant must provide regular reporting on the environmental performance of the development on its website, in accordance with the reporting arrangements in any plans or programs approved under the conditions of this consent.

Annual Review

12. By the end of September each year, or other timing as may be agreed by the Secretary, the Applicant must submit a review to the Department reviewing the environmental performance of the development to the satisfaction of the Secretary. This review must:
- (a) describe the development (including any progressive rehabilitation) that was carried out in the previous financial year, and the development that is proposed to be carried out over the current financial year;
 - (b) include a comprehensive review of the monitoring results and complaints records of the development over the previous financial year, which includes a comparison of these results against the:
 - relevant statutory requirements, limits or performance measures/criteria;
 - requirements of any plan or program required under this consent;
 - monitoring results of previous years; and
 - relevant predictions in the documents listed in condition 2(a) of Schedule 2;
 - (c) identify any non-compliance over the past financial year, and describe what actions were (or are being) taken to ensure compliance;
 - (d) identify any trends in the monitoring data over the life of the development;
 - (e) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
 - (f) describe what measures will be implemented over the current [financial/calendar] year to improve the environmental performance of the development.

The Applicant must ensure that copies of the Annual Review are submitted to Council and are available to the Community Consultative Committee (see condition 7 of Schedule 5) and any interested person upon request.

INDEPENDENT ENVIRONMENTAL AUDIT

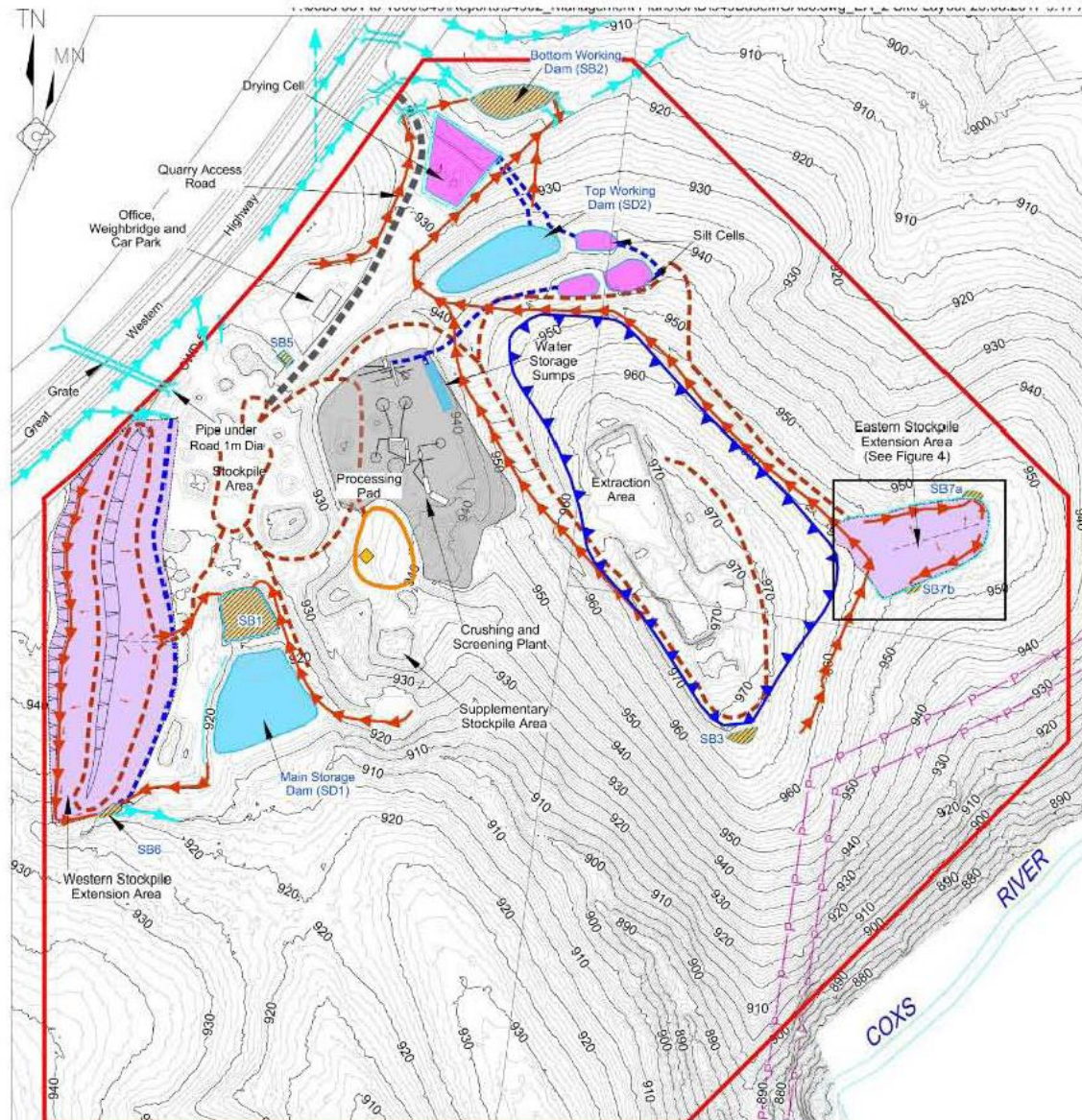
13. Within a year of the date of this consent, and every 3 years thereafter, unless the Secretary directs otherwise, the Applicant must commission, commence and pay the full cost of an Independent Environmental Audit of the development. This audit must:
- (a) be led and conducted by a suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Secretary;
 - (b) include consultation with the relevant agencies and the CCC;
 - (c) assess the environmental performance of the development and whether it is complying with the relevant requirements in this consent and any relevant EPL or necessary water licences for the development (including any assessment, strategy, plan or program required under these approvals);
 - (d) review the adequacy of strategies, plans or programs required under the abovementioned approvals;

- (e) recommend appropriate measures or actions to improve the environmental performance of the development, and/or any assessment, strategy, plan or program required under the abovementioned approvals; and
 - (f) be conducted and reported to the satisfaction of the Secretary.
14. Within 12 weeks of commencing this audit, or as otherwise agreed by the Secretary, the Applicant must submit a copy of the audit report to the Secretary and any other NSW agency that requests it, together with its response to any recommendations contained in the audit report, and a timetable for the implementation of these recommendations as required. The Applicant must implement these recommendations, to the satisfaction of the Secretary.

