



STONECO
ABN 77 003 646 704

Rehabilitation Management Plan

for the

Timor Limestone Quarry



Prepared By:
RWCorkery&co

March 2026



STONECO
ABN 77 003 646 704

Rehabilitation Management Plan

for the

Timor Limestone Quarry

Prepared for:

Stoneco Pty Limited
ABN: 77 003 646 704
PO Box 708
SCONE NSW 2337

Telephone: (02) 6545 2222
Facsimile: (02) 6545 4444
Email: admin@stonecoquarries.com

Prepared by:

R.W. Corkery & Co. Pty Limited
Geological & Environmental Consultants
ABN: 31 002 033 712

Telephone: (02) 9985 8511
Email: admin@rwcorkery.com
Postal: PO Box 1796
CHATSWOOD NSW 2057

Sydney | Orange | Townsville

Sydney
PO Box 1796
CHATSWOOD NSW 2057

Orange
62 Hill Street
ORANGE NSW 2800

Ref No. 759/11

March 2026

Summary Table

Name of mine		Timor Limestone Quarry		
Mining Titles/Leases		ML1660		
Mining Titles/Leases Expiry Date		23 November 2032		
Name of leaseholder		Stoneco Pty Limited		
Name of mine operator		Stoneco Pty Limited		
RMP Commencement Date				
Version	Author	Purpose	Approved by	Version Date
1	RWC	Initial RMP	S. Murdoch	31 March 2026

This Copyright is included for the protection of this document

COPYRIGHT

© R.W. Corkery & Co. Pty Limited 2026
and
© Stoneco Pty Limited 2026

All intellectual property and copyright reserved.

Apart from any fair dealing for the purpose of private study, research, criticism or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system or adapted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without written permission. Enquiries should be addressed to Stoneco Pty Limited.

Contents

	Page
LIST OF ACRONYMS	VI
1 INTRODUCTION TO MINING PROJECT	1
1.1 HISTORY OF OPERATIONS.....	1
1.2 CURRENT DEVELOPMENT CONSENTS, LEASES AND LICENCES	3
1.3 LAND OWNERSHIP AND LAND USE.....	3
1.3.1 Land Ownership.....	3
1.3.2 Land Use.....	3
1.3.3 Land Ownership and Land Use Figures	5
2 FINAL LAND USE	9
2.1 REGULATORY REQUIREMENTS FOR REHABILITATION	9
2.2 FINAL LAND USE OPTIONS ASSESSMENT	21
2.3 FINAL LAND USE STATEMENT	21
2.4 FINAL LAND USE AND MINING DOMAINS	21
2.4.1 Final Land Use Domains.....	21
2.4.2 Mining Domains	22
3 REHABILITATION RISK ASSESSMENT	23
4 REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA	25
4.1 REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA	25
4.2 REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA – STAKEHOLDER CONSULTATION	25
5 FINAL LANDFORM AND REHABILITATION PLAN	33
5.1 FINAL LANDFORM AND REHABILITATION PLAN – ELECTRONIC COPY	33
6 REHABILITATION IMPLEMENTATION	36
6.1 LIFE OF MINE REHABILITATION SCHEDULE	36
6.2 PHASES OF REHABILITATION AND GENERAL METHODOLOGIES	36
6.2.1 Active Mining Phase	36
6.2.2 Decommissioning.....	46
6.2.3 Landform Establishment	49
6.2.4 Growth Medium Development	51
6.2.5 Ecosystem and Land Use Establishment	52
6.2.6 Ecosystem and Land Use Development.....	53
6.3 REHABILITATION OF AREAS AFFECTED BY SUBSIDENCE.....	54
7 REHABILITATION QUALITY ASSURANCE PROCESS	55
8 REHABILITATION MONITORING PROGRAM	56
8.1 ANALOGUE SITE BASELINE MONITORING	56
8.2 REHABILITATION ESTABLISHMENT MONITORING	56
8.2.1 Rehabilitation Monitoring	56

Contents

	Page
8.3 MEASURING PERFORMANCE AGAINST REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA	56
9 REHABILITATION RESEARCH AND TRIALS	58
9.1 CURRENT REHABILITATION RESEARCH AND TRIALS	58
9.2 FUTURE REHABILITATION RESEARCH AND TRIALS	58
10 INTERVENTION AND ADAPTIVE MANAGEMENT	59
11 REVIEW AND IMPLEMENTATION	61
12 REFERENCES	62

APPENDICES

Appendix 1 Rehabilitation Risk Assessment

FIGURES

Figure 1	Locality Plan	2
Figure 2	Land Ownership	4
Figure 3	Surrounding Land Use	6
Figure 4	Vegetation Communities and Heritage Items	7
Figure 5	Surface Water Catchments	8

PLANS

Plan 1	Final Landform Features	34
Plan 2	Final Landform Contours	35
Plan 3	Progressive Rehabilitation Schedule – Year 2034	37
Plan 4	Progressive Rehabilitation Schedule – Year 2044	38
Plan 5	Progressive Rehabilitation Schedule – Year 2050	39

TABLES

Table 1	Current Consents, Authorisations and Licenses	3
Table 2	Land Ownership	5
Table 3	Land Ownership and Land Use Figures	5
Table 4	Regulatory Requirements for Rehabilitation	10
Table 5	Final Land Use Domains	22
Table 6	Mining Domains	22
Table 7	Summarised Rehabilitation Risk Assessment	24
Table 8	Approved Rehabilitation Objectives and Proposed Completion Criteria	26

Contents

	Page
Table 9	Consultation Undertaken 32
Table 10	Regulatory Requirements for Rehabilitation 41
Table 11	Assets in Mining Domains to be Removed or Decommissioned 47
Table 12	Species for Stabilisation..... 51
Table 13	Plant Species for Rehabilitation 52
Table 14	Key Roles and Responsibilities 55
Table 15	Trigger Action Response Plan 60
Table 16	Rehabilitation Management Plan Review Triggers..... 61

List of Acronyms

AHD	Australian Height Datum
DA	Development Application
DECC	Department of Energy and Climate Change
DPI	Department of Primary Industry
DRE	Department of Resources and Energy
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EPL	Environment Protection Licence
ML	Mining Lease
MOP	Mining Operations Plan
NSW	New South Wales
OEH	Office of Environment and Heritage
RMP	Rehabilitation Management Plan
RMS	Roads and Maritime Services
ROM	Run-of-Mine

1 INTRODUCTION TO MINING PROJECT

This Rehabilitation Management Plan (RMP) for the Timor Limestone Quarry has been prepared by R.W. Corkery & Co. Pty. Limited (RWC) in conjunction with Stoneco Pty Limited (the “Company”). The Timor Limestone Quarry (the “Quarry Site”) is located within Lot 32 DP748766, approximately 21km northeast of Murrurundi in the Upper Hunter Region of NSW (see **Figure 1**). The Quarry Site is owned and operated by Stoneco Pty Limited.

This RMP has been prepared in accordance with the following documents and guidelines.

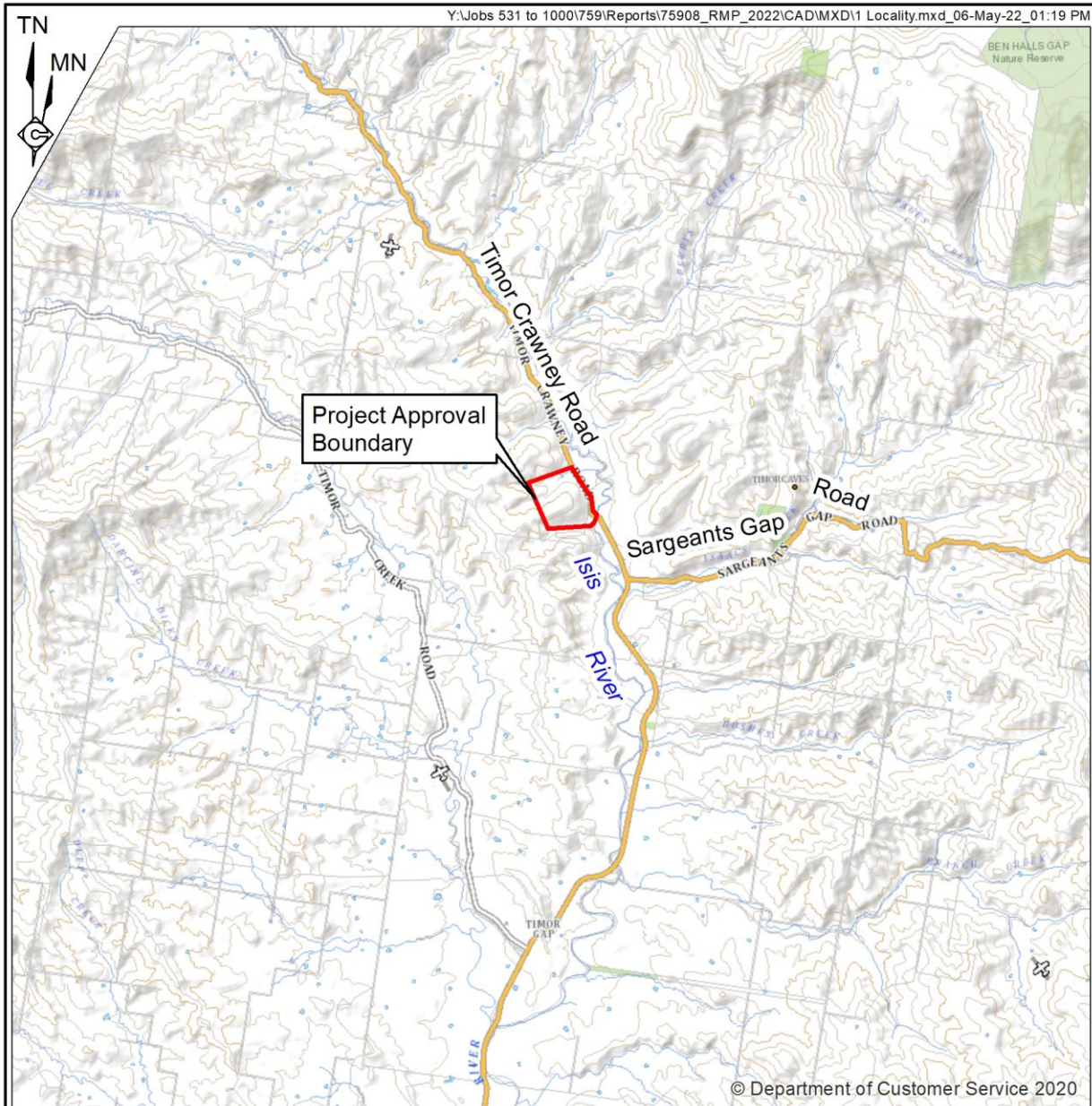
- *Form and Way: Rehabilitation Management Plan for Large Mines (September 2025).*
- *Form and Way For Rehabilitation Objectives Statement, Rehabilitation Completion Criteria and Final Landform and Rehabilitation Plan for Large Mines (February 2024).*
- *Guideline 1: Rehabilitation Risk Assessment (July 2021)*
- *Guideline 2: Rehabilitation Records (July 2021)*
- *Guideline 3: Rehabilitation Controls (July 2021)*
- *Guideline 5: Rehabilitation Objectives and Rehabilitation Completion Criteria (October 2025)*

1.1 HISTORY OF OPERATIONS

Previous exploration activities were undertaken by Snowmist Pty Ltd and Alamo Limestone Pty Ltd following the grant of Exploration Licence EL 5635 in October 1999 (now expired). EL 5635 covered an area of approximately 310ha over the middle Devonian Timor Limestone. A range of exploratory and pre-feasibility studies indicated the presence of a high grade calcium carbonate deposit suitable for economic development.

In October 2007, Stoneco Pty Limited secured an option to acquire EL 5635 which was exercised in December 2007. A mining lease application (MLA 315) was subsequently submitted in February 2008. Development Consent was granted by Upper Hunter Shire Council (Council) on 29 June 2009. Following an appeal by the Newcastle & Hunter Valley Speleological Society, the NSW LEC upheld the approval on 23 June 2010 with revised conditions. ML 1660 was subsequently granted on 23 November 2011, with the first extraction undertaken on 5 September 2014.

The current development consent for the Quarry, NSWLEC 104, was granted on the 23rd of June 2010 and expires 30 years from commencement of excavation (i.e. 4 September 2044).



SCALE 1:100 000 (A4)

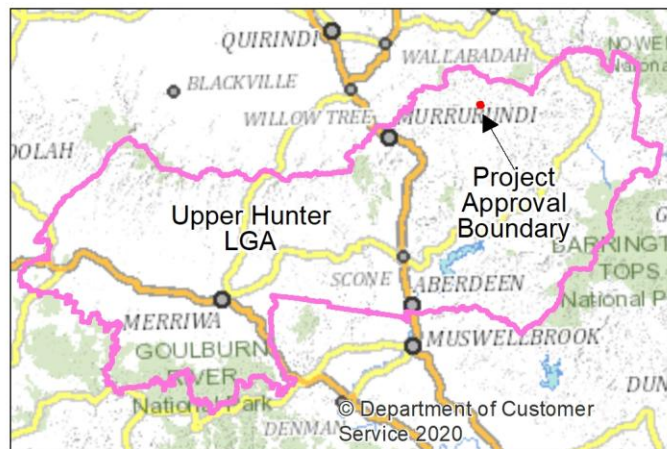
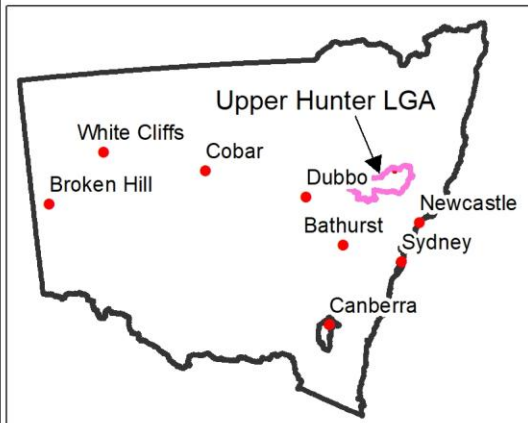
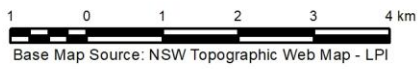


Figure 1
LOCALITY PLAN

1.2 CURRENT DEVELOPMENT CONSENTS, LEASES AND LICENCES

The relevant consents, authorisations and licences held in relation to the Quarry are presented in **Table 1**.

Table 1
Current Consents, Authorisations and Licenses

Number	Granted by	Grant Date	Expiry Date	Comments
Development Consent				
NSWLEC 104	NSW Land & Environment Court	23 Jun 2010	30 years from commencement	Originally granted by Council on 29 June 2009 and upheld by the NSW LEC on 23 June 2010. Modification for haul road approved by Council 24 February 2014 and minor modification 19 September 2011.
Mineral Authorisations				
ML1660	Minister for Mineral Resources	23 Nov 2011	23 Nov 2032	Mining activities at the Timor Limestone Quarry. ML 1660 incorporates an area of 58.64ha
Other Approvals & Licences				
EPL 13397	Environment Protection Authority	25 May 2011	Renewed annually	Regulation of noise, blasting, dust, waste and water emissions from the Licence Area.
S138-34-2011-1 (Roads Act 1993)	Upper Hunter Shire Council	13 Feb 2014	NA	For the Quarry access road and intersection with Timor-Crawney Road.
20BL172563	NSW Office of Water	17 Aug 2010	Perpetuity	For a groundwater monitoring bore.
OSMS No. ST 2429/2014	Upper Hunter Shire Council	1 Apr 2014	NA	For on-site sewage management system.
¹ Timor-Crawney Road is also referred to as Waverly Road or Jenkins Street.				

1.3 LAND OWNERSHIP AND LAND USE

1.3.1 Land Ownership

Figure 2 and **Table 2** present land ownership within and surrounding the Quarry Site. ML 1660 is located wholly within freehold land, principally owned by the Company (Lot 11 DP 1161503) and a smaller area owned by another private landholder (Lot 10 DP 1161503). The surrounding landholdings are also freehold with seven additional landholders located within 2km of the quarry.

1.3.2 Land Use

The land use within ML 1660 has historically been grazing. Land uses surrounding the Quarry are also predominately grazing with some cropping, although horse breeding and training are also undertaken on surrounding properties. The Timor Caves are also located approximately 3.5km southeast of the Quarry, via Isaacs Creek Road, and are a local tourist destination for campers and cavers.

