



CHALLENGER
MINES PTY LTD

ABN: 85 090 166 528

Rehabilitation Management Plan

for the

Adelong Gold Mine

August 2022



CHALLENGER
MINES PTY LTD

ABN: 85 090 166 528

Rehabilitation Management Plan

for the

Adelong Gold Mine

Prepared by:

Challenger Mines Pty Ltd
ABN: 85 090 166 528
c/- Adelong Gold Ltd
Level 4, 91 Williams Street, Melbourne 3000

Ref No. 503/15

August 2022

Telephone: (0400 880 309)
Email: peter.mitchell@3dresources.com.au

Summary Table

Name of Mine		Adelong Gold Mine		
RMP Commencement Date		2 July 2022		
Mineral Authorities		ML 1435	Expiry Date	27/09/2040
		MCLs 279 to 291		27/09/2040
		MCLs 311 to 313		27/09/2040
		EL 5728		17/05/2028
Name of Leaseholder		Challenger Mines Pty Ltd		
Name of Mine Operator		Adelong Gold Ltd (Challenger Mines is a wholly owned subsidiary)		
Reporting Officer		Peter Mitchell		
Title		Managing Director		
Version	Author	Purpose	Approved by	Date of Submission
1.0	P Mitchell	Initial RMP	P Mitchell	August 2022

This Copyright is included for the protection of this document

<p style="font-size: 1.2em; margin: 0;">COPYRIGHT</p> <p style="margin: 5px 0;">© Challenger Mines Pty Ltd 2022</p> <p style="font-size: 0.8em; margin: 5px 0;">All intellectual property and copyright reserved.</p> <p style="font-size: 0.7em; margin: 10px 0;">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 Challenger Mines Pty Ltd.</p>
--

Contents

	Page
LIST OF ACRONYMS	5
1. Introduction	6
1.1 History of Operations	6
1.2 Current Development Consents, Leases and Licences	7
1.3 Land Ownership and Land Use	9
2. Final Land Use	10
2.1 Regulatory Requirements for Rehabilitation	10
2.1.1 Environmental Impact Statement	10
2.1.2 Development Consents	10
2.1.3 Mining Leases.....	11
2.2 Final Land Use Options Assessment.....	12
2.3 Final Land Use Statement	12
2.4 Final Land Use and Mining Domains.....	12
3. Rehabilitation Risk Assessment	13
4. Rehabilitation Objectives and Rehabilitation Completion Criteria.....	15
4.1 Rehabilitation Objectives and Rehabilitation Completion Criteria - Summary.....	15
4.2 Rehabilitation Objectives and Rehabilitation Completion Criteria – Stakeholder Consultation	23
5. Final Landform and Rehabilitation Plan	24
5.1 Final Landform and Rehabilitation Plan	24
6. Rehabilitation implementation.....	28
6.1 Life of Mine Rehabilitation Schedule	28
6.2 Phases of Rehabilitation and General Methodologies.....	28
6.2.1 Active Mining Phase	28
6.2.2 Decommissioning	30
6.2.3 Landform Establishment.....	33
6.2.4 Growth Medium Development	33
6.2.5 Ecosystem and Land Use Establishment	34
6.2.6 Ecosystem and Land Use Development	34
6.3 Rehabilitation of Areas Affected by Subsidence.....	35
7. Rehabilitation Quality Assurance Process	36
8. Rehabilitation Monitoring Program	37
8.1 Analogue Site Baseline Monitoring	37
8.2 Rehabilitation Establishment Monitoring.....	37
8.3 Measuring Performance Against Rehabilitation Objectives and Rehabilitation Completion Criteria	37

Contents

	Page
9. Rehabilitation Research and Trials	38
9.1 Current Rehabilitation Research and Trials	38
9.2 Future Rehabilitation Research and Trials	38
10. Intervention and Adaptive Management	39
11. Review and Implementation	41

FIGURES

Figure 1	Locality Plan.....	42
Figure 2	Built Environment.....	43
Figure 3	Natural Environment – Vegetation Communities.....	44
Figure 4	Natural Environment – Land Uses.....	45
Figure 5	Mining Domains	46

TABLES

Table 1	Development Consents.....	7
Table 2	Approvals and Licences.....	8
Table 3	Mining Leases and Exploration Licences	8
Table 4	Infrastructure to be Removed or Demolished	31
Table 5	Key Roles and Responsibilities.....	36
Table 6	Trigger Action Response Plan	40
Table 7	Rehabilitation Management Plan Review Triggers.....	41

PLANS

Plan 1	Final Landform Features.....	25
Plan 2	Final Landform Contours	Error! Bookmark not defined.
Plan 3	Progressive Rehabilitation Schedule	27

LIST OF ACRONYMS

AHD	Australian Height Datum
DLWC	NSW Department of Land and Water Conservation
DPI	NSW Department of Primary Industries
EPA	NSW Environmental Protection Authority
EPL	License Issued by EPA
MCL	Mineral Claims converted to a Mining Lease
ML	Mining Lease

1. Introduction

The Adelong Gold Mine (the Mine) is located immediately to the north of Adelong and comprises 18 Mineral Authorities, collectively referred to as the “Mine Site” (see **Figure 1**). The Mine is operated by Challenger Mines Pty Ltd (Challenger, a wholly owned subsidiary of Adelong Gold Ltd (Adelong Gold)).

1.1 History of Operations

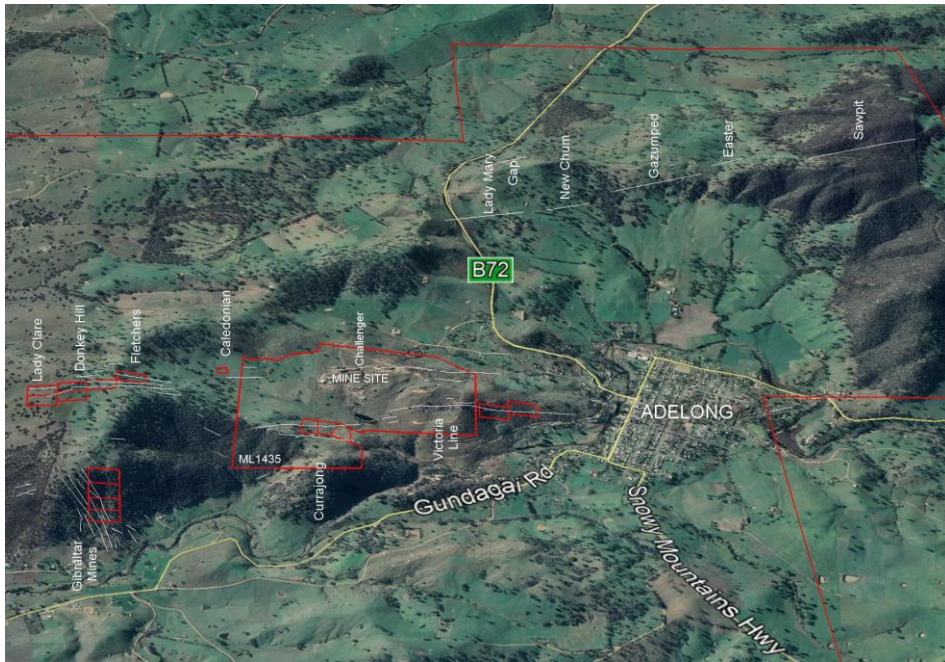
Gold was first reported in the Adelong district in 1841 (Ritchie, 1987). More than 21,000 kilograms of gold has been extracted during a 100-year production history, making it one of the major gold producing districts of NSW (Min Fact 54, 1996). These activities have resulted in substantial historic disturbance that predates the grant of ML1435 in 1998. In addition, 17 Mineral Claims were converted to Mining Leases between 2003 and 2006. Rehabilitation of disturbance that predates the granting of ML1435 and the various Mineral Claims does not form a component of this Plan. Similarly, rehabilitation of mining-related disturbance of areas outside of the Mineral Authorities identified in Section 1.2 does not form a component of this Plan.

Carpentaria Exploration, Golden Cross Resources and PanAust conducted extensive exploration drilling work on the Challenger orebody in the Old Hill line of lode between 1979 and 2007. Challenger Mines Pty Ltd completed confirmatory drilling work to verify this exploration and under the ownership of Adelong Gold Ltd, expanded the JORC Resources, refined the ore model, initiated detailed mine planning and completed an initial Scoping Study that shows the project to be viable.

The primary area of modern disturbance on the tenements to date has been the construction of the Processing Plant, and associated infrastructure (**Figures 3 and 5A and 5B**). This comprises a crushing and grinding circuit, flotation and gravity circuits, and cyanide leach tanks for dealing with the concentrates (which was never commissioned), a decline and some exploratory underground workings that was used for bulk sampling the Challenger deposit, together with associated infrastructure including offices, roads, fences, telecommunication, water dams, drainage channels and water pipelines. Some mullock dumps were also moved from historical mine sites to the Adelong processing plant as a precursor to production. There has also been extensive exploratory drilling around many of the old mine sites with around 40,000m of drilling. In 2017 there was around 4,000t to 5,000t of mullock and ore processed with tailings temporarily stored in the quarry, and mullock and a minor amount of ore from underground was stockpiled at the ROM pad.

While rehabilitation has taken place on most of the drill sites and drill pads, no work has been carried out on rehabilitating the existing process plant facilities as these facilities remain an integral part of the long term plan to re-establish mining operations at Adelong. Where old mullock dumps have been transported to the ROM stockpile at the processing plant, these sites have also been rehabilitated after the mullock has been removed.

The longer term plans at Adelong is to develop mines at several sites: Challenger, Currajong, Caledonian and Donkey Hill deposits, as well as take mullock dumps from historical mine workings for processing at the central processing plant. On-going exploration is likely to identify additional sites for mining which can extend the mine life beyond the 5 to 7 years already identified in the current resources.



Currently, the Company holds development consents to mine the Challenger Deposit by open cut and underground mining methods, as well as transporting mullock to the central processing plant. The processing plant site is also approved for development with associated infrastructure such as tailings dam, water supply etc and the plant has been approved for the use of cyanide. Other approvals will be necessary for the additional mine sites and for any increase in the scale of these operations.

1.2 Current Development Consents, Leases and Licences

Table 1
Development Consents

Development Consent	Grant Date	Covers
D1021-1991	18 April 1991	Underground and Open Cut Mining, mineral processing, use of cyanide, and deposition of tailings based on EIS (No Expiry)
99/00-094	19 October 1999	Transportation of Construction Materials from the Adelong Gold Mine to local markets
2001/02-273	14 August 2002	Screening , removal and transport of Mullock Dumps from scattered sites to Processing Plant at Challenger

Table 2
Approvals and Licences

Approvals and Licences	Covers
Environment Protection Licence (EPL 10265)	Mining, mineral processing, use of cyanide, and deposition of tailings and associated environmental monitoring
Water Licence DLWC Permit 40BL 187731	Provides for dewatering the mine and use of that water
Dangerous Goods Licence (Explosives Magazine) MAG 28-11-01	Screening and removal of Mullock Dumps for Processing
Dam Safety Committee Approval DSC Reference 10.132.5000	Approves the design of a Tailings Dam at Adelong (Dam Never Constructed)

Table 3
Mining Leases and Exploration Licences

Authority	Grant Date	Expiry Date	Area (ha)
ML 1435	28 Sep 1998	27 Sep 2040	145.9
M(C)L 279	10 Mar 2003	27 Sep 2040	1.8
M(C)L 280	10 Mar 2003	27 Sep 2040	2
M(C)L 281	10 Mar 2003	27 Sep 2040	2
M(C)L 282	10 Mar 2003	27 Sep 2040	2
M(C)L 283	10 Mar 2003	27 Sep 2040	2
M(C)L 284	10 Mar 2003	27 Sep 2040	1.6
M(C)L 285	10 Mar 2003	27 Sep 2040	1.6
M(C)L 286	10 Mar 2003	27 Sep 2040	0.35
M(C)L 287	10 Mar 2003	27 Sep 2040	2
M(C)L 288	10 Mar 2003	27 Sep 2040	2
M(C)L 289	10 Mar 2003	27 Sep 2040	1.8
M(C)L 290	10 Mar 2003	27 Sep 2040	2
M(C)L 291	10 Mar 2003	27 Sep 2040	1.8
M(C)L 311	02 Feb 2006	27 Sep 2040	1.86
M(C)L 312	02 Feb 2006	27 Sep 2040	1.83
M(C)L 313	02 Feb 2006	27 Sep 2040	1.98
EL 5728	17 May 2000	Renewal Pending	6,835

1.3 Land Ownership and Land Use

Challenger Mines Pty Ltd owns approximately 65ha of freehold land and leases a further ~87ha from the Crown which when combined covers the entire area currently disturbed by the construction of the mineral processing plant and the underground mine access (**Figure 2**).