ACCESS TO INFORMATION

15. Within 6 months of the date of this consent, until the completion of all works, including rehabilitation and remediation the Applicant must:
- (a) make the following information publicly available on its website:¹
 - the documents listed in condition 2(a) of Schedule 2;
 - current statutory approvals for the development;
 - all approved strategies, plans and programs required under the conditions of this consent;
 - a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
 - a complaints register, updated monthly;
 - the annual reviews of the development;
 - any independent environmental audit as described in condition 12 above, and the Applicant's response to the recommendations in any audit; and
 - any other matter required by the Secretary; and
 - (b) keep this information up-to-date, to the satisfaction of the Secretary.

APPENDIX 1
DEVELOPMENT LAYOUT PLAN



- REFERENCE**
- Quarry Site (ML1633)
 - ▲ Approved Extraction Area ①
 - ▲ Existing Extraction Area
 - Access Road
 - Haul Road
 - Stockpile Extension Area
 - Cadastral Boundary

- Contour (mAHD) (Interval = 1m)
- Watercourse/Drainage Line
- Clean Water Drain
- Dirty Water Drain
- Storage Dam
- Sediment Basin
- Silt Cell
- Transmission Line Corridor
- Water Pipeline
- Aboriginal Heritage Site (Camp Site)

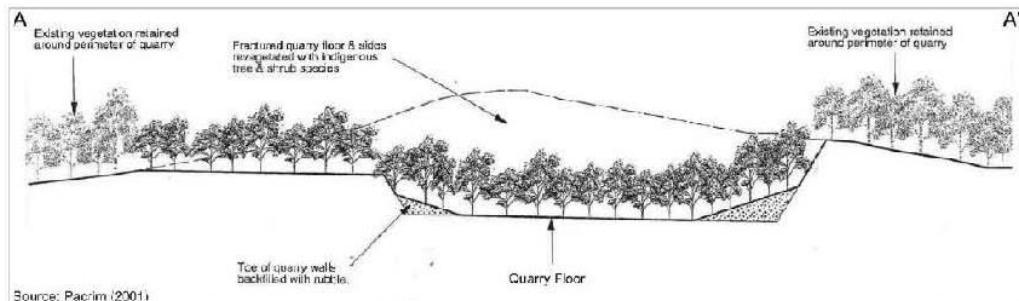
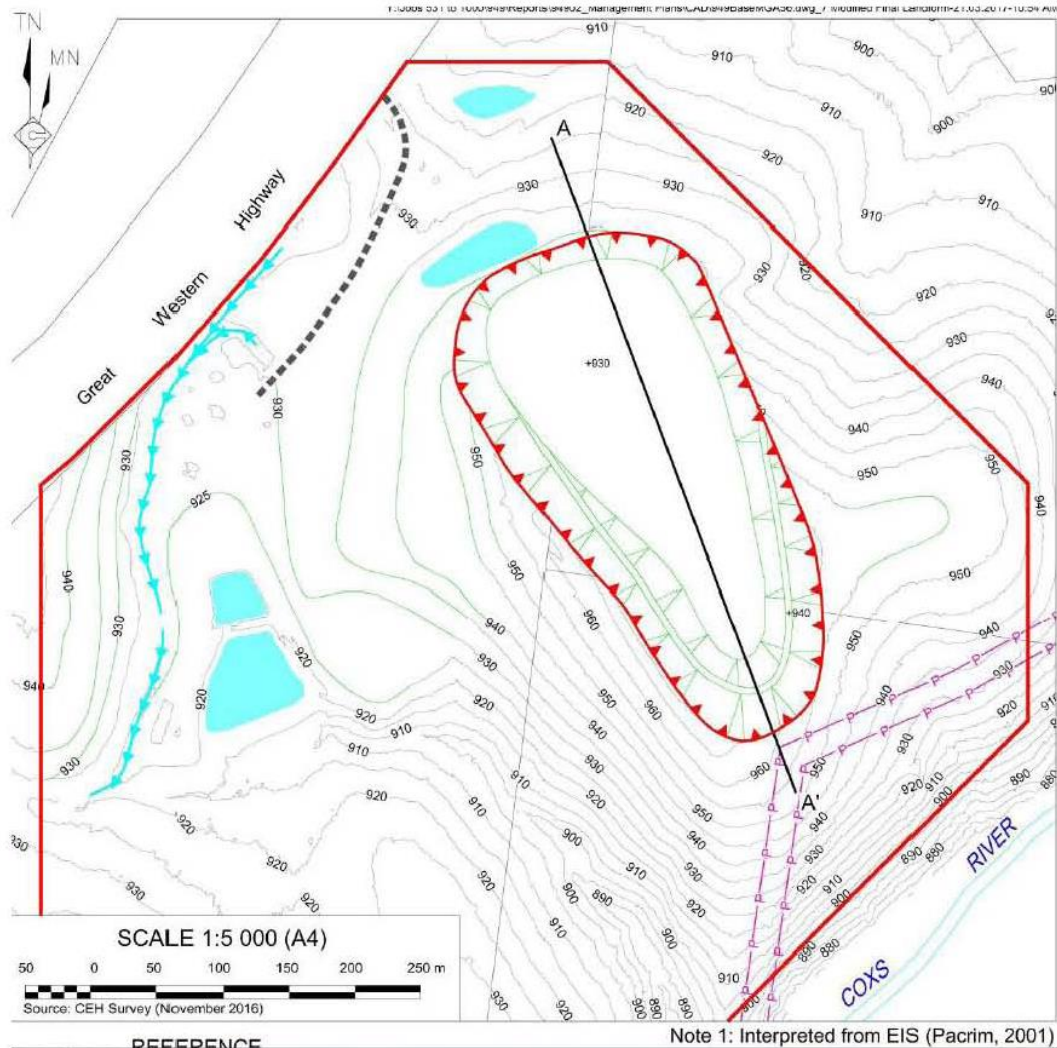
SCALE 1:5 000 (A4)

50 0 50 100 150 200 250 m

Source: CEH Survey (November 2016)

QUARRY SITE LAYOUT

APPENDIX 2 CONCEPTUAL REHABILITATION PLAN



Typical Section
Not to Scale

Figure 7
MODIFIED FINAL LANDFORM

APPENDIX 3
NOISE COMPLIANCE ASSESSMENT

Applicable Meteorological Conditions

1. The noise criteria in Table 2 are to apply under all meteorological conditions except the following:
 - (a) wind speeds greater than 3 m/s at 10 m above ground level; or
 - (b) temperature inversion conditions between 1.5°C and 3°C/100 m and wind speed greater than 2 m/s at 10 m above ground level; or
 - (c) temperature inversion conditions greater than 3°C/100 m.

