# 3. Rehabilitation Risk Assessment

The initial Rehabilitation Risk Assessment for the Mine was undertaken generally in accordance with *Australian Standard AS/NZS ISO 31000:2009 Risk Management*. The Rehabilitation Risk Assessment has been prepared to consider potential rehabilitation risks associated with any mine within the Tritton Copper Operations, and as such, also applies to those mines.

Risks to achieving the rehabilitation objectives and rehabilitation completion criteria outlined in Section 4, as well as the final landform outlined in Section 5, were identified and assessed jointly prior to the preparation of this plan by representatives from the following.

- Company staff, including specialists and/or managers for:
  - environmental;
  - geotechnical;
  - geological; and
  - operational activities.
- External consultants from:
  - R.W. Corkery & Co. Pty Limited (environmental management and approvals);
  - O'Kane Consulting Pty Ltd (geoscience); and
  - DnA Environmental (ecology).

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 6, 7, 8** and **9** present the consequence, likelihood, risk rating and residual risk rating used during this analysis. Where risks were determined to be unacceptable, namely those risks classified as "Moderate" or above, a Trigger Action Response Plan has been developed and is presented in Section 10.

In accordance with Schedule 8A of the *Mining Regulation 2016*, the Rehabilitation Risk Assessment is maintained as a 'live' document and is regularly reviewed in response to changes to operations where potential risks to rehabilitation may occur.

**Table 10** presents the results of the risk analysis assuming the implementation of standard mitigation measures and those outlined within this RMP.



## Table 6Tritton Consequence Table

Page 1 of 2						
5	4	3	2	1		
5	4	Descriptor	Z	<b>I</b>		
Insignificant	Minor	Moderate	Major	Critical		
Insignificant	WINO	Health and Safety	-	Critical		
First sid to store and	Ma dia al Tra atra ant		[	De maren en tralis e la litta		
First aid treatment or injury only	Medical Treatment Injury (MTI)	Single Lost Time Injury (LTI)	Multiple Lost Time Injuries	Permanent disability >30%		
Low level soreness or small amount of pain	Restricted Work Injury (RWI)	Short term hospitalisation (<7 days)	Extended hospital treatment (>7 days)	One or more fatalities		
	Presented to hospital (no overnight stay)	Reversible impairment to	Permanent disability <30%			
		human health	Serious long-term health issue			
		Environment				
No or very low environmental impact	Low environmental Impact	Moderate environmental impact	Major environmental impact	Severe environmental impact		
Impact confined to a small area	Rapid clean-up by internal staff or contractors	Clean-up by internal staff or contractors	Considerable clean- up effort required by internal staff and external contractors	Likely species destruction and long recovery period		
	Impact contained to area already impacted by operations	Impact confined within lease boundary	Impact may extend across lease boundary	Extensive clean-up using external resources		
				Impact on a regional scale		
	Com	munity/External Re	lations			
Isolated complaint received	Multiple or sporadic complaints received	Repeated or serious rate of complaints	Ongoing complaints from local groups, NGO's or regulators	High level concern from community, regulators, stakeholders and/or stakeholders		
No media coverage	No media coverage	Local media interest and coverage	Regional/national media interests	Adverse national or international media coverage		
No damage to reputation or relationships with	Short-term damage with relationship with one or more stakeholders but	Reversible damage with stakeholders and to reputation	Protests by external stakeholders	International damage to reputation		
stakeholders	no damage to reputation		Local or regional damage to reputation			
		Legal				
Questionable or minor non- conformance with operating condition	Non-compliance with operating conditions	Breach of local or national law with potential prosecution by regulator	Major breach of local or national law	Significant breach of national or international law with potential jail sentence		
No fine or prosecution	Could attach low level administrative response from regulator	Continuing occurrence of minor breach	Prosecution or penalties by regulator likely	Operations suspended or cease (short term or long term)		
Unlikely to attract regularity interest	No court appearance required		Short term treat to operations continuing	Licenses withdrawn or revoked		
Easy to resolve			Civil action initiated	Class action initiated		



## Table 6 (Cont'd)Tritton Consequence Table

		on consequence	Table	Page 2 of 2			
	Level						
5	4	3	2	1			
		Descriptor					
Insignificant	Minor	Moderate	Major	Critical			
		Operational/Cost					
Minor impact, easily corrected with insignificant cost to the operation: <\$5,000	Minor damage/failure to equipment or infrastructure with minimal associated cost: \$5,000 - \$50,000	Damage/failure to equipment or infrastructure marginal cost to the operation: \$50,000 -	Damage/failure to equipment or infrastructure resulting in significant cost to the operation: \$100,000 - \$500,000	Damage/failure to equipment or infrastructure resulting in a detrimental cost to the operation: > \$500,000			
		\$100,000 Business Interrupti	on				
Minimal disruption to concentrate production (<4hrs)	Minor loss of concentrate production (< 1 day)	Significant loss of concentrate production (1 - 3 days)	Major disruption to concentrate production (3-7 days)	Critical loss of revenue from extended disruption to concentrate production (>1 week)			
<100,000	\$100, 000 to \$500, 000	\$500,000 - 1,500,000	\$1,500,000 - \$4,500,000	> \$4,500,000			
Source: Tritton Resou	rces	•	•	L			

#### Table 7 Qualitative Likelihood Rating

Level	Descriptor	Description in terms of full operating life of the Site	Description in terms of frequency
А	Almost Certain	Consequences expected to occur in most circumstances	Daily or continuous
В	Likely	Consequences will probably occur in most circumstances	Weekly or monthly
С	Possible	Consequences could occur at some time	Annually
D	Unlikely	Consequence will probably NOT occur in most circumstances	Within the life of the operation
Е	Rare	Consequence may occur in exceptional circumstances	>100 years
Source:	Tritton Resources		



## Table 8Qualitative Risk Rating

		Consequence					
Like	lihood	5 Insignificant	4 Minor	3 Moderate	2 Major	1 Critical	
Α	Almost Certain	15(H)	10(H)	6(E)	3(E)	1(E)	
В	Likely	19(M)	14(H)	9(H)	5(E)	2(E)	
С	Possible	22(L)	18(M)	13(H)	8(E)	4(E)	
D	Unlikely	24(L)	21(L)	17(M)	12(H)	7(E)	
Е	Rare	25(L)	23(L)	20(M)	16(H)	11(H)	
Sour	ce: Tritton Resources						