All land within the Mine Site is zoned RU1 – Primary Production under the Tumut Local Environmental Plan 2012 (**Figure 2**). Open cut mining and underground mining are permissible with consent in this zone.

Figure 4 presents the land uses within and surrounding the Mine Site. Most of the land encompassed by ML1435, is fenced and developed farm land, used for grazing with an extensive development of vehicle tracks while some of the remaining mining tenements are in similar farm land or form part of degraded woodland. Ground cover is dominated by exotic pasture grasses, except on the more densely wooded slopes where native grasses prevail. There are some areas of rocky outcrops on hill sides and crests. Predominant land use in the area immediate to the mining lease is agricultural, primarily consisting of cattle, sheep and goat grazing. Where topography and soil profile allows, some feed-crop cultivation is practiced. Challenger owns 17 freehold properties and Crown leasehold properties which cover the majority of ML 1435, the mine, the proposed processing plant location and road access to the workings. Many of the other tenements and particularly to the north of ML1435 are located on land owned by third parties.

2. Final Land Use

2.1 Regulatory Requirements for Rehabilitation

Challenger have been granted approvals to mine and develop the Adelong Gold Project subject to specific conditions, including the requirement to rehabilitate the land at cessation of activities in a form that supports commercial land use. Prior to mining activities the land was used for grazing cattle, sheep, and goats. It is proposed to return the land to a state suitable for that purpose to the extent possible, but provide alternate commercial use such as forestry where it is not.

2.1.1 Environmental Impact Statement

The EIS on which Development Consent was granted provided for rehabilitation of the site as follows:

- Remove as far as possible, all traces of mining in areas disturbed. All structures and buildings are to be removed. Foundations are to be buried or in case of concrete broken up and buried. Approval from the local government can be obtained to leave certain buildings or infrastructure for future commercial use.
- Prior to disturbance, areas are to be stripped of soil for future use in rehabilitation. Given that the plant site and mine site is quite rocky and devoid of much soil cover, the main source of soil for rehabilitation was expected to come from the construction of the Tailings Dam.
- Waste Rock stockpiles and disturbed areas are to have soil layer laid over these dumps and disturbed areas when being rehabilitated. Tailings dams are to be capped by a rock layer and soil spread over the broken rock cap. The reformed area will be planted with indigenous tree, shrub and grass species.
- Re-vegetation will be monitored to ensure it is achieving the objective of maintaining surface stability. Remedial work will be undertaken to repair erosion as necessary.

2.1.2 Development Consents

The Development Consent conditions are largely about minimising the impact of the mining activity on the local community including the effects on associated infrastructure rather than setting out specific conditions for rehabilitation.

Prior to commencing operations, samples, measurements, records and analyses as required by EPA, DLWC, and DPI will be taken to establish baseline levels of environmental monitoring. Specific criteria for establish baseline levels for air quality, water quality, noise and vibration are prescribed in the EPL. This monitoring has occurred and clearly demonstrates that the waste rock is not acid generating nor does it contain any deleterious minerals that may impact on the environment.

Prior to commencing operations, Challenger is required to submit a final rehabilitation plan, and timetable, to the Local Council and DPI that provides for rehabilitation to a stable and appropriate landform.

The Rehabilitation and Management Plan is to include -

- the capping and rehabilitation of waste rock emplacements
- the rehabilitation of tailings dams in much the same way
- top soil management
- water control procedures past mine closure
- protection of indigenous trees wherever possible

Re-vegetation with specified tree species along (relevant) ridge lines, water courses and wherever optimal grazing conditions cannot be restored, for commercial and environmental uses as appropriate.

2.1.3 Mining Leases

Mining Lease 1435 was granted in 1998 on the basis of the development consents with a range of lease conditions. A further 17 mining claims were converted to Mining Leases between 2003 and 2006. These Mining Lease conditions have been recently amended as a result of the introduction of the Mining Amendments (Standard Conditions of Mining Leases - Rehabilitation) Regulations 2021 which sets standard conditions for all mining leases in NSW via the Regulations and amends the Mining Lease Conditions contained in the lease to :

- Maintaining a Security Bond that covers the costs of rehabilitation
- Any Assessable Prospecting Activity not covered by the Development Consent requires approval
- In the case of ML1435 any mining that takes place on the Company's approved "Designated Dam" (tailings dam) is to be approved by Dam Safety and the Resource Regulator

The Leases are also subject to the conditions provided under the Mining Act and Regulations and in particular Schedule 8A of the Regulations that in summary includes:

- Take action to minimise harm to the environment
- Rehabilitate disturbance as soon as practical
- Rehabilitation to achieve a final land use objective
- Leaseholders to undertake a rehabilitation risk assessment and implement plans to ameliorate risks, document plans, assess forward programs and report on rehabilitation undertaken.

2.2 Final Land Use Options Assessment

The Mine Site is located on the western slopes of Victoria Hill and early photographs (prior to the construction of the processing plant) show the ground was rough grass land with rocky outcrops and used for grazing. As a result, grazing is the preferred final land use for the Mine Site.

Another potential land use possible at this site would be forestry and in particular because of the Visy plant located just 7km east along the Snowy Mountain Highway. The Visy Paper Mill imports cut trees from the surrounding district for processing so could provide a commercial option for the mine site where grazing proves unsuitable.

Within the terms of the development approval there is scope to obtain approval from the Council to retain some of the infrastructure such as the process plant shed and administration buildings to be used for other commercial purposes. Given its proximity to Adelong and the Snowy Mountain Highway this would also potentially provide an alternate commercial option for this site (subject to Council approvals).

At the close of mining operations there is likely to be substantial quantities of broken rock that could provide a long term supply of crushed rock for use by the Local Council as well as other industries in the region. This could also be a longer term “commercial” use for this property.

The final decision on the land use and rehabilitation requirements for this site is unlikely to be decided in the near future as the processing plant and associated infrastructure will be required for future gold mining operations and so will only be rehabilitated during the decommissioning of the mine. At this stage all of the above options are available.

Any open cut remaining open at the end of mine life would remain as water storage, but could also be backfilled with imported material subject to receipt of the appropriate approvals..

2.3 Final Land Use Statement

To the extent possible, the site will be rehabilitated to allow on-going beneficial land use. Historically, the land on which the processing plant was built had been cleared for grazing cattle, sheep and goats, and the majority of the site could be rehabilitated for that purpose. However, forestry is an alternate option for this site.

A more complete analysis of rehabilitation plans and options for the Adelong Gold Project will be made once a more detailed plan for re-opening the gold mine is available.

2.4 Final Land Use and Mining Domains

Plan 1 and **Figures 5A** and **5B** present the final land use and mining domains for the Mine Site.

3. Rehabilitation Risk Assessment

Within the framework of the existing site conditions there are very few minor to moderate risk items that may affect the ability to achieve a positive rehabilitation outcome if the site was rehabilitated at this current time. When considered in terms of the Risk Management Issues typical of any mine sites, the risks applicable to the Adelong Gold Project are assessed as follows:

Risk	Probability	Severity	Action to Minimise Risk
Acid Mine Drainage	LOW	LOW	Any minor sulphides would be processed as ore

The host rock (granodiorites and basic intrusives) are low in sulphides and, with the exception of the spoils from underground mining, all the remaining material on site is from the oxide zone. Tests on the rock material from the decline and underground all show the material to have low potential for generating acid, and this is verified by the long term monitoring of drainage from the underground mine that has recorded pH > 7 for many years.

Risk	Probability	Severity	Action to Minimise Risk
Soil Availability and possible Erosion	Moderate	Low	Encourage early propagation of plants with fertilizer to protect soil from erosion

The area disturbed lies on the western flank of Victoria Hill where soil cover was very thin, and so while soil has been stockpiled, any rehabilitation of the site at this time would have limited material to effectively cover any broken rock. This situation would improve if and when the Tailings Dam is constructed as the valley has several metres of sediments and soil that can be used to rehabilitate that Tailings Dam but also other sites including the plant site.

Risk	Probability	Severity	Action to Minimise Risk
Flora	Moderate	Moderate	Continue weed spraying and add grass seeds/fertilizer to any areas rehabilitated

Weeds are also endemic on this site and while the company spends several thousand dollars a year in weed spraying, this merely suppresses the problem rather than eradicate the weeds. More than likely any existing soil stockpiles to be used in rehabilitation, would carry seeds from these weeds and lead to weeds propagating in rehabilitated areas. While this would return the ground to the condition it was prior to mining activity, it will not generate high value farm land. The presence of weeds on this property has not constrained the use of this land owned by the company for grazing by local farmers and so should not prevent the property from continuing to be used for grazing after mining is completed and the land is rehabilitated.

Risk	Probability	Severity	Action to Minimise Risk
Bushfire/Grassfire Control	Moderate	Moderate	Maintain tracks for access to various parts of the property, Retain water tanks and the Goodwin Dam as water resources available for firefighting. Keep grass levels low with agistment and stocking property with goats.

Bushfires are a moderate risk at this site and the 2021 bushfires in NSW did reach an area within 10km of this site. The property currently has the means to fight a fire. However, after rehabilitation has occurred and the water tanks and water supply is removed then the rehabilitated site would potentially be more vulnerable to bush/grass fires.

Risk	Probability	Severity	Action to Minimise Risk
Aboriginal & European Heritage	Low	Low	Maintain the company’s policy of managing heritage issues

There are no registered Aboriginal sites in the mining tenements and while there is historical mining of gold at various sites, there is only limited evidence in the form of shafts and waste dumps. Sites where processing took place which have some heritage value but are largely distant from the existing resources so should not be affected by future mining. The company retains a management plan to protect sites/items of any significant heritage value

Risk	Probability	Severity	Action to Minimise Risk
Pollution	Low	Low	Manage any potential risks associated with chemicals and operate within the EPA License

Currently there are no hazardous chemicals stored on site other than diesel and weed control sprays. However, the company has in place a set of documents approved by the NSW government for managing the use and storage of hazardous chemicals such as cyanide. The company also maintains bunds/drainage channels that direct all water from processing/storage site into Goodwin Dam to prevent any release of pollutants. The company has monitored site conditions for several years under an EPA license and no pollution has occurred and the site is within set limits under the license.

Risk	Probability	Severity	Action to Minimise Risk
Safety	Low	Low	Continue to monitor safety measures and repair/replace fencing where needed.

During exploratory drilling or trenching etc there are protocols adopted for managing safety on site and all contractors on site are inducted into these safety protocols. The site also has a number of historical shafts that could pose a danger trespassers. The site is fenced with locked gates and warning signs. Individual shafts have been fenced off or have a grate over the shaft with locked access.

4. Rehabilitation Objectives and Rehabilitation Completion Criteria

4.1 Rehabilitation Objectives and Rehabilitation Completion Criteria - Summary

Unless the Council approve the use of some of the existing mine infrastructure for alternate commercial use, the company aims to rehabilitate the current mine site with a view to returning the land for grazing sheep, cattle or goats to the extent possible.

In terms of the current disturbance, it should be feasible to re-contour all but the quarry to fit the natural contours of the land with the existing material on site. In the case of the quarry, the material extracted from this small quarry has already left the site to be used in the construction of the Visy Paper Mill.

The EIS on which mining approval was based, showed the quarry formed part of the waste removal needed to mine the Challenger Deposit via an open cut. Therefore the quarry was to remain part of the open cut site.