Compliance Monitoring

2. A noise compliance assessment must be undertaken within three months of the determination of Modification 1. The assessment must be conducted by a suitably qualified and experienced acoustical practitioner and must assess compliance with noise criteria presented above. A report must be provided to the Department and EPA within 1 month of the assessment.
3. Unless the Secretary agrees otherwise, this monitoring is to be carried out in accordance with the relevant requirements for reviewing performance set out in the *NSW Industrial Noise Policy* (as amended from time to time), in particular the requirements relating to:
 - (a) monitoring locations for the collection of representative noise data;
 - (b) equipment used to collect noise data, and conformity with Australian Standards relevant to such equipment;
 - (c) modifications to noise data collected, including for the exclusion of extraneous noise and/or penalties for modifying factors apart from adjustments for duration; and
 - (d) the use of an appropriate modifying factor for low frequency noise to be applied during compliance testing at any individual residence if low frequency noise is present (in accordance with the INP) and before comparison with the specified noise levels in the consent.

Appendix 2

Correspondence with Government Agencies

(Total No. of pages including blank pages = 20)

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Alex Irwin

From: Gen Seed <genevieve.seed@planning.nsw.gov.au>
Sent: 2 May 2018 11:55 AM
To: Alex Irwin
Subject: RE: 949 - Wallerawang Quarry - Proposed Quarry Extension / request for advice

Hi Alex

Thanks for your email. I have answered your questions in three parts below.

Mod / SSD

Based on the scope you have described below, it appears that this could be a modification under 4.55(2). However, the scope is such that it could be borderline SSD. I would recommend getting some legal advice to be sure. For it to be considered a 4.55(2), the SEE would need to justify that the development would be substantially the same as the currently approved project (ie the project as modified). I understand that 'substantially' not only relates to things like project layout, but also the severity and extent of impacts.

SIA Engagement Strategy

The proposed engagement strategy appears appropriate in terms of the Department's SIA Guidelines Engagement Techniques (Table 3). I think a mix of 'Sharing Information' and 'Consulting to collect information and insights' is appropriate, particularly if the Project is not controversial in the community. If there was some unexpected reactions from the community in the early stages of consultation, this could prompt the need to re-consider the strategy.

Assessment Timeframes

On the basis that assessment requirements have not been issued and an SEE has not yet been prepared, it is possible that the proposed modification may not be determined prior to July 2019. Further, most major modifications include post determination pre-commencement requirements, which could restrict operations until certain activities have been undertaken.

A modification to extend the consent life could be an option in the interim. However, the reason for the extension would need to be appropriately justified. For example, we would expect the extension of life to be based on extracting and processing the remaining approved resources. If there is not enough resource left to justify an extension to the consent life, this pathway may not be appropriate.

If you would like to discuss this further, please give me a call.

Kind regards,

Gen

Genevieve Seed

A/Team Leader
Resource Assessments
320 Pitt Street | GPO Box 39 | Sydney NSW 2001
T 02 9274 6489



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From: Alex Irwin [mailto:alex@rwcorkery.com]
Sent: Monday, 30 April 2018 8:57 AM
To: Gen Seed <genevieve.seed@planning.nsw.gov.au>
Cc: Andrew Bridle <andrew@rwcorkery.com>
Subject: 949 - Wallerawang Quarry - Proposed Quarry Extension / request for advice

Gen,

Following from our conversation on Monday afternoon, I am writing in regard to the Wallerawang Quarry and planning which is underway by Walker Quarries to extend and modify operations. The Development Consent for the Quarry, DA 344-11-2001, includes a condition which restricts quarrying operations to 10 years from the issue of mining lease, i.e. July 2019 and Walker Quarries are in the planning phase of a proposal which would provide for the following.

1. Extending the period of consent of Development Approval DA 344-11-2001 beyond its current expiry in July 2019.
2. Extending the extraction area, both laterally and vertically to a depth of 860mAHD. The Cocks River southeast of the Project Site is at an elevation at 850m, therefore it is not expected that the extraction area would reach the water table.
3. Increasing the area available for stockpiling, to the west of the Western Stockpile Area.

The attached Figure 1 provides, conceptually, the areas of potential extension.

Walker Quarries is not proposing, at this stage, any increase in the Quarry's annual production rate (500,000tpa) nor make significant changes to processing or transport operations are proposed.

Given the scope and scale of the proposed changes to the Quarry, the imminent expiration of the DA, and your understanding of the EP&A Act, we are seeking your feedback as to the most appropriate path forward for Walker Quarries? Can you identify any reasons why an application for a Modification to the DA under Section 4.55 would not be sufficient?

We would also appreciate your guidance on what the most appropriate level of community engagement for a Social Impact Assessment would be for a quarry expansion of this nature and size. After some initial discussions with Walker Quarries, the following is being considered.

1. Calling of an extraordinary CCC meeting which would be opened to the local community and where the proposed modification would be presented.
2. Letter box drop to the residents of properties surrounding the Quarry and in the south Wallerawang area with an overview of the proposed modification, summary of the development assessment process and invitation to take part in one-on-one consultation.
3. One-on-one consultation with local residents to discuss social values and matters of concern.
4. Meetings and interviews with local business and community groups.

The input of the Department as to the adequacy of this engagement strategy is requested.

Noting that the DA currently requires a cessation of quarrying operations by July 2019, and noting that predicting assessment times is not an exact science, we would appreciate some guidance from the Department as to whether Walker Quarries should consider preparing a minor modification application to extend the sunset date, what extension would be considered as a 'minor environmental impact', and when we should consider pulling the trigger on such a modification, i.e. if determination of the main modification is not likely before July 2019.

Regards

STATEMENT OF ENVIRONMENTAL EFFECTS

DA 344-11-2001 MOD 2

Report No. 949/11

WALKER QUARRIES PTY LTD

Wallerawang Quarry

Alex Irwin

Senior Environmental Consultant

(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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<https://www.sophos.com>



Alex Irwin

From: Gen Seed <genevieve.seed@planning.nsw.gov.au>
Sent: 28 August 2018 9:45 AM
To: Alex Irwin; kerryburke2@bigpond.com; Mitchell Bland
Cc: Howard Reed; Lauren Evans
Subject: RE: 949 - Wallerawang Quarry - Proposed Modification to DA 344-11-2001

Good Morning Alex

Thanks for the update.

