# 2. Final Land Use

### 2.1 **Regulatory Requirements for Rehabilitation**

**Table 3** lists the regulatory requirements relating to the rehabilitation of the Mine Site and post-mining land uses. It is noted that the conditional requirements for MLs within the Mine Site have been adopted from Schedule 8A of the *Mining Amendment (Standard Conditions of Mining Leases – Rehabilitation) Regulation 2021*, gazetted by the NSW Government on 2 July 2021. It has been assumed that site specific conditions within Mining Authorities relating to rehabilitation have been retained, and the standard conditions have been replaced by those identified in Schedule 8A of the *Mining Amendment (Standard Conditions of Mining Leases – Rehabilitation) Regulation 2021*. In the event that there are any discrepancies between the conditions identified in this Plan and those included in the Mining Authorities for the Mine Site following updates to the conditions of these Mining Authorities, this Plan will be updated to correct these discrepancies.

### 2.2 Final Land Use Options Assessment

A final land use options assessment is not required for the Murrawombie Mine as Condition 2 of DA 1/91 states that development is to be undertaken in accordance with the *Environmental Impact Assessment* (EIS) for the Murrawombie Mine (RWC, 1990). Section 2.17.1 of the EIS (RWC, 1990) states that the final landform features will, as far as practicable, blend with the existing topography. Sections 2.17.2-2.17.6 describe the final landform features of each mining domain in detail.

Further, the previously approved *Mining Operations Plan* (MOP) for the Mine (RWC, 2015) defines the final land use to be agricultural and grazing activities reflecting the pre-mining land uses within the area, or native vegetation conservation. Section 4.2 of the MOP defines that the final land use goals are as follows.

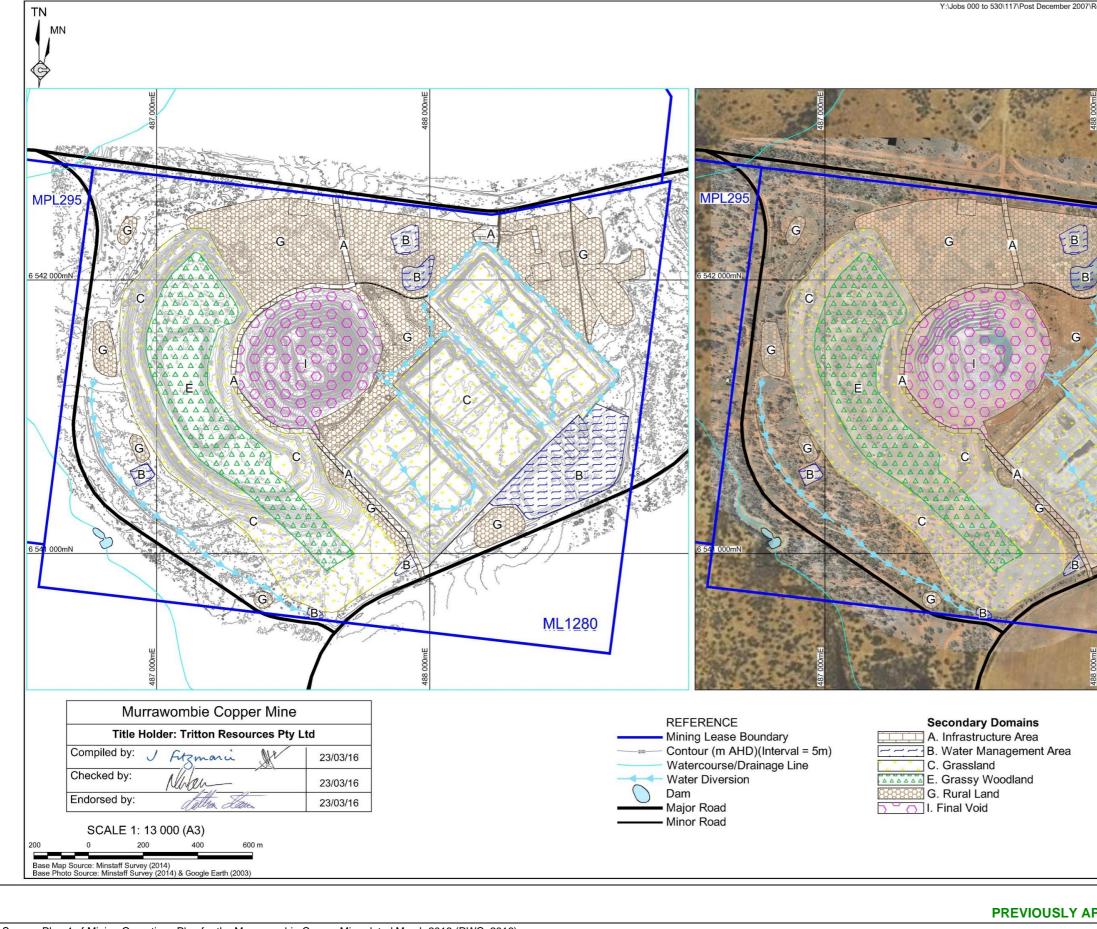
- To implement successful design and rehabilitation of landforms to ensure structural stability, revegetation success and free drainage of water;
- To ensure rehabilitation and revegetation is self-sustaining, blends with the surrounding landscape, as far as practicable, and follows the principles of sustainable development; and
- To retain areas of the Mine Site amenable to future agricultural activities or other mining operations in the region. These aspects would be subject to written agreement with a future landowner or the development approvals for other operations.