REHABILITATION MANAGEMENT PLAN
CHALLENGER MINES PTY LTD – Adelong Gold Mine

Objective	Performance Indicator	Completion Criteria	Justification/ Source	Complete (yes/no)	Timetable
Phase 1 Decommissioning					
Domain-Infrastructure					
All redundant infrastructure and services not suitable for a final land use will be removed	Redundant infrastructure and services identified and removed.	Complete removal of redundant infrastructure and services unless retention is approved by Council for future commercial operations.	-	No	Decommissioning the mine
Domain safe and free from hazardous materials	Hazardous materials removed and disposal/chain of custody certificates received	Certificates Held	-	No	Decommissioning the mine
All roads and hardstand areas to be retained for final land use reduced in width or size to that suitable for final land use	Roads removed and or remaining roads reduced. Hardstand areas reduced or removed	Permitted hardstand and road areas identified and remainder removed	-		Decommissioning the mine
Domain-Decline					
Infrastructure removed and domain made safe.	Services removed	Complete removal of services	-	No	Decommissioning the mine
	Plug Decline and backfill boxcut using waste rock stockpile material	Concrete plug in decline box cut backfilled	-	No	Decommissioning the mine
Domain-Final Void (Dry Tailings Stockpile in Quarry)					
Infrastructure removed and domain made safe.	Stockpile removed and placed in approved TSF and HDPE liner removed	Stockpile securely sealed to prevent chemical release to environment.		No	Decommissioning the mine or moved when permanent TSF built
	If no TSF built then tailings sealed in placed and buried in-situ			No	Decommissioning the mine

Objective	Performance Indicator	Completion Criteria	Justification/ Source	Complete (yes/no)	Timetable
Domain Waste Rock Dumps and ROM					
Stable and permanent landform established to conform with surrounding landscape.	Landform safe and stable and conforms to surrounding landscape	Survey confirms that with landform conforms with surrounding landscape and is safe and stable.		No	Decommissioning the mine
Domain water management					
Domain stable and non-polluting	Suitable surface water controls installed and operating effectively	Monitoring of water discharged from the Mine Site complies with EPL limits. No identifiable erosion or sedimentation	EPL	No	Decommissioning the mine
Domain-Infrastructure					
Landform safe, stable and secure	Earthworks conducted to create a landform that conforms to surrounding landscape	Earthworks completed. Survey confirms that with landform conforms with surrounding landscape. Compare mapping between pre-mining and post-mining contours		No	Decommissioning the mine
	Suitable surface water controls installed and operating effectively	Surface water quality. Monitoring of water discharged from the Mine Site complies with EPL limits No identifiable erosion or sedimentation			Decommissioning the mine
Domain-Decline					
Infrastructure removed and domain made safe. Final landform Stable and permanent.	Plug decline and backfill boxcut using waste rock stockpile material	Concrete plug in decline box cut backfilled to original landform		No	Decommissioning the mine
Domain-Final Void (Dry Tailings Stockpile in Quarry)					
Infrastructure removed and domain made safe. Final landform non polluting. Stable and permanent	Contaminated Quarry floor substrate (if any) identified and removed to permanent TSF.	Confirm any contaminated material removed or securely sealed for environmental protection(visual inspection)		No	During Open Cut development of Challenger
	Limit surface waters entering the quarry	surface water diversion in place			Ongoing

REHABILITATION MANAGEMENT PLAN
CHALLENGER MINES PTY LTD – Adelong Gold Mine

Objective	Performance Indicator	Completion Criteria	Justification/ Source	Complete (yes/no)	Timetable
landform (final void) established. Surface water diverted away from void.	Void geotechnically stable	Independent geotechnical report indicating no unacceptable risk of instability			
	Access to void restricted. Retain access for light vehicles.	Safety bund and fence and gate off access to void.			Ongoing (safety bund)
Domain Waste Rock Dumps and ROM					
Landform established to conform with surrounding landscape. Stable and permanent landform. Final landform non-polluting.	Landform conforms to surrounding landscape	Survey confirms that with landform conforms with surrounding landscape.		No	Decommissioning the mine
	Suitable surface water controls installed and operating effectively	Surface water quality. Monitoring of water discharged from the Mine Site complies with EPL limits No identifiable erosion or sedimentation			Ongoing as per EPL
Domain water management					
All sediment and water storage dams to be retained for stockuse. Diversion drains maintained to divert water around areas of disturbance.	Suitable surface water controls installed and operating effectively	Surface water quality. Monitoring of water discharged from the Mine Site complies with EPL limits No identifiable erosion or sedimentation		No	Ongoing
Phase 3 Growth Medium Development					
Domain-Infrastructure					
Soils, hydrology and pasture system with maintenance needs no greater than those of analogue sites	Topsoil spread over landform at a thickness of => 150mm.	Test pits (10 per ha) show topsoil thickness =>150mm thick across shaped landform, unless data from analogue sites suggests an alternative thickness is acceptable		No	Decommissioning the mine
	Application of ameliorant/fertilizer	Apply appropriate soil ameliorants/fertilizer at rates specified			Decommissioning the mine
	Application of pastoral seed mix	Apply seed mix at the specified rates as advised by a consultant pastoral advisor/agronomist			Decommissioning the mine
Domain-Decline					

Objective	Performance Indicator	Completion Criteria	Justification/ Source	Complete (yes/no)	Timetable
N/A					
Domain- Final Void (Dry Tailings Stockpile in Quarry)					
N/A					
Domain Waste Rock Dumps and ROM					
Landform established to conform with surrounding landscape. Stable and permanent landform. Soils, hydrology, and pasture system with maintenance needs no greater than those of analogue. Final landform non-polluting.	Topsoil spread over landform at a thickness of => 150mm.	Test pits (10 per ha) show topsoil thickness =>150mm thick across shaped landform, unless data from analogue sites suggests an alternative thickness is acceptable		No	Decommissioning the mine
	Application of ameliorant/fertilizer	Apply appropriate soil ameliorants/fertilizer at rates specified by pastoral advisor/agronomist			Decommissioning the mine
	Application of pastoral seed mix	Apply seed mix at the specified rates as advised by a consultant pastoral advisor/agronomist			Decommissioning the mine
Domain water management					
All sediment and water storage dams to be retained for stock use. Diversion drains installed and maintained to divert water around areas of disturbance.	Analyse water in water storage dams and assess water quality as per guidelines for stock	Water in dams meets the minimum water quality guidelines for stock use or fence off to exclude stock.	Water quality testing as per DPI Water for livestock: interpreting water quality tests	No	Decommissioning the mine
Phase 4 Ecosystem and Land Use Establishment					
Domain-Infrastructure					
Remaining infrastructure suitable for a lawful final land use	Infrastructure remaining at the end of the mine life is suitable for a lawful final land use	Infrastructure safe and suitable for a lawful final land use		No	Decommissioning the mine
Stable and permanent landform. Soils, hydrology,	Vegetation survey to assess pasture development and productivity	Mix of species growing is broadly consistent with pasture species at analogue site		No	Decommissioning the mine

REHABILITATION MANAGEMENT PLAN
CHALLENGER MINES PTY LTD – Adelong Gold Mine

Objective	Performance Indicator	Completion Criteria	Justification/ Source	Complete (yes/no)	Timetable
and pasture system with maintenance needs no greater than those of analogue site Final landform non-polluting	Weed Species and abundance inspection and control program late spring early summer weed inspection including inspection of analogue sites	Weed species and abundance consistent with analogue sites. Declared weeds actively managed.		No	Decommissioning the mine
Domain Waste Rock Dumps and ROM					
Stable and permanent landform. Soils, hydrology, and pasture system with maintenance needs no greater than those of analogue site Final landform non-polluting.	Vegetation survey to assess pasture development and productivity	Land capability similar to existing land capability at analogue site. Mix of species growing is broadly consistent with pasture species at analogue site		No	Decommissioning the mine or during mining operations when final extent of the waste rock dump is established
	Weed Species and abundance inspection and control program late spring early summer weed inspection including inspection of analogue sites	Weed species and abundance consistent with analogue sites. Declared weeds actively managed.		No	Decommissioning the mine
Domain water management					
All sediment and water storage dams to be retained for stockuse. Diversion drains installed and maintained to divert water around areas of disturbance.	Analyse water in water storage dams and assess water quality as per guidelines for stock	Water in dams meets water quality guidelines for stock use or fence off to exclude stock.	Water quality testing as per DPI Water for livestock: interpreting water quality tests	No	Decommissioning the mine

Objective	Performance Indicator	Completion Criteria	Justification/ Source	Complete (yes/no)	Timetable
Phase 5 Ecosystem and Land Use Sustainability					
Domain-Infrastructure					
Remaining infrastructure suitable for a lawful final land use	Infrastructure remaining at the end of the mine life is suitable for a lawful final land use	Infrastructure safe and suitable for a lawful final land use		No	Decommissioning the mine
Stable and permanent landform. Soils, hydrology, and pasture system with maintenance needs no greater than those of analogue site Final landform non-polluting	Vegetation survey to assess pasture development and productivity	Land capability similar to existing land capability at analogue site. Mix of species growing is broadly consistent with pasture species at analogue site		No	Decommissioning the mine
	Weed species and abundance inspection and control annually. Declared weeds actively managed	Weed species and abundance consistent with analogue sites..		No	Decommissioning the mine
Soil chemical and physical characteristics like that of analogue sites	Soil profile of rehab areas developing appropriately	Soil survey demonstrates characteristics like that of the analogue sites.		No	
Domain Waste Rock Dumps and ROM					
Stable and permanent landform. Soils, hydrology, and pasture system with maintenance needs no greater than those of analogue site Final landform non-polluting.	Vegetation survey to assess pasture development and productivity	Land capability similar to existing land capability at analogue site. Mix of species growing is consistent with species at analogue site.		No	Decommissioning the mine
	Weed Species and abundance inspection and control program conducted each summer	Weed species and abundance consistent with analogue sites. Declared weeds actively managed.		No	Decommissioning the mine
Soil chemical and physical characteristics like that of analogue sites	Soil profile of rehab areas developing appropriately	Soil survey demonstrates characteristics like that of the analogue sites.		No	Decommissioning the mine

REHABILITATION MANAGEMENT PLAN
CHALLENGER MINES PTY LTD – Adelong Gold Mine

Objective	Performance Indicator	Completion Criteria	Justification/ Source	Complete (yes/no)	Timetable
Domain water management					
All sediment and water storage dams to be retained for stock use. Diversion drains installed and maintained to divert water around areas of disturbance.	Analyse water in water storage dams and assess water quality as per guidelines for stock	Water in dams meets water quality guidelines for stock use or fence off to exclude stock.	Water quality testing as per DPI Water for livestock: interpreting water quality tests	No	Decommissioning the mine

4.2 Rehabilitation Objectives and Rehabilitation Completion Criteria – Stakeholder Consultation

All the areas that have been disturbed at the current mine site are located on land owned or leased by the company. This disturbance was carried out in accordance with the Development Consents that arose after an extensive public review of the Environmental Impact Statement and so the development plans have been the subject of consultation in the past.

While the areas disturbed are on land leased or owned by the company, the company does consult with the local community on matters likely to affect them. During previous attempts to mine the Adelong project a Community Consultation Committee was formed in order to communicate with the broader community on such matters including rehabilitation.