A modification for a short-term extension of life remains an option for the company. The SEE will need to justify that the modification is within the scope of Section 4.55 (1A). This would like be associated with the proposed extension timeframe, available approved resource and consistency with existing conditions.

In terms of requirements, the Department requests that the company consult with DRG, FC NSW and nearby affected landowners.

Please let me know if you have any questions.

Thanks

Gen

From: Alex Irwin [mailto:alex@rwcorkery.com]
Sent: Friday, 24 August 2018 4:27 PM
To: Lauren Evans <Lauren.Evans@planning.nsw.gov.au>
Cc: Gen Seed <genevieve.seed@planning.nsw.gov.au>; Howard Reed <Howard.Reed@planning.nsw.gov.au>; 'Kerry Burke' <kerryburke2@bigpond.com>; Mitchell Bland <mitchell@rwcorkery.com>
Subject: 949 - Wallerawang Quarry - Proposed Modification to DA 344-11-2001

Dear Lauren,

RW Corkery & Co. Pty Limited is continuing to work with Walker Quarries Pty Ltd in the preparation of a Statement of Environmental Effects (SEE) to support a proposed modification to the Wallerawang Quarry under Section 4.55(2) of the *Environmental Planning & Assessment Act 1979* (EP&A Act). The Department issued Environmental Assessment Requirements (EARs) on 18 June 2018 and we have consulted with other government agencies and progressed assessment against these since that time.

Our original intent was to complete the SEE by late October 2018 and have this exhibited prior to Christmas. This would have provided at least 6 months for departmental review, assessment and determination before the current consent expires.

For several reasons, RWC and Walker Quarries believe that completion of the SEE will extend beyond late October.

- Field survey for Purple Copper Butterfly in areas of identified potential habitat cannot be completed until October (when the identifiable adult form of this species is active). The result is a Biodiversity Development Assessment Report is unlikely to be finalised until late October or early November.
- Consultation with the National Resources Assessment Regulator (NRAR) has resulted in a more detailed approach to modelling of groundwater impacts than initially proposed. This approach requires the construction and monitoring of several groundwater bores, with the required acquisition of approvals

delaying the completion of this until very recently. As a result, a draft groundwater assessment report is unlikely before November.

- Consultation with Forestry Corporation NSW has resulted in a review of the proposed operational and final landform on SF land. The refinement of these landforms is ongoing and Walker Quarries seeks to obtain endorsement from FC NSW before proceeding to lodgement. While we are hopeful of receiving this endorsement during September 2018, uncertainty over the final impact footprint will delay the various assessments being completed for the SEE.
- Consultation with Crown Lands has pre-empted an enquiry to purchase the block of Crown Land affected by the Quarry. Advice on whether purchase is feasible is not expected until September 2018. An acquisition, or agreement for acquisition, could affect some aspects of the assessment.

This email is to confirm that advice received from the Department in early May this year (see attached) remains unchanged and that an application for a simple modification to extend the current end date of the development consent can be made. We believe that modification under Section 4.55(1A) (Modifications involving minimal environmental impact) of the EP&A Act is appropriate.

I can confirm that any extraction beyond July 2019 would remain within the approved extraction limit of the Quarry (noting that extraction has yet to extended to its full lateral extent and only recently reached the 955m AHD level, 25m above the approved depth of extraction). We can provide further detail in a simple Statement of Environmental SEE to confirm that continued operations would remain consistent with the conditions of consent.

On the basis that an application to extend the completion date referenced by Condition 2(5) may be made, can you please confirm the application can be considered under Section 4.55(1A) of the EP&A Act and any specific requirements the Department for such an application?

Regards,

Alex Irwin

Senior Environmental Consultant

(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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Alex Irwin

From: Alex Irwin
Sent: 10 September 2018 1:59 PM
To: 'Greg Kininmonth'
Cc: 'Paul Hensley'; 'Kerry Burke'; Andrew Bridle
Subject: 949 - Wallerawang Quarry - Quarry Extension

Dear Greg,

I have previously consulted with you regarding any assessment requirements the Resources Regulator has in relation to a proposed extension to the extraction area and stockpile areas of the Wallerawang Quarry (with an application to modify DA 344-11-2001 to be made under Section 4.55(2) of the EP&A Act). You replied on 10 August requesting that the assessment addresses the **Mining Development - Rehabilitation Standard Assessment Requirements**.

As it turns out, while Walker Quarries continues to work on the planning and assessment of an extension to the extraction area and stockpile areas, there are several factors which is delaying this process (which you may or may not be interested in).

- Field survey for Purple Copper Butterfly in areas of identified potential habitat cannot be completed until October (when the identifiable adult form of this species is active). The result is a Biodiversity Development Assessment Report is unlikely to be finalised until late October or early November.
- Consultation with the National Resources Assessment Regulator (NRAR) has resulted in a more detailed approach to modelling of groundwater impacts than initially proposed. This approach requires the construction and monitoring of several groundwater bores, with the required acquisition of approvals delaying the completion of this until very recently. As a result, a draft groundwater assessment report is unlikely before November.
- Consultation with Crown Lands has pre-empted an enquiry to purchase the block of Crown Land affected by the Quarry. Advice on whether purchase is feasible is not expected until October 2018. An acquisition, or agreement for acquisition, could affect some aspects of the assessment.
- The proposed stockpile area extension is currently being refined, with final design likely to be influenced by biodiversity and heritage field studies (ongoing) and negotiations with Crown Lands.

As a consequence of the above, Walker Quarries is intending on making a separate application (under Section 4.55(1A) of the EP&A Act, i.e. a modification which involves minimal environmental impact) to extend the limit imposed by Condition 2(5) by 12 months. That is, extending the limit on quarrying operations from 15 July 2019 to 15 July 2020.

I can confirm that any extraction beyond July 2019 would remain within the approved extraction limit of the Quarry and would not require any further disturbance on the Quarry Site. The approach to quarrying and rehabilitation would remain consistent with that contained in the Quarry Mining Operations Plan (incorporating an Rehabilitation Management Plan) (MOP). While the proposed 12 month extension would not require any additional disturbance to that contained within the current MOP, Walker Quarries will seek to modify the MOP prior to 15 July 2019 to account for the extended period of operations and any changes to rehabilitation management proposed in consultation with the Resources Regulator and FC NSW.