#### Table 9 Residual Risk Level Action

Residual Risk Level	Priority	Actions to Minimise Risk	Actions to Maximise Opportunity
Critical	1	Detailed research and planning required; determine whether activity or task should be stopped pending further investigation	Detailed research and planned required; high payoff potential; pursue opportunity aggressively
High	2	Senior management attention; immediate corrective and preventative action required	Near term opportunity with above average rate of return; pursue diligently
Moderate	3	Conditionally acceptable risk – management responsibility assigned; corrective and preventative action plan developed	Opportunity to realise average rate of return with certainty pursue with existing plans
Low	4	Manage by routine procedures; accept risk	Manage by routine procedures



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# Table 10Rehabilitation Risk Assessment

Risk	Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
General			
Insufficient skills and	Site based environmental staff are to be supported by external consultants.	17 (M)	Section 7
experience of rehabilitation personnel.	• Procedural documents and records are to be located in central server for document control and storage.		
percention	Company to implement succession planning and staff training as much as is feasible.		
	• Company to maintain a Rehabilitation Management Plan as a staff manual and ensure it is available for ease of guidance to new or inexperienced staff.		
	Company to assess and assign sufficient resources to manage environmental and closure risk.		
Lack of clearly defined	Clearly mapped and available organisation chart and management plans to be maintained.	18 (M)	Section 7
responsibilities.	Position descriptions for relevant staff include rehabilitation and mine closure responsibilities.		
	Quality Assurance program to be established through Rehabilitation Management Plan.		
	• Clear communication between departments and relevant stakeholders relating to rehabilitation planning, scheduling and execution.		
Insufficient funding for or	Budget and reforecast process applied.	21 (L)	Section 7
prioritisation of rehabilitation activities.	Rehabilitation commitments acknowledged and understood at senior leadership level.		
	• Long-term rehabilitation schedule to be included in Rehabilitation Management Plan with currently estimated costing for each action to be maintained confidentially for staff action and update.		
	All capital investment decision making to include recognition of rehabilitation and closure aspects.		
Not compliant with permit/licence approvals.	<ul> <li>Obligation Register to be regularly reviewed and updated. Development of a system to assign responsibilities from Obligation Register to 'Obligation Owners'.</li> </ul>	24 (L)	
	Annual reporting, monitoring and Independent Environmental Audits as required under conditions of consent.		
	• Trigger Action Response Plans (TARPs) and summary of legal and permit requirements included in RMPs.		
	• Regular risk assessments used to identify and assess compliance with permit and licence conditions.		
	• Devise and implement corrective actions (following audits, incidents, non-compliances, specialist reports) as needed.		



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	Renabilitation Risk Assessment		Page 2 of 10
Risk	Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
Active Mining Phase of Re	ehabilitation		
Poor / inadequate / lost opportunity to salvage topsoil & other biological resources through clearing, salvage and handling practices (including timing).	<ul> <li>Progressive stripping and storage of topsoil.</li> <li>Practices that minimise the re-handling of topsoil.</li> <li>Topsoil tested and analysed through rehabilitation monitoring.</li> <li>Habitat structures (timber / trees etc) retained for placement at rehabilitation.</li> <li>Material inventory (including topsoil, NAF waste rock) and a projection of future closure requirements.</li> <li>Geotechnical and geochemical characterisation of growth medium and capping material to be undertaken opportunistically as stripped.</li> </ul>	21 (L)	6.2.1.1, 6.2.1.11
	<ul> <li>Seed collection including a seed quantity inventory to be established where necessary to support ongoing purchase of seed and tubestock.</li> </ul>		
Limited pre-existing and stockpiled biological resources for salvage.	<ul> <li>Progressive stripping and storage of topsoil.</li> <li>Practices that minimise the re-handling of topsoil.</li> <li>Topsoil tested and analysed through rehabilitation monitoring.</li> <li>Habitat structures (timber / trees etc) retained for placement at rehabilitation.</li> <li>Material inventory (including topsoil, NAF waste rock) and a projection of future closure requirements.</li> <li>Develop contingency plan for where material inventory projection forecasts a deficit (TARP).</li> <li>Investigate use of Company owned farming land for seed and biological resource salvage.</li> </ul>	21 (L)	6.2.1.11, 10.2
Adverse geochemical/chemical composition of materials such as overburden, tailings, heap leach, subsoils and topsoils etc	<ul> <li>Design and Rehabilitation Planning         <ul> <li>Cover design/model for Heap Leach Pads.</li> <li>Ongoing kinetic geochemical characterisation of waste rock and update of Waste Rock Characterisation and Management Plan.</li> <li>Ongoing rehabilitation trials or assessments and accurate records.</li> </ul> </li> <li>Rehabilitation brine trial on Murrawombie Heap Leach Pads (and broader implementation if successful).</li> <li>Survey and testing of historical mining areas to identify contaminated areas / materials that need to be removed / treated prior to rehabilitation.</li> <li>Rehabilitation-focused assessments of high-risk landforms including groundwater modelling, water balance</li> </ul>	17 (M)	6.2.1.4, 6.2.1.6, 6.2.1.9, 6.2.1.11, 9.1.1



	Renabilitation Risk Assessment		Page 3 of 10
Risk	Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
Active Mining Phase of Re	ehabilitation (Cont'd)		
Handling and containment of waste materials	<ul> <li>Proactive waste classification and segregation (NAF / PAF) including update of Waste Rock Characterisation and Management Plan.</li> </ul>	17 (M)	6.2.1.4, 6.2.1.5,
including Tailings, waste rock, heap leach, waste /	Design and Rehabilitation Planning		6.2.1.9
contaminated water.	<ul> <li>Cover design/model for Heap Leach Pads.</li> </ul>		
	<ul> <li>Ongoing kinetic geochemical characterisation of waste rock and update of Waste Rock Characterisation and Management Plan.</li> </ul>		
	<ul> <li>Ongoing rehabilitation trials or assessments and accurate records.</li> </ul>		
	• Rehabilitation brine trial on Murrawombie Heap Leach Pads (and broader implementation if successful).		
	• Survey and testing of historical mining areas to identify contaminated areas / materials that need to be removed / treated prior to rehabilitation.		
	• Rehabilitation-focused assessments of high-risk landforms including for example groundwater modelling or water balance modelling.		
Adverse surface and	Sediment and erosion control structures/dams.	21 (L)	6.2.1.10
groundwater quality and quantity.	Current studies indicate pits and underground workings act as groundwater sinks.		
quantity.	Closure plans include design for contaminated waters to passively drain towards pits.		
	• Rehabilitation-focused assessments of high-risk landforms including groundwater modelling, water balance modelling.		
	Implement mitigation/containment controls as required.		
Decommissioning Phase	of Rehabilitation		
Failure to disconnect	Survey records, as built records of services and evidence of prior decommissioning.	21 (L)	6.2.2.2
services / remove infrastructure.	• Decommissioning activities to commence in close association with the mine production schedule.		
	• Infrastructure that can be used at the other nearby Tritton operations will be re-located to these facilities.		
Hazards associated with	Identification of equipment and material to be retained.	21 (L)	6.2.2.3
retained infrastructure.	• Prior to mine closure - undertake risk assessment on infrastructure that is proposed to be retained. Risk assessment to focus on future / long term liability for the environment, community and the beneficial use of land and water. Implement controls as identified.		