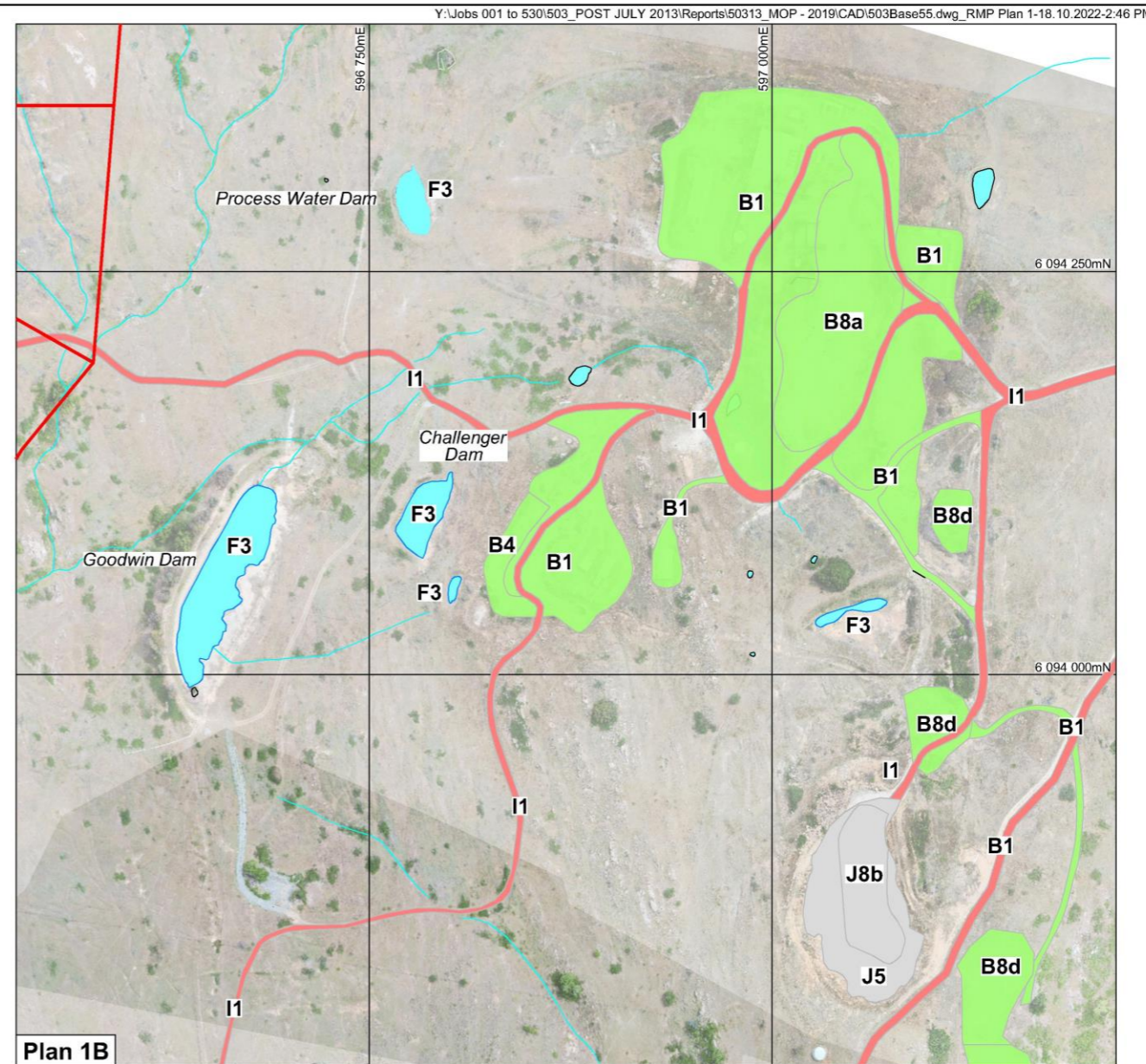
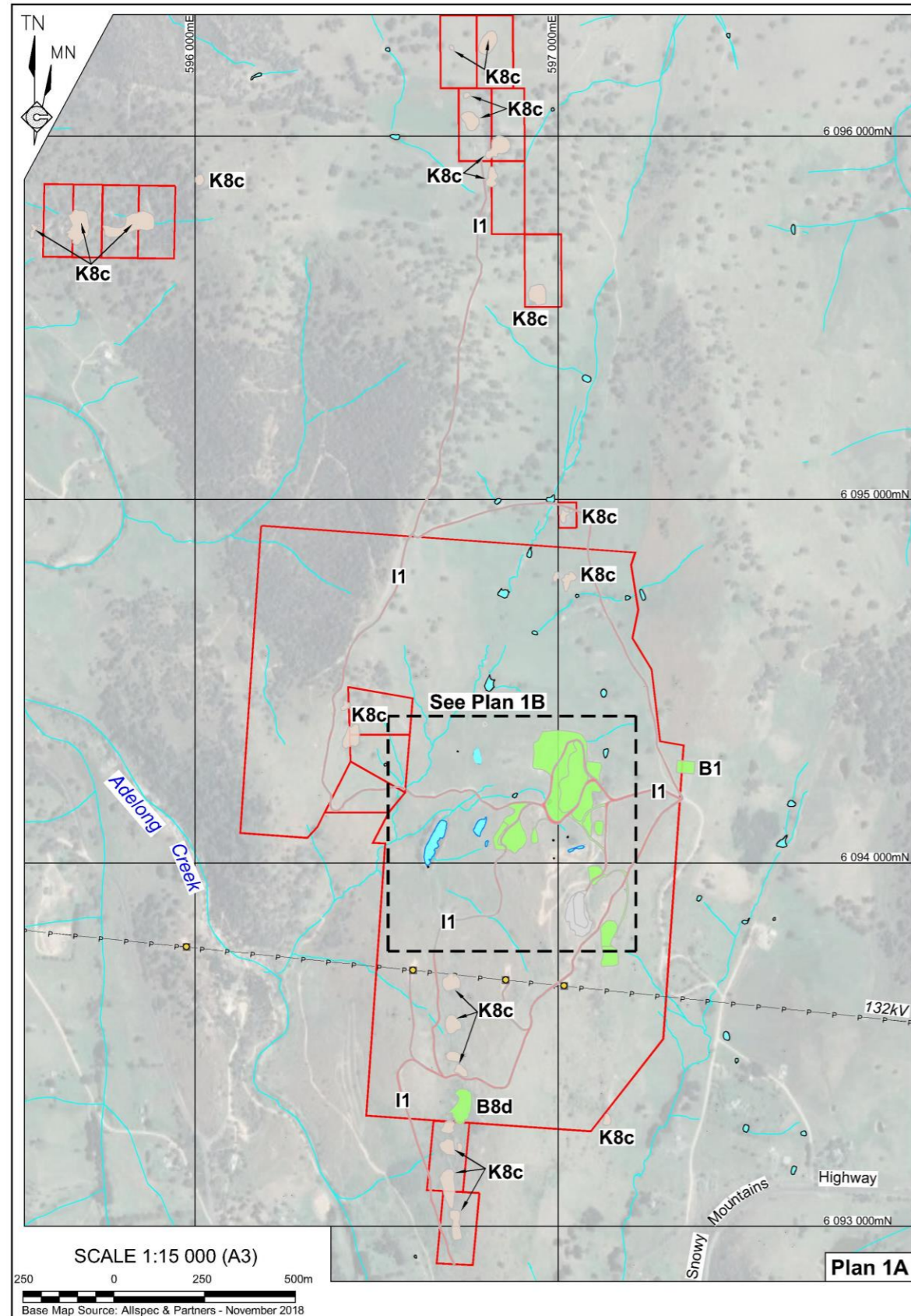
The exploration work that is conducted on the mining tenements and Exploration Licence is also on land owned by the surrounding farmers and this exploration activity is discussed and agreed with these farmers under formal land access agreements and so there is direct consultation with those landowners in respect of rehabilitation. Where possible we also involve those landowners in the rehabilitation process.

At such time the Company plans the re-establishment of mining operations it is intended to re-activate the Community Consultation Committee to consider all aspects of the mine development plans and rehabilitation arrangements.

The company maintains good relations with the local community and employs a local representative on site as a contact. Where we are undertaking work that may affect local residents (such as additional traffic down a local road) the company consults with local residents to advise them. No complaints have yet been received.

5. Final Landform and Rehabilitation Plan

5.1 Final Landform and Rehabilitation Plan



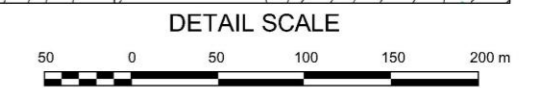
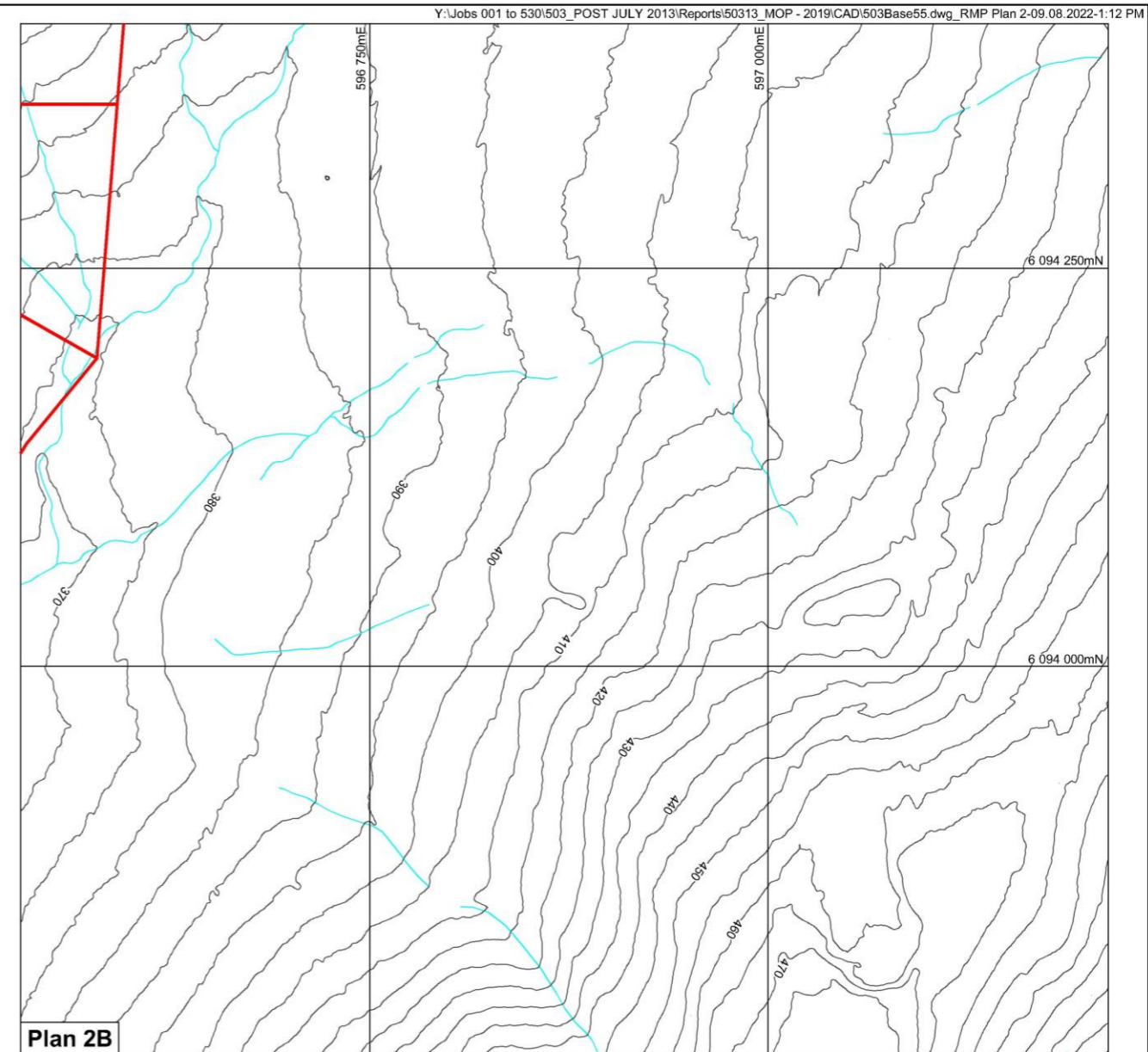
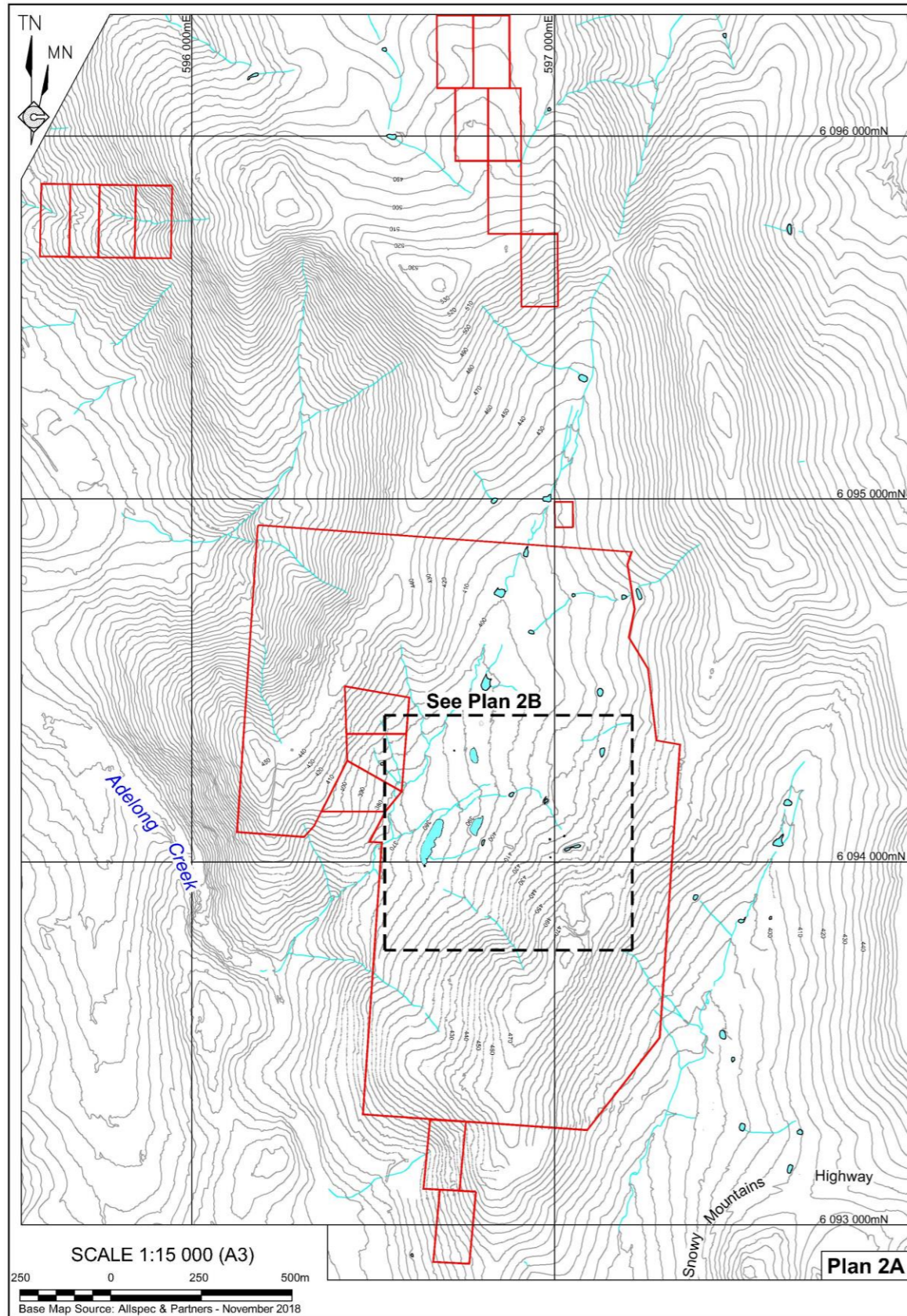
Final Land Use Domain	Mine Domain	Ref	Area (ha)
Agricultural Grazing	Infrastructure Area	B1	3.3
Agricultural Grazing	Overburden Emplacement Area	B4	0.1
Agricultural Grazing	Other (Ore Stockpile Area)	B8a	0.9
Agricultural Grazing	Other (Rehabilitation Area)	B8d	0.7
Water Management Area	Water Management Area	F3	0.5
Infrastructure	Infrastructure Area	I1	3.6
Final Void	Active Mining Area (Open Cut Void)	J5	0.3
Final Void	Other (Process Residue Stockpile Area)	J8b	0.3
Other (Mullock)	Other (Mullock)	K8c	4.0