Similar to my previous request for assessment requirements for the larger quarry extension, does the Resources Regulator have any specific requests of requirements for assessment which we can include in a simple Statement of Environmental Effects to accompany this application for minor modification?

Regards,

Alex Irwin

STATEMENT OF ENVIRONMENTAL EFFECTS

DA 344-11-2001 MOD 2

Report No. 949/11

WALKER QUARRIES PTY LTD

Wallerawang Quarry

Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

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Alex Irwin

From: Melanie Klootwijk <Melanie.Klootwijk@fcnsw.com.au>
Sent: 26 September 2018 10:06 AM
To: Alex Irwin
Subject: RE: 949 - Wallerawang Quarry - Quarry Extension

Hi Alex,

Thanks for the opportunity to comment on the minor modification for extending the limit on quarrying operations from 15 July 2019 to 15 July 2020. FCNSW does not have any specific requirements for assessment, however we would like to reiterate our preference in relation to rehabilitation and final landform. Ideally, final landform will mirror what was there previously, with natural drainage re-instated (water storage dams removed), a minimal final void remaining, the site entrance and access road rehabilitated and the former Hoskins Quarry site also rehabilitated. I understand these specific issues may not be addressed in your minor modification, however when the opportunity arises during the major modification process we would like our concerns addressed.

FCNSW would also like to note our records show several recorded sites for the Purple Copper butterfly, which have now been disturbed due to quarry operations. We welcome further assessment of the presence of the butterfly and are interested in reviewing the Biodiversity Development Assessment Report once finalised.

If you'd like to discuss anything further please let me know.

Regards,

Melanie Klootwijk | Stewardship Supervisor (NOTE: I work Tues - Wed)
Forestry Corporation of NSW | Northern Softwoods Region

Cnr Panorama Ave and Browning Street | Bathurst NSW 2795
PO Box 143 | Bathurst NSW 2795
T: 02 6330 1002 | M: 0427 259 503 | F: 02 6331 5528
E: melanie.klootwijk@fcnsw.com.au | W: www.forestrycorporation.com.au

From: Alex Irwin <alex@rwcorkery.com>
Sent: Monday, 10 September 2018 12:26 PM
To: Melanie Klootwijk <Melanie.Klootwijk@fcnsw.com.au>
Cc: Dan Kirby <Dan.Kirby@fcnsw.com.au>; Paul Hensley <pfhensley@gmail.com>; Kerry Burke <kerryburke2@bigpond.com>
Subject: 949 - Wallerawang Quarry - Quarry Extension

Dear Melanie,

I have previously consulted with you regarding any assessment requirements FC NSW has in relation to a proposed extension to the extraction area and stockpile areas of the Wallerawang Quarry (with an application to modify DA 344-11-2001 to be made under Section 4.55(2) of the EP&A Act). You replied on 9 August requesting FC NSW noting that while you did not have any particular comment on assessment requirements, FC NSW would like to be kept up to date with the modification process.

As it turns out, while Walker Quarries continues to work on the planning and assessment of an extension to the extraction area and stockpile areas, there are several factors which is delaying this process (which you may or may not be interested in).

- Field survey for Purple Copper Butterfly in areas of identified potential habitat cannot be completed until October (when the identifiable adult form of this species is active). The result is a Biodiversity Development Assessment Report is unlikely to be finalised until late October or early November.
- Consultation with the National Resources Assessment Regulator (NRAR) has resulted in a more detailed approach to modelling of groundwater impacts than initially proposed. This approach requires the construction and monitoring of several groundwater bores, with the required acquisition of approvals

delaying the completion of this until very recently. As a result, a draft groundwater assessment report is unlikely before November.

- Consultation with Crown Lands has pre-empted an enquiry to purchase the block of Crown Land affected by the Quarry. Advice on whether purchase is feasible is not expected until October 2018. An acquisition, or agreement for acquisition, could affect some aspects of the assessment.
- The proposed stockpile area extension is currently being refined, with final design likely to be influenced by biodiversity and heritage field studies (ongoing) and negotiations with Crown Lands.

As a consequence of the above, Walker Quarries is intending on making a separate application (under Section 4.55(1A) of the EP&A Act, i.e. a modification which involves minimal environmental impact) to extend the limit imposed by Condition 2(5) by 12 months. That is, extending the limit on quarrying operations from 15 July 2019 to 15 July 2020.

I can confirm that any extraction beyond July 2019 would remain within the approved extraction limit of the Quarry and would not require any further disturbance on the Quarry Site. The approach to quarrying and rehabilitation would remain consistent with that contained in the Quarry Mining Operations Plan (incorporating an Rehabilitation Management Plan) (MOP). While the proposed 12 month extension would not require any additional disturbance to that contained within the current MOP, Walker Quarries will seek to modify the MOP prior to 15 July 2019 to account for the extended period of operations and any changes to rehabilitation management proposed in consultation with FC NSW and the Resources Regulator.

Similar to my previous request for assessment requirements for the larger quarry extension, does FC NSW have any specific requests of requirements for assessment which we can include in a simple Statement of Environmental Effects to accompany this application for minor modification?

Regards,

Alex Irwin

Senior Environmental Consultant
(Mobile 0429 635 975)

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Geological and Environmental Consultants



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Alex Irwin

From: Alex Irwin
Sent: 14 September 2018 11:08 AM
To: 'Steve Pearson'
Cc: 'Daryl Lawrence'; 'Kay Oxley'; 'Paul Hensley'; Andrew Bridle
Subject: 949 - Wallerawang Quarry - Application for modification to DA 344-11-2001 (Under Section 4.55(1A) of the EP&A Act 1979)

Dear Steve,

Our discussions with Crown Lands related to a modification to DA 344-11-2001 for the Wallerawang Quarry have referenced a proposed extension to the extraction area and stockpile areas of the Wallerawang Quarry. Crown Lands provided feedback on assessment requirements on 2 July 2018 and we met to discuss this and other issues several weeks ago.

As it turns out, while Walker Quarries continues to work on the planning and assessment of an extension to the extraction area and stockpile areas, there are several factors which is delaying this process (which you may or may not be interested in).