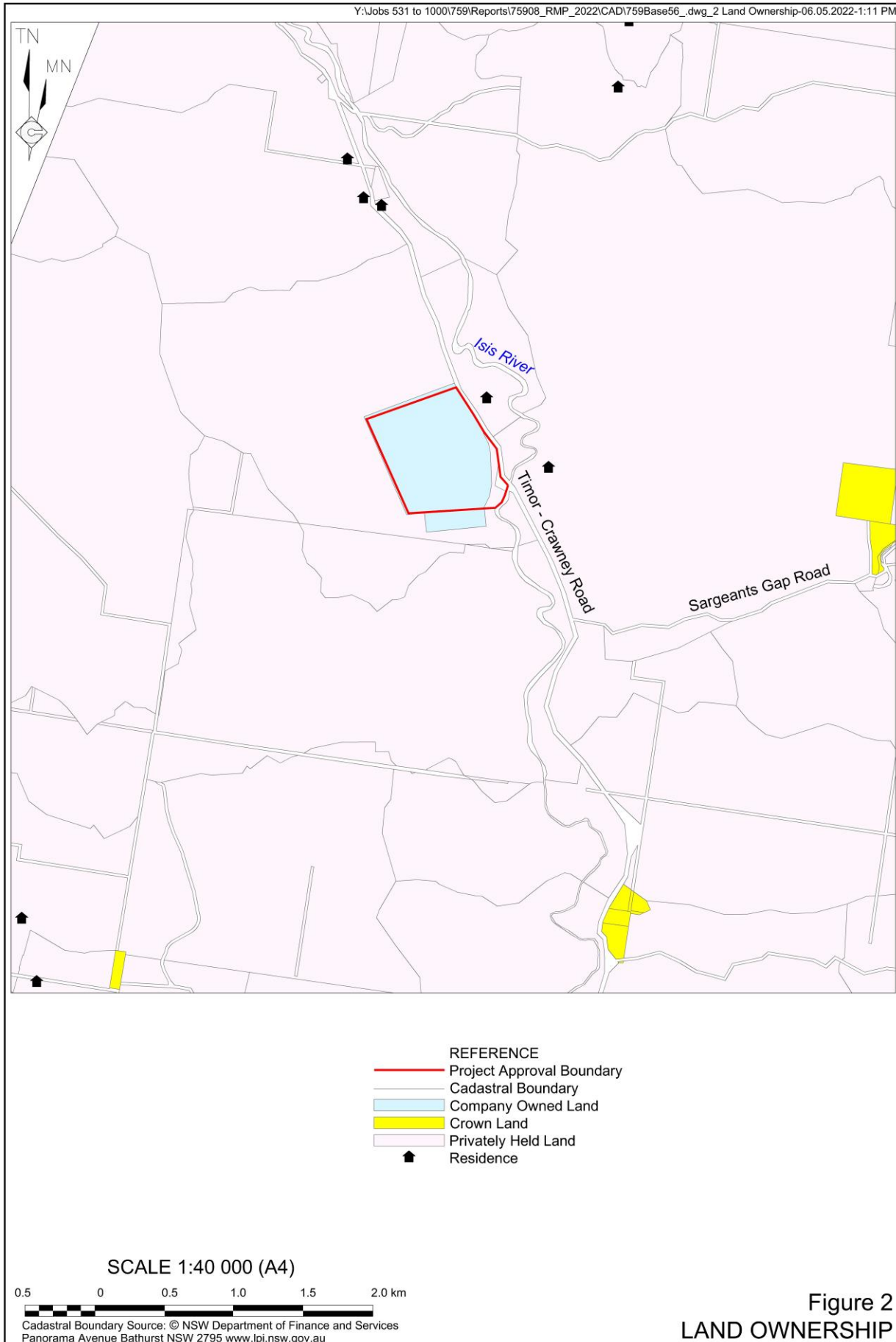


Table 2
Land Ownership

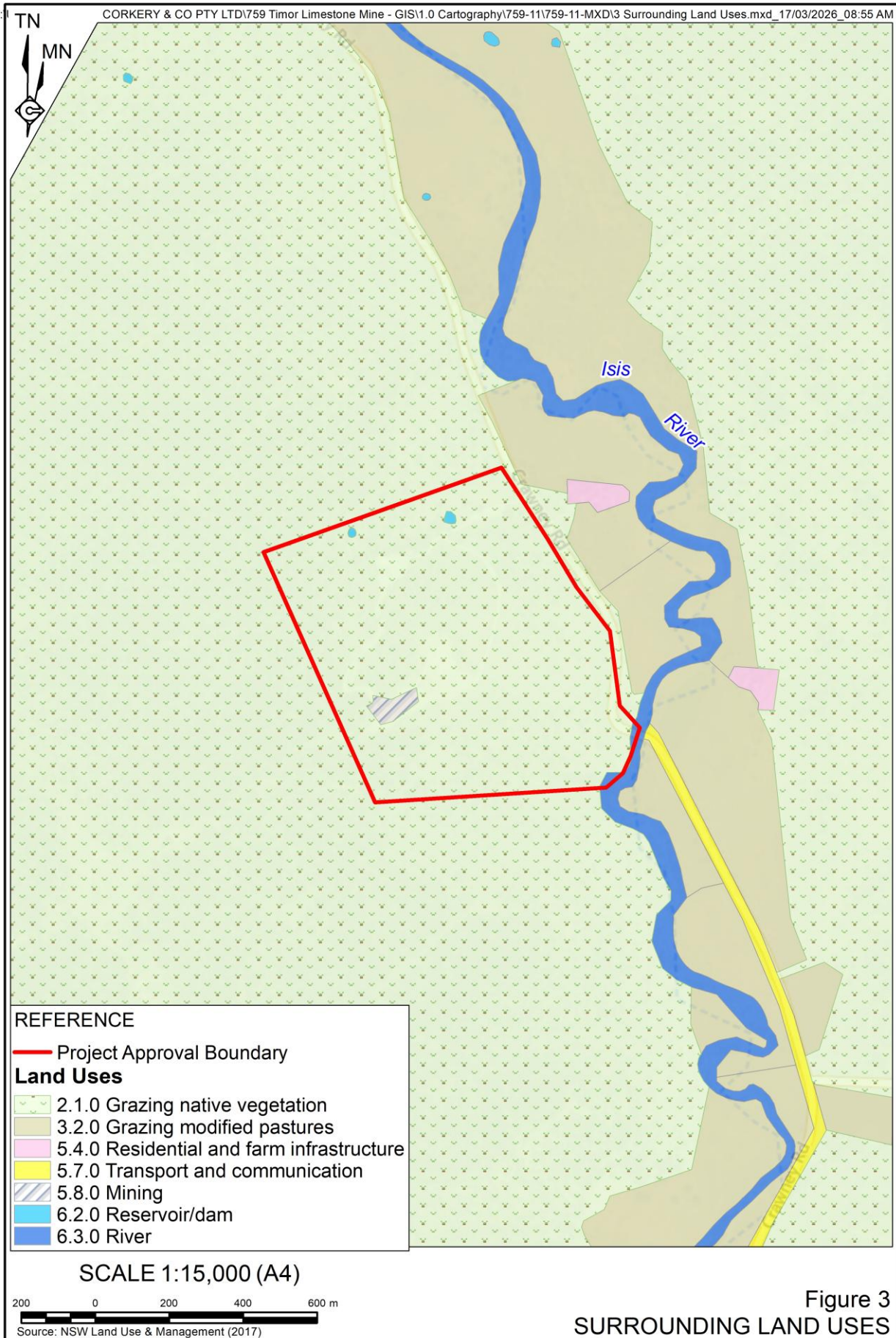
Ref	Lot	Deposited Plan	Tenure	Owner
Quarry Site				
2	11	1161503	Freehold	Stoneco Pty Limited
4	100	1225548	Freehold	Marina Seven Holdings Pty Ltd
Land Adjacent to the Quarry Site				
1	103	1248176	Freehold	Private Individual
1	10	849471	Freehold	Private Individual
2	11	1161503	Freehold	Private Individual
3	111	852844	Freehold	Private Individual
4	100	1225548	Freehold	Marina Seven Holdings Pty Ltd
4	32	748766	Freehold	Marina Seven Holdings Pty Ltd
4	1	1127257	Freehold	Marina Seven Holdings Pty Ltd
4	3	1204442	Freehold	Marina Seven Holdings Pty Ltd
4	11	1130600	Freehold	Marina Seven Holdings Pty Ltd
5	1	335683	Freehold	Hunter Valley Energy Coal Pty Ltd
5	1	986866	Freehold	Hunter Valley Energy Coal Pty Ltd
5	1	624179	Freehold	Hunter Valley Energy Coal Pty Ltd
5	1	367438	Freehold	Hunter Valley Energy Coal Pty Ltd
6	33	856514	Freehold	Private Individual
7	214	44391	Freehold	Private Individual
8	1	590486	Freehold	Private Individual
9	34	856514	Freehold	Private Individual
10	3	863264	Freehold	Private Individual
11	1	1204442	Freehold	Private Individual
12	1	157371	Freehold	Mackven Pty Limited
12	2	157371	Freehold	Mackven Pty Limited

1.3.3 Land Ownership and Land Use Figures

The figures listed in **Table 3**, present a range of information to identify the Quarry Site's local, regional and State context.

Table 3
Land Ownership and Land Use Figures

Figure No.	Title	Description
1	Locality Plan	The Quarry Site's State and regional context with regards to administrative boundaries, population centres, transport and public infrastructure
2	Land Ownership	Land ownership and residences within and surrounding the Quarry Site
3	Surrounding Land Use	Land use and topography within and surrounding the Quarry Site
4	Vegetation Communities and Heritage Items	Vegetation Communities and Heritage within and surrounding the Quarry Site
5	Surface Water Catchments	Watercourses/drainage lines and water storage areas within and surrounding the Quarry Site.



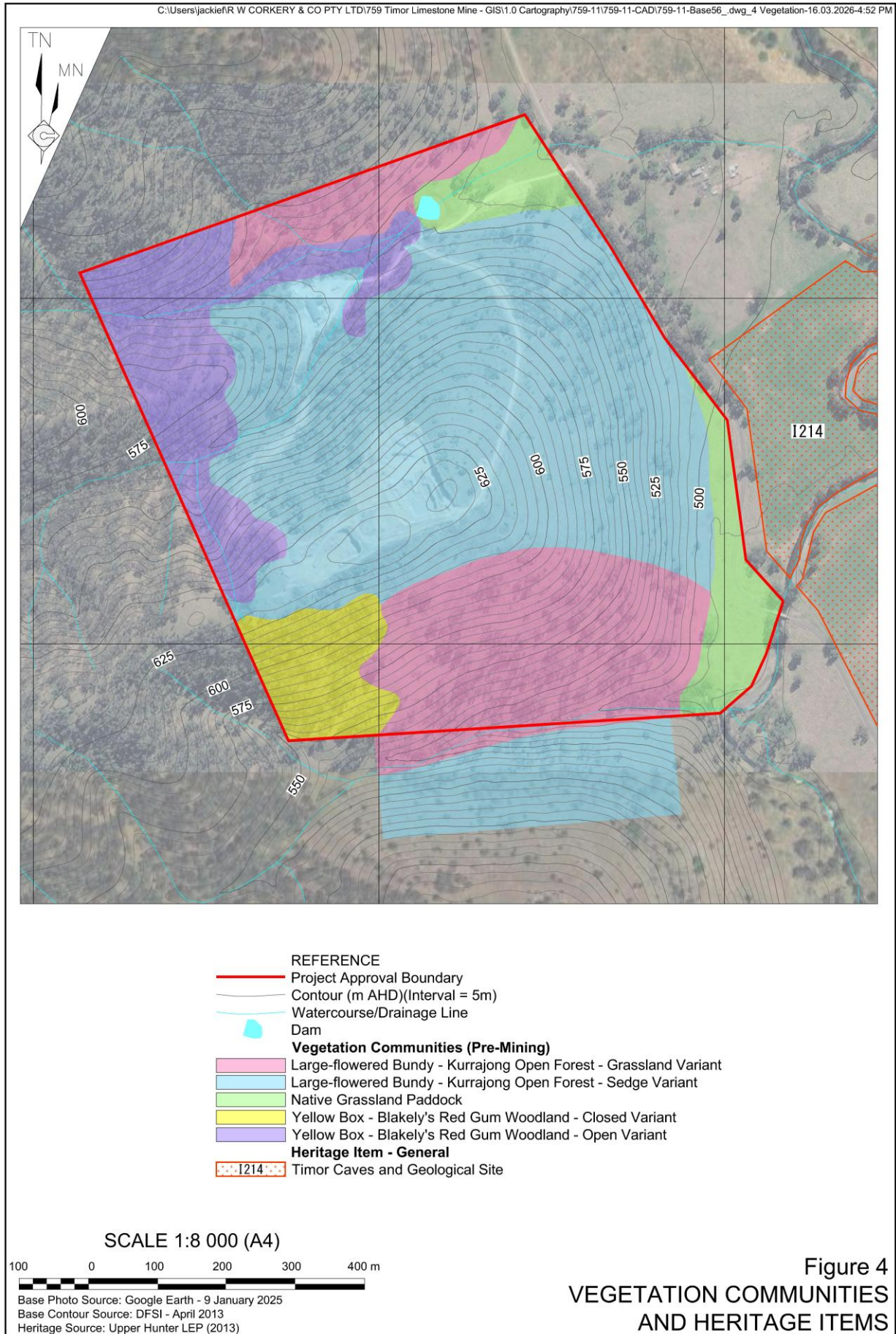


Figure 4
**VEGETATION COMMUNITIES
AND HERITAGE ITEMS**

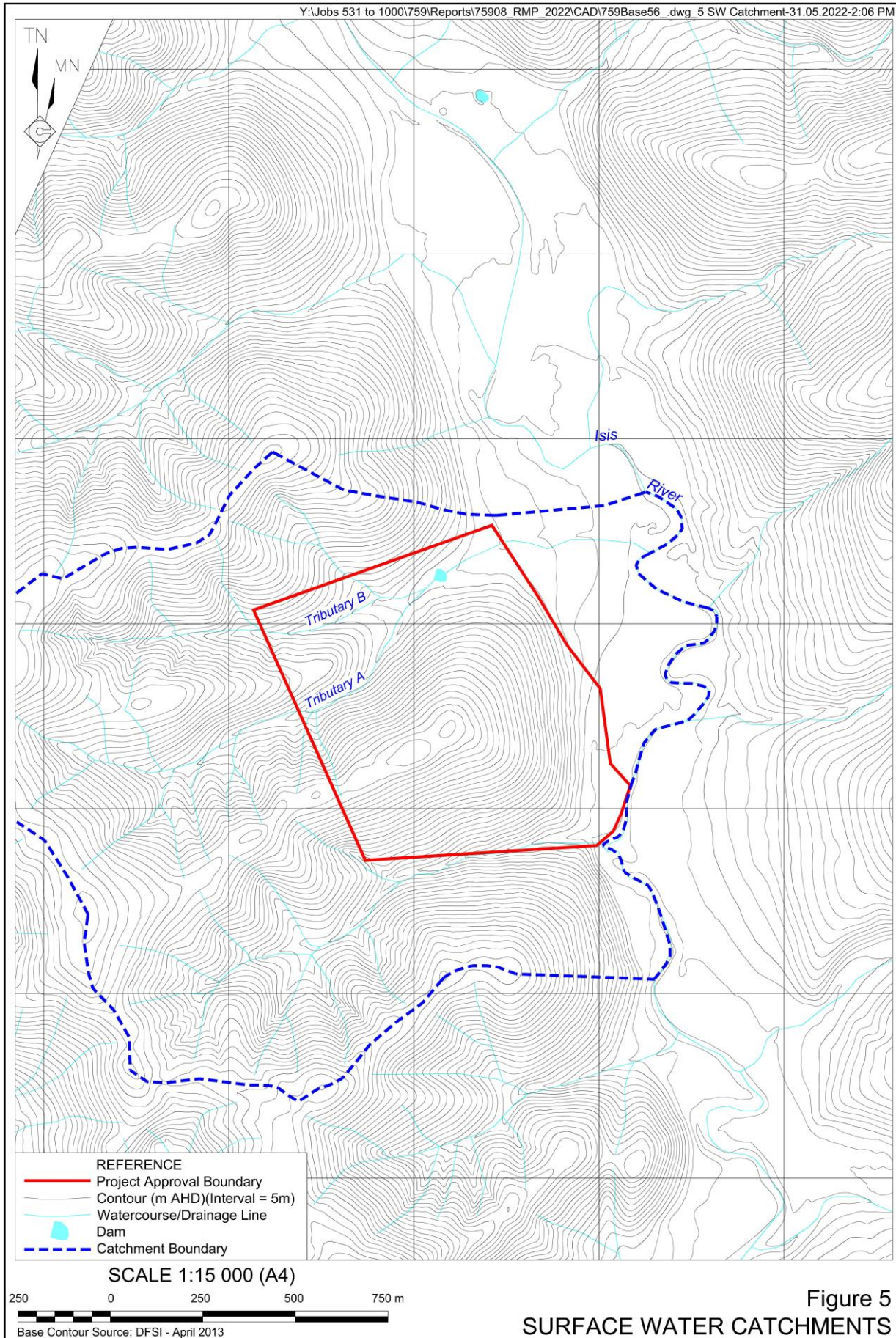


Figure 5
SURFACE WATER CATCHMENTS

2 FINAL LAND USE

2.1 REGULATORY REQUIREMENTS FOR REHABILITATION

Table 4 lists the regulatory requirements relating to rehabilitation of the Quarry Site and post-mining land uses.

Table 4
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A				
	4	<p>Must prevent or minimise harm to the environment</p> <p>(1) The holder of a mining lease must take all reasonable measures to prevent, or if that is not reasonably practicable, to minimise, harm to the environment caused by activities under the mining lease.</p> <p>(2) In this clause – harm to the environment has the same meaning as in the Protection of the Environment Operations Act 1997.</p>	ML1660	During operation and rehabilitation.	Noted
	5	<p>Rehabilitation to occur as soon as reasonably practicable after disturbance</p> <p>i. The holder of a mining lease must rehabilitate land and water in the mining area that is disturbed by mining activities under the mining lease as soon as reasonably practicable after the disturbance occurs.</p>	ML1660	During operation and rehabilitation.	Noted
6	<p>Rehabilitation must achieve final land use</p> <p>(1) The holder of a mining lease must ensure that rehabilitation of the mining area achieves the final land use for the mining area.</p> <p>(2) The holder of a mining lease must ensure any planning approval has been obtained that is necessary to enable the holder to comply with subclause (1).</p> <p>(3) The holder of the mining lease must identify and record any reasonably foreseeable hazard that presents a risk to the holder’s ability to comply with subclause (1) Note – clause 7 requires a rehabilitation risk assessment to be conducted whenever a hazard is identified under this subclause.</p> <p>(4) In this clause – final land use for the mining area means the final landform and final land uses to be achieved for the mining area –</p> <p>(a) as set out in the rehabilitation objectives statement and rehabilitation completion criteria statement, and</p> <p>(b) for a large mine – as spatially depicted in the final landform and rehabilitation plan, and</p> <p>(c) if the final land use for the mining area is required by a condition of development consent for activities under the mining lease – as stated in the condition.</p> <p>planning approval means –</p> <p>(a) a development consent within the meaning of the <i>Environmental Planning and Assessment Act 1979</i>, or an approval under that Act, Division 5.1.</p>	ML1660	During rehabilitation.	1.2, 3	

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A (Cont'd)				
	7	<p>Rehabilitation risk assessment</p> <p>(1) The holder of a mining lease must conduct a risk assessment (a rehabilitation risk assessment) that –</p> <p>(a) identifies, assesses and evaluates the risks that need to be addressed to achieve the following in relation to the mining lease –</p> <p>(i) the rehabilitation objectives,</p> <p>(ii) the rehabilitation completion criteria,</p> <p>(iii) for large mines – the final land use as spatially depicted in the final landform and rehabilitation plan, and</p> <p>(b) identifies the measures that need to be implemented to eliminate, minimise or mitigate the risks.</p> <p>(1) The holder of the mining lease must implement the measures identified.</p> <p>(2) The holder of a mining lease must conduct a rehabilitation risk assessment –</p> <p>(a) for a large mine – before preparing a rehabilitation management plan, and</p> <p>(b) for a small mine – before preparing the rehabilitation outcome documents for the mine, and</p> <p>(c) whenever a hazard is identified under clause 6(3) – as soon as reasonably practicable after it is identified, and</p> <p>whenever given a written direction to do so by the Secretary.</p>	ML1660	During rehabilitation.	3
	8	<p>Application of Division</p> <p>This Division does not apply to a mining lease unless—</p> <p>(a) the security deposit required under the mining lease is greater than the minimum deposit prescribed under the Act, section 261BF in relation to that type of mining lease, or the Secretary gives a written direction to the holder of the mining lease that this Division, or a provision of this Division, applies to the mining lease.</p>	ML1660	During operation and rehabilitation.	Noted
9	<p>General requirements for documents</p> <p>A document required to be prepared under this Division must—</p> <p>(a) be in a form approved by the Secretary, and Note— The approved forms are available on the Department’s website.</p> <p>(b) include any matter required to be included by the form, and</p> <p>if required to be given to the Secretary—be given in a way approved by the Secretary.</p>	Not Applicable	During operation and rehabilitation.	This Document	

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A (Cont'd)				
	10	<p>Rehabilitation management plans for large mines</p> <p>(1) The holder of a mining lease relating to a large mine must prepare a plan (a rehabilitation management plan) for the mining lease that includes the following—</p> <ul style="list-style-type: none"> (a) a description of how the holder proposes to manage all aspects of the rehabilitation of the mining area, (b) a description of the steps and actions the holder proposes to take to comply with the conditions of the mining lease that relate to rehabilitation, (c) a summary of rehabilitation risk assessments conducted by the holder, (d) the risk control measures identified in the rehabilitation risk assessments, (e) the rehabilitation outcome documents for the mining lease, (f) a statement of the performance outcomes for the matters addressed by the rehabilitation outcome documents and the ways in which those outcomes are to be measured and monitored. <p>(2) If a rehabilitation outcome document has not been approved by the Secretary, the holder of the mining lease must include a proposed version of the document.</p> <p>(3) A rehabilitation management plan is not required to be given to the Secretary for approval.</p> <p>(4) The holder of the mining lease—</p> <ul style="list-style-type: none"> (a) must implement the matters set out in the rehabilitation management plan, and <p>if the forward program specifies timeframes for the implementation of the matters—must implement the matters within those timeframes.</p>	ML1660	During operation and rehabilitation.	This Document
	11	<p>Amendment of rehabilitation management plans</p> <p>The holder of a mining lease must amend the rehabilitation management plan for the mining lease as follows—</p> <ul style="list-style-type: none"> (a) to substitute the proposed version of a rehabilitation outcome document with the version approved by the Secretary—within 30 days after the document is approved, (b) as a consequence of an amendment made under clause 14 to a rehabilitation outcome document—within 30 days after the amendment is made, (c) to reflect any changes to the risk control measures in the prepared plan that are identified in a rehabilitation risk assessment—as soon as practicable after the rehabilitation risk assessment is conducted, <p>whenever given a written direction to do so by the Secretary—in accordance with the direction.</p>	ML1660	During operation and rehabilitation.	11

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A (Cont'd)				
	12	<p>Rehabilitation outcome documents</p> <p>(1) The holder of a mining lease must prepare the following documents (the rehabilitation outcome documents) for the mining lease and give them to the Secretary for approval—</p> <ul style="list-style-type: none"> (a) the rehabilitation objectives statement, which sets out the rehabilitation objectives required to achieve the final land use for the mining area, (b) the rehabilitation completion criteria statement, which sets out criteria, the completion of which will demonstrate the achievement of the rehabilitation objectives, (c) for a large mine, the final landform and rehabilitation plan, showing a spatial depiction of the final land use. <p>If the final land use for the mining area is required by a condition of development consent for activities under the mining lease, the holder of the mining lease must ensure the rehabilitation outcome documents are consistent with that condition.</p>	ML1660	At commencement and following any modification / new development approval	4, 5
	13	<p>Forward program and annual rehabilitation report</p> <p>(1) The holder of a mining lease must prepare a program (a forward program) for the mining lease that includes the following—</p> <ul style="list-style-type: none"> (a) a schedule of mining activities for the mining area for the next 3 years, (b) a summary of the spatial progression of rehabilitation through its various phases for the next 3 years, (c) a requirement that the rehabilitation of land and water disturbed by mining activities under the mining lease must occur as soon as reasonably practicable after the disturbance occurs. <p>(2) The holder of a mining lease must prepare a report (an annual rehabilitation report) for the mining lease that includes—</p> <ul style="list-style-type: none"> (a) a description of the rehabilitation undertaken over the annual reporting period, (b) a report demonstrating the progress made through the phases of rehabilitation provided for in the forward program applying to the reporting period, (c) a report demonstrating progress made towards the achievement of the following— <ul style="list-style-type: none"> (i) the objectives set out in the rehabilitation objectives statement, (ii) the criteria set out in the rehabilitation completion criteria statement, (iii) for large mines—the final land use as spatially depicted in the final landform and rehabilitation plan. 	ML1660	Annually	8.3