REFERENCE	Final Land Use Domain
— Mining Lease / Mining (Claim)	— B - Agricultural - Grazing
— Lease Boundary	— F - Water Management Area
— Watercourse/Drainage Line	— I - Infrastructure
— Dam	— J - Final Void
— 132kV Power Line and Pylon	— K - Other (Mullock)

Mine Name	Adelong Gold Mine
Plan Name	Plan 1 Final Landform Features
Anticipated Year of Relinquishment	????
Date Plan Created	25 August 2022
Data Theme	
Submission ID Numbers	

Plan 1
FINAL LANDFORM FEATURES

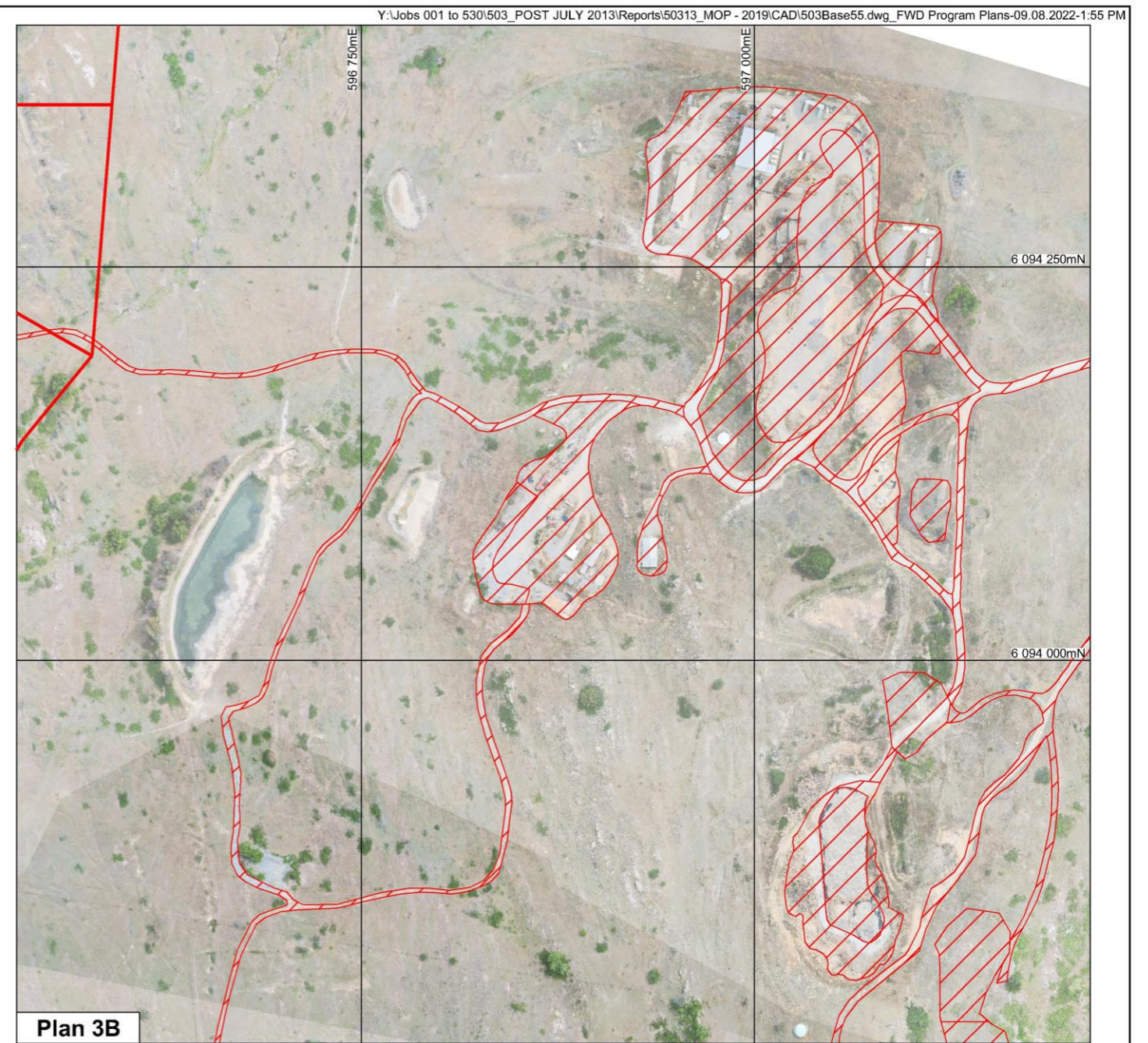
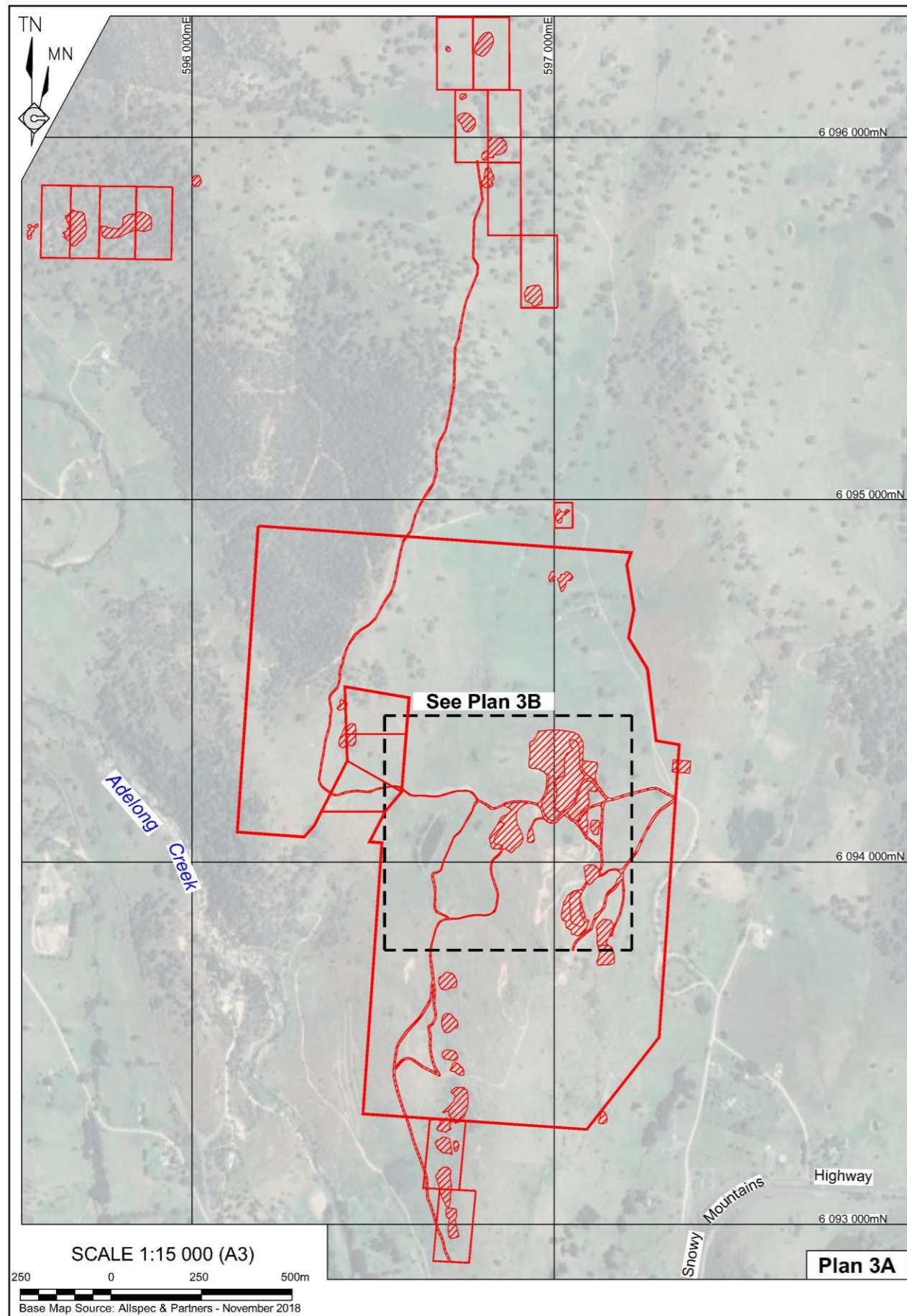
Plan 1 Final Landform Features



- REFERENCE
- Mining Lease / Mining (Claim) Lease Boundary
 - Watercourse/Drainage Line
 - Dam
 - Existing Contour (mAHD)(Interval = 5m)
 - Final Contour (mAHD)(Interval = 5m)

Mine Name	Adelong Gold Mine
Plan Name	Plan 2 Final Landform Contours
Anticipated Year of Relinquishment	????
Date Plan Created	9 August 2022
Data Theme	
Submission ID Numbers	

Plan 2
 FINAL LANDFORM CONTOURS



- REFERENCE
- Mining Lease / Mining (Claim)
 - Lease Boundary
 - Watercourse/Drainage Line
 - Dam
- Rehabilitation Forecast
- ▨ Forecast Disturbance
 - ▨ Forecast Land Prepared for Rehabilitation
 - ▨ Ecosystem and Land Use Establishment



Mine Name	Adelong Gold Mine
Plan Name	Plan 3 Progressive Rehabilitation Schedule
Anticipated Year of Relinquishment	????
Date Plan Created	9 August 2022
Data Theme	
Submission ID Numbers	

Plan 3
 PROGRESSIVE REHABILITATION SCHEDULE

6. Rehabilitation implementation

6.1 Life of Mine Rehabilitation Schedule

The current economic studies provide for the development of the Adelong Gold Project based on a central milling facility treating ore from a number of deposits in the project area. An economic assessment has demonstrated a mine life of +5 years based on open cut and underground mining at Challenger, Caledonian and Currajong Deposits. This is merely 60% of the current resources and with on-going exploration, these resources are expected to increase and so mine life extended.

The area of current disturbance is primarily the Processing Plant Site, Administration Buildings and associated infrastructure. These are expected to remain in use until the mine is decommissioned.

The area around the underground portal to the Challenger deposit and any other mine sites developed in the future can be rehabilitated once all the commercially extractable resources have been extracted. This plan for scheduling those sites for rehabilitation will be formulated once the mining schedules are better known. The current access via the decline to the Challenger Deposit may also be rehabilitated once mining at Challenger is complete. Part of the tasks in scheduling rehabilitation of mine sites after the resources at that site have been exhausted will be to look at ways to rehabilitate an open cut mines with waste taken from the subsequent open cut mines.