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	Reliabilitation Risk Assessment		Page 4 of 10
Risk	Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
Decommissioning Phase	of Rehabilitation (Cont'd)		
Any identified hazards on items of heritage or biodiversity assets (e.g. known heritage items / fauna species at the operational site) e.g. migratory birds (utilising water sources), bats (utilising underground portals, etc.)	<ul> <li>Cultural and heritage registers.</li> <li>Flora and fauna registers.</li> <li>Annually monitoring.</li> <li>Undertake survey (fauna) and risk assessments prior to mine closure to ensure mine closure activities do not impact on heritage or fauna within active mining areas.</li> </ul>	21 (L)	
Generation of material and waste products from the demolition process (including hazardous waste materials).	<ul> <li>Hazardous materials, demolition products and transport assessments prior to demolition.</li> </ul>	21 (L)	6.2.1.5, 6.2.2.4, 6.2.2.5
Accumulation of groundwater in underground / open pit workings - impact on beneficial use of groundwater resources.	<ul> <li>Current studies indicate pits and underground workings act as groundwater sinks.</li> <li>Current groundwater monitoring network.</li> <li>Develop modelling assessment of long term/future groundwater impact risks. Mine closure plans adjusted following model results.</li> </ul>	21 (L)	
Failure to remove hazardous materials resulting in land / water contamination	<ul> <li>All spills reported and cleaned up.</li> <li>Designated hydrocarbon and chemical storage areas, with hydrocarbons stored in bunded areas (compliant with AS1940).</li> <li>Contaminated site register.</li> <li>Contamination assessment undertaken for all 'at risk' areas with remediation undertaken as required.</li> <li>Validation sampling undertaken to verify any residual contamination is below industry/government (NEPM) guidelines.</li> </ul>	24 (L)	6.2.2.5



	Renabilitation Risk Assessment		Page 5 of 10
Risk	Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
Decommissioning Phase	of Rehabilitation (Cont'd)		
Failure to address contamination, resulting in residual contamination that impacts meeting mine	<ul> <li>All spills reported and cleaned up.</li> <li>Designated hydrocarbon and chemical storage areas, with hydrocarbons stored in bunded areas (compliant with AS1940).</li> </ul>	24 (L)	6.2.2.4, 6.2.2.5
closure criteria / impacts	Contaminated site register.		
future beneficial land / surface water / ground	• Contamination assessment undertaken for all 'at risk' areas with remediation undertaken as required.		
water use.	• Validation sampling undertaken to verify any residual contamination is below industry/government (NEPM) guidelines.		
	Heap Leach Pads have HDPE liner and containment structures.		
	Heap Leach Pads conceptual cover design advanced to detailed design.		
	Groundwater and surface water monitoring during operations and post-closure.		
	Consideration of passive water treatment options.		
Unauthorised access to	Establish safety and security bunds during operational life of mine where possible.	<mark>16 (H)</mark>	6.2.2.1
open pit / voids, underground workings,	Underground workings and vent rises fitted with a concrete plug.		
infrastructure areas and	Safety bunds, fencing and signs established to limit public access.		
general mining landforms.	• Final landform assessment to ensure landforms are built to the approved final landform design and stable.		
Landform Establishment R	Phase of Rehabilitation		
Final landform does not conform to the approved final landform.	<ul> <li>All landforms planned and constructed as per approved project description, commitments, approvals and permits.</li> </ul>	21 (L)	6.2.3.2, 6.2.3.3, 6.2.3.4
Lack of suitable materials	Detailed final landform design plans - design landform for free drainage.		0.2.3.4
for capping / encapsulation	<ul> <li>Post closure 'as built' survey to confirm free draining landform i.e. built to design.</li> </ul>		
of adverse materials.	Re-profile slopes or install drainage to provide a stable free-draining landform i.e. meets construction design.		
	<ul> <li>Where existing rehabilitation landforms show poor rehabilitation outcomes, develop and implement alternate designs.</li> </ul>		



	Renabilitation Risk Assessment		Page 6 of 10
Risk	Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
Landform Establishment	Phase of Rehabilitation (Cont'd)		
Geotechnical instability of	• Final void designed to be geotechnically stable during the operational life of the pit and post closure.	20 (M)	6.2.3.4
Final Open Pit voids.	Any identified unstable pit walls addressed during operational life of mine.		
	• Geotechnical monitoring and/or inspection. If required, suitably qualified geotechnical engineer engaged to assess the instability and provide a range of recommendations to mediate the instability.		
	Recommendations to be implemented in consultation with NSW Resource Regulator.		
Heap Leach Pad landform	• Heap Leach Pads conceptual cover design advanced to detailed design including detailed drainage design.	21 (L)	6.2.3.3
lesign is unstable.	Landform evolution modelling.		
	Geotechnical assessment of materials and slope.		
	Monitoring of cover performance (to cover all seasonal variations).		
Heap Leach lining or	• Groundwater monitoring, and purge where necessary. Groundwater purge to be diverted to pit.	21 (L)	
capping is unsuccessful / inadequate.	Liner selection and installation QAQC.		
madoquator	Schedule visual inspections and required repairs.		
	Remedial Action Plan.		
	• Modelling (such as SeepW modelling of groundwater flow) to better understand risks at closure and plan for remediation.		
	Heap Leach Pads conceptual cover design advanced to detailed design including detailed drainage design.		
Leachate from Heap Leach		21 (L)	
Pads uncontained/released into environment.	Detailed drainage design to direct runoff into the pit.		
Overall Heap Leach	• Heap Leach Pads conceptual cover design advanced to detailed design including detailed drainage design.	21 (L)	
Design unsuitable to sustain final land use.	Landform fenced to exclude grazing.		
	Landform evolution modelling.		
	Geotechnical assessment of materials and slope.		
	Monitoring of cover performance.		