- Field survey for Purple Copper Butterfly in areas of identified potential habitat cannot be completed until October (when the identifiable adult form of this species is active). The result is a Biodiversity Development Assessment Report is unlikely to be finalised until late October or early November.
- Consultation with the National Resources Assessment Regulator (NRAR) has resulted in a more detailed approach to modelling of groundwater impacts than initially proposed. This approach requires the construction and monitoring of several groundwater bores, with the required acquisition of approvals delaying the completion of this until very recently. As a result, a draft groundwater assessment report is unlikely before November.
- The proposed stockpile area extension is currently being refined, with final design likely to be influenced by biodiversity and heritage field studies (ongoing).

As a consequence of the above, Walker Quarries is intending on making a separate application (under Section 4.55(1A) of the EP&A Act, i.e. a modification which involves minimal environmental impact) as an interim measures to extend the limit imposed by Condition 2(5) of DA 344-11-2001 by 12 months. That is, extending the limit on quarrying operations from 15 July 2019 to 15 July 2020.

I can confirm that this modification would not require any additional disturbance beyond that currently approved, nor any additional impacts on Lot 7322 DP1149335. The approach to quarrying and rehabilitation would remain consistent with that contain in the Quarry Mining Operations Plan (incorporating an Rehabilitation Management Plan) (MOP).

Similar to my previous request for assessment requirements for the larger quarry extension, does Crown Lands have any specific requests or requirements for assessment which we can include in a simple Statement of Environmental Effects to accompany this application for minor modification?

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

STATEMENT OF ENVIRONMENTAL EFFECTS

DA 344-11-2001 MOD 2

Report No. 949/11

WALKER QUARRIES PTY LTD

Wallerawang Quarry

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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Alex Irwin

From: Alex Irwin
Sent: 14 August 2018 8:46 AM
To: 'Orange CrownLands'
Cc: 'Daryl Lawrence'; 'Paul Hensley'; 'John McAuley'; Kerry Burke
Subject: 949 - Wallerawang Quarry - Notes from meeting 1 August 2018
Attachments: Meeting_Crown Lands_20180801.pdf; 949 - Wallerawang Quarry - Questions / Requests Arising from meeting of 1 August 2018

Daryl,

I apologise for the delay, however, please find attached a copy of notes prepared following our meeting of 1 August 2018. I trust this is an accurate record of discussions.

I've also attached a copy of the email I sent to Orange.crownlands@crowland.nsw.gov.au following the meeting with a number of queries. I was wondering whether these have been assigned within crown lands and who I might contact to discuss these?

Thank you again for your time.

Regards,

Alex Irwin
Senior Environmental Consultant
(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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MEETING NOTES
1 August 2018

WALKER QUARRIES PTY LTD
Ref No. 949/11

MEETING NOTES

CLIENT: Walker Quarries Pty Ltd

PROJECT: Wallerawang Quarry

MEETING LOCATION: Clyde Room, Department of Industry

DATE: 1 August 2018 TIME: 11:00am – 12:00pm

PERSONS PRESENT: Daryl Lawrence (CL), Steve Pearson (CL), Kay Oxley (CL),
Paul Hensley (WQ), John McAuley (WQ)
Alex Irwin (RWC)

The following notes have been prepared following a meeting between Walker Quarries and Department of Industry – Crown Lands (CL) to discuss the proposal of Walker Quarries to extend operations at the Wallerawang Quarry, which includes extension of activities on Crown Land Lot 7322 DP1149335.

The meeting follows a request to CL (by RWC) for assessment requirements or other feedback related to the proposed extension, and the response provided by CL to RWC on 2 July 2018.

These notes reflect the recollection of myself, Paul Hensley and John McAuley, and largely follow the numbered list of notes include in CL's 2 July correspondence.

1. Ministerial Concurrence Required
 - AI noted that consent to lodge the development application is not required as only notification is required in accordance with Clause 49 of the *Environmental Planning & Assessment Regulation 2000* (EP&A Reg).
 - Concurrence of the Minister is still required.
2. Requirement for an Occupation Licence.
 - An application for an occupation licence was lodged by WQ on 9 July 2018. Copy held by CL.
 - The requirement for a licence superseded by a Compensation Agreement between CL and WQ.
 - David Baber (DB) within Crown Lands is the responsible officer and plans to contact AI.
 - Kay Oxley (KO) related recent history behind requirement for occupation licence or compensation agreement (previously such arrangement was not required where land operated under mining lease).
 - Paul Hensley (PH) enquired as to cost structure. Lump sum payment?
 - Daryl Lawrence (DL) noted this would be reviewed by DB and take into account impacts on use / future use of the land.
 - PH enquired as to purchase of the crown land.
 - DL noted an enquiry could be made and reviewed by CL commercial unit.

MEETING NOTES

1 August 2018

WALKER QUARRIES PTY LTD

Ref No. 949/11

3. Native Title Land Claim

- Alex Irwin (AI) noted that WQ consider the land to have been cleared from the claim by virtue of Travelling Stock Route 70 (providing preservation for 'public works' and therefore demonstrating previous exclusive possession which extinguishes native title).
- Steve Pearson (SP) raised query over Aboriginal Land Claim (ALC).

4. No negative impact on Crown Lands as a result of development drainage, overflow or contaminated waste.

- Proposal includes construction of a dam on drainage line to Coxs River (on Lot 7322).
- Capacity of this dam would be over MHRDC of ML 1633.
- AI enquired as to potential for MHRDC of larger 7322 to be used to avoid requirement for licensing.
- SP: Are other approvals required for the dam?
 - AI: CAA not required as SSD, hoping to avoid requirement for licence.
- KO: Would dam require Dam Safety Committee approval. Cannot result in liability to CL or future land uses.

5. Minimal Environmental Disturbance.

- Disturbance limited to extraction area and dam.
- The land is identified as for 'Future Public Requirements'. Assessment should refer to the Principles of Crown Land Management contained in the Crown Lands Act.
- Assessment should consider 'fair and equitable access to resources'.
- Visual impacts will require management.
- Local Land Services hold a licence for environmental works in Coxs River on Lot 7322.

6. Appropriate Erosion and Sediment Control.

- Agreed.

7. Controls in accordance with the Blue Book. Controls to be constructed prior to disturbance.

- Agreed.

8. Notification Requirements (pollution events / encroachment into crown waterway).

- Agreed.