6.2 Phases of Rehabilitation and General Methodologies

6.2.1 Active Mining Phase

During the Active mining phase where exploration activity will be the primary cause of disturbance, rehabilitation will occur as and when the exploration work at that site has been complete. In this regard:

Exploration Activity

- Exploratory drill holes will generally be capped and drill pads rehabilitated/re-contoured on completion of a drilling program
- Trenches, pits etc would be refilled after sampling/mapping/surveying is completed
- Tracks to drill sites re-contoured with any removed soil after the track is no longer required for access to a site.

Mining Phase

- At this stage Mining Activity is likely to be confined to on-going exploration activity with a view to final assessment of the mining plans for each deposit and where necessary additional Development Consents are granted.
- Once a complete plan and schedule for other mining activity is known then additional longer term staged rehabilitation plans would be formulated. This most likely would involve using of waste rock developed from one open cut being in the rehabilitation of any completed open cut.

Soils and Materials

Any site being cleared for Mining Activity is to have the topsoil stored and used in the rehabilitation of the site.

At this stage the Development Consent and Mining License also allows for the sale of constructional material (crushed rock) but the likely quantity sold is yet to be determined. Some waste rock will also be required for constructing the Tailings Dam and is to be used in the rehabilitation of the tailings dam. There is expected to be surplus waste rock that would be

Some clay material may be required to be imported into the lease to seal the base of the tailings dam.

Flora/Fauna

There is no endangered species of flora / fauna recorded in this area. The areas containing the known resources lie on land where the native trees are removed and the land used for grazing. None of the future plans are expected to have a material impact on flora/fauna.

Rock/Overburden Emplacement

There is a small quantity of waste rock (Max 3,000 lcm) currently forming a platform outside the decline portal. This was generated from opening up the decline into the Challenger Deposit. This waste could be used in partially rehabilitating the quarry or for burying old/disused machinery. The waste rock from the decline was tested and is not acid generating.

Some stockpiles of Mullock from historical mine sites as well as small quantities of ore from underground are stockpiled on the ROM stockpile. If any of these resources remain at the end of the mine life they can be buried.

Waste Management

All non-production wastes are stored on site in sealed bins and skips and removed to a licenced waste management facility. Waste hydrocarbons are removed from site the day they are generated. The Company is not aware of any contaminated land within the Mine Site.

Geology, Geochemistry and Acid Mine Drainage

The waste rock from the decline was tested and is not acid generating.

Spontaneous Combustion

There is no material prone to spontaneous combustion within the Mine Site.

Tailings Management

While approval for a Tailings Storage Facility(TSF) under the Development Consents and by NSW Dam Safety there has been no TSF constructed to date. Should that situation change there are quite stringent controls and requirements under the NSW laws that would come into play in management of that TSF.

Erosion and Sediment Control

The site currently has silt traps prior to catch any runoff from site with all the final run-off ending up in the Goodwin Dam. However, there is no substantial erosion taking place within the area of disturbance at the site.

Exploration Activities

There is an active exploration program underway although the focus in the past year has been to look for additional resources mainly within the Exploration License. The Company conforms to the code of practice for rehabilitating drill sites and any trenching. Where road/track access is constructed to specific drill sites etc or where drill pads are constructed these sites are rehabilitated once exploration activity to that site is no longer required. Around the plant site and a single access track across the valley have been capped with stone to provide all weather access.

6.2.2 Decommissioning

The majority of the areas currently disturbed are located in and around the processing plant site and decline portal. As noted previously the future plans for the Adelong Gold Project is to have a central processing facility taking ore from several orebodies which at this stage have not been brought into production.

The majority of these sites will be rehabilitated at the end of the project mine life. Currently there are around +5 years of commercial resources to mine and process and the mine life is expected to be extended with additional ore.

Site Security

The site maintains reasonable security with fences and locked gates. There is also signage around the site warning of specific dangers such as open shaft, high voltage power etc. The company monitors the site for danger and takes appropriate action where necessary. Not all historical shafts and openings will be removed during mining so some fencing and warning signs will remain after rehabilitation is completed.

Infrastructure to be Removed or Demolished

At the completion of mining and processing activities, the Company will demolish and remove from site the following infrastructure unless there is a lawful final use for the infrastructure and retention is approved by the landholder, and local council. The details of the plant, equipment, and associated infrastructure to be demolished or removed are detailed in **Table 4**.

Table 4
Infrastructure to be Removed or Demolished

See Figures 5A and 5B	Components	Rehabilitation to be Completed	Timetable
Processing Plant Area	<ul style="list-style-type: none"> • Crushing & grinding plant with mobile jaw crusher, gyratory crusher, ball mill vibrating screen and associated conveyors. • Processing building housing gravity gold, flotation and cyanide circuits. • Diesel generators, fuel tanks and water tanks. • Transportable office and ablution facilities. • ROM Stockpile area 	<p>The Council may approve infrastructure or buildings that can remain after the mine closes for alternate commercial use, otherwise:</p> <p>All plant, equipment and infrastructure (power, water, telecommunications etc) is to be removed.</p> <p>Concrete foundations of crushing and grinding circuit broken and buried, any fuel spills or contamination cleaned up.</p> <p>Area re-contoured to landscape and available stockpiled soils respread over disturbed areas.</p>	At the end of the mine life
Mine Portal Area	<ul style="list-style-type: none"> • Decline portal. • Storage shed. • Generator shed with switchboard and fuel tank. • Transportable office and ablution facilities. • Core shed. • Laydown area. • Waste rock emplacement. 	<p>Decline Portal Sealed for access, but allowed to naturally drain old workings (Monitored to date - pH>7 no pollutants).</p> <p>Buildings and equipment removed. Any concrete foundations broken and buried.</p> <p>Laydown area is generated from waste mined from underground. Area re-contoured to blend in with landscape. Available stockpiled soil spread over the waste rock.</p>	The Decline and associated infrastructure removed once underground access no longer required, Core Shed rehabilitated at end of mine life
Administration Area	<ul style="list-style-type: none"> • Transportable office and ablution facilities. • Water tank. • Car parking area. 	<p>Offices, water tanks and facilities removed.</p> <p>Car Park site re-contoured to natural contours and available soil spread over the area.</p>	At the end of the mine life
Water Management Infrastructure	<ul style="list-style-type: none"> • Various bunds and dams to capture run-off from mine site • Water tanks. • Water Pipeline to Adelong 	<p>Goodwin Dam and other dams remain for future use as a water resource for pastoral use. Any accumulated silt in the Goodwin dam removed and used in rehabilitation.</p> <p>Water tanks and pipelines removed.</p>	At the end of the mine life

See Figures 5A and 5B	Components	Rehabilitation to be Completed	Timetable
Explosive magazine	Secure Storage facility for explosives	Explosive magazine removed and site re-contoured.	At the end of the mine life
Quarry		Quarry forms part of the future open cut and will be dealt with as part of that open cut. Otherwise will be made safe. About 4,380t of tailings stored in quarry would be moved to permanent TSF or would be capped with rock and soil as an alternate option.	At the end of the mine life

Buildings, Structures and Fixed Plant to be Retained

Infrastructure that will remain for ongoing land management purposes, with landholder and Council approval, will include the following.

- Processing Shed for storage of equipment
- Administrative buildings
- Telecommunications
- Ablutions

Management of Carbonaceous/Contaminated Material

No known contaminated land is present within the Mine Site.

No carbonaceous material exists within the Mine Site.

Hazardous Materials Management

All hydrocarbons will be stored in bunded areas or on bunded pallets and will be removed at the end of the life of the Mine. No other hazardous materials will be stored or used within the Mine Site.

Underground Infrastructure

The existing portal to the decline would be sealed and box cut filled. As the portal drains water from the underground which naturally flows from the portal during wet conditions a drain will be left to provide on-going use for livestock.

The buildings generators and other infrastructure used for underground mining would be removed.

6.2.3 Landform Establishment

6.2.3.1 Water Management Infrastructure

The intent is to leave the existing bunds and diversions around the plant site in place which when combined with the Goodwin Dam it provides a level of protection from any possible pollution leaving the site. This will ensure any contamination around the plant site are contained/managed and ultimately channelled into the Goodwin Dam. This provides the ability to monitor the site for any pollution caused during rehabilitation, as well as providing an added level of containment while any contaminated material is dealt with.

6.2.3.2 Final Landform Construction

General Requirements

The area of disturbance at the processing plant site has largely involved the establishment of benches to create level areas on which plant and equipment has been constructed or where car parking occurs or ore storage/stockpile areas have been created. All the rock material and topsoil moved to create these benches remain on site and the aim would be to re-contour the rock material to return the site to a landform that is compatible with the area, and then spread available stockpiled soil.

Reject Emplacement Areas and Tailings Dams

There are no tailings facilities constructed and so no plans are provided for rehabilitation. This is likely to change once a plan to redevelop the mine is approved.

Final Voids, Highwalls and Low Walls

The only voids likely to remain at this point, is the small quarry at the top of Victoria Hill used to mine construction material for the Visy Paper Mill. This forms part of the original designed open cut for the Challenger Orebody and if redevelopment plans at Adelong proceed, this void would form part of the future open cut at Challenger.

6.2.3.3 Construction of Creek/River Diversion Works

No creek diversion work has been constructed and no permanent water courses exist at site.

6.2.4 Growth Medium Development

Soil at site has been stockpiled from areas disturbed. Where rehabilitation occurs shortly after disturbance there is generally sufficient seed and medium to rehabilitate a site without added seed or fertilizer. Some of the areas disturbed have had the soil stockpiled for several years so it is intended that where this occurs that grass seeds native to the area and some fertilizer would be added to the soil as part of the rehabilitation process.

6.2.5 Ecosystem and Land Use Establishment

The area disturbed is a small part of an existing ecosystem with existing flora and fauna present in the surrounding area. Once the site is rehabilitated it is expected that the flora/fauna will naturally return to this site.

6.2.6 Ecosystem and Land Use Development

6.2.6.1 Weed and Pest Management and Monitoring

Weeds are endemic in the area surrounding this site and while the will be measures put in place to control these it is unlikely to eradicate them. The leases do have an existing population of rabbits, but some of these leases are located within 2 km of the township of Adelong so it is likely that some feral cats, foxes and dogs may move into this area. The area would be monitored for a period after mine closure

6.2.6.2 Environmental Management and Monitoring Program

Surface Water

Monitoring water discharged from the site is part of the EPA Licence and would continue for a period after mine closure.

Groundwater

Groundwater is also monitored for pollutants in the EPA License and would continue for a period after mine closure.

Ecology

The areas disturbed form a small part of the areas held that are undisturbed and retain their natural ecology. Once this area is rehabilitated it is expected that the natural ecology will return to the rehabilitated areas quite quickly.

Land Capability

The land has capability to be used for grazing sheep cattle and goats. It could also be used as a tree plantation supplying cut timber to the local Visy Paper Mill. Most of the currently disturbed areas can be returned to these land uses.

6.2.6.3 Revegetation

While all the areas disturbed have had their soil stockpiled for future use in rehabilitation there may be a requirement to assist in rehabilitation the soil with seed and some fertilizers.

6.2.6.4 Land Management and Infrastructure Maintenance

As much of the disturbed land is either owned by the company or leased by the company, there will be a Land Management Plan put in place for the on-going commercial use of the land which will involve maintenance of any remaining infrastructure.

6.3 Rehabilitation of Areas Affected by Subsidence

There is no subsidence present or expected to occur and no subsidence-related management and maintenance programs are required.

7. Rehabilitation Quality Assurance Process

To assess the effectiveness of rehabilitation and the potential objectives to provide an on-going use as pastoral land or forestry, it will be important to put in place effective monitoring that should involve:

- Taking photographs from fixed points showing effectiveness of the rehabilitation plans
- Complete a drove survey of the landform to ensure it has effectively re-contoured the sites to the current land form
- Provide periodic monitoring of water quality, dust and weed control measures to determine the effectiveness of the rehabilitation measures and where necessary implement further measures to achieve objectives.

Table 5 outlines key responsibilities for the Company and Mine personnel with regards to rehabilitation operations.

Table 5
Key Roles and Responsibilities

Role	Responsibility
Mine 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. • 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 and Appendix 2 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 Plan where required, or that the guidelines and methodologies in this Plan are updated to reflect those employed at the Mine Site.
All Mine Personnel	<ul style="list-style-type: none"> • Follow direction provided by the Mine Manager. • Notify the Mine Manager in the event that uncontrolled rehabilitation risks are identified at the Mine.