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Risk	Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
Landform Establishment F	Phase of Rehabilitation (Cont'd)		1
Generation and release of	Geochemical assessment of waste rock during mining.	21 (L)	6.2.1.8,
acid and metalliferous drainage.	<ul> <li>Identification and selective handling and storing of NAF/PAF material.</li> </ul>		6.2.3.3
dramage.	Refinement of Waste Rock Characterisation and Management Plan.		
	<ul> <li>Established containment to prevent release of AMD leachate - maintained throughout operational and post closure phases.</li> </ul>		
	<ul> <li>Geochemical characterisation of existing Murrawombie Waste Rock Emplacements (kinetic and static) - targeting failed or underperforming rehabilitation areas.</li> </ul>		
	Remediation of identified failures in rehabilitation of emplacements.		
Geotechnical instability of	Original design as proposed in SEE's and approved.	21 (L)	6.2.3.3
Murrawombie Waste Rock Emplacement leading to slope and landform failure.	<ul> <li>Stability of rehabilitated Murrawombie Waste Rock Emplacements monitored and assessed during operational mining phases.</li> </ul>		
	<ul> <li>Original design as proposed in SEE's and approved</li> </ul>		
	<ul> <li>Any failed slopes repaired following assessment and re-design by qualified Geotechnical engineer in consultation with restoration ecologist.</li> </ul>		
	• Understand long term stability and risks to the rehabilitated landform through landform evolution modelling.		
Murrawombie Waste Rock	Sediment dams located to capture runoff from Murrawombie Waste Rock Emplacement.	21 (L)	6.2.3.3
Emplacement leachate uncontained / released to environment.	<ul> <li>Understand groundwater and surface water contamination risks for Murrawombie Waste Rock Emplacement by undertaking (for example) groundwater modelling. Implement mitigation / containment measures as required.</li> </ul>		



			Page 8 of 10
Risk	Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
Landform Establishment	Phase of Rehabilitation (Cont'd)		·
Overall Murrawombie Waste Rock Emplacement	Stability of rehabilitated Murrawombie Waste Rock Emplacements monitored and assessed during operational mining phases.	21 (L)	6.2.3.3
landform design is unsuitable to sustain final land use.	• Undertake further characterisation and selective use of closure materials in Murrawombie Waste Rock Emplacement design and construction.		
	• Assess and develop corrective actions for existing rehabilitated Murrawombie Waste Rock Emplacement landforms to improve vegetation establishment and persistence (where required).		
	• Any failed slopes repaired following assessment and re-design by qualified geotechnical engineer in consultation with restoration ecologist.		
	Landform evolution modelling to inform final landform establishment works that may be required.		
	<ul> <li>Murrawombie Waste Rock Emplacement design updated following completion of above study / assessments and rehabilitation outcomes.</li> </ul>		
Soil erosion/pollution/sediment	Remediate eroding area through additional earthworks, soil works, revegetation or other stabilisation works.	21 (L)	6.2.3.1
ation of waterways.	Cross-ripping (parallel to the contour).		
	• If current controls are unsuccessful, engage a suitably qualified professional in sediment and erosion control to prepare an assessment report and recommendations.		
Growth Medium Developm	nent Phase of Rehabilitation		
Physical and structural properties of substrate.	• Materials inventory and characterisation (including topsoil and NAF waste rock) with a projection of future closure requirements.	21 (L)	6.2.4
Subsoil and topsoil deficit for rehabilitation activities.	• Undertake further characterisation and selective use of closure materials in Murrawombie Waste Rock Emplacement design and construction.	21 (L)	6.2.4
	Incorporate specific materials into detailed rehabilitation designs.		
Topsoil not applied as per	Topsoil applied as per mine closure planning requirements (nominally 100mm thick).	24 (L)	6.2.4
plan.	• Engage a restoration ecologist to re-evaluate vegetation type for each domain (therefore topsoil requirements) and incorporate findings into mine closure plans.		
	• Document amount of topsoil applied at the time of undertaking rehabilitation in 'as built' surveys and reports.		
	Develop and implement quality assurance program.		



Renabilitation Risk Assessment		Page 9 of 10
Risk Controls	Residual Risk Rating*	Where Addressed in this RMP
nent Phase of Rehabilitation (Cont'd)		
<ul> <li>Minimise handling of all soils so they retain their structural integrity.</li> <li>Where possible direct placement of stripped topsoil to landform under rehabilitation.</li> <li>For sub-optimal soils, investigate stockpile amelioration to improve rehabilitation outcomes.</li> </ul> Establishment Phase of Rehabilitation	24 (L)	6.2.4
<ul> <li>Soil tests prior to revegetation works.</li> <li>Develop protocols for seed collection for other relevant species in consultation with a suitably qualified person.</li> <li>Purchase additional seed as required.</li> <li>Develop internal protocol for seed collection and storage.</li> </ul>	21 (L)	6.2.5
Development Phase of Rehabilitation		
<ul> <li>Selection of local native species adapted to local climate based on final land use vegetation type.</li> <li>Undertake rehabilitation trials on native species establishment and persistence.</li> <li>Develop and implement a revegetation strategy to guide revegetation works and improve the likelihood of success and reduce the likelihood of weed infestation or pest impacts.</li> <li>Under prevailing drought conditions - defer rehabilitation activities.</li> </ul>	21 (L)	6.2.6.3
	Risk Controls         ent Phase of Rehabilitation (Cont'd)         • Minimise handling of all soils so they retain their structural integrity.         • Where possible direct placement of stripped topsoil to landform under rehabilitation.         • For sub-optimal soils, investigate stockpile amelioration to improve rehabilitation outcomes.         Establishment Phase of Rehabilitation         • Soil tests prior to revegetation works.         • Develop protocols for seed collection for other relevant species in consultation with a suitably qualified person.         • Purchase additional seed as required.         • Develop internal protocol for seed collection and storage.         • Develop internal protocol for seed collection and storage.         • Develop internal protocol for seed collection and storage.         • Develop internal protocol for seed collection and storage.         • Develop internal protocol for seed collection and storage.         • Develop internal protocol for seed collection and storage.         • Develop internal protocol for seed collection and storage.         • Develop internal protocol for seed collection and storage.         • Develop internal protocol for seed collection and storage.         • Undertake rehabilitation         • Selection of local native species adapted to local climate based on final land use vegetation type.         • Undertake rehabilitation trials on native species establishment and persistence.	Risk Controls       Residual Risk Rating*         Pent Phase of Rehabilitation (Cont'd)       24 (L)         • Minimise handling of all soils so they retain their structural integrity.       24 (L)         • Where possible direct placement of stripped topsoil to landform under rehabilitation.       24 (L)         • For sub-optimal soils, investigate stockpile amelioration to improve rehabilitation outcomes.       21 (L)         • Soil tests prior to revegetation works.       21 (L)         • Develop protocols for seed collection for other relevant species in consultation with a suitably qualified person.       21 (L)         • Purchase additional seed as required.       21 (L)         • Develop internal protocol for seed collection and storage.       21 (L)         • Develop internal protocol for seed collection and storage.       21 (L)         • Develop internal protocol for seed collection and storage.       21 (L)         • Develop internal protocol for seed collection and storage.       21 (L)         • Develop and implement a revegetation strategy to guide revegetation works and improve the likelihood of success and reduce the likelihood of weed infestation or pest impacts.       21 (L)         • Under prevailing drought conditions - defer rehabilitation activities.       21 (L)