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A (Cont'd)				
	13 (Cont'd)	<p>(2) If a rehabilitation outcome document has not been approved by the Secretary, the holder of the mining lease must rely on a proposed version of the document.</p> <p>(3) The holder of the mining lease must give the forward program and annual rehabilitation report to the Secretary.</p> <p>(4) In this clause— annual reporting period means each period of 12 months commencing on—</p> <p>(a) the date on which the mining lease is granted, or</p> <p>if the Secretary approves another date in relation to the mining lease— the other date</p>			
	14	<p>Amendment of rehabilitation outcome documents and forward program</p> <p>(1) This clause applies to—</p> <p>(a) a rehabilitation outcome document if it has been approved by the Secretary, and</p> <p>(b) a forward program if it has been given to the Secretary.</p> <p>(2) The holder of a mining lease must not amend a document to which this clause applies that relates to the mining lease unless—</p> <p>(a) the Secretary gives the holder a written direction to do so, or</p> <p>(b) the Secretary, on written application by the holder, gives a written approval of the amendment.</p> <p>(3) The holder of the mining lease must amend the document in accordance with the Secretary's direction or approval.</p> <p>Nothing in this clause prevents the holder of a mining lease preparing a draft amendment for submission to the Secretary for approval.</p>	ML1660	Annually	8.3
15	<p>Times at which documents must be prepared and given</p> <p>(1) The holder of a mining lease must do the following before the end of the initial period—</p> <p>(a) prepare a rehabilitation management plan, and</p> <p>(b) prepare rehabilitation outcome documents and give them, other than the rehabilitation completion criteria statement, to the Secretary for approval, and</p> <p>(c) prepare a forward program and give it to the Secretary.</p>	ML1660	At commencement and following any	8.3	

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A (Cont'd)				
	15 (Cont'd)	<p>(2) The holder of the mining lease must prepare a forward program and annual rehabilitation report and give them to the Secretary before—</p> <p>(a) 60 days after the last day of each annual reporting period, commencing with the annual reporting period in which the forward program was given to Secretary under subclause (1)(c), or</p> <p>a later date approved by the Secretary.</p> <p>(3) A rehabilitation completion criteria statement relating to completion of rehabilitation during a period covered by a forward program must be given to the Secretary for approval when the forward program is required to be given to the Secretary.</p> <p>(4) The holder of the mining lease must prepare updated rehabilitation outcome documents for the mining lease and give them to the Secretary for approval before—</p> <p>(a) 60 days after a development consent is modified following an application referred to in clause 20(1)(b), or</p> <p>(b) a later date approved by the Secretary.</p> <p>(5) A rehabilitation completion criteria statement is not required to be given to the Secretary under subclause (4) unless a rehabilitation completion criteria statement has already been given to the Secretary under subclause (3).</p> <p>(6) The Secretary may, by written notice, direct the holder of a mining lease to prepare, or give to the Secretary, a document required to be prepared under this Division at a time other than that specified in this clause.</p> <p>(7) The holder of the mining lease must comply with the direction.</p> <p>(8) In this clause— initial period means the period commencing when the mining lease is granted and ending—</p> <p>(a) 30 days, or other period approved by the Secretary, after this Division first applies to the mining lease, or</p> <p>(b) if this Division applies to the mining lease because of an increase in the required security deposit—</p> <p>(i) when the surface of the mining area is disturbed by activities under the mining lease, or</p> <p>at a later date approved by the Secretary.</p>			

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A (Cont'd)				
	16	<p>Certain documents to be publicly available</p> <p>(1) This clause applies to the following documents—</p> <ul style="list-style-type: none"> (a) a rehabilitation management plan, (b) a forward program, (c) an annual rehabilitation report. <p>(2) The holder of a mining lease must make a document to which this clause applies publicly available by—</p> <ul style="list-style-type: none"> (a) publishing it on its website in a prominent position, or (b) if the holder does not have a website— providing a copy of it to a person— <ul style="list-style-type: none"> (i) on the written request of a person, and (ii) without charge, and (iii) within 14 days after the request is received. <p>(3) If a document is published on the website of the holder of the mining lease, the holder must ensure that it is published—</p> <ul style="list-style-type: none"> (a) for a rehabilitation management plan—within 14 days after it is prepared or amended, or (b) for a forward program or an annual rehabilitation report—within 14 days after it is given to the Secretary or amended, <p>Personal information within the meaning of the <i>Privacy and Personal Information Protection Act 1998</i> is not required to be included in a document made available to a person under this clause.</p>	ML1660	During operation and rehabilitation.	Noted
	17	<p>Records demonstrating compliance</p> <p>The holder of a mining lease must create and maintain records of all actions taken that demonstrate compliance with each of the conditions set out in this Part.</p> <p>Note— The Act, sections 163D and 163E provide for the form in which records must be kept and the period for which they must be retained.</p>	ML1660	During operation and rehabilitation.	7

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A (Cont'd)				
	18	<p>Report on non-compliance</p> <p>(1) The holder of a mining lease must provide the Minister with a written report detailing any non-compliance with—</p> <p>(a) a condition of the mining lease, or Note— The Act, section 364A contains provisions relating to the use and disclosure of information provided under this condition.</p> <p>(b) a requirement of the Act or this Regulation relating to activities under the mining lease.</p> <p>(2) The holder of the mining lease must provide the report within 7 days after becoming aware of the non-compliance.</p> <p>(3) The holder of the mining lease must ensure the report—</p> <p>(a) identifies the condition of the mining lease, or the requirement of the Act or this Regulation, to which the non-compliance relates, and</p> <p>(b) describes the non-compliance and specifies the date or dates on which, or the period during which, the non-compliance occurred, and</p> <p>(c) describes the causes or likely causes of the non-compliance, and describes the action that has been taken, or will be taken, to mitigate the effects, and to prevent any recurrence, of the non-compliance.</p>	ML1660	In the event of a non-compliance.	Noted
NSWLEC 104	S1.2.1	The proposed development must be carried out in accordance with the proposal described in the Environmental Impact Statement (<i>R.W. Corkery & Co Pty Limited, 2008</i>), except as modified by	All Quarry Operations	NA	Noted
		(i) these conditions,			
		(ii) engineering and subdivision requirements imposed by the Council;			
		(iii) the location of the stockpile and handling area in the “Preferred Project Layout Plan”;			
		and/or the requirements of the <i>Environmental Planning and Assessment Act 1979</i> .			
S7.3	The Rehabilitation Management Plan must include:				
(a)	the rehabilitation objectives for the Project Site;	Quarry Site	N/A	4	
(b)	an outline of how the Quarry Site will be rehabilitated so as to integrate with the surrounding landform and does not contain any slopes or vertical headwalls that do not conform with the then current industry practice and standards;	Quarry Site	N/A	6.2.3	
(c)	a description of how flora and habitat values will be improved or enhanced;	Quarry Site	N/A	6.2.1.2, 6.2.1.3	

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section	
ML 1660	Standard Conditions – Schedule 8A (Cont'd)					
	(d)	a general description of the short, medium and long term measures that will be implemented to rehabilitate the Project Site;	Quarry Site	N/A	This document	
	(e)	a detailed description of the measures that will be implemented within the proposed areas of disturbance for:	Quarry Site	N/A	6	
	(i)	conserving and reusing topsoil, and obtaining soil depth similar to that naturally occurring on and surrounding the disturbed areas of the Project Site;	Quarry Site	N/A	6.2.1.1, 6.2.4	
	(ii)	establishing biologically active topsoil by introduction of native early colonising species of naturally occurring limestone soils prior to re-establishing existing vegetation communities;	Quarry Site	N/A	6.2.1.1, 6.2.4	
	(iii)	protecting any areas displaying spontaneous recovery/regeneration of vegetation and facilitating that recovery and regeneration;	Quarry Site	N/A	6.2.1.2	
	(iv)	revegetation with native tree, shrub and grass species comparable with the existing vegetation communities in the area;	Quarry Site	N/A	6.2.4, 6.2.5	
	(v)	methods of seeding (prepared by a restoration ecologist) which ensure that local native provenance plants will be able to be re-established on the constructed slopes;	Quarry Site	N/A	6.2.4, 6.2.5	
	(vi)	salvaging and reusing material from the Project Site for habitat enhancement; and	Quarry Site	N/A	6.2.1.3	
	(vii)	controlling weeds and feral pests.	Quarry Site	N/A	6	
	(viii)	performance and completion criteria for the rehabilitation of the site; and	Quarry Site	N/A	4	
(ix)	a description of how the performance of the rehabilitation works will be monitored over time to achieve the stated objectives and against the relevant performance and completion criteria.	Quarry Site	N/A	8		
S7.6	Where stabilisation utilising groundcover species is required, the Operator shall use appropriate groundcover species as identified in the table below.		Quarry Site	During rehabilitation	6.2.4	
	Endemic Perennial Species	Other Native Perennial Species				Non-native Annual / Non-persistent Species
	<i>Lomandra longifolia</i>	<i>Chloris truncata</i>				Japanese Millet (Spring/Summer)
	<i>Aristida personata</i>	<i>Elymus scaber</i>				Couch (perennial)
	<i>Aristida vagans</i>	<i>Microlaena stipoides</i>				Serradella (Aug to Jan)
	<i>Bothriochloa macra</i>	<i>Sorghum leiocladum</i>				White Clover (perennial)
	<i>Chloris ventricosa</i>	<i>Themeda australis</i>				Haresfoot Clover (perennial)
	<i>Cymbopogon refractus</i>					Ryecorn/Oats (Autumn/Winter)
	<i>Dichanthium sericeum</i>					
	<i>Panicum effusum</i>					

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Consent	Condition No.	Requirement	Area	Timing	RMP Section
ML 1660	Standard Conditions – Schedule 8A (Cont'd)				
	S7.7	If necessary, 'soft engineering practices', such as installation of jute mesh or other soil stabilisation methods, shall be utilised on steeper slopes and near drainage lines to reduce potential surface water pollution.	Quarry Site	N/A	6.2.4
Environmental Impact Statement (RWC 2008)	Section 2.12.3.1	<p>Initial rehabilitation</p> <ul style="list-style-type: none"> Rehabilitation of the amenity bund, safety bunding (where appropriate), water management structures and cut and fill batters not required for ongoing operations. Rehabilitation through placement of topsoil and seeding with a non-persistent cover crop and a native seed mix. Use of additional erosion protection, such as jute mesh, where required. 	Quarry Site	During rehabilitation	6.2.3, 6.2.4
	Section 2.12.3.2	<p>Decommissioning and Final Landform</p> <ul style="list-style-type: none"> Rehabilitation of the extraction area and removal of all buildings and structures removed from the site. Ripping and removal of any concrete footings. Ripping, topsoiling and seeding hardstands and internal roads not required for future land use. Removal of any material contaminated by hydrocarbons to a licenced facility. Retention of safety bunding and fencing. Placement of soil and fine material on quarry benches to provide pockets of soil material suitable for vegetation. Restoration blasting of final extraction benches to provide a final undulating slope of approximately 2:1 (V:H) or 60°. Application of an appropriate native seed mix through spraying or aerial methods. 			6.2.2

Table 4 (Cont'd)
Regulatory Requirements for Rehabilitation

Page 11 of 11

Consent	Condition No.	Requirement	Area	Timing	RMP Section
Environmental Impact Statement (RWC 2008) (Cont'd)	Section 2.4.3	<p>Soil Management</p> <ul style="list-style-type: none"> Progressively remove the recoverable topsoil and any available subsoil for areas required for the next 12 months of operation. Clear the smaller vegetation and ground cover with the topsoil to maximise the retention of the soil seed stock and organic matter within the soil. Recover and store any clayey material recovered at depth for use as subsoil material. Stockpile soil in windrows adjacent the amenity bund or as non-permanent bunding. Stockpile topsoil and subsoil separately at maximum heights of 2m and 3m respectively. Seed soil stockpiles with a non-persistent cover crop to provide initial stabilisation. Avoid driving machinery on soil stockpiles. 	Quarry Site	During operations and rehabilitation works	6.2.1.1, 7.2.1.1, 7.2.4
Legislation					
NSW Legislation					
<i>Protection of Environmental Operations Act 1997</i>	Chapter 3	Discusses the provision of Environment Protection Licences.	Quarry Site	During operations and rehabilitation works	Noted
	Part 2.4	Discusses the application of Clean-up Notices.			
	Chapter 5	Discusses environmental offences including water, air, noise and land pollution and waste.			
<i>Heritage Act 1977</i>	Part 3	Discusses interim orders for items of State or local heritage significance.	Quarry Site	During decommission and rehabilitation works	Noted
	Part 3A	Discusses listing of items on the State Heritage Register.			
	Part 4	Discusses the effect of interim heritage orders and listings on the State Heritage Register			
	Part 6	Discusses other measures for the conservation of environmental heritage.			
<i>Mining Act 1992</i>	Part 11, Division 3	Discusses environmental, rehabilitation and other directions.	Quarry Site	During rehabilitation works	Noted

2.2 FINAL LAND USE OPTIONS ASSESSMENT

A final land use options assessment is not required as development is to be in accordance with the final landform and use defined in Figure 2.8 of the *Environmental Impact Statement* (RWC, 2008). Section 2.14 of the EIS also details the final land uses within the Quarry Site as predominantly nature conservation although grazing activities may also be continued within suitable areas across the site, principally the flatter areas within the eastern section of the Quarry Site. It is considered that the final land use will be consistent with existing surrounding land uses and Council's land use objectives.

2.3 FINAL LAND USE STATEMENT

The nominated post mining land use goals are to:

- implement successful design and rehabilitation to ensure structural stability, revegetation success and containment of wastes;
- ensure rehabilitation and revegetation is self-sustaining and follows the principles of sustainable development; and
- return disturbed areas to future nature conservation and grazing land use activities.

The planned final landform and land use are displayed on **Plans 1** and **2**.

2.4 FINAL LAND USE AND MINING DOMAINS

The *Form and Way: Rehabilitation Management Plan for Large Mines (September 2025)* guideline defines a domain as follows.

“An area (or areas) of the land that has been disturbed by mining and has a specific operational use (mining domain) or specific final land use (final land use domain). Land within a domain typically has similar geochemical and/or geophysical characteristics and therefore requires specific rehabilitation activities to achieve the associated final land use.”

For the purposes of this RMP, the domains are categorised as follows.

1. Mining domains – categorised on the basis of quarry-related activities occurring within each domain.
2. Final land use domains – categorised on the basis of similar post-mining land use objectives and rehabilitation outcomes.

2.4.1 Final Land Use Domains

Table 5 defines the final land use domains for the Quarry Site and **Plan 1** displays the final land use domains for the Quarry Site.

Table 5
Final Land Use Domains

Final Land Use Domain	Spatial Refs	Domain Description
Native Ecosystem	A1, A5	This domain incorporates areas to be rehabilitated to native vegetation. It is noted that the vegetation re-established within this domain will generally be comparable with the species composition of the existing communities, however, vegetation structure will vary and may not specifically classify as the existing community.
Water Storage (Excluding Final Void)	G3	This domain incorporates the clean water dam which is to be retained for future land uses.
Infrastructure	I1, I5	This domain incorporates part of the site access road to be retained for future property access, and safety bunding and fencing.
Final Void	J5	This domain incorporates the residual void comprising a 'sump' area to be retained at the base of the highwall.

2.4.2 Mining Domains

Table 6 defines the mining domains for the Quarry Site and **Plan 1** displays the mining domains within the Quarry Site.

Table 6
Mining Domains

Mining Domain	Spatial Refs	Domain Description
Infrastructure	A1, I1	This domain includes the office and amenities area and the standing and laydown area, all site access roads and the haul road / future conveyor route.
Water Management Area	G3	This domain is limited to the existing clean water dam.
Active Mining Area (Open Cut Void)	A5, I5, J5	This domain incorporates the approved extraction area and adjacent safety bund and fence.
Note 1: See Plan 1		

3 REHABILITATION RISK ASSESSMENT

A rehabilitation risk assessment was undertaken generally in accordance with *AS/NZS ISO 31000:2018 Risk Management – Principles & Guidelines* and is presented in full as **Appendix 1. Table 7** presents the summarised results of the risk analysis, showing risks deemed moderate or above, assuming the implementation of standard mitigation measures and those outlined within this Plan.

Table 7
Summarised Rehabilitation Risk Assessment

Risk	Risk Control	Final Land Use Domain			Where Addressed in RMP
		Domain A: Native Ecosystem	Domain G: Water Storage (Excluding Final Void)	Domain I: Infrastructure	
Limited pre-existing biological resources for use (e.g. topsoil, woody debris).	Strip all available soil / growth medium resources and either immediately place on shaped landform or stockpile in accordance with Rehabilitation Management Plan. Growth medium register. Suitable source of additional soil material to be identified, including the need for importation of soils from off site. Investigation into methods that may be implemented to ameliorate on-site materials to make them suitable for use as a growth medium.	M(D3)	NA	NA	6.2.1.1, 6.2.1.11, 9.2
Unstable landform due to erosion and/or mass movement issues associated with inappropriate design and/or quality assurance during landform construction.	Use of erosion protection, such as rip rap, contour banks, gabion, where required. Geotechnical assessment prior to relinquishment.	M(E4)	L(F2)	L(F2)	6.2.3.2, 6.2.3.4
Uncontrolled public access to highwalls	Install fencing, signage and bunding to prevent public access to retained highwall faces.	M(E4)	NA	NA	6.2.2.1, 6.2.3.4
Subsoil and topsoil deficit for rehabilitation activities.	Suitable source of additional soil material to be identified, including the need for importation of soils from off site. Investigation into methods that may be implemented to ameliorate on-site materials to make them suitable for use as a growth medium.	M(D3)	NA	NA	6.2.4, 8, 9.2
Adverse weather and climatic influences (e.g. drought; intense rainfall events; bushfire and climate change) during ecosystem and land use establishment phase of rehabilitation.	Review long-term weather forecast prior to purchase of seed mix. Consult with suitably experienced expert to confirm suitability of seed mix for seasonal conditions. If required, utilisation of stored water for irrigation of revegetation areas to achieve effective root establishment.	M(E3)	L(F2)	L(F1)	6.2.5, 8
Adverse weather and climatic influences (e.g. drought; intense rainfall events; bushfire and climate change) during ecosystem and land use development phase of rehabilitation.	Review long-term weather forecast. If existing seed mix is inappropriate for current weather conditions, consult with suitably experienced expert to confirm alternative species and/or cover crop or mulch for temporary stabilisation.	M(E3)	L(F2)	L(F1)	6.2.6.2, 6.2.6.3

4 REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA

4.1 REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA

Table 8 provides the approved rehabilitation objectives and proposed completion criteria developed for the Quarry to achieve the nominated post mining land use goals (refer to Section 2.3).

It is noted that details of monitoring completed against completion criteria will be reported through the respective annual reporting and either a final report or separate relinquishment report.

4.2 REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA – STAKEHOLDER CONSULTATION

Table 9 presents a summary of consultation undertaken with relevant stakeholders with regards to the rehabilitation objectives, rehabilitation completion criteria and proposed final land uses and landforms presented in this Plan. This table will be updated as required with each revision to this Plan to include details of further consultation with relevant and interested stakeholders.

Table 8
Approved Rehabilitation Objectives and Proposed Completion Criteria

Final Land Use Domain	Mining Domain	Spatial Ref	Rehabilitation Objective Category	Approved Rehabilitation Objectives	Indicator	Proposed Rehabilitation Completion Criteria	Validation Method
Native Ecosystem	Infrastructure	A1	Bushfire	The risk of bushfires at the site is commensurate with bushfire risks in adjacent areas and is managed according to the appropriate NSW RFS advice.	Bushfire controls implemented.	Appropriate bushfire hazard controls (where required) implemented on the advice from the NSW Rural Fire Service.	Correspondence records with NSW Rural Fire Service. Single occurrence relinquishment inspection and report, including photographs, following decommissioning.
			Ecological rehabilitation	Levels of ecosystem function have been established that demonstrate the rehabilitation is self-sustainable.	Evidence of plant regeneration from 0.04 hectare fixed monitoring plots or a walk over of the ecological rehabilitation area	Second generation individuals of trees are within the 10 th -90 th percentile variation range of reference sites/data.	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that validate rehabilitation completion criteria have been met.
					Cover of exotic species within 0.04 hectare fixed monitoring plots is low	Foliage cover of 'high threat exotic' (HTE) weeds is within 10 th -90 th percentile variation range of reference sites/data or at a level that does not cause significant risk to rehabilitation.	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that validate rehabilitation completion criteria have been met.
					Resilience demonstrated by the effects of drought and fire on composition, structure and other function attributes.	Resilience to drought and fire.	Rehabilitation monitoring reports, environmental monitoring records.
					Threats to rehabilitation.	Vertebrate pest species – presence and damage is recorded at a level that does not cause significant risk to rehabilitation.	Rehabilitation monitoring reports.
					The vegetation structure of the rehabilitation is similar to that of native vegetation communities of White Box Yellow Box Blakely's Red Gum Woodland found in the local area (comprising either or a combination of the Native Grassland, Box-Gum Woodland, and Large-Flowered Bundy - Kurrajong Woodland variants).	Cover and abundance of plant growth forms recorded from 0.04 hectare fixed monitoring plots are characteristic of the target vegetation communities, or an ongoing trend toward becoming characteristic is evident from the monitoring data	Cover, abundance and height range of native plant growth forms are characteristic of, or trending towards, the target vegetation community type(s).
				The vegetation composition of the rehabilitation contains species that are commensurate with native vegetation communities of White Box Yellow Box Blakely's Red Gum Woodland and other complimentary species found in the local area.	Native plant species recorded from 0.04 hectare fixed monitoring plots are characteristic of / complementary to the target vegetation communities.	Native plant species are characteristic of / complementary to the target vegetation community(s) when compared to analogue sites.	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that validate rehabilitation completion criteria have been met.
			Land contamination	Domain is safe and free from hazardous materials.	Contaminated land identified and remediated.	Contaminated land assessment indicates contamination acceptable for final land use.	Single occurrence visual contamination assessment and report prepared by a suitably qualified person.
					Waste material and/or visible contamination areas on site surface.	All rubbish/ waste materials removed from site.	Statement provided and before/after photos.
						There are no visible signs of contamination following the removal of plant, equipment and materials.	Statement provided and before/after photos.