9. Rehabilitation.

- Starting point is safe, stable, non-polluting landform.
- Void to be retained. Will not accumulate water.
- Requirement to ensure no ongoing maintenance requirement greater than surrounding bushland reiterated.
- Safe and stable landform needs to be demonstrated for the long-term.
- KO referenced example of ongoing legacy of poor final landform / rehabilitation.

STATEMENT OF ENVIRONMENTAL EFFECTS

DA 344-11-2001 MOD 2

Report No. 949/11

WALKER QUARRIES PTY LTD

Wallerawang Quarry

MEETING NOTES

1 August 2018

WALKER QUARRIES PTY LTD

Ref No. 949/11

Concluding notes.

- Orange.crownlands@industry.nsw.gov.au to be used for email contact with CL.
- AI to generate and forward any follow-up queries to CL.
- WQ aiming for completion of assessment in 2018 and determination before July 2019.

Alex Irwin

1 August 2018



Alex Irwin

From: Alex Irwin
Sent: 2 August 2018 3:17 PM
To: 'Orange CrownLands'
Cc: 'Paul Hensley'; 'John McAuley'
Subject: 949 - Wallerawang Quarry - Questions / Requests Arising from meeting of 1 August 2018
Attachments: MHRDC for Lot 7322.pdf

Attn: Darryl Lawrence

Thank you Darryl, Steve and Kay for the opportunity to discuss the proposed extension to the Wallerawang Quarry with you yesterday.

I intend on issuing more formal notes on the meeting later today or tomorrow, however, the following references a couple of key issues and specific queries or requests of Crown Lands (see italicised and underlined bullet points below) made on behalf of Walker Quarries.

Land use of Lot 7322

- Can you confirm what the identified 'use' of Lot 7322 is and what the management / land use objectives are for this?

Land Access

The existence / issue of a licence to Local land Services for environmental works in the Cocks River was referenced.

- Are you able to disclose the details of this licence (such that we can ensure that the proposal does not negatively impact on this, or the proposed outcomes of the work)?

Possible Land Purchase

- Is there a particular form, or information required, if an enquiry to purchase crown land is made?

Proposed Dam on Lot 7322

The proposal includes the construction of a dam on a drainage line to the Cocks River. The dam is proposed to increase the water security of the Quarry and would include the harvesting of runoff as well as storage of groundwater pumped from a bore.

There are requirements to obtain a licence for dams which have a capacity larger than the Maximum Harvestable Right Dam Capacity (MHRDC) for the property. Walker Quarries would like to avoid this if possible.

The MHRDC for Lot 7322 (in its entirety) is 10.9ML (see attached).

A review of satellite imagery indicates there are no other dams on Lot 7322.

- Is it possible for Walker Quarries to negotiate (possibly as part of a compensation agreement) to construct the dam up to the MHRDC for the entire property? (It is noted that a dam of up to 10ML could provide an important repository of water should bushfire threaten or impact on Lot 7322)
- If the above is considered feasible, who within Crown Lands should future enquiries be made?

Final Landform and Rehabilitation

Very little overburden / waste rock will be created by the quarry (5-10% of material removed). As a result the final landform on Lot 7322 will include a void to at least 50m below natural ground level. As discussed, vegetated benches would be retained.

STATEMENT OF ENVIRONMENTAL EFFECTS

DA 344-11-2001 MOD 2

Report No. 949/11

WALKER QUARRIES PTY LTD

Wallerawang Quarry

- Does Crown Lands have any specific requirements or requests in relation to the construction of the final land form and rehabilitation of the land?

Regards,

Alex Irwin

Senior Environmental Consultant

(Mobile 0429 635 975)

RW Corkery & Co Pty Limited

Geological and Environmental Consultants



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Maximum harvestable rights dam capacity calculator

<http://registers.water.nsw.gov.au/wma/mhrdcalc/main.jsp>



Maximum Harvestable Right Dam Capacity

Information provided by the user

1. The location of the proposed dam is:

- Latitude: **-33.437221**
- Longitude: **150.076126**

2. Total property area to use for calculating the size of the dam is **128.2 Hectares**

Result

The maximum Harvestable right dam capacity for your property is **10.897** ML (Megalitres)

Date

05/06/2018

Name

Lot 7322

Limitations of the calculator

a) Where to site a dam

You can only construct a harvestable rights dam where the Harvestable Rights Orders apply, refer to [NSW Government Gazette 40 dated 31 March 2006](#) (pages 1628 to 1631).

b) First and Second order streams

The maximum harvestable right calculator does not verify that the location of the proposed dam sits on a first or second order stream. A factsheet : "[Where can they be built without a licence?](#)" is available on the DPI Water website to help you work out the stream orders.

You will need to use the legislated topographic map for your area to identify the stream order. This map is the gazetted map as per [NSW Government Gazette 57 dated 23 March 2001](#) (pages 1481-1489).

c) Size of property and dam

The calculator does not take into account other dams already on your property. If you have existing harvestable rights dams on your property, you must take the capacity of these dams into account when constructing a new dam. In the Eastern and Central Divisions other dams must also be taken into account, as described in the [NSW Government Gazette 40 dated 31 March 2006](#) (pages 1628 to 1631).

d) Protected wetlands

The Harvestable Rights Orders specify that you are not allowed to build a dam on or within 3 km of a RAMSAR wetland site. There are 12 RAMSAR wetlands in NSW. Further information on the location of those [12 RAMSAR sites in NSW](#) can be found on the NSW Environment and Heritage government website.

Appendix 3

Community Consultation Invitation – June 2018

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Wallerawang Quarry Modification Proposal

Dear Resident,

Walker Quarries Pty Ltd ("Walker Quarries") currently operates Wallerawang Quarry (the Quarry), located on land adjoining the Great Western Highway to the south of Wallerawang, approximately 8km northwest of Lithgow (refer to **Figure 1** included with this letter). The Quarry has been operating under Development Approval DA 344-11-2001, which was originally approved in 2004, since late 2014 and the Development Approval is due to expire in July 2019.

The Quarry is currently approved to produce up to 500 000t of rock, sand and other products per year. The rock is mined from a single open cut using conventional drill and blast, load and haul methods, with crushing and screening undertaken in-pit to produce quartzite aggregates, road base and other hard rock products. A washing plant is also operated at the Quarry producing a range of fine aggregates and sand products. For further information about the Quarry, please refer to Walker Quarries' website at <http://walkerquarries.com.au/statutory-information/>.