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Risk	Risk Controls	Residual Risk Rating*	Page 10 of 10 Where Addressed in this RMP
Ecosystem and Land Use	Development Phase of Rehabilitation (Cont'd)	1	
Long term water quality issues (leachate, surface waters, etc).	<ul> <li>Rehabilitation Monitoring</li> <li>Ongoing rehabilitation trials and accurate records.</li> <li>Survey and testing of historical mining areas to identify contaminated areas or materials that need to be removed or treated prior to rehabilitation.</li> <li>Designated hydrocarbon and chemical storage areas with hydrocarbons stored in bunded areas (compliant with AS1940).</li> <li>All spills reported and cleaned up.</li> <li>Groundwater and surface water monitoring conducted during mine life to monitor impact with any contamination issues managed during active mine life.</li> </ul>	21 (L)	6.2.6.2
Damage to revegetation from pests, livestock, unauthorised machinery access, bushfire, vandalism, etc.	<ul> <li>Stormwater containment structures ensure that stormwater, leachate etc is contained.</li> <li>Pest control and population monitoring.</li> <li>Exclusion fencing.</li> <li>Rehabilitation inspections.</li> <li>Staff inductions and training.</li> <li>TARPs for identifying and implementing pest species management programs.</li> </ul>	18 (M)	6.2.6.1
Species established during revegetation operations do not meet mine closure objectives (diversity, structure, density, habitat).	<ul> <li>Suitable pasture species to be used for rehabilitation of lands with a final land use of 'intermittent agriculture' to be identified from monitoring of analogue sites.</li> <li>Ongoing monitoring of revegetation success with corrective actions applied during operational phases.</li> <li>Topsoil management and analysis.</li> <li>Annual compliance monitoring.</li> <li>If required, suitably qualified ecologist or revegetation expert engaged 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.</li> </ul>	21 (L)	6.2.6.4
Erosion and failure of landform, drainage and water management storage structures *Risk rating assumes successful	<ul> <li>Detailed post closure drainage and containment structures designed to withstand climate change scenarios.</li> <li>All containment structures to include safe overflow facilities.</li> </ul>	21 (L)	6.2.6.2



# 4. Rehabilitation Objectives and Rehabilitation Completion Criteria

### 4.1 Rehabilitation Objectives and Rehabilitation Completion Criteria

**Table 12** presents the rehabilitation objectives and rehabilitation completion criteria for individual final land use domains at the Mine Site. Final land use domains and their respective mining domains are shown on **Plan 1**.

### 4.2 Rehabilitation Objectives and Rehabilitation Completion Criteria – Stakeholder Consultation

**Table 11** 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 with each revision to this Plan to include details of further consultation with relevant and interested stakeholders.

	Page 1 of 2
Stakeholder	Consultation Activities
Bogan Shire	Form of Consultation: Letter (email transmission). <sup>1</sup>
Council	Date: 30 November 2022.
	Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation     Completion Criteria, and Final Land Use Domain Plans.
	Outcomes: No response received.
Heritage NSW	Form of Consultation: Letter (email transmission). <sup>1</sup>
	Date: 30 November 2022.
	Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans.
	Outcomes: Response received 5 December 2022. No comments provided. Request to ensure consultation regarding heritage is maintained where relevant.
NSW Biodiversity,	Form of Consultation: Letter (email transmission). <sup>1</sup>
Conservation and Science	Date: 30 November 2022.
Directorate	Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans.
	Outcomes: Response received 5 December 2022. No comments or actions required.

 Table 11

 Community Consultation Activities



# Table 11 (Cont'd)Community Consultation Activities

	Page 2 of 2
Stakeholder	Consultation Activities
NSW DPE Water	Form of Consultation: Letter (email transmission). <sup>1</sup>
	Date: 30 November 2022.
	Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans.
	• Outcomes: Response received 13 December 2022. It is noted that DPE Water did not provide any specific comments relating to the proposed ROBJ, ROCC or FLRP. However, advice was provided with regard to the overall rehabilitation outcomes for the Mines.
Nyngan Local	Form of Consultation: Letter (email transmission). <sup>1</sup>
Aboriginal Land Council	Date: 30 November 2022.
	Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans.
	• Outcomes: Response received 21 December 2022. No actions required. General comment to ensure consideration of <i>Due Diligence Code of Practice</i> <i>for the Protection of Aboriginal Objects in New South Wales</i> (NSW DECCW 2010)
Crown Lands	Form of Consultation: Letter (email transmission). <sup>1</sup>
	Date: 30 November 2022.
	Matters Subject to Consultation: Rehabilitation Objectives and Rehabilitation Completion Criteria, and Final Land Use Domain Plans.
	Outcomes: Response received 10 January 2023. No comments or actions required.
Note 1: An example of	this consultation letter is provided as Appendix 1.