Table 8 (Cont'd)
Approved Rehabilitation Objectives and Proposed Completion Criteria

Final Land Use Domain	Mining Domain	Spatial Ref	Rehabilitation Objective Category	Approved Rehabilitation Objectives	Indicator	Proposed Rehabilitation Completion Criteria	Validation Method			
			Landform stability	The final landform is stable for the long-term and does not present a risk of environmental harm downstream / downslope of the site or a safety risk to the public/stock/native fauna.	Visual - indicators of erosion and land instability.	Minimal erosion that will not require moderate to significant ongoing management and maintenance works.	Before and after photos, rehabilitation monitoring reports, erosion surveys, that indicate long-term stability of rehabilitated landform.			
						No signs of land instability such as mass movement.				
						No areas of active gully erosion.				
						No evidence of tunnel erosion.				
								Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan.	Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.	As constructed survey plan(s) prepared by surveyor.
			Removal of infrastructure	All infrastructure and services not suitable for a lawful final land use will be removed.	Infrastructure removed.		Removal of all plant, equipment and associated infrastructure including stockpiles, amenity bunds, and site office and amenities.		As-constructed final landform plan, photos and decommissioning reports.	
									Removal of all services (power, water, communications) that have been connected on the site as part of the operation and are not required for the final land use.	Statement provided, utility service disconnection record / notification.
									Removal of all water management infrastructure (including dirty water drain and sediment retention basin)	Statement provided and before/after photos.
			Surface water	Runoff water quality meets the requirements of the development consent / EPL and does not present a risk of environmental harm.	Water quality parameters selected from Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 and/or EPL.		Water quality discharged from rehabilitated mining operation meet specifications in Environment Protection Licence and/or ANZECC guidelines for specific environment.		EPL relinquished by Environment Protection Authority.	
			Active Mining Area (Open cut void)	A5	Bushfire	The risk of bushfires at the site is commensurate with bushfire risks in adjacent areas and is managed according to the appropriate NSW RFS advice.	Bushfire controls implemented.	Appropriate bushfire hazard controls (where required) implemented on the advice from the NSW Rural Fire Service.	Correspondence records with NSW Rural Fire Service.	
Single occurrence relinquishment inspection and report, including photographs, following decommissioning.										
Ecological rehabilitation	The vegetation structure of the rehabilitation is similar to that of native vegetation communities of White Box Yellow Box Blakely's Red Gum Woodland found in the local area (comprising either or a combination of the Native Grassland, Box-Gum Woodland, and Large-Flowered Bundy - Kurrajong Woodland variants).	Cover and abundance of plant growth forms recorded from 0.04 hectare fixed monitoring plots are characteristic of the target vegetation communities, or an ongoing trend toward becoming characteristic is evident from the monitoring data							Cover, abundance and height range of native plant growth forms are characteristic of, or trending towards, the target vegetation community type(s).	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that validate rehabilitation completion criteria have been met.
	The vegetation composition of the rehabilitation contains species that are commensurate with native vegetation communities of White Box Yellow Box Blakely's Red Gum Woodland and other complimentary species found in the local area	Native plant species recorded from 0.04 hectare fixed monitoring plots are characteristic of / complementary to the target vegetation communities.		Native plant species are characteristic of / complementary to the target vegetation community(s) when compared to analogue sites.		Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that validate rehabilitation completion criteria have been met.				

Table 8 (Cont'd)
Approved Rehabilitation Objectives and Proposed Completion Criteria

Final Land Use Domain	Mining Domain	Spatial Ref	Rehabilitation Objective Category	Approved Rehabilitation Objectives	Indicator	Proposed Rehabilitation Completion Criteria	Validation Method
				Levels of ecosystem function have been established that demonstrate the rehabilitation is self-sustainable.	Evidence of plant regeneration from 0.04 hectare fixed monitoring plots or a walk over of the ecological rehabilitation area	Second generation individuals of trees are within the 10 th -90 th percentile variation range of reference sites/data.	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that validate rehabilitation completion criteria have been met.
					Cover of exotic species within 0.04 hectare fixed monitoring plots is low	Foliage cover of 'high threat exotic' (HTE) weeds is within 10 th -90 th percentile variation range of reference sites/data or at a level that does not cause significant risk to rehabilitation.	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that validate rehabilitation completion criteria have been met.
					Resilience demonstrated by the effects of drought and fire on composition, structure and other function attributes.	Resilience to drought and fire.	Rehabilitation monitoring reports, environmental monitoring records.
					Threats to rehabilitation.	Vertebrate pest species – presence and damage is recorded at a level that does not cause significant risk to rehabilitation.	Rehabilitation monitoring reports.
			Land contamination	Domain is safe and free from hazardous materials.	Contaminated land identified and remediated.	Contaminated land assessment indicates contamination acceptable for final land use.	Single occurrence visual contamination assessment and report prepared by a suitably qualified person.
					Waste material and/or visible contamination areas on site surface.	All rubbish/ waste materials removed from site.	Statement provided and before/after photos.
						There are no visible signs of contamination following the removal of plant, equipment and materials.	Statement provided and before/after photos.
			Landform stability	The final landform is stable for the long-term and does not present a risk of environmental harm downstream / downslope of the site or a safety risk to the public/stock/native fauna.	Visual - indicators of erosion and land instability.	Minimal erosion that will not require moderate to significant ongoing management and maintenance works.	Before and after photos, rehabilitation monitoring reports, erosion surveys, that indicate long-term stability of rehabilitated landform.
						No signs of land instability such as mass movement.	
						No areas of active gully erosion. No evidence of tunnel erosion.	
					Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan	Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.	As constructed survey plan(s) prepared by surveyor.
			Removal of infrastructure	All infrastructure and services not suitable for a lawful final land use will be removed.	Infrastructure removed.	Removal of all plant, equipment and associated infrastructure including stockpiles, amenity bunds, and site office and amenities.	As-constructed final landform plan, photos and decommissioning reports.
						Removal of all services (power, water, communications) that have been connected on the site as part of the operation and are not required for the final land use.	Statement provided, utility service disconnection record / notification.
						Removal of all water management infrastructure (including dirty water drain and sediment retention basin)	Statement provided and before/after photos.

Table 8 (Cont'd)
Approved Rehabilitation Objectives and Proposed Completion Criteria

Final Land Use Domain	Mining Domain	Spatial Ref	Rehabilitation Objective Category	Approved Rehabilitation Objectives	Indicator	Proposed Rehabilitation Completion Criteria	Validation Method
			Surface water	Runoff water quality meets the requirements of the development consent / EPL and does not present a risk of environmental harm.	Water quality parameters selected from Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 and/or EPL.	Water quality discharged from rehabilitated mining operation meet specifications in Environment Protection Licence and/or ANZECC guidelines for specific environment.	EPL relinquished by Environment Protection Authority.
Water Storage (Excluding Final Void)	Water Management Area	G3	Bushfire	The risk of bushfires at the site is commensurate with bushfire risks in adjacent areas and is managed according to the appropriate NSW RFS advice.	Bushfire controls implemented.	Appropriate bushfire hazard controls (where required) implemented on the advice from the NSW Rural Fire Service.	Correspondence records with NSW Rural Fire Service. Single occurrence relinquishment inspection and report, including photographs, following decommissioning.
			Landform stability	Retained sediment retention dam and clean water dam is stable and permanent	Visual - indicators of erosion and land instability.	Minimal erosion that will not require moderate to significant ongoing management and maintenance works.	Before and after photos, rehabilitation monitoring reports, erosion surveys, that indicate long-term stability of rehabilitated landform.
						No signs of land instability such as mass movement.	
						No areas of active gully erosion.	
						No evidence of tunnel erosion.	
				Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan	Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.	As constructed survey plan(s) prepared by surveyor.	
			Removal of infrastructure	All infrastructure that is not to be used as part of the final land use is removed to ensure the site is safe and free of hazardous materials.	Infrastructure removed.	Removal of all plant, equipment and associated infrastructure including stockpiles, amenity bunds, and site office and amenities.	As-constructed final landform plan, photos and decommissioning reports.
						Removal of all services (power, water, communications) that have been connected on the site as part of the operation and are not required for the final land use.	
Removal of all water management infrastructure (including dirty water drain and sediment retention basin)	Statement provided and before/after photos.						
Surface water	Runoff water quality meets the requirements of the relevant development consent(s) / Environment Protection Licence and does not present a risk of environmental harm.	Water quality parameters selected from Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 and/or Environment Protection Licence.	Water quality discharged from rehabilitated mining operation meet specifications in Environment Protection Licence and/or ANZECC guidelines for specific environment.	EPL relinquished by Environment Protection Authority.			
Water approvals	Structures that take or divert water are appropriately licenced and ensure sufficient licence shares are held in the water source(s) to account for water take or captured/diverted water volumes are within the maximum harvestable rights for the property.	Final landform considers advice from relevant Government Agency whether sufficient licence shares are available in the water source to account for water stored in voids and dams in the proposed final landform.	Water approvals / licences are granted by relevant NSW Government Agency.	Confirmation from relevant Government Agency that relevant water approvals / licences are able to be granted.			

Table 8 (Cont'd)
Approved Rehabilitation Objectives and Proposed Completion Criteria

Final Land Use Domain	Mining Domain	Spatial Ref	Rehabilitation Objective Category	Approved Rehabilitation Objectives	Indicator	Proposed Rehabilitation Completion Criteria	Validation Method			
Infrastructure	Infrastructure	I1	Bushfire	The risk of bushfires at the site is commensurate with bushfire risks in adjacent areas and is managed according to the appropriate NSW RFS advice.	Bushfire controls implemented.	Appropriate bushfire hazard controls (where required) implemented on the advice from the NSW Rural Fire Service.	Correspondence records with NSW Rural Fire Service. Single occurrence relinquishment inspection and report, including photographs, following decommissioning.			
			Land contamination	Domain is free from hazardous materials and contaminants.	Contaminated land identified and remediated.	Contaminated land assessment indicates contamination acceptable for final land use.	Single occurrence visual contamination assessment and report prepared by a suitably qualified person.			
					Waste material and/or visible contamination areas on site surface.	All rubbish/ waste materials removed from site.	Statement provided and before/after photos.			
						There are no visible signs of contamination following the removal of plant, equipment and materials.	Statement provided and before/after photos.			
			Retention of infrastructure	All infrastructure that is to remain as part of the final land use benefits from the relevant approvals (e.g. development consent and / or licence/lease/binding agreement, etc)	Where applicable, necessary approvals are in place (e.g. development consent under the <i>Environmental Planning and Assessment Act 1979</i>) where buildings and infrastructure are to be retained as part of final land use.	Permits and approval documents issued.	Copy of any relevant approvals.			
					Damage to access tracks has been repaired and stabilised.	Repairs complete.	Single occurrence relinquishment inspection and report, including photographs.			
			Surface Water	Runoff water quality meets the requirements of the development consent / EPL and does not present a risk of environmental harm.	Water quality parameters selected from Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 and/or EPL.	Water quality discharged from rehabilitated mining operation meet specifications in Environment Protection Licence and/or ANZECC guidelines for specific environment.	EPL relinquished by Environment Protection Authority.			
			Active Mining Area (Open cut void)		I5	Bushfire	The risk of bushfires at the site is commensurate with bushfire risks in adjacent areas and is managed according to the appropriate NSW RFS advice.	Bushfire controls implemented.	Appropriate bushfire hazard controls (where required) implemented on the advice from the NSW Rural Fire Service.	Correspondence records with NSW Rural Fire Service. Single occurrence relinquishment inspection and report, including photographs, following decommissioning.
						Land contamination	Domain is free from hazardous materials and contaminants.	Contaminated land identified and remediated.	Contaminated land assessment indicates contamination acceptable for final land use.	Single occurrence visual contamination assessment and report prepared by a suitably qualified person.
								Waste material and/or visible contamination areas on site surface.	All rubbish/ waste materials removed from site.	Statement provided and before/after photos.
There are no visible signs of contamination following the removal of plant, equipment and materials.	Statement provided and before/after photos.									
Retention of infrastructure	All infrastructure that is to remain as part of the final land use benefits from the relevant approvals (e.g. development consent and / or licence/lease/binding agreement, etc)	Where applicable, necessary approvals are in place (e.g. development consent under the <i>Environmental Planning and Assessment Act 1979</i>) where buildings and infrastructure are to be retained as part of final land use.				Permits and approval documents issued.	Copy of any relevant approvals.			

Table 8 (Cont'd)
Approved Rehabilitation Objectives and Proposed Completion Criteria

Final Land Use Domain	Mining Domain	Spatial Ref	Rehabilitation Objective Category	Approved Rehabilitation Objectives	Indicator	Proposed Rehabilitation Completion Criteria	Validation Method
					Damage to access tracks has been repaired and stabilised.	Repairs complete.	Single occurrence relinquishment inspection and report, including photographs.
			Surface water	Runoff water quality meets the requirements of the development consent / EPL and does not present a risk of environmental harm.	Water quality parameters selected from Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 and/or EPL	Water quality discharged from rehabilitated mining operation meet specifications in Environment Protection Licence and/or ANZECC guidelines for specific environment.	EPL relinquished by Environment Protection Authority.
Final Void	Active Mining Area (Open cut void)	J5	Groundwater	Impacts to groundwater regime are within range as per the development consent / approved Soil and Water Management Plan.	Groundwater quality both on and off a mining lease represent an acceptable level of change from a defined reference condition.	Groundwater levels and groundwater flow rates are consistent with the relevant approved trigger values / criteria	Water quality monitoring reports.
					Groundwater quality meets the requirements of the relevant development consent(s) and does not present a risk of environmental harm.	Water quality discharged from rehabilitated mining operation meet specifications in the ANZECC guidelines for specific environment.	Independent hydrological assessment report.
			Land contamination	Domain is free from hazardous materials and contaminants.	Contaminated land identified and remediated.	Contaminated land assessment indicates contamination acceptable for final land use.	Single occurrence visual contamination assessment and report prepared by a suitably qualified person.
					Waste material and/or visible contamination areas on site surface.	All rubbish/ waste materials removed from site.	Statement provided and before/after photos.
						There are no visible signs of contamination following the removal of plant, equipment and materials.	Statement provided and before/after photos.
			Landform stability	The final landform is stable for the long term and does not present a risk of environmental harm downstream / downslope of the site or a safety risk to the public/stock/native fauna.	Visual - indicators of erosion and land instability.	Minimal erosion that will not require moderate to significant ongoing management and maintenance works.	Before and after photos, rehabilitation monitoring reports, erosion surveys, that indicate long-term stability of rehabilitated landform.
						No signs of land instability such as mass movement.	
						No areas of active gully erosion.	
					Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan	Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan.	As constructed survey plan(s) prepared by surveyor.
			Water approvals	Structures that take or divert water (such as final voids) are appropriately licenced and ensure sufficient licence shares are held in the water source(s) to account for water take or captured/diverted water volumes are within the maximum harvestable rights for the property.	Final landform considers advice from relevant Government Agency whether sufficient licence shares are available in the water source to account for water stored in voids and dams in the proposed final landform.	Water approvals / licences are granted by relevant NSW Government Agency.	Confirmation from relevant Government Agency that relevant water approvals / licences are able to be granted.

Table 9
Consultation Undertaken

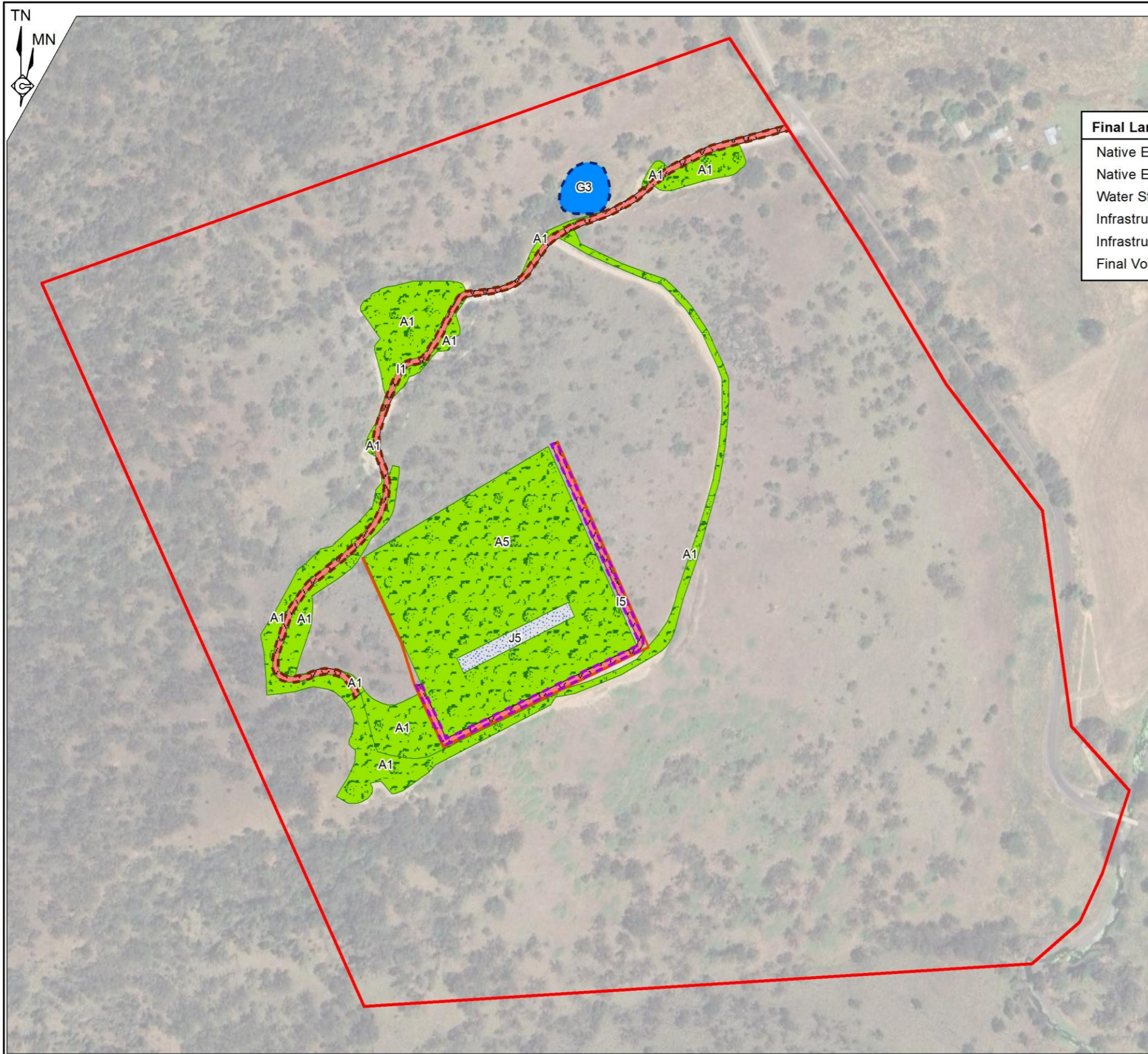
Stakeholder	Consultation Activities
Wanaruah Local Aboriginal Land Council	<ul style="list-style-type: none"> • Form of Consultation: Letter (email transmission). • Date: 14 July 2022. • Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans. • Outcomes: No response received.
Upper Hunter Shire Council	<ul style="list-style-type: none"> • Form of Consultation: Letter (email transmission). • Date: 14 July 2022. • Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans. • Outcomes: No response received.
Environmental Protection Authority	<ul style="list-style-type: none"> • Form of Consultation: Letter (email transmission). • Date: 14 July 2022. • Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans. • Outcomes: No response received.
Resources Regulator	<ul style="list-style-type: none"> • Form of Consultation: Letter (email transmission). • Date: 14 July 2022. • Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans. • Outcomes: No response received.
Mining, Exploration and Geoscience	<ul style="list-style-type: none"> • Form of Consultation: Letter (email transmission). • Date: 14 July 2022. • Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans. • Outcomes: No response received.

5 FINAL LANDFORM AND REHABILITATION PLAN

5.1 FINAL LANDFORM AND REHABILITATION PLAN – ELECTRONIC COPY

Plan 1 presents the approved final landform features for the Quarry Site and **Plan 2** presents the approved final landform contours for the Quarry Site.