8. Rehabilitation Monitoring Program

8.1 Analogue Site Baseline Monitoring

The Company has established several years of environmental base line data relating to dust, water discharges and chemical composition of those discharges. In addition base line noise monitoring has also been carried out. This monitoring is carried out in compliance with the current license from the EPA. This provides base line data for this project area and in particular the plant site. The EPA License sets maximum limits for chemical composition of water discharges and dust emissions and results to date have been within those limits.

8.2 Rehabilitation Establishment Monitoring

Establishment of vegetation cover in the rehabilitated areas would be monitored and weeds minimised by spraying. Erosion control measures would also be checked.

The EPA Licence would require monitoring the potential for pollution of the site for a period after decommissioning and rehabilitation of the mine site. Data that could identify any contamination would be factored into any rehabilitation plan for ML1435 and in particular the process plant site.

Should any of the satellite orebodies be developed there will need to be additional monitoring for these sites.

8.3 Measuring Performance Against Rehabilitation Objectives and Rehabilitation Completion Criteria

The company maintains good records of historical environmental monitoring data so it will be able to identify fairly quickly any detrimental changes in the environmental conditions at the site. Any anomalous readings outside of the thresholds selected by the EPA would require investigation and resolution.

9. Rehabilitation Research and Trials

9.1 Current Rehabilitation Research and Trials

There are no on-going research or trials underway as most sites currently being rehabilitated are naturally revegetating and returning to a rehabilitated state that the current landowners are satisfied with. Should a problem arise expertise will be brought in to fix the problem.

9.2 Future Rehabilitation Research and Trials

Future rehabilitation may prove a little more challenging as the soil stockpile may have lost their ability to revegetate and so some studies and consultation with landowners may be required to select the best seed stock and fertilizers to use.

10. Intervention and Adaptive Management

Table 6 presents the Trigger Action Response Plan.

The results of rehabilitation monitoring assessments, including the development of procedures to be implemented during rehabilitation operations as outlined in Section 9, will be continually reviewed and reported in the Annual Rehabilitation Report for the Mine. 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 9 is completed, this Plan will be updated to reflect specific management implications for individual areas of the Mine Site and/or target values associated with rehabilitation completion criteria.

Table 6
Trigger Action Response Plan

Rehabilitation Threat	Potential Adverse Outcome	Trigger	Action/ Response
Unstable landform due to mass movement issues	Final landform is unstable or significant erosion is occurring	Evidence of geotechnical instability in operational or terminal faces Evidence of erosion of the final faces	<ul style="list-style-type: none"> Engage a suitably qualified and experienced geotechnical engineer or similar to assess the stability of the Extraction Area faces and provide recommendations in relation to Extraction Area design and/or stabilisation of the affected areas. Implement recommended actions.
Weed or pest management fails.	Weeds and pests become established and require significant resources to manage.	Rehabilitation monitoring identifies that weed species are substantially more abundant on the final landform than undisturbed analogue sites. Rehabilitation monitoring identifies significant numbers of exotic fauna, such that vegetation establishment or ecosystem sustainability is threatened.	<ul style="list-style-type: none"> Undertake, in consultation with surrounding neighbours, an immediate program of weed or pest control consistent with current management practices. Review success of control program within 6 months. If weed or pest management is not successful engage a suitably qualified ecologist to assess reasons for failure of management measures and recommend additional measures. Implement the recommended actions.
Adverse weather and climatic influences	Vegetation does not become established on final landform or fails to achieve the relevant completion criteria.	Vegetation does not become established fails to achieve the relevant completion criteria on final landform due to adverse weather and climatic influences.	<ul style="list-style-type: none"> Implement some irrigation using available water supply to better establish vegetation and look at seeding with alternate grasses that are more suited to dry conditions. Failing that, engage a suitably qualified ecologist or revegetation expert to assess reasons for failure of revegetation and recommend actions to ensure that the final vegetation community corresponds as closely as possible to analogue sites. Implement the recommended actions.

11. Review and Implementation

Table 7 presents the triggers for reviewing the Plan. Following each review, this Plan will be revised if significant structural amendments are necessary and provided to the Resources Regulator. 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.

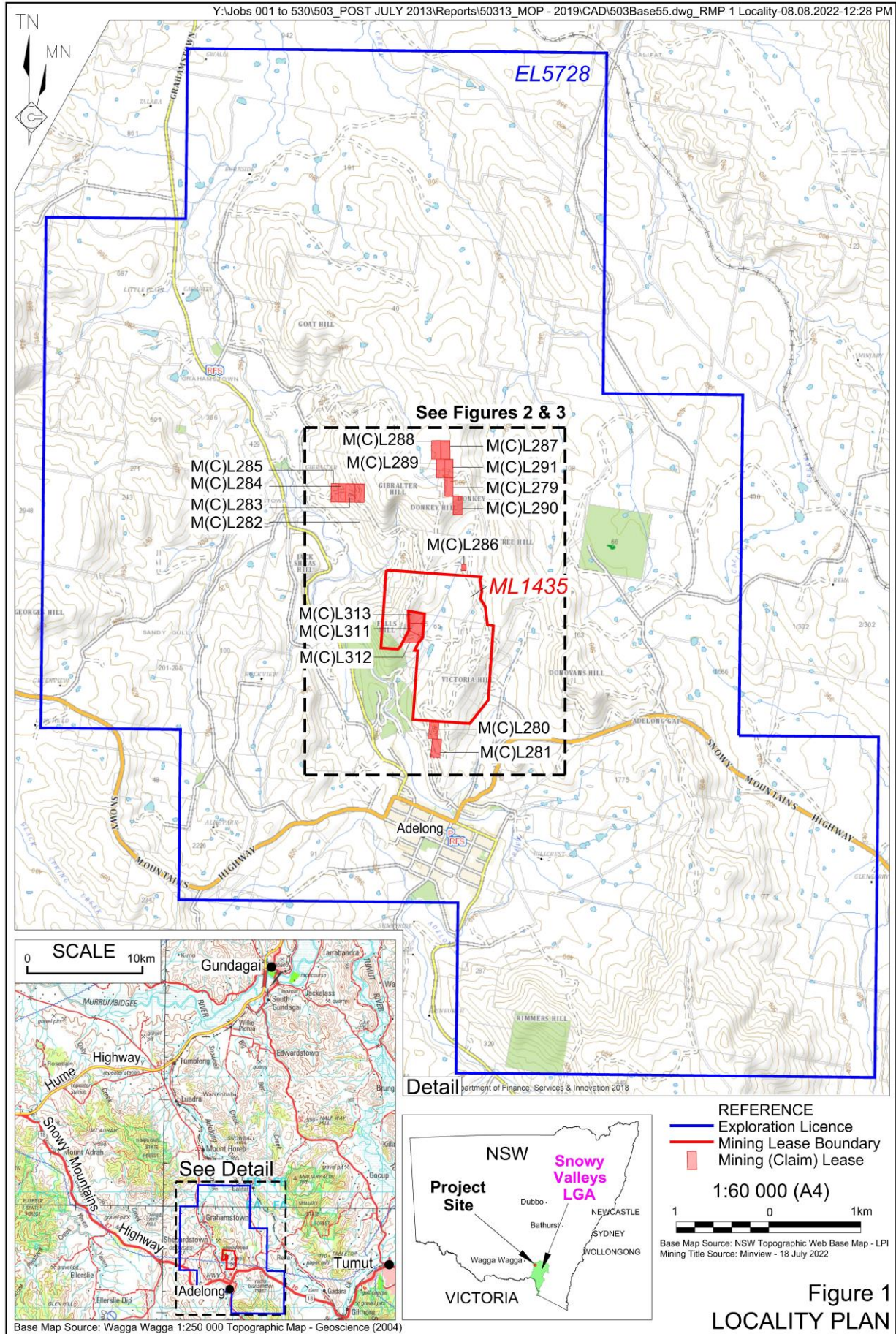
**Table 7
Rehabilitation Management Plan Review Triggers**

Trigger	Review
Request from the Resources Regulator or other relevant government agency to review the Plan.	As required by any notice
Modification of an existing development consent or the addition of new Development Consents.	Within 3-6 months
Submission of each Annual Rehabilitation Report and Forward Schedule.	Within 2 month
Completion of a rehabilitation trial.	Within 2 month
Receipt of a specialist consultant report prepared in response to a trigger outlined in Section 10.	Within 3 months
Preparation of a revised Rehabilitation Risk Assessment.	Within 2 months
Preparation of revised Rehabilitation Completion Criteria.	Within 2 months

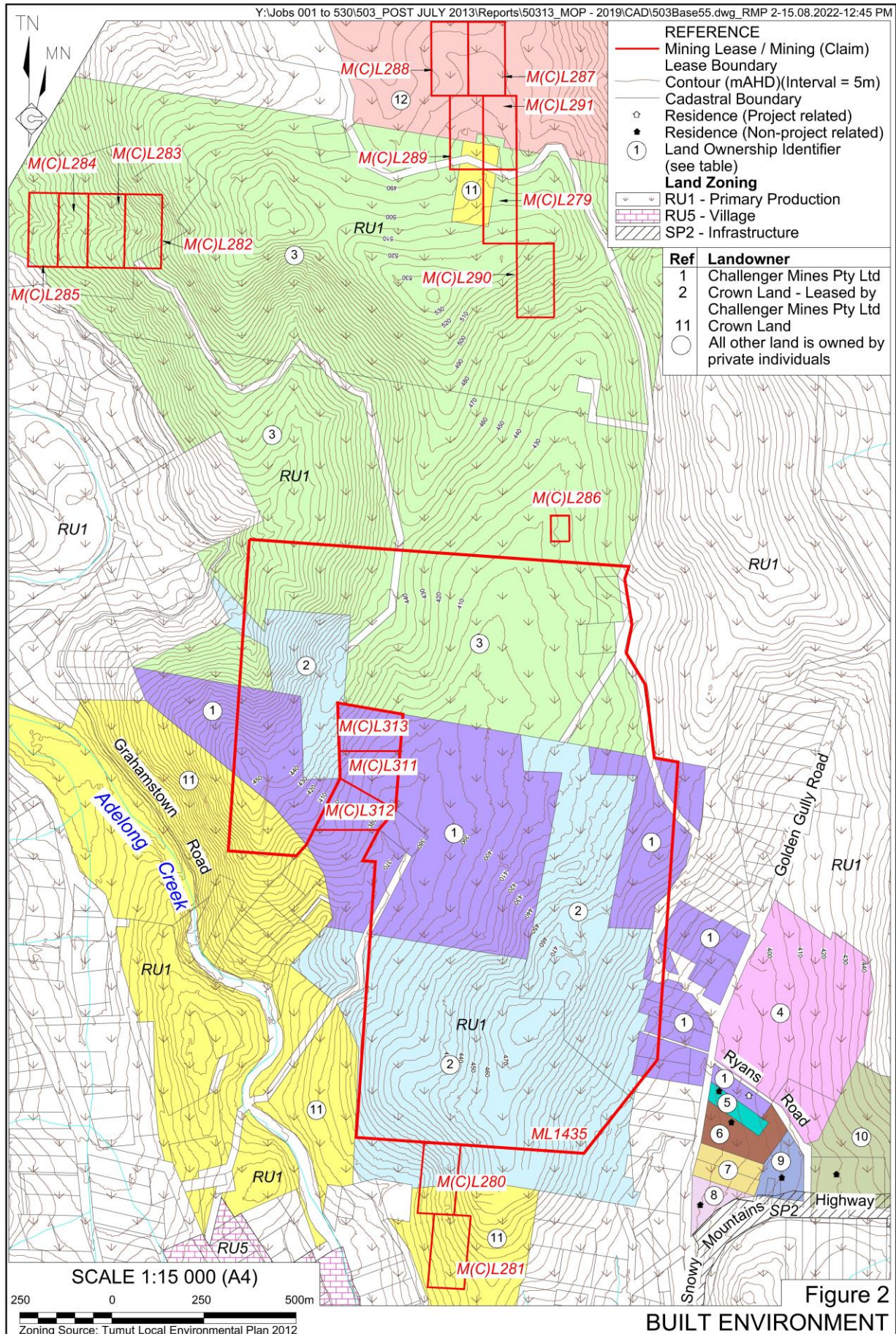
In addition to reviews of this Plan, a Rehabilitation Quality Assurance Register will be developed and regularly maintained to ensure that mining and rehabilitation activities at the Mine Site are being conducted in accordance with this Plan and requirements under relevant development consents, leases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