 Table 12

 Proposed Rehabilitation Objectives and Rehabilitation Completion Criteria

		Proposed F	Rehabilitation Objectives and Rehabilitation Com	pletion Criteria	Page 1 of 5
Rehabilitation Objective Category	Spatial Reference	Rehabilitation Objectives (describe the desired features and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective)	Rehabilitation Completion Criteria (benchmark for the indicator, based on analogue data where appropriate)	Example Justification/Validation Methods* (evidence that the benchmark has been achieved)
Removal of A2, A4, B1, E Infrastructure G3, I1, J5	A2, A4, B1, B3, B8, G3, I1, J5	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.	Removal of all services (power, water, communications) that have been connected on the site as part of the operation.	All utility infrastructure removed.	Statement provided, utility service disconnection record / notification.
			Heritage obligations (e.g. development consent under the <i>Environmental Planning and Assessment Act 1979,</i> approvals under the <i>Heritage Act 1977,</i> etc.) have been met (e.g. archival recording, building retention or building demolition with footings preserved).	Permits and approval documents issued. All archival reports required are complete and submitted.	Copy of any relevant approval documentation and archival reports/records.
			Removal of all plant, equipment and associated infrastructure including processing facilities, stockpile areas, underground hydrocarbon storage tanks, office complex, portable offices, exploration core samples storage racks, samples.	Infrastructure removed.	As-constructed final landform plan, photos, decommissioning reports etc.
			Removal of all footings or removal to a certain depth (e.g. 1 meter).	Footings removed and or removed to specified depths to avoid exposure pathways to subsequent final land use.	Surveyed and marked on the as-constructed final landform plan.
			Removal of all water management infrastructure (including pumps, pipes and power) unless required lawful final land use.	Infrastructure removed.	Statement provided and before/after photos.
		a S a s S a	All drill cores have been removed and taken either to an authorised storage or a disposal location.	Cores removed and relocated.	Statement provided, receipt records from storage or disposal location.
			Surveying and sealing of all drill holes and boreholes in accordance with departmental guidelines and relevant standards.	Sealing completed and verified.	Engineering report/statement, plug and abandonment log, photos, as-constructed drawings, records of fill materials and concrete plugs, filling methods etc.
			Surveying and sealing of all underground mine entries in accordance with departmental guidelines and relevant standards.	Sealing completed and verified by suitably qualified engineer.	Engineering report/statement, plug and abandonment log, photos, as-constructed drawings, records of fill materials and concrete plugs, filling methods etc.
Retention of Infrastructure	A2, A4, B1, B3, B8, G3, I1	All infrastructure that is to remain as part of the final land use is safe, does not pose any hazard to the community	Potential hazards (e.g. electrical, mechanical) have been effectively isolated and secured.	Hazards isolated and secured.	Statement provided by suitably qualified engineer.
	A2, A4, B1, B3, B8, G3, I1, J5	3, I1, J5 land use benefits from the relevant approvals (e.g. development consent and / or licence/lease/binding agreement, etc)	Damage to access tracks has been repaired and stabilised.	Repairs complete.	As-constructed final landform plan, photos etc.
			Where applicable, necessary approvals are in place (e.g. development consent under the <i>Environmental</i> <i>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.
			Heritage obligations as required under the <i>Environmental Planning and Assessment Act 1979</i> , <i>Heritage Act 1977</i> , etc. have been met (e.g. archival recording, building retention and restoration).	Permits and approval documents issued; archival reports (where required) complete and submitted.	Copy of any relevant approvals.
			The structural integrity of the infrastructure is suitable and safe for use as part of the intended final land use.	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be suitable and safe as part of the intended final land use.	Engineering report/statement, photos, risk assessment verifying modes of failure are adequately addressed to minimise risks to public safety or the environment.
			Infrastructure is in a condition (e.g. structural, electrical, other hazards) that is suitable for the intended final land use.	Formal acceptance from the subsequent landowner that infrastructure is in a condition that is suitable for the intended final land use in accordance with formal agreement.	Formal acceptance from landowner.



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Table 12 (Cont'd) Proposed Rehabilitation Objectives and Rehabilitation Completion Criteria

Rehabilitation Objective Category	Spatial Reference	Rehabilitation Objectives (describe the desired features and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective)	<b>Rehabilitation Completion Criteria</b> (benchmark for the indicator, based on analogue data where appropriate)	Exa (evic
Retention of Infrastructure (Cont'd)	A2, A4, B1, B3, B8, G3, I1, J5 (Cont'd)		If any underground pipelines or other infrastructure are to remain in situ, they do not pose a hazard for the intended final land use.	The location of the infrastructure has been marked on a plan and registered with the relevant local authority (e.g. local Council) and Dial Before You	Surv land Cop
		i i r	Note: If any underground pipelines or other	Dig.	Befo
			nominated depth (e.g. >1m).	Formal acceptance from the subsequent landowner that underground infrastructure has been left in a condition that is suitable for the intended final land use in accordance with formal agreement.	Forr Ider asso
			Heritage obligations as required under the Environmental Planning and Assessment Act 1979, Heritage Act 1977, etc. have been met (e.g. archival recording, building retention and restoration).	Permits and approval documents issued; archival reports (where required) complete and submitted.	Cop repo
			The structural integrity of the infrastructure is suitable and safe for use as part of the intended final land use.	The structural integrity of the infrastructure has been inspected by a suitably qualified engineer and determined to be suitable and safe as part of the intended final land use.	Eng asse have safe
Land Contamination	A2, A4, B1, B3, B8, G3, I1, J5	There is no residual soil contamination on site that is incompatible with the final land use or that poses a threat of environmental harm.	Waste material and/or visible contamination areas on site surface.	There are no visible signs of contamination following the removal of plant, equipment and materials.	Stat
				All rubbish/ waste materials removed from site.	
				Excess sludge/material has been removed from surface water dams.	
			Soil testing for contaminants of concern as listed by Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999) applicable to land use type.	Contamination will be appropriately remediated so that appropriate guidelines for land use are met, e.g. Health Investigation Level of the National Environment Protection (Assessment of Site Contamination) Measure (1999).	Con Land Site Stat (whe
Management of waste and process	A2, A4, B1, I1		Visual – capping material placement, type across emplacement	Visual – verification that capping, type and placement consistent with design	Phot
materials			Visual – indication of capping performance on final landform – vegetation health	Visual – no signs of compromised capping performance indicated by vegetation health – such as tree death (deeper root systems)	geot grou
			Visual – emplacement seepage and other indicators of groundwater issues – wet spots etc.	Visual – no areas of unexpected seepage	The capp engi
			Measured - survey of emplacement capping to verify construction and to monitor settlement.	Survey verifies that capping placement consistent with design and settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.	as p mate
			Quality assurance records for the construction of the emplacement material including (where relevant) capping material, liner system, seepage control etc	Quality assurance records verify capping constructed and in accordance with design specifications relevant to site risks and target final land use. For example: - Capping depth - Capping material type - Capillary breaks - Seepage control.	
			Measured- surface and groundwater levels to verify water balance modeling and capping function	Groundwater and surface monitoring verify capping function e.g. 'store and release' and design performance permeability/seepage.	
			Measured – contamination levels in surface and groundwater surrounding emplacement for contaminants of concern associated with waste material emplaced.	Groundwater and surface water monitoring verify adequate containment of waste materials and seepage/leachate is not contributing to land/groundwater contamination.	