Y:\Jobs 531 to 1000\759\Reports\75908_RMP_2022\CAD\MXD\Plan 1.mxd_12-Dec-23_02:04 PM

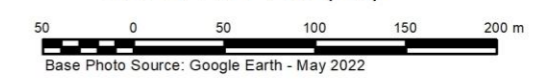


Final Landuse Domain	Mine Domain	Ref	Area (ha)
Native Ecosystem	Infrastructure	A1	2.6
Native Ecosystem	Active Mining Area (Open Cut Void)	A5	3.7
Water Storage	Water Management Area	G3	0.2
Infrastructure	Infrastructure	I1	0.2
Infrastructure	Active Mining Area (Open Cut Void)	I5	0.2
Final Void	Active Mining Area (Open Cut Void)	J5	0.2

Mine Name	Timor Limestone Quarry
Plan Name	Plan 1 Final Landform Features
Anticipated Year of Relinquishment	2050
Date Plan Created	12 December 2023
Data Theme Submission ID Numbers	6775, 6776

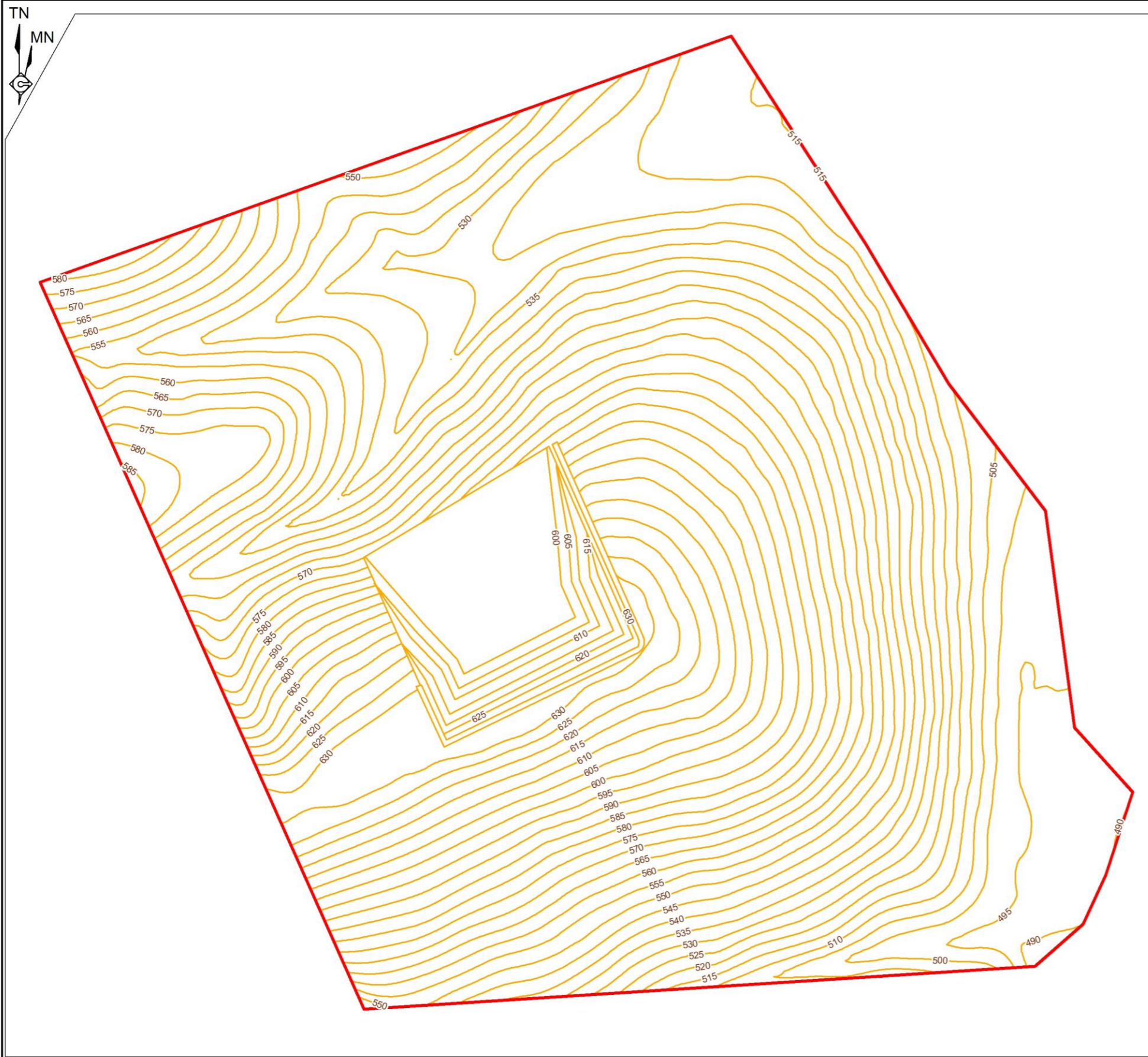
- REFERENCE**
- Project Approval Boundary / ML1660
- Final Landuse**
- Native Ecosystem
 - Water Storage (Excluding Final Void)
 - Infrastructure
 - Final Void
- Final Landform Features**
- Fence
 - Retained Access Road
 - Retained Safety Barrier
 - Water Storage (Excluding Final Void)

SCALE 1:4 100 (A3)



Plan 1
FINAL LANDFORM FEATURES

Y:\Jobs 531 to 1000\537\Reports\53755_RMP_Paddys River - 2023\CAD\IMXD\Plan 2.mxd_12-Dec-23_02:41 PM



Mine Name	Timor Limestone Quarry
Plan Name	Plan 2 Final Landform Contours
Anticipated Year of Relinquishment	2050
Date Plan Created	12 December 2023
Data Theme Submission ID Numbers	6777

REFERENCE

- ▭ Project Approval Boundary / ML1660
- ▬ Final Landform Contour (mAHD)(Interval = 5m)

SCALE 1:4 100 (A3)



Plan 2
FINAL LANDFORM CONTOURS

6 REHABILITATION IMPLEMENTATION

6.1 LIFE OF MINE REHABILITATION SCHEDULE

Due to the nature of the site and small operational footprint, progressive rehabilitation is unlikely to be able to commence until later in the life of the Quarry. It is noted, however, that rehabilitation trials are planned to be undertaken in selected areas to develop experience in achieving successful rehabilitation. Rehabilitation trials would be undertaken once sufficient areas of completed benches become available and which are not required for ongoing operations. Rehabilitation trials are further discussed in Section 9.

The Quarry is currently approved to operate until 2044, however, the life of the Quarry is dependent upon production rates. A 30 year life was calculated based upon an average extraction rate of 80,000tpa. Furthermore, additional high-grade limestone is available within the Quarry site with the potential to extend the extraction area further into the hill, subject to future development consent. Any such future extension would remove any preliminary rehabilitation on the upper benches of the extraction area.

Notwithstanding, for the purposes of defining an estimated completion and relinquishment date, a further 6 years is provided beyond the approved operational life, i.e. to 2050. The Rehabilitation Management Plan and anticipated relinquishment date would be updated in the event of a future development application to extend operations.

Given the limited potential for progressive rehabilitation, **Plans 3, 4 and 5** present the anticipated status of rehabilitation at 2034, 2044 and 2050.

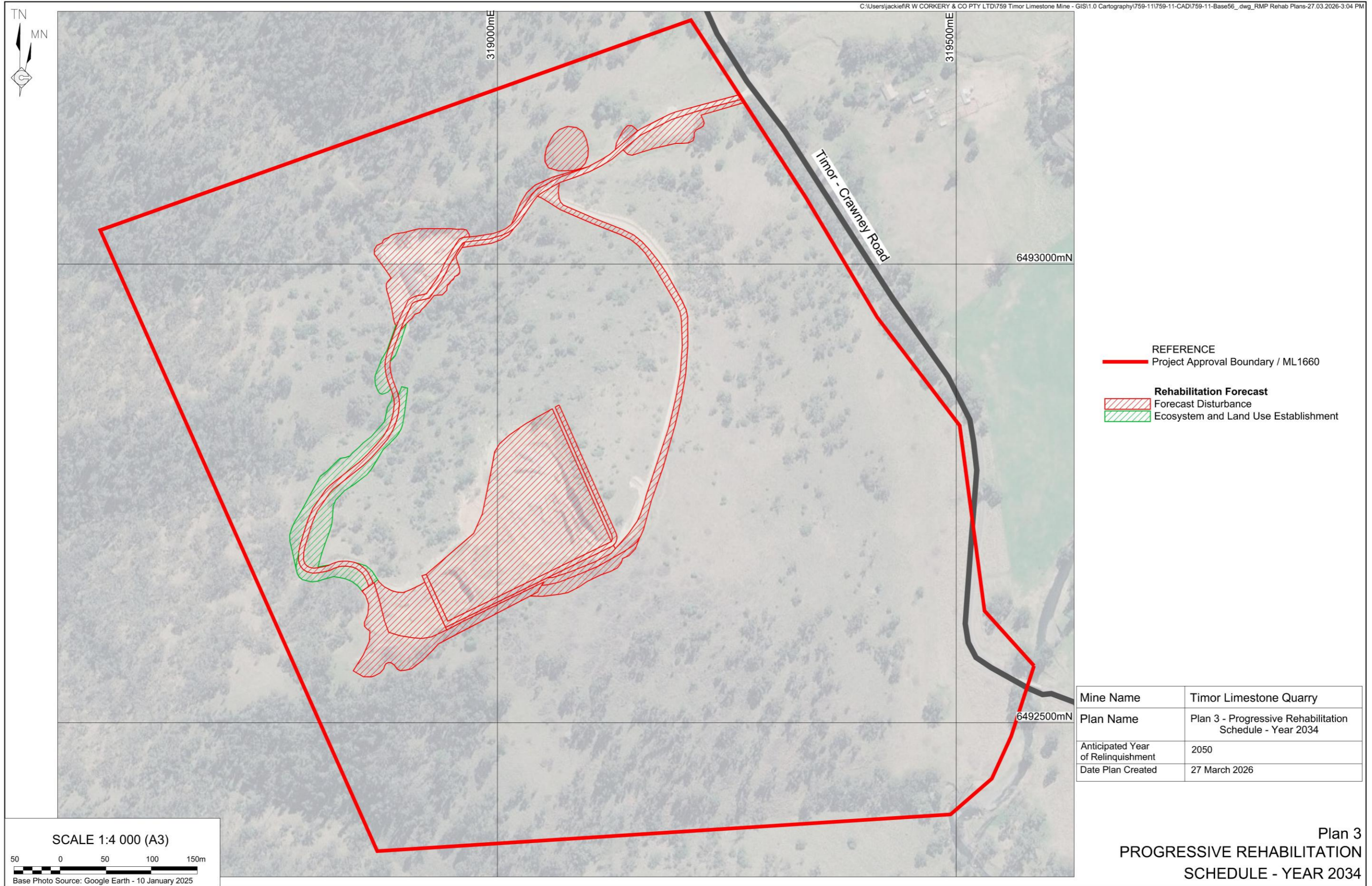
6.2 PHASES OF REHABILITATION AND GENERAL METHODOLOGIES

6.2.1 Active Mining Phase

6.2.1.1 Soils and Materials

A detailed soils and land capability/agricultural land suitability assessment of the proposal was conducted by GSS Environmental (GSSE, 2008a) during September 2008 and is discussed in detail within Section 4 of the EIS (RWC, 2008).

Two soil units were identified within the Quarry Site, namely Red Duplex and Brown Duplex. High erodibility was not identified as a major issue in either of the identified soil units with both the Red Duplex and Brown Duplex soils displaying structural stability and little erosion potential requiring only standard erosion and sediment controls. Potential acid generation from soil material within the Quarry Site was determined to be low.



- REFERENCE**
- Project Approval Boundary / ML1660
- Rehabilitation Forecast**
- Forecast Disturbance
 - Ecosystem and Land Use Establishment

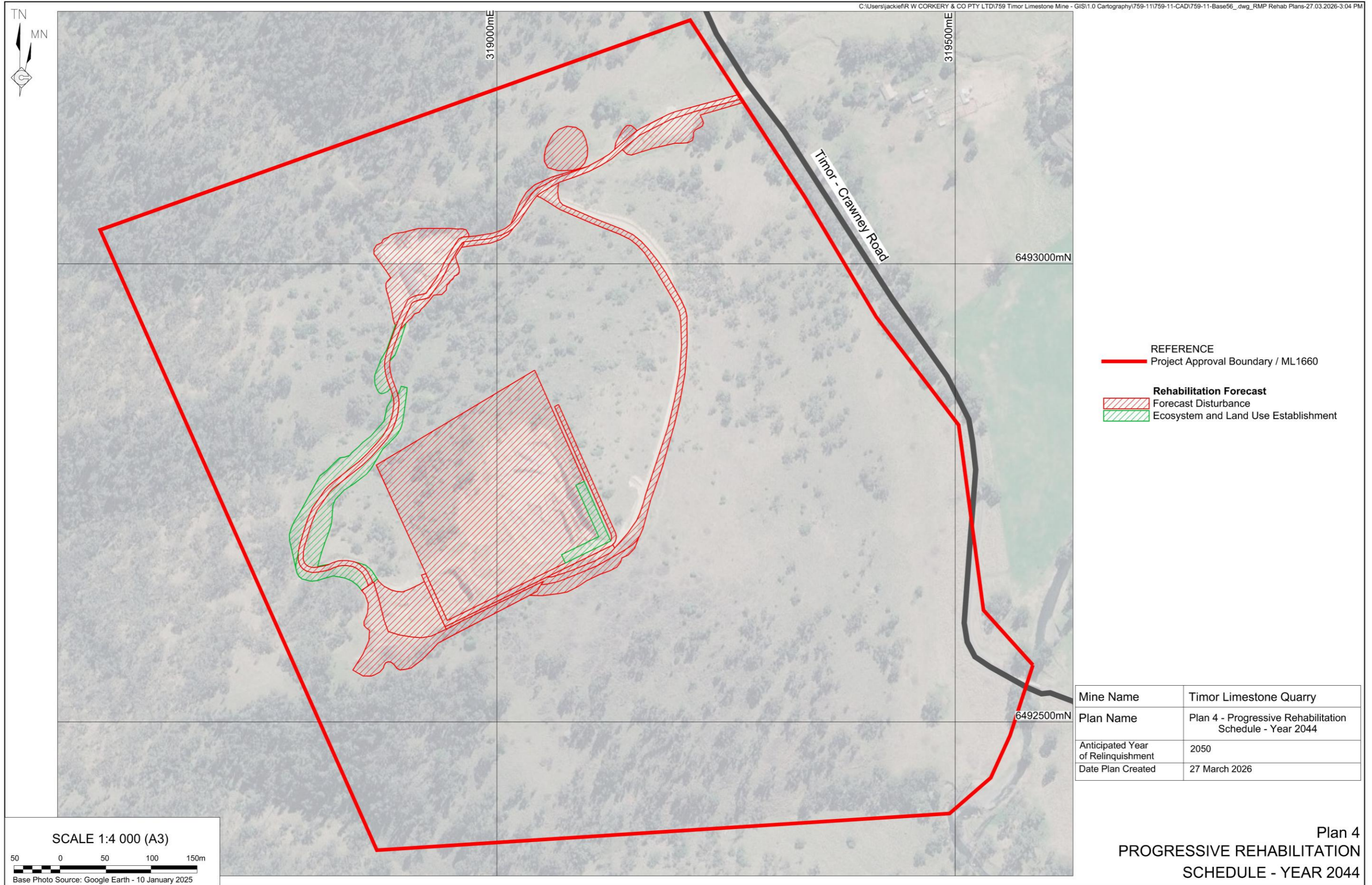
Mine Name	Timor Limestone Quarry
Plan Name	Plan 3 - Progressive Rehabilitation Schedule - Year 2034
Anticipated Year of Relinquishment	2050
Date Plan Created	27 March 2026

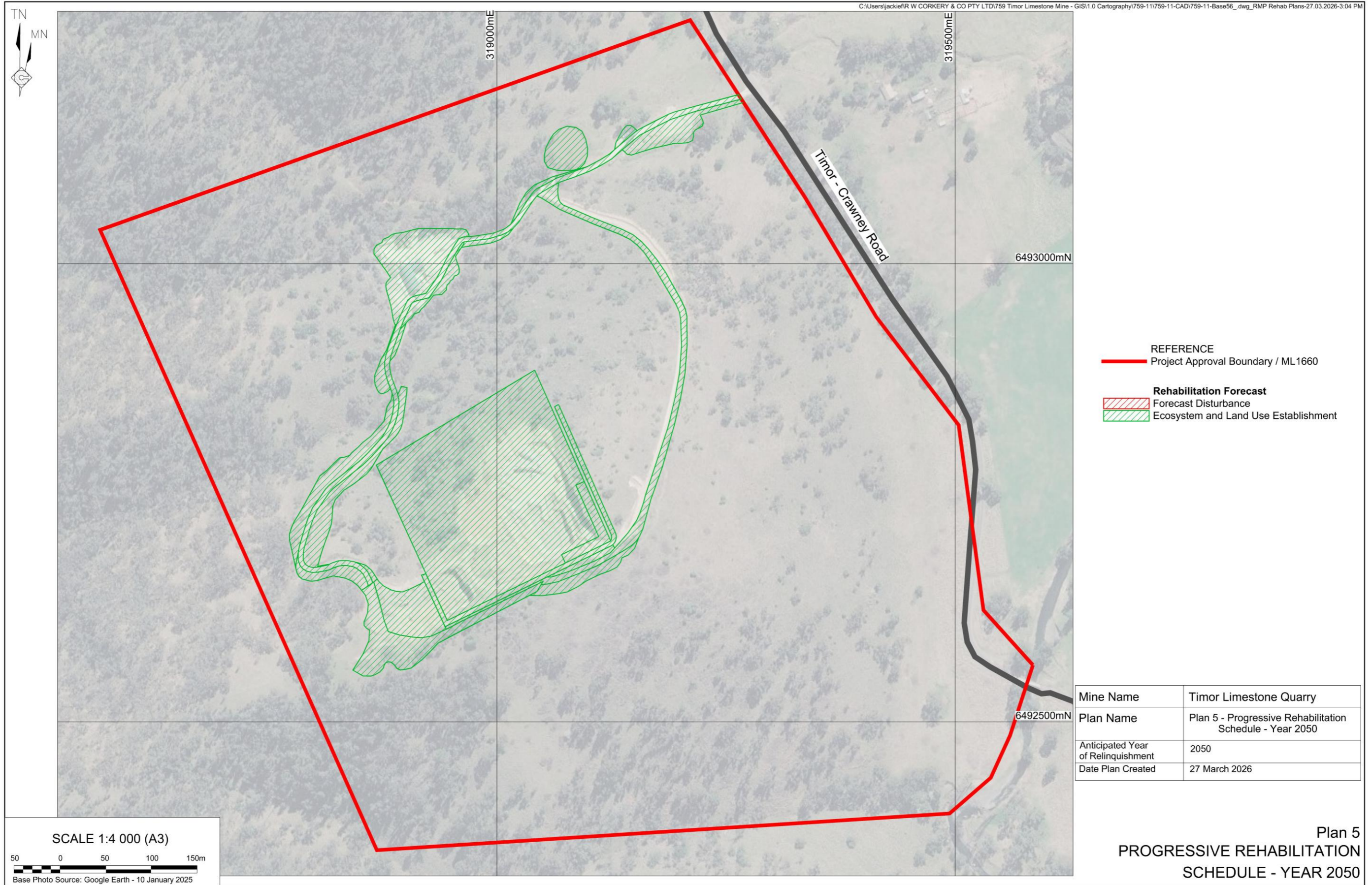
Plan 3
PROGRESSIVE REHABILITATION
SCHEDULE - YEAR 2034

SCALE 1:4 000 (A3)

50 0 50 100 150m

Base Photo Source: Google Earth - 10 January 2025





Soil management and procedures will include the following.

- The recoverable topsoil and any available subsoil will be progressively removed for areas required for the next 12 months of operation.
- Where possible, the topsoil layer from the Red Duplex and Brown Duplex soils will be stripped to a depth of approximately 20cm and 10cm respectively.
- In areas of deeper disturbance (e.g. stockpiling and handling area and extraction area) subsoil layers within the Red Duplex will be stripped for reuse as an intermediate layer but not as a surface cover.
- Suitable clayey material at depth will be recovered and stored for use as subsoil material.
- Soil will be maintained in a slightly moist condition during stripping but not stripped in either an excessively dry or wet condition.
- The smaller vegetation and groundcover will be stripped with the topsoil to maximise the retention of the soil seed stock and organic matter within the soil.
- Stripped topsoil will be directly placed over areas awaiting rehabilitation, wherever possible.
- Stockpiles will be constructed with a slope no greater than 1:2 (V:H) and the surface left 'rough', in a micro sense, to assist in runoff control, seed retention and germination.
- Topsoil and subsoil unable to be directly placed will be stockpiled separately from each other and to heights no greater than 2m and 3m respectively. Stockpile soil in windrows adjacent the amenity bund or as non-permanent bunding.
- Any stockpile that will be retained in excess of 3 months will be seeded using a non-persistent cover crop thereby providing competition against any emerging weeds and enhancing desirable micro-organism activity within the soil.
- Stockpiles will be clearly identified by a sign or barrier and appropriately labelled on site mapping and plans to reduce the likelihood of contamination and inadvertent soil loss.
- Driving of machinery on soil stockpiles will be kept to a minimum and completely avoided where possible to limit compaction and degradation of the soil structure.
- Where required, water management structures will be utilised to divert surface water flow away from soil stockpile areas, thereby reducing the potential for erosion. Additionally, silt-stop fencing or similar will be placed immediately downslope of stockpiles, until stable vegetation cover is established.
- Prior to re-spreading stockpiled topsoil onto reshaped areas (particularly onto designated tree seeding areas), an assessment of weed infestation on stockpiles will be undertaken to determine if the stockpiles require herbicide application and / or "scalping" of weed species prior to topsoil spreading.
- An inventory of available soil will be maintained to ensure adequate topsoil materials are available for planned rehabilitation activities.
- Where possible, topsoil will be spread to the approximate pre-disturbance topsoil depth.