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

REHABILITATION MANAGEMENT PLAN
CHALLENGER MINES PTY LTD – Adelong Gold Mine



**REHABILITATION MANAGEMENT PLAN
CHALLENGER MINES PTY LTD – Adelong Gold Mine**



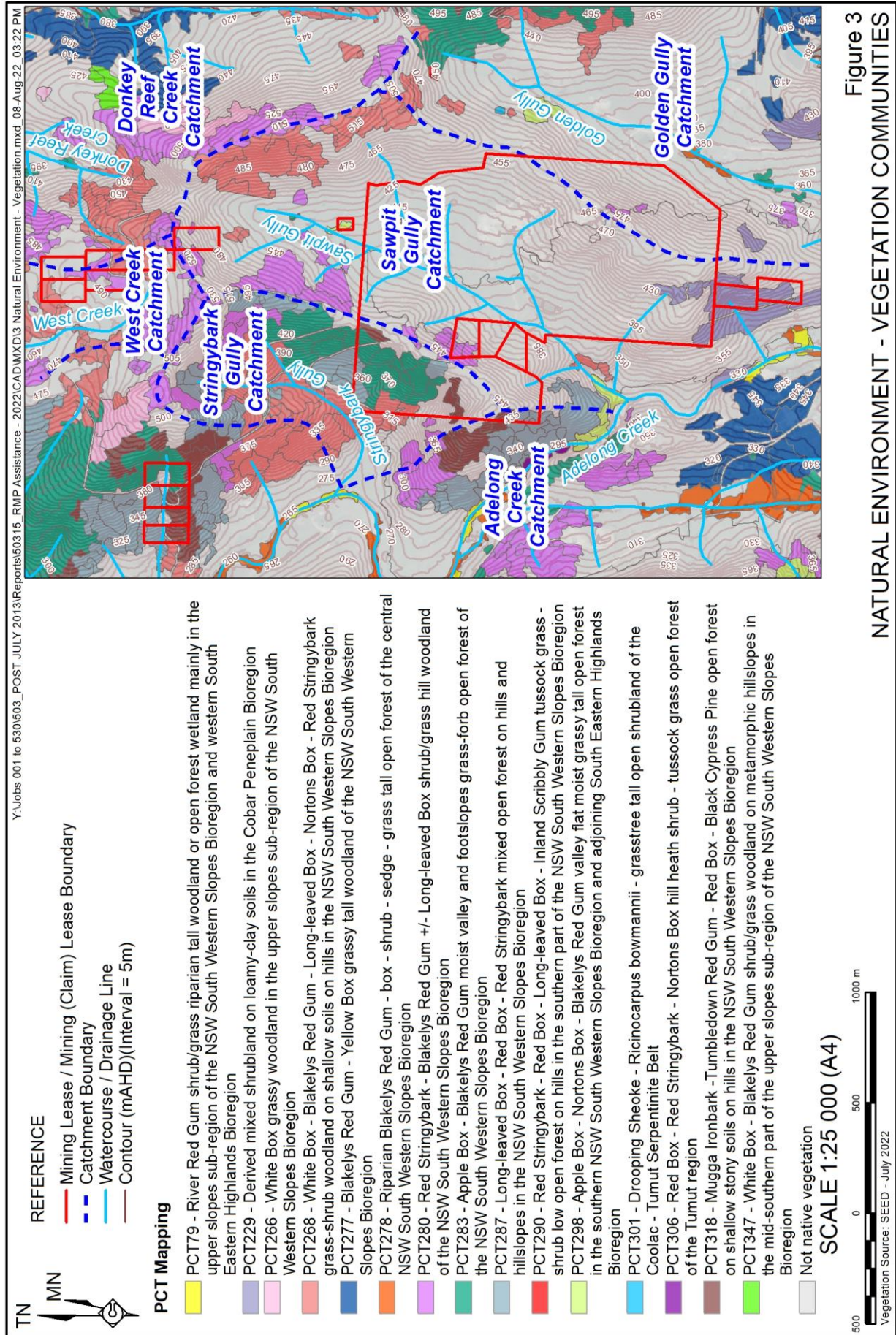
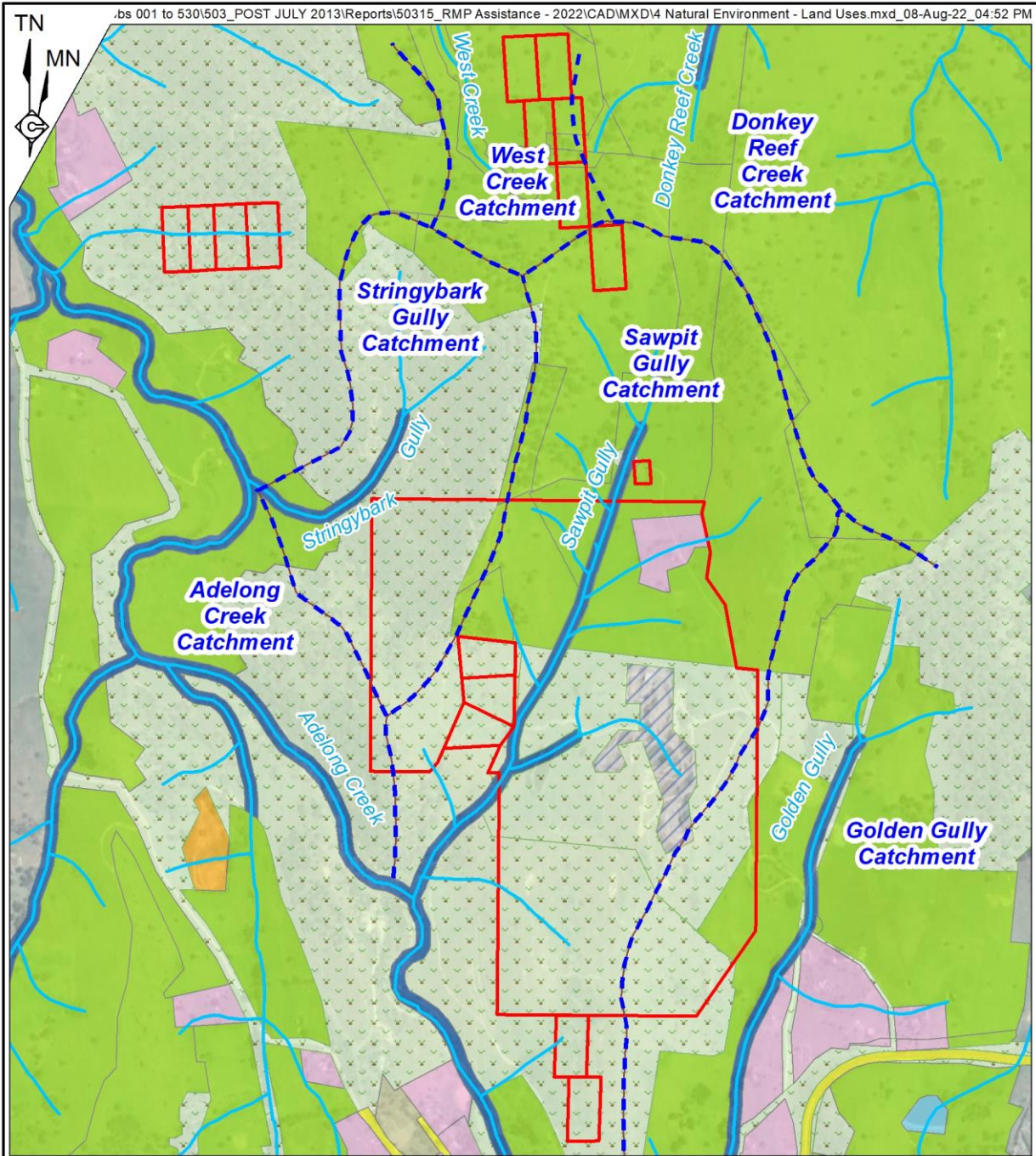


Figure 3
 NATURAL ENVIRONMENT - VEGETATION COMMUNITIES



REFERENCE

- Mining Lease / Mining (Claim)
- Lease Boundary
- - - Catchment Boundary
- Watercourse / Drainage Line
- Contour (mAHD)(Interval = 5m)

Land Use

- Grazing native vegetation
- Grazing modified pastures
- Intensive animal production
- Residential and farm infrastructure
- Transport and communication
- Mining
- Waste treatment and disposal
- Reservoir/dam
- River

SCALE 1:20 000 (A4)

250 0 250 500 750 m

Source: Australian Land Use and Management Classification (2017)

Figure 4
 NATURAL ENVIRONMENT - LAND USES

Figure 5A Mining Domains

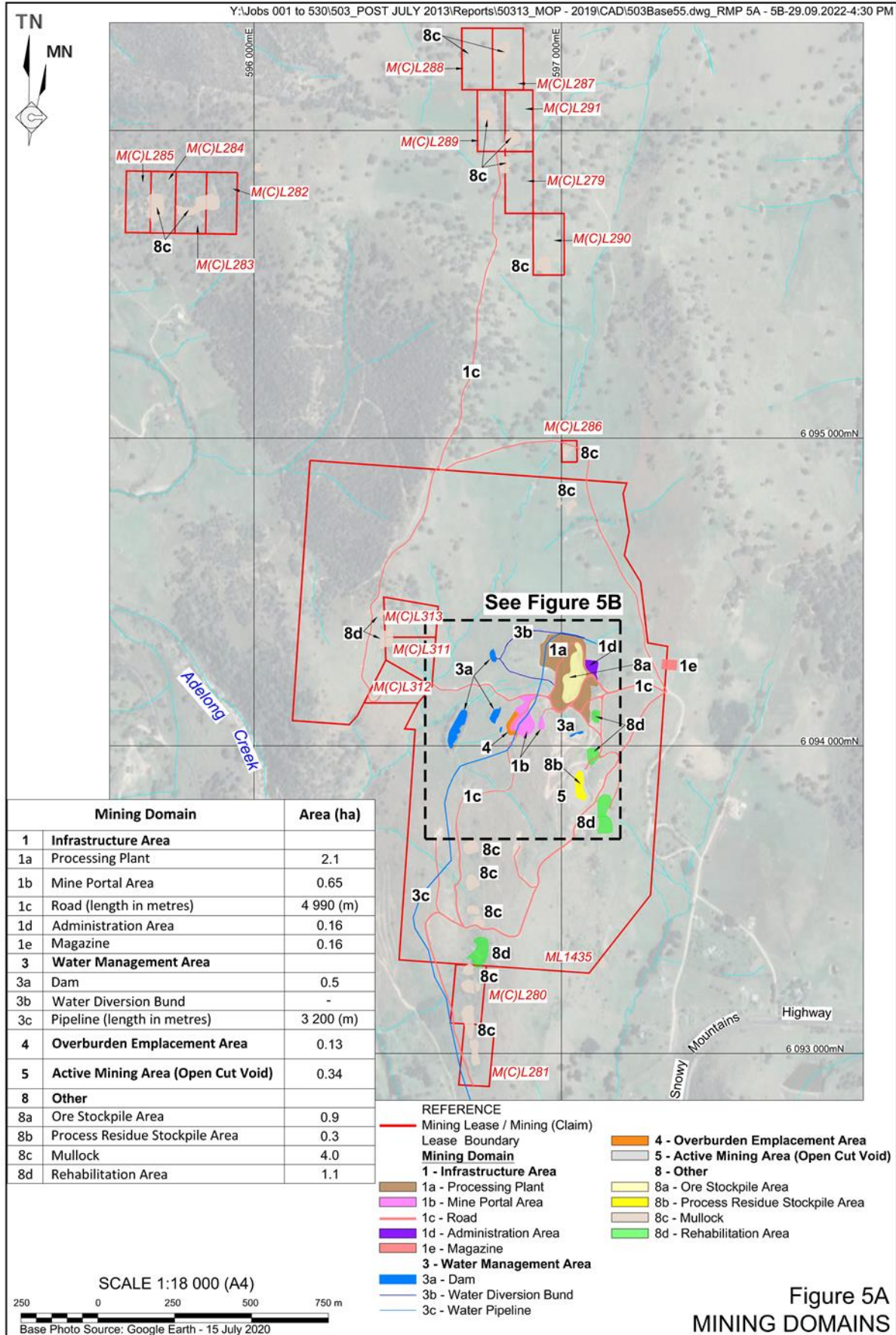


Figure 5B Mining Domains