#### TRITTON RESOURCES PTY LTD

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	Page 2 of 5
jue	Example Justification/Validation Methods* (evidence that the benchmark has been achieved)
arked al	Surveyed and marked on the as-constructed final landform plan.
/ou	Copy of notification to local Council and Dial Before You Dig
	Formal acceptance from landowner.
s mal	Identified on an appropriate legal instrument associated with the land title.
ival ted.	Copy of any relevant approvals and associated reports.
s er rt of	Engineering report/statement, photos, risk assessment report validating modes of failure have been addressed to minimise risks to public safety and the environment etc.
	Statement provided and before/after photos.
э.	
m	
ed so et,	Contamination Remediation Report prepared by Land Contamination Consultant
	Site Contamination Audit Report and Site Audit Statement prepared by EPA Accredited Auditor (where required).
such	Photos, rehabilitation monitoring reports, as- constructed surveys, quality assurance records for construction, erosion surveys, independent geotechnical reports (where required),
Such	groundwater/surface water monitoring reports.
	The structural integrity of the infrastructure and capping has been inspected by a suitably qualified engineer and determined to be suitable and safe
stent ss is e	as part of the intended final land use and water material adequately contained.
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 Table 12 (Cont'd)

 Proposed Rehabilitation Objectives and Rehabilitation Completion Criteria

Rehabilitation Objective Category	Spatial Reference	Rehabilitation Objectives (describe the desired features and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective)	Rehabilitation Completion Criteria (benchmark for the indicator, based on analogue data where appropriate)
Landform Stability	A2, A4, B1, B3, B8, G3, I1, J5	11, J5 does not present a risk of environmental harm downstream / downslope of the site or a safety risk	Visual - indicators of erosion and land instability.	Visual - minimal erosion that would not require moderate to significant ongoing management and maintenance works.
		to the public/stock/native fauna.	Visual - indicators that surface water management structure are functioning as designed.	Visual – no signs of land instability such as mass movement.
		Landform that is commensurate with surrounding natural landform and where appropriate, incorporates geomorphic design principles.	Measured – erosion rates from field trials and or surveys on both target analogue sites (representative of final land use) and rehabilitated profiles (tonnes / ha).	Visual - no areas of active gully erosion.
			Measured - Survey of rehabilitated landform to verify final landform construction in accordance with Final Landform and Rehabilitation Plan <sup>6</sup> .	Visual - no evidence of tunnel erosion.
			Measured - survey of rehabilitated landform to specifically monitor settlement and/or material loss via erosion.	Visual – no evidence of active scour likely to compromise surface water management structure.
			Modelled – long term erosional stability modelling undertaken as required (e.g. Landform Evolution Modelling) to verify the long-term stability of rehabilitated landform.	Survey verifies final landform complies with final landform construction in accordance with Final Landform and Rehabilitation Plan. <sup>6</sup>
			Modelled – long term geotechnical stability modelling undertaken as required (e.g. stability analysis) to verify the long-term stability of rehabilitated landform.	Survey verifies that settlement and/or material loss is within predicted limits and will not compromise final landform drainage via differential settlement.
				Erosion rate monitoring verifies that erosion levels are within the range of target analogue sites representative of final land use.
				Significant surface water management structures (e.g. spillways, drop structures, major drains and creek diversions) have been constructed in accordance with hydrological design.
				High risk landforms (such as steep slopes, high walls) have been constructed in accordance with geotechnical design.
Bushfire	A2, B1, B1, B3, B8, I1	The risk of bushfire and impacts to the community, environment and infrastructure has been addressed as part of rehabilitation.	Appropriate bushfire hazard controls (where required) have been implemented on the advice from the NSW Rural Fire Service.	Bushfire controls implemented.
Surface Water	A2, A4, B1, B3, B8, G3, I1, J5	Runoff water quality from mine site is similar to, or better than the pre-disturbance runoff water quality.	Water quality parameters selected from Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 and or Environment Protection Licence (further guidance available on NSW Environment Protection Authority website).	Water quality discharged from rehabilitated mining operation meet specifications in Environment Protection Licence and or ANZECC guidelines for specific environment.
Water Approvals	G3, J5	voids, dams, levees etc. are appropriately licensed (e.g. under the <i>Water Management Act 2000</i> ) and	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.
		held in the water source(s) to account for water take.	Indicators as specified by Australian River Assessment System (AUSRIVAS).	Assessment of biological health in accordance with Australian River Assessment System (AUSRIVAS).



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Example Justification/Validation Methods* (evidence that the benchmark has been achieved)
Before and after photos, rehabilitation monitoring reports, as- constructed surveys, erosion surveys, independent geotechnical reports (where required) and or erosion modelling reports (where required) that indicate long-term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, stability will need to be evaluated over a number of years (e.g. 5 years).
An engineering assessment undertaken by a suitably qualified person concludes that significant surface water management structures (e.g. spillways, drop structures, major drains and creek diversions) have been constructed in accordance with hydrological design.
An engineering assessment undertaken by a
suitably qualified person concludes that high risk landforms (such as steep slopes, high walls) have been constructed in accordance with geotechnical design.
Statement provided and before/after photos.
Water quality monitoring reports.
Environment Protection Licence relinquished by
Environment Protection Authority. Independent hydrological assessment report.
Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).
Confirmation from relevant Government Agency that relevant water approvals / licences are able to be granted.
Independent biological health assessment report. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).