While no materials deficit is anticipated for life of mine rehabilitation, the Trigger Action Response Plan in Section 10 states that, should the soil inventory indicate a deficit of soil material, a suitable source of additional soil material / growth medium is to be identified, including the need for importation of material from off site.

6.2.1.2 Flora

Idyll Spaces (2008) undertook a flora assessment report for the Quarry Site and identified three Endangered Ecological Communities (EEC) under the *Threatened Species Conservation Act 1995* (TSC Act) and Critically Endangered Community (CEC) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These were Yellow Box- Blakely's Red Gum, Large-flowered Bundy – Kurrajong, and Slender Rats-tail Grass. No Endangered Populations or Critical Habitat was listed for the Quarry Site under the TSC Act or the EPBC Act nor were any Threatened flora species identified during the surveys.

The following mitigation measures are implemented on-site to reduce potential flora impacts.

- Development and implementation of a Weed Management Plan, in consultation with local government authorities (e.g. Council), to minimise impacts on remnant vegetation from existing weed infestations, particularly from existing blackberry infestation.
- Protecting any areas displaying spontaneous recovery/regeneration of vegetation and facilitating that recovery and regeneration.
- Development and implementation of a protocol for the cleaning of vehicles and machinery to minimise the likelihood of introduction of new weed species on vehicles and equipment.
- Development and implementation of sediment and erosion control plans to minimise potential impacts on vegetation arising from soil erosion.
- Use of conservative blast designs to minimise the creation of 'fly rock' that may potentially damage surrounding vegetation.
- Use of native species, preferentially endemic to the area and representative of the identified EEC, for rehabilitation.
- Seed collection and revegetation techniques are discussed in Sections 6.2.4 and 6.2.5. No translocation is currently planned or anticipated.

Where stabilisation using groundcover species is required Condition S7.6 within NSWLEC104 states the Company shall use appropriate groundcover species as identified **Table 10** below.

Table 10
Regulatory Requirements for Rehabilitation

Endemic Perennial Species	Other Native Perennial Species	Non-native Annual / Non-persistent Species
<i>Lomandra longifolia</i>	<i>Chloris truncata</i>	Japanese Millet (Spring/Summer)
<i>Aristida personata</i>	<i>Elymus scaber</i>	Couch (perennial)
<i>Aristida vagans</i>	<i>Microlaena stipoides</i>	Serradella (Aug to Jan)
<i>Bothriochloa macra</i>	<i>Sorghum leiocladum</i>	White Clover (perennial)
<i>Chloris ventricosa</i>	<i>Themeda australis</i>	Haresfoot Clover (perennial)
<i>Cymbopogon refractus</i>		Ryecorn/Oats (Autumn/Winter)
<i>Dichanthium sericeum</i>		
<i>Panicum effusum</i>		

6.2.1.3 Fauna

A fauna survey was undertaken by Kendall & Kendall Ecological Services in 2008. A total of 83 fauna species were recorded during the field survey including:

- three species listed as vulnerable under Schedule 2 of the TSC Act (Diamond Firetail, Squirrel Glider and Eastern Bentwing Bat); and
- three introduced animals (Rabbit, Fox and Wild Pig).

No fauna species listed under the threatened species provisions of the EPBC Act were detected during the field survey although, one species, the Wanderer Butterfly, listed under the migratory provisions of the EPBC Act was detected.

Within the *Eucalyptus melliodora* – *E. blakelyi* Open Forest to Woodland (Yellow Box - Blakely's Red Gum) there are numerous trees with small to medium sized hollows and occasional larger hollows. The Quarry Site contains abundant rock crevices created by the dominance of limestone boulders, which lie above the limestone bedrock. However, no limestone caves have been observed within the Quarry Site and previous geotechnical survey, including six drill holes, did not reveal the presence of caves. Therefore, it is considered that cave dependant bats are probably not using the Quarry Site as a sheltering resource. Notably, no caves have been encountered to date during extraction operations.

In addition to flora mitigation measures outlined in Section 6.2.1.2, fauna mitigation measures during the active mining phase are as follows.

- Prior to clearing, hollow bearing trees will be observed by an appropriately trained or qualified person to determine if hollow bearing fauna are present. Hollow bearing trees in use will be marked and surrounding vegetation cleared several days prior to the removal of the hollow bearing trees. This will be done to promote the vacation of any hollows in use. A suitably trained or qualified person will also be present during the felling the identified hollow bearing trees to provide assistance with the care of any injured fauna.
- Salvaging and reusing material from the Quarry Site for habitat enhancement.
- The approximate size and number of hollow bearing trees to be removed will be recorded and the same number of nesting boxes of appropriate sizing will be installed in similar vegetation within the Quarry Site.
- The number of Yellow Box trees removed will be recorded and five seedlings will be planted for each Yellow Box tree within similar vegetation within the Quarry Site and cared for until established.
- In the event that a limestone cave is encountered, blasting operations will cease immediately and will not continue until the fauna values of the cave are assessed.

The nesting boxes and establishment of the Yellow Box trees will be monitored annually for a period of 5 years to monitor their performance and success. The results of this inspection will be reported within the respective Annual Environmental Management Report.

6.2.1.4 Rock/Overburden Emplacement

Little to no overburden material is expected with outcropping of limestone clearly visible on the surface of the extraction area. Any overburden material recovered will be used to form the amenity bunding, a safety barrier around the extraction area or as road base. As all overburden will be utilised, no specific waste rock emplacement is required. Additionally, the approved final landform does not rely upon overburden material for its creation.

6.2.1.5 Waste Management

The principal wastes that will be generated include general wastes associated with equipment maintenance, and operating the office and amenities. All general wastes originating from the office and amenities together with routine maintenance consumables from the servicing of equipment facilities will be disposed of in appropriate waste receptacles placed adjacent to the office or within the stockpiling and handling area. The waste receptacles will be collected by a licenced waste disposal contractor or removed to a licenced facility on an as-needs basis.

All wastes capable of being recycled e.g. paper / cardboard, hydrocarbons, and metals will be separately stored from non-recyclable wastes. All hydrocarbon wastes will be stored in an appropriately bunded area within the stockpiling and handling area or laydown area and removed by a licenced waste disposal contractor. In the event of a hydrocarbon spill, the contaminated material and spill kit material use to absorb the spill will be collected and also stored in the bunded area for removal by a licenced waste disposal contractor.

The following hydrocarbon management controls will be implemented by the Company.

- Diesel will be stored within a double skinned mini-tanker which will be parked within the stockpiling and handling area when not in use.
- All non-diesel hydrocarbon material will be stored in bunded areas (e.g. bunded pallets) in accordance with Australian Standard *AS 1940 The storage and handling of flammable and combustible liquids*.
- The volume of hydrocarbons stored on site will be kept to the minimum volume necessary.
- All on-site employees will be trained in appropriate hydrocarbon storage, handling and spill response practices and procedures.

Ablution wastes will be managed using a Council approved septic system with absorption trench (OSSMS No ST 2429/2014). The system will be serviced in accordance with manufacturer and Council requirements and be of sufficient capacity to provide for the on-site workforce and product truck drivers.

6.2.1.6 Geology and Geochemistry

The Quarry is located within the Timor Limestone which occupies an elongate area of approximately 8km north-south and an average of 3.2km east-west from the head of the Isis River.

Within the Quarry, the lowest stratigraphic unit is the Lower Limestone which is overlain by a very fine-grained unit referred to as the Lithographic Limestone (approximate average composition of 97.5% CaCO₃) which in turn is overlain by a fossil-rich unit referred to as the Fossiliferous Limestone (approximate average composition of 96.0% CaCO₃). This sequence is in turn conformably overlain by the Bushes Formation which comprises sandstone, siltstone, chert and conglomerate. The sequence is exposed in the core of a southeast-plunging anticline and, within the Quarry, the stratigraphic units generally dip at between 30° and 50° towards the west.

No caves have been identified during surveys, exploration activities or operations to date.

No environmental / geochemical constraints are expected from the ROM or product limestone. Furthermore, as no washing or other beneficiation beyond crushing will be undertaken on site, no processing wastes will be generated or require management.

Therefore, there are no geological or geochemistry risks relevant to the waste emplacements or ore beneficiation within the Quarry Site.

6.2.1.7 Materials Prone to Spontaneous Combustion

As no material within the Quarry Site is prone to spontaneous combustion, no specific risks to rehabilitation associated with spontaneous combustion have been considered.

6.2.1.8 Material Prone to Generating Acid Mine Drainage

The potential for acid generation from soil material within the Quarry Site is low as acid sulphate soils, which are the main cause of acid generation, are commonly found less than 5m above sea level, particularly in low-lying coastal areas such as mangroves, salt marshes, floodplains, swamps, wetlands, estuaries, and brackish or tidal lakes. There has been little history of acid generation from soil material in the Singleton - Muswellbrook - Scone area, which is located approximately 80km to 140km from the coast and at an elevation of 530m to 640m AHD. Furthermore, soil surveys conducted for the Quarry Site have not identified characteristics of concern within the disturbance area, including the potential acid generating material. Therefore, no specific risks to rehabilitation associated with Acid Mine Drainage have been considered.

6.2.1.9 Ore Beneficiation Waste Management (reject and tailings disposal)

As the on-site processing operations will not generate any residues, tailings or other production wastes, they have not been considered further.

6.2.1.10 Erosion and Sediment Control

Erosion and sediment controls to be implemented at the Quarry Site are described in detail in the *Soil and Water Management Plan (Stoneco, 2011)* (“the SWMP”) prepared for the Quarry Site.

Section 3 of the SWMP identifies the following principal potential sources of erosion and sediment.

- Stormwater runoff during construction of the site access roads and stockpiling and handling area, surge stockpile area, office and amenities area, etc.
- Stormwater runoff from water management structures, amenity bunding and safety barriers prior to their stabilisation.
- Stormwater runoff from the active extraction area and product stockpiles.
- Stormwater runoff from rehabilitated areas prior to successful establishment of vegetation.

The following principal surface water and erosion control measures will be implemented.

- Installation of temporary erosion and sediment control devices (including sediment fencing, hay bales, rip rap etc.) during the site establishment and construction phase.
- Direction of stormwater runoff from the stockpiling and handling area into the designated sediment retention basin.
- Maintaining sediment control structures.
- Implementation of an effective revegetation and maintenance program.

6.2.1.11 Ongoing Management of biological resources for use in rehabilitation

Appropriate sedimentation controls, including sediment fencing will be placed immediately down slope of any soil stockpiles and maintained until such time as a stable vegetation cover over the stockpile is achieved. Any soil stockpile likely to be retained for more than 3 months and that has not naturally established vegetation cover will be stabilised using a non-persistent cover crop.

In the event that unacceptable weed generation is observed on the soil stockpiles, a weed eradication program will be implemented. There will be no vehicle access on the soil stockpiles.

6.2.1.12 Mine Subsidence

No risks to rehabilitation associated with mine subsidence are present and no specific risk controls are required.

6.2.1.13 Management of Potential Cultural and Heritage Issues

Aboriginal Heritage

An Aboriginal heritage assessment was conducted by Archaeological Surveys and Reports (ASR, 2008) in conjunction with identified Aboriginal stakeholders. No sites of cultural or archaeological significance or places of potential research significance were identified within the Quarry Site.

The Company will continue to make all employees and contractors aware of their obligations under the *National Parks and Wildlife Act 1974* and, should any suspected relic be uncovered during extraction-related activities, work in the area surrounding the relic will cease and Heritage NSW, Wanaruh LALC, Upper Hunter Wonnarua Council Inc., Aboriginal Native Title Consultants, Ungooroo Aboriginal Corporation, and the Police (if bone is discovered) will be informed of the find. Work will not recommence in the area immediately surrounding the find until those officials have inspected the material and permission has been given to proceed.

Historic Heritage

A search of the Australian Heritage Database, the NSW State Heritage Register, the NSW State Heritage Inventory and the *Murrurundi Local Environmental Plan 1993* (Murrurundi LEP) was conducted on 05 November 2008. The searches of the databases for all heritage listed items within the Upper Hunter Local Government Area did not identify any sites of European heritage significance in the vicinity of the Quarry Site.

During the inspection of the Quarry Site for Karst features, members of the Newcastle & Hunter Valley Speleological Society identified what was thought to be 30cm to 50cm high man-made, dry stone wall. The dry 'stone wall' was identified over a length of approximately 450m running from the existing clean water dam south up the eastern side of the ridge line.

Due to the distance of the Quarry Site from the nearest listed heritage items, no specific safeguards are considered necessary. As none of the listed European heritage items occur in close proximity to the Quarry Site or near the transport route, it is considered that the Quarry operations will not result in any impacts upon these items.

In relation to the potentially man-made stone wall, it is proposed that, prior to its disturbance, a person suitably trained or qualified in relation to heritage matters will be provided the opportunity to photograph and catalogue the wall. It is considered that, if the stone wall is man-made it will be only of local heritage significance. In total, less than half of the wall will be disturbed over the life of the operation with little, if any, disturbance required for the initial several years of operations.

6.2.1.14 Exploration Activities

No exploration outside the area of approved disturbance is currently planned.

6.2.2 Decommissioning

Decommissioning will include the cessation of infrastructure usage, disconnection of remaining services, demolition and removal from the Quarry Site. Remediation of any contamination will also be undertaken during this phase.

6.2.2.1 Site Security

The security measures to be implemented during and following the decommissioning process to prevent access by members of the public and to secure rehabilitation areas include the following.

- Installation of fencing, signage and bunding to prevent public access to retained highwall faces.

- Retention of secure rural fencing around the Quarry Site boundary with lockable gates to discourage unauthorised access to the site. The entrance gate on Timor-Crawney Road provides the only public vehicular access point.
- Creation of barrier to vehicular entry to the rehabilitation area.
- Inspections of retained fencing and bunding to confirm integrity.

6.2.2.2 Infrastructure to be Removed or Demolished

Table 11 presents a list of the site features to be decommissioned to achieve the final land use. Any infrastructure not required for the final land use will be subject to engineering assessments to identify potential risks associated with closure and decommissioning activities, where required.

Table 11
Assets in Mining Domains to be Removed or Decommissioned

Domain	Assets	Decommissioning and Demolition Requirements
A1 - Infrastructure Area	<ul style="list-style-type: none"> • Demountable office and lunchroom (9m x 3m). • Septic system. • Standing & laydown area (25m x 10m). • Grader and road trucks. • Front-end loader. • Mobile screen. • Shipping containers for tools, spares & consumables. • Product stockpiles. • Surge stockpile. • Amenity bund. • Soil stockpiles / windrows. • Cut and fill batters of site access roads. • Sediment retention dam. 	<p>At closure, all plant, equipment and associated infrastructure including stockpiles, sediment retention basin, amenity bunds and site office and amenities will be removed.</p> <p>Demolition post-quarry life will involve removal of the demountable buildings and footings. Any remaining product stockpiles will be sold or spread prior to topsoiling and revegetation.</p> <p>All services (power, water communications) that have been connected on the site as part of operation and are not required for the final land use will be removed.</p>
G3 - Water Management Area (G3)	<ul style="list-style-type: none"> • Clean water dam (existing) 	No demolition activities relevant to this domain.
A5 – Active Mining Area (Open cut void)	<ul style="list-style-type: none"> • Mobile crushing plant consisting of primary jaw and secondary impact crusher and screen. • Mobile equipment, including drill rig, bulldozer, excavator, front-end loader & haul truck (during drilling and extraction campaigns). • Safety barrier (earthen construction). • Drill rig. 	<p>No demolition activities relevant to this domain. All highwall benches will be retained for topsoiling and revegetation.</p> <p>All equipment not required for the final land use will be removed.</p>

All demolition procedures and subsequent waste removal undertaken during the decommissioning phase of rehabilitation operations will comply with requirements as identified through consultation with Council.

As a minimum, the following controls will be implemented during demolition works at the Quarry Site.

- Sites will be damped down with water as required to suppress dust during demolition, with potentially sediment-laden or contaminated water captured as appropriate.
- Works will be undertaken so as to minimise the generation of particulate matter.
- Works will not be undertaken during periods of high wind.
- Loads of waste material removed from demolition sites and with potential to generate dust will be covered prior to transportation.

All material and waste products generated from any demolition, decommissioning and/or removal operations will be collected and either disposed of within the Quarry Site where appropriate, removed from the Quarry Site or stored in appropriate (i.e. disturbed) areas for removal by a licensed waste contractor as soon as practicable.

6.2.2.3 Buildings, Structures and Fixed Plant to be Retained

Plan 1 shows the key infrastructure to be retained as part of the final land use, namely:

- Safety bunding and fencing around the open cut void; and
- The retained access track.

Short-term risks associated with the retention of this infrastructure are relatively low as these features have primarily been retained for safety purposes to facilitate access to areas of the Quarry Site.

Long-term risks to public safety and the environment associated with retained infrastructure and structures will only occur in the absence of appropriate maintenance. Roads will need to be inspected following high intensity rainfall events to ensure that conditions remain suitable for safe access to publicly accessible areas. Failure of roads will potentially contribute to the generation of sediment laden water which may impact water quality within local watercourses.

Prior to and during the decommissioning and landform establishment phases of rehabilitation operations, structural and engineering assessments will be carried out as required prior to the relinquishment of retained roads. Any necessary repair, replacement or re-design works recommended as part of these assessments will be carried out and assessed by a suitably qualified engineer.

6.2.2.4 Management of Carbonaceous/Contaminated Material

During decommissioning, any material contaminated with hydrocarbons will be removed from site and disposed of at a licenced facility.

To ensure all domains are safe and free from hazardous material prior to landform establishment, a single occurrence visual contamination assessment and report will be prepared by a suitably qualified person.

6.2.2.5 Hazardous Materials Management

No hazardous materials are proposed to be retained following the cessation of extraction and rehabilitation operations. During decommissioning any material contaminated with hydrocarbons will be removed from site and disposed of at a licenced facility.

During decommissioning, a visual contamination inspection and report will be completed, ensuring:

- all rubbish/waste materials have been removed from site; and
- there are no visible signs of contamination following the removal of plant, equipment and materials.

6.2.2.6 Underground Infrastructure

No underground mining infrastructure will be developed; therefore, no specific risk controls are required.

6.2.3 Landform Establishment

6.2.3.1 Water Management Infrastructure

As identified in **Plan 1**, the clean water dam will be retained as part of the final landform and will provide an ongoing water source for future land use. As there will be no change to the catchment and hence volume or quality of water reporting to the dam, no specific risk controls are required

The sediment retention dam and associated infrastructure will be removed and disturbed areas rehabilitated following cessation of extraction operations.

Within the extraction area, the floor of the extraction area will be sloped so the area remains internally draining to a retained sump. The sump will be designed with sides that provide for safe ingress/egress of wildlife.

6.2.3.2 Final Landform Construction: General Requirements

As shown on **Plan 1**, the majority of the Quarry Site will be rehabilitated to achieve the appearance of vegetated natural landforms in the surrounding area. Areas which will remain unvegetated, including the retained infrastructure (access road, safety bund and fencing) and the water storage dam, will be consistent with the final land uses for the Quarry Site.

Within the extraction area, restoration blasting will be undertaken on the final benches to provide a final undulating slope of approximately 2:1 (V:H) or 60°. The slope of the extraction floor will be retained with a slight camber back towards the final benches so as to slow and capture the

initial water runoff from the final slope, however, the final landform will essentially be free draining. Prior to the restoration blast, fine overburden or subsoil material will be placed across the section of the bench to be blasted so as to provide pockets of soil material. Following the blast, remaining soil will be cast over the slope using an excavator. Considering the naturally steep and rocky slopes within the extraction area and naturally sparse vegetation, it is considered that the final landform will be generally consistent the existing natural landform.

Following the completion of rehabilitation operations, it is not expected that these areas will present any specific geotechnical or geochemical risks. As constructed survey plan(s) will be prepared by a surveyor to verify the final landform construction in accordance with Final Landform and Rehabilitation Plan (**Plan 2**).