Walker Quarries intends on making application to modify DA 344-11-2001 to:

- extend the period of consent beyond July 2019;
- extend the extraction area (both laterally and vertically), within the present approved Mining Lease Area; and
- marginally increase the area available for stockpiling (to the west of the Western Stockpile Area) (refer to **Figure 2** included with this letter).

It is noted that there will be no change to the Quarry's annual production rate, transport operations, hours of operation, nor is any significant change to processing operations is being proposed.

More information on the proposed modification can be obtained by viewing a *Project Overview and Preliminary Environmental Assessment* which has been prepared to support an application to the Department of Planning and Environment (DPE) for Secretary's Environmental Assessment Requirements (SEARs). This document is available on Walker Quarries' website at the address shown above.

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15 June 2018

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What Happens Next?

Walker Quarries will be preparing and lodging a comprehensive Environmental Impact Statement (EIS), with the assistance of R.W. Corkery and Co. Pty Limited (RWC), in accordance with the provisions of the *Environmental Planning and Assessment Act 1979* and the requirements included in the SEARs (once issued).

On completion of the EIS, the development application will be advertised and publicly exhibited for a period to be defined by the DPE (typically 28 days). During this exhibition period, you will have the opportunity to review and comment on the proposed modification. The DPE will require the Applicant to respond to any requests for correction, clarification or supplementary information.

Community Input

Walker Quarries is committed to continuing to operate the Quarry in a manner which will minimise impacts on the surrounding community. To assist in ensuring that all impacts are identified, assessed and either eliminated or minimised, Walker Quarries has requested that RWC be available to consult with community members to discuss the proposed Modification and potential impacts.

This consultation will focus on identifying the issues of importance and relevance to the community, as well as any concerns held over the Modification. Walker Quarries has targeted the week commencing the 25th of June for this consultation and if you would like to be included, please contact Andrew Bridle at RWC using the contact details below and a suitable time will be arranged for either Andrew or Alex Irwin (Senior Environmental Consultant) to speak or meet with you.

Andrew Bridle: Graduate Environmental Consultant

Telephone: (02) 6362 5411

Email: andrew@rwcorkery.com

Further Updates

Further information on the proposed modification will be provided to the community during the preparation of the EIS by email. Please let Andrew know if you wish to be included in future email correspondence. Additionally, if you know of others who may wish to be included in future distribution of information, please let Andrew know.

Many thanks for your interest.

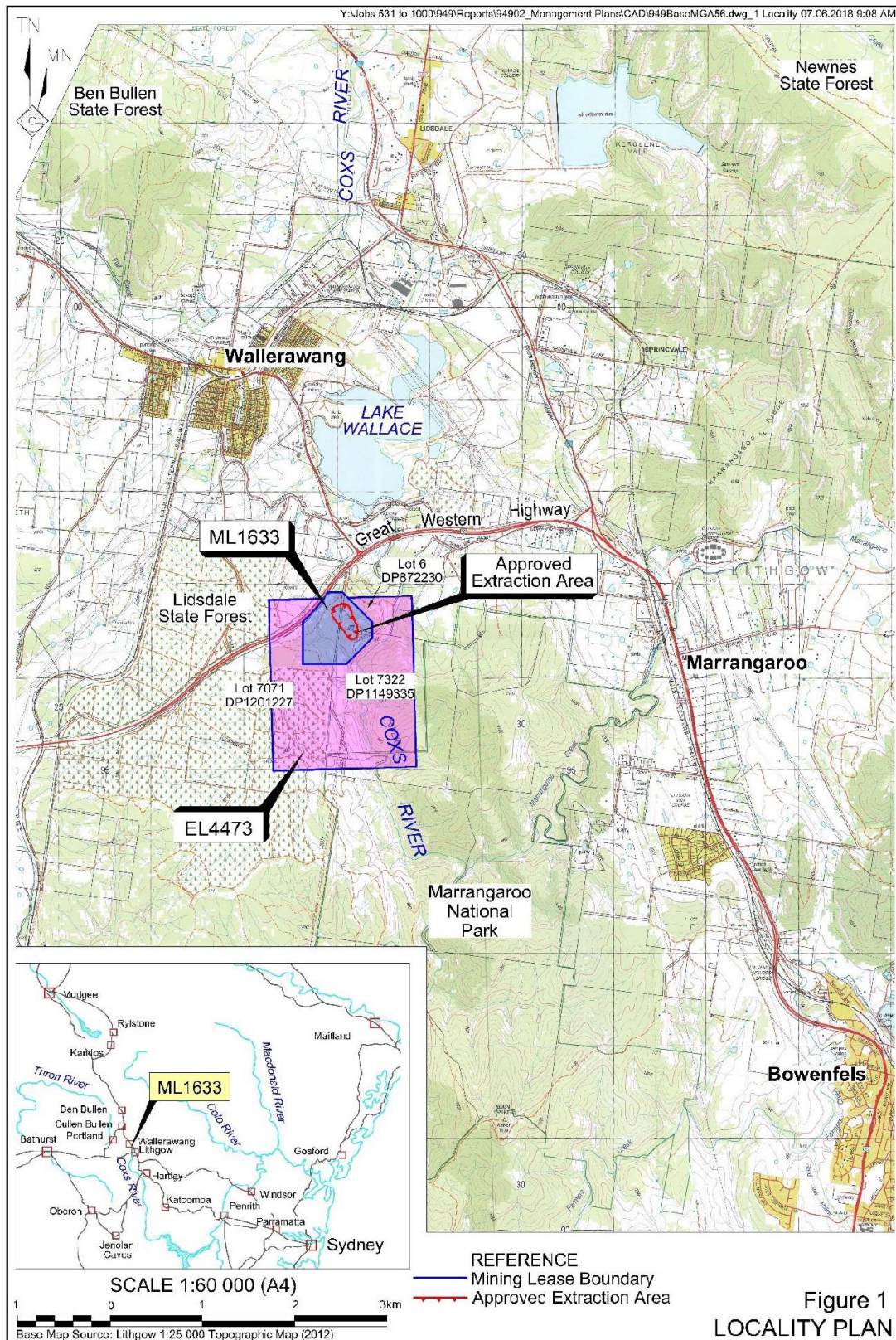
Yours sincerely

Alex Irwin
Senior Environmental Consultant

Encls: Figure 1– Locality Plan
Figure 2 – Conceptual Quarry Extension

15 June 2018

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15 June 2018

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