Table 12 (Cont'd) Proposed Rehabilitation Objectives and Rehabilitation Completion Criteria

					Page 4 of
Rehabilitation Objective Category	Spatial Reference	Rehabilitation Objectives (describe the desired features and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective)	<b>Rehabilitation Completion Criteria</b> (benchmark for the indicator, based on analogue data where appropriate)	Example Justification/Validation Methods* (evidence that the benchmark has been achieved
Groundwater Quality	A2, A4, B1, B3, B8, G3, I1, J5	Groundwater quality is similar to, or better than the pre- disturbance water quality.	Water quality parameters selected from Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2000 and or Environment Protection Licence (further guidance available on the NSW Environment Protection Authority website).	Water quality discharged from rehabilitated mining operation meet specifications in Environment Protection Licence and or ANZECC guidelines for specific environment.	Independent hydrological assessment report. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).
Groundwater Regime		Impacts to groundwater regime are within range as	Groundwater quality both on and off a mining lease	Groundwater levels, groundwater flow.	Water quality monitoring reports.
	G3, I1, J5	per the development consent(s) / pre-mining environmental assessment.	represent an acceptable level of change from a defined reference condition.		Environment Protection Licence relinquished by Environment Protection Authority.
					Independent hydrological assessment report.
					Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).
Ecological rehabilitation	A2, A4	The vegetation composition includes native species commensurate with one or more of the surrounding PCT types (PCT103, PCT105, PCT250) and that are deemed suitable to establish over the Heap	Native plant species recorded from 0.04 hectare fixed monitoring plots are characteristic of the target vegetation community (e.g. target PCT)	Native plant species are characteristic of 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.
		Leach Facility without impacting upon the integrity of the cover / cap.			Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).
		The vegetation structure of the final landform is commensurate with one or more of the surrounding PCT types (PCT103, PCT105, PCT250) and that are deemed suitable to establish over the Heap	Cover and abundance of plant growth forms recorded from 0.04 hectare fixed monitoring plots are characteristic of the target vegetation community (e.g. PCT), or an ongoing trend toward becoming	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.
		Leach Facility without impacting upon the integrity of the cover / cap.	characteristic is evident from the monitoring data		Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).
	Levels of ecosystem function have been established that demonstrate that the vegetation is self-sustainable	Indicators of nutrient cycling are suitable for sustaining the target vegetation community (e.g. PCT(s))	Litter cover is within 10 <sup>th</sup> -90 <sup>th</sup> percentile variation range of reference sites/data	Rehabilitation monitoring reports, independent so reports (where required) that demonstrate long- term function of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).	
			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 <sup>th</sup> -90 <sup>th</sup> percentile variation range of reference sites/data approved by the consent authority	Before and after photos, rehabilitation monitoring reports, independent ecological reports (where required) that validate rehabilitation completion criteria have been met.
					Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).
			Cover of exotic species within 0.04 hectare fixed monitoring plots is low	Foliage cover of 'high threat exotic' (HTE) weeds is within 10 <sup>th</sup> -90 <sup>th</sup> 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 demonstrate long-term stability of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).



### TRITTON RESOURCES PTY LTD

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 Table 12 (Cont'd)

 Proposed Rehabilitation Objectives and Rehabilitation Completion Criteria

Rehabilitation Objective Category	Spatial Reference	Rehabilitation Objectives (describe the desired features and/or characteristics of the final land use domain)	Indicator (specific attribute associated with the objective)	Rehabilitation Completion Criteria (benchmark for the indicator, based on analogue data where appropriate)	E (
			Soil health is suitable to sustain the target vegetation community(s) (e.g. PCT)	Total organic carbon is within 10 <sup>th</sup> - 90 <sup>th</sup> percentile variation range of reference sites/data; and	F re
				Total microbial biomass is within 10 <sup>th</sup> -90 <sup>th</sup> percentile variation range of reference sites/data approved by the consent authority; and	te O S
				The ratio of fungus to bacteria (fungal:bacterial) biomass is within 10 <sup>th</sup> -90 <sup>th</sup> percentile variation range of reference sites/data	to
			Resilience demonstrated by the effects of drought and fire on composition, structure and other function attributes.	Resilience to drought and fire.	R n
			Threats to rehabilitation.	Vertebrate pest species – presence and damage is recorded at a level that does not cause significant risk to rehabilitation.	R
				Domesticated stock - presence and damage is recorded at a level that does not cause significant risk to rehabilitation.	
Agricultural Revegetation	B1, B3, B8	Revegetation is sustainable for the long-term and only requires maintenance that is consistent with the intended final land use. Land capability similar to pre-mining capability (Class V or Class VI).	Routine Soil Test (bulked soil cores 0-10 cm) –Includes: Total Carbon (TC), Total Nitrogen (TN), Organic Matter, TC/TN Ratio; Bray I and II Phosphorus; Colwell Phosphorus; Available cations (Calcium, Magnesium, Potassium, Ammonium, Nitrate, Phosphate, Sulfur); Available Micronutrients (Zinc, Manganese, Iron, Copper, Boron, Silicon); Exchangeable (Sodium, Potassium, Calcium, Magnesium, Hydrogen, Aluminium, Cation Exchange Capacity); pH and EC (1:5 water); Basic Colour, Basic Texture.	Land and Soil Capability classification or Agricultural Land Classification criteria met.	R ir D a c o
			Commodity data (e.g. stocking rates, livestock weights, crop yields, pasture composition).	The re-established topsoil / subsoil substrate is capable of supporting the targeted pasture / cropping regime on a sustained basis.	
				Cropping / Pasture establishment is consistent with the range of species utilised within the region.	
				Cropping / Pasture establishment is in good health and provides adequate cover.	
				Cropping yields from rehabilitated areas are similar to adjacent cropping land.	
				Appropriate and reliable access to water for livestock.	
				Appropriate animal refuge areas for livestock (e.g. wooded/treed areas) during extreme weather conditions.	



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Example Justification/Validation Methods* (evidence that the benchmark has been achieved)
Rehabilitation monitoring reports, independent soil reports (where required) that demonstrate long- term function of rehabilitated landform. Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).
Rehabilitation monitoring reports, environmental monitoring records.
Rehabilitation monitoring reports.
Rehabilitation monitoring reports, independent soil reports, environmental monitoring records, independent agronomist reports.
Depending on the nature, scale and risks associated with a specific site, achievement of criteria may need to be evaluated over a number of years (e.g. 5 years to 15+ years).