Before and after photos, rehabilitation monitoring reports and erosion surveys will be taken/conducted throughout rehabilitation operations to ensure the following.

- Minimal erosion that will not require moderate to significant ongoing management and maintenance works.
- No signs of land instability.
- No areas of active gully erosion.
- No evidence of tunnel erosion.

Surface water management will include ensuring water discharged from rehabilitated mining operation will meet water quality specifications in the EPL and/or relevant ANZECC guidelines.

6.2.3.3 Final Landform Construction: Reject Emplacement Areas and Tailings Dams

All crushed and screened material will be sold as product or taken off site for further processing. Therefore, no washing or processing resulting in reject material will occur. There is no tailings dam on-site.

6.2.3.4 Final Landform Construction: Final Voids, Highwalls and Low Walls

The extraction area has been designed to be open to the north with highwalls retained to the south generally consistent with the existing natural landform. Restoration blasting will be undertaken on the final benches to provide a final undulating slope of approximately 2:1 (V:H) or 60°. The slope of the extraction floor will be retained with a slight slope back towards the final benches so as to slow and capture the initial water runoff from the final slope, however, the final landform will essentially be free draining. The floor of the extraction area would be rehabilitated to native vegetation and vegetation would be established on the retained benches, thereby providing native ecosystem value / avoiding sterilisation of land for the approved final land uses.

Public safety will be managed through the retention of the safety bunding and fencing. The site access road will also be retained to provide for ongoing safe site access.

No additional management strategies or risk controls are currently deemed necessary.

6.2.3.5 Construction of Creek/River Diversion Works

No watercourses are present in the extraction areas; therefore, no creek or river diversion works will be required during rehabilitation of the Quarry Site.

6.2.4 Growth Medium Development

Growth medium development activities will primarily involve the placement of topsoil to a thickness of between 50mm and 100mm (if available). Placement of topsoil will be followed by seeding with a fast growing, non-persistent crop (see **Table 12**). These species are required to be utilised in accordance with Condition S7.6 of the development consent.

In the event of subsoil and topsoil deficiencies, suitable source(s) of additional soil material will be identified, including the need for importation of soils from off site.

Shaping and ripping of the extraction floor will provide suitable grades and surface substrate for application of growth medium. Light ripping of growth medium across contours will be applied to key into substrate, reduce surface runoff velocities, and retain seed (when spread). Where required, additional erosion protection, such as jute mesh, will be used to assist in the stabilisation and establishment of vegetation on disturbed areas.

A weed inspection and control program will be implemented, which will include equipment delivery protocol to ensure equipment does not import weeds.

If required, water carts will be employed to lightly wet growth medium material prior to spreading in order to minimise dust generation. Growth medium spreading will not be undertaken during excessively wet or windy conditions.

Seasonal and local meteorological conditions will be monitored to identify conditions which may result in delaying vegetation establishment (e.g. extended drought conditions). Land preparation and growth medium spreading activities will only be undertaken where conditions are predicted to be favourable (i.e. average or above average annual rainfall) to the establishment of vegetation.

Table 12
Species for Stabilisation

Endemic Perennial Species	Other Native Species	Non-Native Annual/Nonpersistence Species (growth period)
<i>Lomandra longifolia</i>	<i>Chloris truncata</i>	Japanese Millet (Spring/Summer)
<i>Aristida personata</i>	<i>Elymus scaber</i>	Ryecorn/Oats (Autumn/Winter)
<i>Aristida vagans</i>	<i>Microlaena stipoides</i>	Serradella (Aug to Jan)
<i>Bothriochloa macra</i>	<i>Sorghum leiocladum</i>	White Clover (perennial)
<i>Chloris ventricosa</i>	<i>Themeda australis</i>	Haresfoot Clover (perennial)
<i>Cymbopogon refractus</i>		Couch (perennial)
<i>Dichanthium sericeum</i>		
<i>Panicum effusum</i>		

Source: Development Consent – Condition S7.6

6.2.5 Ecosystem and Land Use Establishment

Following establishment of the growth medium a native seed mix will be sown as appropriate to the area using aerial methods or sprayed across the slope (e.g. through hydromulching). In addition to or alternatively, tubestock may be propagated and planted. Species that may be utilised in rehabilitation are outlined in **Table 13**. Additional species will also be selected by the Bush Regeneration Contractor based on the Flora Species List in the InSites, 2011 *Biodiversity Management Plan*, on the basis of availability, propagability, seasonal conditions and/or seed/propagation stock availability. The native seed mix / tubestock will be sourced from local seed stock from a reputable supplier.

Table 13
Plant Species for Rehabilitation

Type	Scientific Name	
	Shallow Soils / Rocky Slopes	Deeper Soils / Flats
Trees	<i>Brachychiton populneus</i> <i>Eucalyptus nortonii</i> <i>Ficus rubiginosa</i> <i>Melia azedarach</i>	<i>Angophora floribunda</i> <i>Eucalyptus blakelyi</i> <i>Eucalyptus melliodora</i>
Shrubs	<i>Notolaea microcarpa var microcarpa</i> <i>Myoporum montanum</i> <i>Santalum lanceolatum</i>	<i>Bursaria spinosa</i> <i>Cassinia quinquefaria</i> <i>Olearia elliptica</i>
Grasses	<i>Lomandra longifolia</i> <i>Aristida personata</i> <i>Aristida vagans</i> <i>Bothriochloa macra</i> <i>Chloris ventricosa</i> <i>Cymbopogon refractus</i> <i>Dichanthium sericeum</i> <i>Panicum effusum</i>	<i>Aristida personata</i> <i>Bothriochloa macra</i> <i>Chloris ventricosa</i> <i>Cymbopogon refractus</i> <i>Dichanthium sericeum</i> <i>Sporobolus elongatus</i>
Source: Idyll Spaces (2008)		

As outlined in Section 6.2.4, a cover crop will be utilised to provide initial stabilisation and, where required, additional erosion protection, such as jute mesh, will be used to assist in the stabilisation and establishment of vegetation.

The long-term weather forecast will be reviewed prior to purchasing the seed mix and a suitably experienced expert will be consulted to confirm the suitability of the seed mix for the seasonal conditions. If required, stored water will be utilised for irrigation of revegetation areas to achieve effective root establishment.

A weed inspection and pest control program will be implemented, which will include equipment delivery protocol to ensure equipment does not import weeds.

6.2.6 Ecosystem and Land Use Development

6.2.6.1 Weed and Pest Management and Monitoring

Several parameters associated with the presence of weeds and grazer impacts will be recorded as part of rehabilitation monitoring activities. The Annual Rehabilitation Report will include the following.

- An overview of any weed and pest management measures implemented at the Quarry Site during the reporting period.
- A list of weed species identified during rehabilitation monitoring and any other inspections completed at the Quarry Site.
- Details of any pests or evidence of grazer damage to revegetated areas identified during inspections, including a plan showing distribution within the Quarry Site, where appropriate.
- Recommendations for specific weed and pest management measures to be implemented during the subsequent 12-month period.

6.2.6.2 Erosion, Water and Stability Management and Monitoring

A visual inspection program will be implemented to mitigate the risk of erosion and failure of landform, drainage and water management/storage structures. Other drainage controls will include ensuring adequate projected foliage cover to limit erosion / silt entrainment, and ensuring water within final extraction footprint remains internally draining. A geotechnical assessment will be conducted by a suitably qualified person prior to relinquishment.

Appropriate rehabilitation planning/scheduling and the creation of a barrier to vehicular entry to the rehabilitation area will be implemented to mitigate the risk of re-disturbance of established rehabilitation areas.

During this phase of rehabilitation, site infrastructure including retained roads, security fencing, safety bunds will be inspected on a regular basis. Additionally, infrastructure vulnerable to erosion (e.g. unsealed roads) will be inspected following significant rainfall events. The results of infrastructure inspections as well as records of annual infrastructure maintenance activities and costs will be included as part of an Annual Rehabilitation Report.

6.2.6.3 Revegetation Management and Monitoring

The management and monitoring measures that will be implemented during the ecosystem development phase of rehabilitation will be consistent with those identified in **Table 9**. Results from rehabilitation monitoring will be used to assess the progress of revegetated areas towards target values based on analogue sites for each of the established vegetation community types (see Section 8.1).

The results of rehabilitation monitoring will also be compared against the triggers outlined in Section 10 and additional management actions implemented as required. These additional management actions may include, but would not be limited to:

- growth medium amelioration (e.g. fertiliser or organic matter application);
- reseeded of areas with seed of target species where species assemblages are not consistent with those of analogue sites; and
- engaging a suitably qualified expert to provide recommendations to improve rehabilitation outcomes.

6.3 REHABILITATION OF AREAS AFFECTED BY SUBSIDENCE

There is no subsidence present at the Quarry Site as it will recover material through open cut methods only. As such, no subsidence-related management and maintenance programs are required.

7 REHABILITATION QUALITY ASSURANCE PROCESS

The following section details the rehabilitation quality assurance process for the Quarry in accordance with *Guideline 3: Rehabilitation Controls (July 2021)*. The rehabilitation quality assurance checklist included in this section is intended to be used as an indicative guide for rehabilitation operation managers and practitioners responsible for the rehabilitation of the Quarry Site.

As the Quarry is currently operational, many of the pre-disturbance risk controls outlined in Guideline 3 (e.g. baseline assessments and monitoring) have either been completed or form part of ongoing investigations to be undertaken during rehabilitation planning. Whilst the majority of rehabilitation activities will not be able to be undertaken until closure, rehabilitation progress through the planned rehabilitation phases will not occur concurrently across all mining and final landform domains identified in **Plan 1**. Therefore the quality assurance records of rehabilitation for each domain will be recorded as appropriate to the respective phase of rehabilitation for that domain / portion of domain. In some instances, validation and monitoring records that apply to all/multiple domains may occur following completion of the relevant phase for all domains.

As part of the rehabilitation quality assurance process, relevant records and documentation will be recorded in a Rehabilitation Quality Assurance Register and, as applicable, reported as part of the Annual Rehabilitation Report. The Rehabilitation Quality Assurance Register will, as a minimum, include a compliance register used to assess the status of compliance with requirements under relevant development consents, leases and licences. The Rehabilitation Quality Assurance Register will be maintained, reviewed and refined by the Quarry Manager to ensure that it is reflective of current rehabilitation progress, risk controls implemented at the Quarry Site and the outcomes of any updated rehabilitation risk assessments.

Table 14 outlines key responsibilities for the Company and Quarry personnel with regards to rehabilitation operations.

Table 14
Key Roles and Responsibilities

Role	Responsibility
Quarry Manager	<ul style="list-style-type: none"> Comply with applicable laws, regulations, licences and approvals. Ensure all contractors, sub-contractors and service personnel are appropriately qualified and/or licenced to undertake the required work. Ensure that appropriate resources are available to site management and personnel to enable the implementation of this Plan.
Environmental Officer / Quarry Manager	<ul style="list-style-type: none"> Ensure that the Rehabilitation Quality Assurance register is maintained and up to date based on site activities. Ensure that the workforce is aware of relevant development and rehabilitation risks and management and mitigation measures, including any additional corrective and/or preventative measures. Ensure that the rehabilitation quality assurance process outlined in Section 7 is implemented as required. Ensure that the documentation and recording of rehabilitation risk controls occurs within a suitable timeframe Ensure that specialist contractors adhere to the guidelines and methodologies outlined in this RMP where required, or that the guidelines and methodologies in this Plan are updated to reflect those employed at the Quarry Site.
All Quarry Personnel	<ul style="list-style-type: none"> Follow direction provided by the Environmental Officer / Quarry Manager. Notify the Quarry Manager or Environmental Officer in the event that uncontrolled rehabilitation risks are identified at the Quarry.

8 REHABILITATION MONITORING PROGRAM

8.1 ANALOGUE SITE BASELINE MONITORING

The rehabilitation objectives and rehabilitation completion criteria as defined in Section 4 and **Table 9** for vegetation re-establishment were developed with reference to visual inspections of appropriate analogue sites, namely areas of undisturbed native vegetation located within and adjacent to the Quarry Site. Substantial areas of native vegetation are retained within the Quarry Site that will not be disturbed. As such there will remain ample opportunity for future establishment of analogue sites. Given the majority of rehabilitation will not be able to occur until to closure, analogue sites will be established closer to closure in order to provide relevant data for comparison.

8.2 REHABILITATION ESTABLISHMENT MONITORING

8.2.1 Rehabilitation Monitoring

Rehabilitation monitoring will focus upon determining whether progress towards achieving the relevant performance indicators and completion and relinquishment criteria presented in Section 4 and **Table 9** is being achieved.

Rehabilitation establishment monitoring will involve inspections of each progressive phase, and will consist of the following.

- Photo monitoring of rehabilitated areas, including prior to seeding, immediately following seeding and one year after revegetation activities of the area is completed.
- Visual inspections and documentation following significant rainfall events (i.e. $\geq 25\text{mm}$ within 24 hours) to identify any signs of erosion and detail any follow up actions required (e.g. repairs, installation of additional erosion and sediment controls).
- Recording of all monitoring and inspection events, including the results of monitoring and any follow up activities, in accordance with the Rehabilitation Quality Assurance Register.

These recommendations will be implemented as soon as reasonably practicable, and the above steps will be repeated until the nominated rehabilitation criteria have been achieved.

8.3 MEASURING PERFORMANCE AGAINST REHABILITATION OBJECTIVES AND REHABILITATION COMPLETION CRITERIA

Details of validation methods and indicators to be employed during monitoring to assess performance against the rehabilitation completion criteria for the Quarry Site are provided in Section 4.2.

Annual Rehabilitation Reports will form the foundation of long-term rehabilitation monitoring at the Quarry Site.

The results of rehabilitation monitoring will be graphed and compared against target values to determine:

- the relative performance of rehabilitated areas compared to other sites within the Quarry Site;
- the rate of development towards target values, including a timeline for the achievement of target values and/or rehabilitation completion criteria; and
- whether additional controls, management measures or specialist assessments to identify issues and provide recommendations are required based on trigger values (see Section 10).

The Rehabilitation Quality Assurance Register will be used to record details of any additional management measures or risk controls implemented during the ecosystem development phase in response to the analysis of rehabilitation monitoring results.

An Annual Rehabilitation Report and Forward Program will be prepared for the Quarry as required under *Standard Condition 13 (Clause 13 of Schedule 8A)* of ML1660. The Company proposes to submit an Annual Rehabilitation Report and Forward Program for the Mine each year to cover the previous 12-month calendar year period. As part of the Annual Rehabilitation Report and Forward Program, the Company will validate and certify that the security deposit covers the estimated cost of rehabilitation liabilities each year.

9 REHABILITATION RESEARCH AND TRIALS

9.1 CURRENT REHABILITATION RESEARCH AND TRIALS

No rehabilitation research or rehabilitation trials are currently being undertaken within or surrounding the Quarry. Rehabilitation to date has been limited to the batters of the access road.

9.2 FUTURE REHABILITATION RESEARCH AND TRIALS

The planned rehabilitation at the Quarry Site will utilise known and tested methodology. However, the Company intends to undertake rehabilitation trials once sufficient areas of completed benches become available and which are not required for ongoing operations. The details of these trials will be further developed, however, it is expected these will target aspects including depth of growth medium, ameliorants applied, and species utilised. Given the progression of extraction to date, potential commencement of these trials is expected beyond 2030.

10 INTERVENTION AND ADAPTIVE MANAGEMENT

Table 15 presents the Trigger Action Response Plan for each of the rehabilitation threats and potential adverse outcomes identified in **Table 7** in Section 3 as having a risk rating of moderate or above.

The results of rehabilitation monitoring assessments, including the development of procedures to be implemented during rehabilitation operations as outlined in Section 8, will be continually reviewed and reported in the Annual Rehabilitation Report for the Quarry. Where rehabilitation monitoring assessment outcomes suggest that rehabilitation methods outlined in this Plan may not support the realisation of rehabilitation completion criteria, this Plan will be updated to detail additional or alternative rehabilitation methods as required. Additionally, where the development of procedures or plans described in Section 8 is completed, this Plan will be updated to reflect specific management implications for individual areas of the Quarry Site and/or target values associated with rehabilitation completion criteria.

Table 15
Trigger Action Response Plan

Rehabilitant Risk	Potential Adverse Outcome	Trigger	Response
Active Mining Phase of Rehabilitation			
Limited pre-existing biological resources for use (e.g. topsoil, woody debris)	Insufficient resources available for rehabilitation limiting suitability of final land use.	Survey of stockpiled rehabilitation resources and/or growth medium register indicates a resource deficit within the Quarry Site.	Identify a suitable alternative source of additional growth medium, including any approvals necessary to acquire the resource. Commence investigations into measures that may be implemented to ameliorate other material to make them suitable for use as a growth medium.
Landform Establishment Phase of Rehabilitation			
Unstable landform due to erosion and/or mass movement issues associated with inappropriate design and/or quality assurance during landform construction.	Landform unsuitable for intended land use.	Monitoring or geotechnical assessment identifies instability / unacceptable movement (actual or potential) in final landform.	Engage a suitably qualified geotechnical engineer to assess the instability and provide a range of recommendations to remediate the instability. Recommendations to be implemented will be detailed in the Annual Rehabilitation Report.
Uncontrolled public access to highwalls	Public access to open cut void possible.	Appropriate fencing, signage and bunding is not in place.	Install fencing, signage and bunding to prevent inadvertent public access to the highwall / retained void faces.
Growth Medium Development Phase of Rehabilitation			
Subsoil and topsoil deficit for rehabilitation activities	Insufficient growth medium available for construction of sustainable final landform and land use.	Growth medium register indicates a deficit in material required for rehabilitation.	Identify an alternative source of additional suitable material, including the potential for amelioration of available unsuitable resources and/or importation of material.
Ecosystem and Land Use Establishment Phase of Rehabilitation			
Adverse weather and climatic influences (e.g. drought; intense rainfall events; bushfire and climate change).	Delay to or failure of vegetation establishment	Long term and visual monitoring during and/or after adverse weather/climatic events identifies limited opportunities for progressive rehabilitation or negative effects on vegetation establishment	Review the rehabilitation schedule and update the forward schedule with revised rehabilitation timing estimates. If existing seed mix is inappropriate for current weather conditions, consult with suitably experienced expert to confirm alternative species and/or cover crop or mulch for temporary stabilisation. Identify any alternative areas which can be rehabilitated or activities which can be progressed during adverse weather conditions.

11 REVIEW AND IMPLEMENTATION

Table 16 presents the triggers for reviewing the Plan. Following each review, this Plan will be revised if significant structural amendments are necessary. Additionally, further consultation with relevant stakeholders will be undertaken where revisions to this Plan result in significant changes to proposed final land uses final landforms, rehabilitation objectives, rehabilitation completion criteria and/or the rehabilitation schedule. Milestones as documented in this Plan will be updated in the Annual Rehabilitation Report and will trigger an update to this Plan in the event that a significant change in rehabilitation risks and/or proposed rehabilitation methodologies is identified.

Table 16
Rehabilitation Management Plan Review Triggers

Trigger	Review
Substituting a proposed rehabilitation outcome document (final landform plan, rehabilitation objectives or completion criteria) with the version approved by the Secretary. <i>per Mining Regulation 2016 – Schedule 8A Clause 11(a)</i>	Within 30 days.
Following an amendment made to a rehabilitation outcome document (final landform plan, rehabilitation objectives or completion criteria). <i>per Mining Regulation 2016 – Schedule 8A Clause 11(b)</i>	Within 30 days
To reflect any changes to the risk control measures within the RMP as a result of a revised Rehabilitation Risk Assessment. <i>per Mining Regulation 2016 – Schedule 8A Clause 11(c)</i>	As soon as practicable after the rehabilitation risk assessment is conducted.
Following a written direction by the Secretary (Resources Regulator) to review the Plan.	As required by the written direction

In addition to reviews of this Plan as outlined in **Table 16**, a Rehabilitation Quality Assurance Register will be developed and regularly maintained to ensure that mining and rehabilitation activities at the Quarry Site are being conducted in accordance with this Plan and requirements under relevant development consents, leases and licences. Additionally, the Rehabilitation Quality Assurance Register will include:

- records of any contaminated water or hazardous materials collected at the Quarry Site and disposed of off site;
- the latest map of any contamination at the Quarry Site; and
- details of any additional rehabilitation measures and/or risk controls implemented within individual subdomains during rehabilitation operations.

Relevant details and records of rehabilitation activities will be presented within the respective Annual Rehabilitation Reports.

12 REFERENCES

Archaeological Surveys and Reports (ASR) (2008). *Aboriginal Heritage Assessment.*

GSS Environmental (GSSE, 2008a). *Soils and Land Capability/Agricultural Land Suitability Assessment*

Idyll Spaces (2008). *Flora Assessment.*

Kendall & Kendall Ecological Services (2008). *Fauna Survey.*

RW Corkery & Co Pty Ltd (RWC) (2008). *Environmental Impact Statement*

StoneCo Pty Limited (Stoneco) (2011). *Soil and Water Management Plan.*

Appendix 1

Rehabilitation Risk Assessment

(Total No. of pages including blank pages = 13)



STONECO
ABN 77 003 646 704

Rehabilitation Risk Assessment

for the

Timor Limestone Quarry

March 2026



STONECO
ABN 77 003 646 704

Rehabilitation Risk Assessment

for the

Timor Limestone Quarry

Prepared by:

StoneCo Pty Limited
ABN: 77 003 646 704
PO Box 708
SCONE NSW 2337

Telephone: (02) 6545 2222
Facsimile: (02) 6545 4444
Email: admin@stonecoquarries.com

Ref No. 759/11

March 2026

Document Control

Document Title	Timor Limestone Quarry Rehabilitation Risk Assessment		
Document No.	759/11		
Version	Date	Reason for Risk Assessment	Version Authority
Version 1	01/07/2022	Preparation of initial RMP	Scott Murdoch
Version 2	31/03/2026	Review following finalisation of RMP	Scott Murdoch

This Copyright is included for the protection of this document

COPYRIGHT

© StoneCo Pty Limited 2026

All intellectual property and copyright reserved.

Apart from any fair dealing for the purpose of private study, research, criticism or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system or adapted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without written permission. Enquiries should be addressed to StoneCo Pty Limited.

Contents

	Page
1. SCOPE	4
2. METHODOLOGY	5
3. REHABILITATION RISK ASSESSMENT	5

TABLES

Table 1	Risk Assessment Version and Participants	6
Table 2	Qualitative Consequence Rating	7
Table 3	Qualitative Likelihood Rating	7
Table 4	Qualitative Risk Rating	7
Table 5	Timor Limestone Quarry Rehabilitation Risk Assessment	8

1. Scope

The following rehabilitation risk assessment was undertaken generally in accordance with:

- Australian Standards HB 203:2006, AS/NZS 4360:2004 and AS/NZS ISO 31000:2018 Risk Management – Principles & Guidelines; and
- NSW Resources Regulator’s *Rehabilitation Risk Assessment Guideline* dated 2 July 2021.

This risk assessment has been designed in consideration of Schedule 8A of the *Mining Regulation 2016*, which requires the holder of a mining lease to conduct a rehabilitation risk assessment that:

- identifies, assesses and evaluates the risks that need to be addressed to achieve the following in relation to the mining lease:
 - the rehabilitation objectives;
 - the rehabilitation completion criteria;
 - for large mines—the final land use as spatially depicted in the final landform and rehabilitation plan; and
- identifies the measures that need to be implemented to eliminate, minimise or mitigate the risks.

In addition to the above, the holder of a mining lease must conduct a rehabilitation risk assessment:

- for a large mine—before preparing a rehabilitation management plan;
- whenever a hazard is identified under Clause 6(3) (of Schedule 8A)—as soon as reasonably practicable after it is identified, and
- whenever given a written direction to do so by the Secretary.

2. Methodology

This risk assessment has been prepared in consideration of the completed *Rehabilitation Management Plan* for the Timor Limestone Quarry and relevant background documentation, including the previous Mining Operation Plan. Risks to achieving the rehabilitation objectives and rehabilitation completion criteria outlined in Section 4 of the *Rehabilitation Management Plan*, as well as the final landform outlined in Section 5 of the *Rehabilitation Management Plan*, were identified and assessed. Version 2 of this assessment has been completed jointly by StoneCo Pty Ltd (StoneCo) and R.W. Corkery & Co. Pty Limited (RWC).

This risk assessment remains a ‘live’ document with the version history and personnel involved in each update outlined in **Table 1**.

Site-specific threats to rehabilitation were assessed based upon previous risk assessments undertaken as part of the Mining Operations Plan, observations of site-specific conditions and threats to rehabilitation observed during site operations as well as the experience of StoneCo and RWC personnel at similar sites. This risk assessment was completed with consideration of existing controls as well as those risk controls outlined in the *Rehabilitation Management Plan*.

For each identified risk to rehabilitation, potential adverse outcomes were identified and allocated a risk rating based on the potential consequences and likelihood of occurrence. **Tables 2, 3 and 4** present the consequence, likelihood and risk rating used during this analysis. Where risk ratings were determined to be “Moderate” or above, a Trigger Action Response Plan has been developed and is presented in Section 10 of the *Rehabilitation Management Plan*.

3. Rehabilitation Risk Assessment

Table 5 presents the results of the rehabilitation risk assessment utilising the methodology outlined in Section 2 and assuming the implementation of standard mitigation measures and those outlined within this risk assessment and reflected in the RMP. It is noted that not all controls are currently implemented or relevant to existing operations with controls to be implemented as required and relevant.

Table 1
Risk Assessment Version and Participants

Version	Review Date	Name, Position and Company	Role in Risk Assessment	Qualifications and Experience
1	01/07/2022	Scott Hollamby <i>Senior Environmental Consultant</i> R.W. Corkery & Co. Pty Limited	Facilitator	B.EnvSc (Hons) 18 years as an environmental consultant for extractive material and mining projects.
		Sarah Maher <i>Graduate Environmental Consultant</i> R.W. Corkery & Co. Pty Limited	Participant	BSc. Env Sci & Ecology 5 months as an environmental consultant for extractive material and mining projects.
		Scott Murdoch <i>Quarry Manager / Managing Director</i> StoneCo Pty Ltd	Participant/ Approver	Practicing Certificate - Quarry Manager (2019/1223) 37 years of experience in mining, earthmoving and shot firing.
2	24/03/2026	Scott Hollamby <i>Principal Environmental Consultant</i> R.W. Corkery & Co. Pty Limited	Facilitator	B.EnvSc (Hons) 22 years as an environmental consultant for extractive material and mining projects.
		Scott Murdoch <i>Quarry Manager / Managing Director</i> StoneCo Pty Ltd	Participant/ Approver	Practicing Certificate - Quarry Manager (2019/1223) 40+ years of experience in mining, earthmoving and shot firing.
3				
4				
5				

Table 2
Qualitative Consequence Rating

Level	Descriptor	Description
1	Negligible	No detrimental impact on the final land use is measurable or envisaged.
2	Minor	An event which could have temporary and minor effects on the suitability of the final land use.
3	Moderate	An event which would create substantial temporary or minor permanent damage to the suitability of the final land use.
4	Major	An event which could have a substantial and permanent consequence to the suitability of the final land use.
5	Severe	A major event which could cause severe damage to the suitability of the final land use with actual or potential loss of credibility with key stakeholders, environmental liability, regulatory intervention, national publicity/complaints, or could close the operation prematurely.

Note: Rating modified after AS ISO 31000:2018 Risk Management – Guidelines

Table 3
Qualitative Likelihood Rating

Level	Descriptor	Description
A	Certain	Is an ongoing occurrence or will occur under all conditions
B	Almost Certain	Is expected to occur in most circumstances
C	Likely	Will probably occur in most circumstances
D	Possible	Will probably occur under favourable circumstances
E	Unlikely	May occur, but only under favourable circumstances
F	Rare	Not expected to occur, unless subject to exceptional circumstances
G	Very Rare	Theoretically possible but not expected to occur

Source: Rating modified after HB 89:2012 – Figure B7

Table 4
Qualitative Risk Rating

Likelihood	Consequences				
	1 Negligible	2 Minor	3 Moderate	4 Major	5 Severe
A Certain	M	H	H	VH	VH
B Almost Certain	M	M	H	VH	VH
C Likely	M	M	H	H	VH
D Possible	L	M	M	H	H
E Unlikely	L	L	M	M	H
F Rare	L	L	L	M	M
G Very Rare	L	L	L	L	M

Risk Rating: L = Low, M = Moderate, H = High and VH = Very High

Source: Modified after HB 89:2012 – Figure B8

Table 5
Timor Limestone Quarry Rehabilitation Risk Assessment

Rehabilitation Phase	Risk	Risk Control	Final Land Use Domain / Risk Ranking			Where Addressed in RMP
			Domain A: Native Ecosystem	Domain G: Water Storage (Excluding Final Void)	Domain I: Infrastructure	
General	Insufficient skills and experience of rehabilitation personnel.	Extensive experience of Quarry Manager. Engagement of specialists consultants to address issues if and when required.	L(F3)	L(F3)	L(F3)	7, 10
	Lack of clearly defined responsibilities.	Responsibilities as defined in the Rehabilitation Management Plan. Site inductions and toolbox talks.	L(F3)	L(F3)	L(F3)	7
	Insufficient funding for or prioritisation of rehabilitation activities.	Rehabilitation cost estimate and maintenance of security bond.	L(F3)	L(F3)	L(F3)	7,10
Active Mining Phase of Rehabilitation	Inappropriate biological resource (e.g. subsoil, topsoil, vegetative material, seedbank, rocks, habitat resources) through clearing, salvage, and handling practices.	Recovery of soil material in accordance with Rehabilitation Management Plan. Stockpiling of growth medium in location not subject to run-on water or vehicle access. Spraying of weeds on an as needed basis. Signposting of growth medium stockpile.	L(F3)	NA	NA	6.2.1.1, 6.2.1.11, 9.2
	Limited pre-existing biological resources for use (e.g. topsoil, woody debris).	Strip all available soil / growth medium resources and either immediately place on shaped landform or stockpile in accordance with Rehabilitation Management Plan. Growth medium register. Suitable source of additional soil material to be identified, including the need for importation of soils from off site. Investigation into methods that may be implemented to ameliorate on-site materials to make them suitable for use as a growth medium.	M(D3)	NA	NA	6.2.1.1, 6.2.1.11, 9.2
	Adverse meteorological conditions during salvage of biological resources.	Review of meteorological forecast prior to vegetation clearing and soil stripping and avoidance of salvage activities during high rainfall. Review site conditions prior to commencement of vegetation clearing and soil stripping.	L(E2)	NA	NA	6.2.1.1, 8
	Adverse geochemical/chemical composition of materials such as overburden, processing wastes, topsoils and subsoils.	No adverse geochemical/chemical composition issues identified for site materials. Testing of growth medium following spreading but prior to application of seed to confirm rates of gypsum, fertiliser and/or other soil ameliorants required.	L(F3)	NA	NA	6.2.1.4, 6.2.1.6, 9.2
	Handling and containment of geochemical and geotechnically unsuitable process residue and reject materials.	All crushed and screened material will be sold as product or taken off site for further processing. Therefore, no washing or processing resulting in reject material will occur.	NA	NA	NA	-
	Adverse surface and/or groundwater quality and quantity.	Ensuring that the extraction floor remains at least 5m above the lower chert band. Direction of stormwater runoff from the stockpiling and handling area into designated sediment retention basin. Erosion and sediment control structures. Storage of all hydrocarbons and chemicals in accordance with AS1940:2017 – The storage and handling of flammable and combustible liquids.	L(F3)	L(F3)	NA	6.2.1.10, 10

Table 5 (Cont'd)
Timor Limestone Quarry Rehabilitation Risk Assessment

Rehabilitation Phase	Risk	Risk Control	Final Land Use Domain / Risk Ranking			Where Addressed in RMP
			Domain A: Native Ecosystem	Domain G: Water Storage (Excluding Final Void)	Domain I: Infrastructure	
Decommissioning Phase of Rehabilitation	Impacts on heritage items.	No sites of Aboriginal cultural significance or potential archaeological deposits have been identified within ML 1660. Unexpected finds protocol. Ensure all machinery remains within approved disturbance footprint. Clearly identify the location of the potentially man-made stone wall and, if required, install temporary high visibility barrier when works occur in the vicinity.	L(G4)	L (G4)	L (G4)	6.2.1.13, 9.2
	Hazards associated with retained infrastructure.	Inspection of roads following periods of intense rainfall to ensure trafficability.	NA	NA	L(E2)	6.2.2.3, 9.2
	Contamination resulting from associated activities (e.g. storage and use of hydrocarbons/chemicals, drilling fluid, spillage of dirty water, brine, sewage).	Storage of all hydrocarbons and chemicals in accordance with AS1940:2017 – The storage and handling of flammable and combustible liquids. Visual contamination inspection and report prior to relinquishment.	L(F3)	L(F3)	L(F3)	6.2.2.4, 6.2.2.5
	Material and waste products from the demolition process retained on the final landform.	Waste material stored within existing hardstand or active disturbance areas and removed from site to a licenced facility as soon as practicable.	L(F2)	NA	L(F2)	6.2.2.2, 6.2.2.5, 9.2
	Groundwater accumulation in former underground workings (e.g. potential for fill and spill or impacts on regional ground water users).	No underground mining undertaken	NA	NA	NA	-
	Exposure or access to underground workings.	No underground mining undertaken	NA	NA	NA	-
	Habitation of structures and/or underground workings by native fauna (e.g. bats).	No underground mining undertaken	NA	NA	NA	-
Landform Establishment Phase of Rehabilitation	Unstable landform due to erosion and/or mass movement issues associated with inappropriate design and/or quality assurance during landform construction.	Use of erosion protection, such as rip rap, contour banks, gabion, where required. Geotechnical assessment prior to relinquishment.	M(E4)	L(F2)	L(F2)	6.2.3.2, 6.2.3.4
	Exposure or release of geochemical and/or geotechnically adverse material associated with containment design and construction, including capping/cover system.	No geochemically or geotechnically adverse material present requiring capping or containment systems.	NA	NA	NA	-
	Lack of availability of suitable materials for encapsulation or capping of adverse materials.	No capping or containment systems present or required.	NA	NA	NA	-
	Borehole or gas well seals failure.	No service boreholes or gas well seals present	NA	NA	NA	-
	Final landform unsuitable for final land use (e.g. large rocks present affecting cultivation, unsuitable surface cover and landform settlement).	Shaping and ripping of extraction floor to provide suitable grades and surface substrate for application of growth medium. Visual inspection prior to application of growth medium. Rehabilitation trials and monitoring.	L(F3)	L (F3)	L (F3)	6.2.3.2, 6.2.4, 8
	Uncontrolled public access to highwalls	Install fencing, signage and bunding to prevent public access to retained highwall faces.	M(E4)	NA	NA	6.2.2.1, 6.2.3.4

Table 5 (Cont'd)
Timor Limestone Quarry Rehabilitation Risk Assessment

Rehabilitation Phase	Risk	Risk Control	Final Land Use Domain / Risk Ranking			Where Addressed in RMP
			Domain A: Native Ecosystem	Domain G: Water Storage (Excluding Final Void)	Domain I: Infrastructure	
Growth Medium Development Phase of Rehabilitation	Inappropriate physical and structural properties of substrate.	Shaping and ripping of extraction floor to provide suitable grades and surface substrate for application of growth medium. Light ripping of growth medium across contours to key in to substrate, reduce surface runoff velocities, and retain seed (when spread). Testing of growth medium following spreading but prior to application of seed to confirm rates of any soil ameliorants required. Restriction of vehicular access following spreading of soil material.	L(F3)	NA	NA	6.2.3.4, 6.2.4, 8, 9.2
	Subsoil and topsoil deficit for rehabilitation activities.	Suitable source of additional soil material to be identified, including the need for importation of soils from off site. Investigation into methods that may be implemented to ameliorate on-site materials to make them suitable for use as a growth medium.	M(D3)	NA	NA	6.2.4, 8, 9.2
	Substrate inadequate to support revegetation or agricultural land capability (e.g. lack of organic matter, nutrient deficiency, lack of soil biota, adverse soil chemical properties, exposed hostile geochemical materials, and any other factors impeding the effective rooting depth).	Allowance for application of gypsum and fertiliser in rehabilitation cost estimate. Testing of growth medium following spreading but prior to application of seed to confirm rates of gypsum, fertiliser and/or other soil ameliorants required.	L(F3)	NA	NA	6.2.1.1, 6.2.4, 8, 9.2
Ecosystem and Land Use Establishment Phase of Rehabilitation	Lack of availability and quality of target seed resources, including genetic integrity.	Source and purchase of appropriate native seed mix for ground stabilisation and ecosystem establishment suitably in advance of planned rehabilitation activities.	L(F3)	NA	NA	6.2.1.11, 6.2.5, 8
	Poor seed viability or seed dormancy.		L(F3)	NA	NA	6.2.5, 8
	Seed predation.	Use of appropriate sowing and seeding techniques. Selection of seed mix appropriate to the season / current weather conditions so that germination occurs as soon as practicable following sowing.	L(F3)	NA	NA	6.2.5, 8.2
	Damage to seed through revegetation process.	Use of appropriate sowing and seeding techniques.	L(G3)	NA	NA	6.2.5, 8, 9
	Poor quality tube stock.	Purchase of suitable tube stock grown from locally collected seed and from a reputable supplier.	L(F3)	NA	NA	6.2.5, 8, 9
	Weed infestation associated with both introduction and control (or lack thereof).	Implement weed inspection and control program. Implement equipment delivery protocol to ensure equipment does not import weeds.	L(E2)	NA	NA	6.2.5, 6.2.6.1, 8
	Adopting inappropriate or inadequate rehabilitation techniques, including equipment fleet.	Extensive experience of Quarry Manager. Engagement of experienced contractors. Rehabilitation personnel induction and training.	L(F3)	L(F3)	L(F3)	7, 9, 10
	Inappropriate revegetation species mix for targeted final land use.	Ensure seed / tube stock supplier provides species from identified species list outlined in Rehabilitation Management Plan Source seed mix from reputable supplier.	L(F3)	NA	NA	6.2.5, 8, 9
Adverse weather and climatic influences (e.g. drought; intense rainfall events; bushfire and climate change).	Review long-term weather forecast prior to purchase of seed mix. Consult with suitably experienced expert to confirm suitability of seed mix for seasonal conditions. If required, utilisation of stored water for irrigation of revegetation areas to achieve effective root establishment.	M(E3)	L(F2)	L(F1)	6.2.5, 8	

Table 5 (Cont'd)
Timor Limestone Quarry Rehabilitation Risk Assessment

Rehabilitation Phase	Risk	Risk Control	Final Land Use Domain / Risk Ranking			Where Addressed in RMP
			Domain A: Native Ecosystem	Domain G: Water Storage (Excluding Final Void)	Domain I: Infrastructure	
Ecosystem and Land Use Development Phase of Rehabilitation	Hazards associated with retained infrastructure.	Inspection of retained roads following periods of high intensity rainfall to ensure trafficability.	NA	NA	L(E2)	6.2.6.4
	Adverse weather and climatic influences (e.g. drought; intense rainfall events; bushfire and climate change).	Review long-term weather forecast. If existing seed mix is inappropriate for current weather conditions, consult with suitably experienced expert to confirm alternative species and/or cover crop or mulch for temporary stabilisation.	M(E3)	L(F2)	L(F1)	6.2.6.2, 6.2.6.3
	Substrate inadequate to support revegetation or agricultural land capacity.	If inadequate groundcover / projected foliage cover achieved, consult with suitably experienced expert in relation to confirm appropriateness of species selection or need for additional soil amelioration requirements (gypsum, fertiliser, organic matter).	L(F3)	NA	NA	6.2.6.3, 9.2
	Post-closure water quality and quantity issues.	Ensure adequate projected foliage cover to limit erosion / silt entrainment. Ensure water within final extraction footprint remains internally draining. Rehabilitation monitoring program.	L(F2)	L(F2)	L(F3)	6.2.3.1, 6.2.6.2, 9.2
	Damage to rehabilitation (e.g. fauna, domestic stock, vandalism, vehicular interactions, bushfire).	Maintain existing property fencing. Creation of barrier to vehicular entry to the rehabilitation areas. Rehabilitation monitoring program.	L(F3)	L(F3)	L(F3)	6.2.2.1, 9.2
	Re-disturbance of established rehabilitation areas.	Appropriate rehabilitation planning / scheduling. Creation of barrier to vehicular entry to the rehabilitation area.	L(F3)	L(F3)	L(F3)	6.2.2.1, 6.2.6.4, 8
	Insufficient establishment of target species and limited species diversity.	Rehabilitation monitoring program. Supplementary sowing of additional species seed mix (if required to maintain adequate projected foliage cover or species diversity). If required, suitably qualified ecologist or revegetation expert engaged to assess reasons for failure of appropriate species to emerge and recommend actions to ensure that the final vegetation community is suitably complimentary to the surrounding remnant vegetation community. Additional weed control activities and/ or pest management, if required.	L(E2)	NA	NA	6.2.6.1, 6.2.6.3, 8
	Erosion and failure of landform, drainage and water management/storage structures.	Visual inspection program. Geotechnical assessment prior to relinquishment.	L(F3)	L(F3)	L(F3)	6.2.6.2, 6.2.6.4
	Lack of infrastructure to support intended final land use (e.g. bunding, fences).	Inspection of retained fencing and bunding to confirm integrity.	L(G3)	NA	NA	6.2.6.4
	Lack of resources for rehabilitation maintenance.	Rehabilitation cost estimate and maintenance of security bond. Rehabilitation planning / scheduling	L(F3)	L(F3)	L(F3)	10
Other Risks (Non-Phase Specific)	Redirection of creek and river flows.	No watercourses present in extraction areas.	NA	NA	NA	-
	Subsidence cracking.	No underground mining undertaken.	NA	NA	NA	-
	Interconnective cracking with underground workings	No underground mining undertaken / no historic underground workings present.	NA	NA	NA	-