The final landform is displayed on Plan 4 of the MOP. For the purposes of this RMP, the final land use approved in the MOP is reproduced in **Figure 7** as the approved final landform.

Following advice from DnA Environmental regarding a revegetation strategy for the Murrawombie Mine Site, it is now proposed that woodland vegetation established be established across the entire Murrawombie Waste Rock Emplacement.



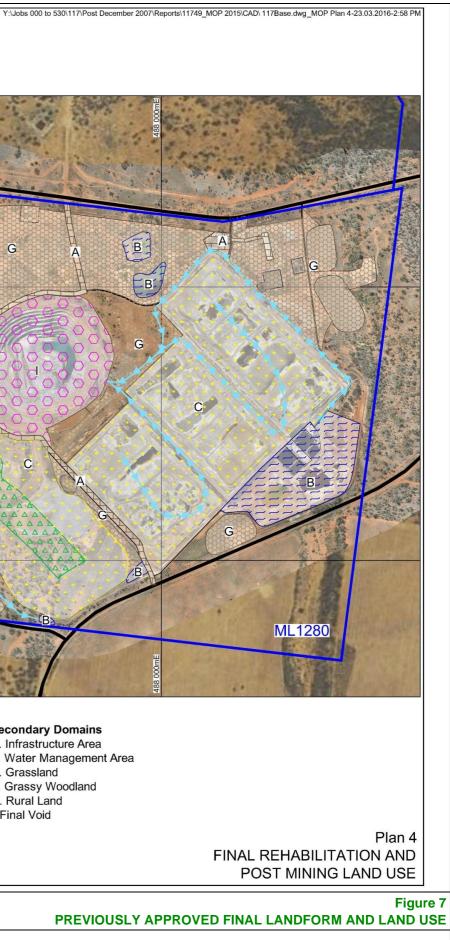
**REHABILITATION MANAGEMENT PLAN** Report No. 117/62



Source: Plan 4 of Mining Operations Plan for the Murrawombie Copper Mine dated March 2016 (RWC, 2016)

RWCorkery&co

#### TRITTON RESOURCES PTY LTD ML1280, MPL294, MPL295 – Murrawombie Copper Mine



ML1280, MPL294, MPL295 – Murrawombie Copper Mine

кероп	INO.	11	1/02

Page 1 of 10

Consent	Condition No. or Section	Requirement	Area	Timing	RMP Section
Murrawombie Mine DA 1/91	2	The Development be generally in accordance with the Environmental Impact Statement dated December 1990 prepared by R.W. Corkery & Co. Pty Ltd and submitted to Council with development application 1/91 dated 2 January 1991.	ML1280	During operations and	Noted
		Except where amended by The "Statement of Environmental Effects for ML1280 – Tritton Expansion Project – Stage 3", Dated October 2007 – prepared by Tritton Resources Limited and the Statement of Environmental Effects for the Extension of the Murrawombie Open Cut, prepared by R.W. Corkery & Co. Pty. Limited dated May 2015.		rehabilitation works	
	9	The Applicant is to consult with the Soil Conservation Service of N.S.W to ensure rehabilitation, and run-off control standards are met.			
	14	The site is to be progressively rehabilitated as outlined in the Environmental Impact Statement and in accordance with the requirements of the Soil Conservation Service, Department of Agriculture and Department of Minerals and Energy.			
Murrawombie	2.17.1	As far as practicable blend the landform with the surrounding land fabric.	ML1280	D During operations and rehabilitation works	5
Mine Environmental		Provide a stable ground cover for erosion control.			6.2.6.2
Impact		To provide a low maintenance, stable and safe landform commensurate with a grazing land use capability.			2
Statement (RWC, 1990)		As far as practicable minimise impacts on scenic amenity.			2
(KWC, 1990)		Revegetate with native tress and scrub species comparable with pre-existing vegetation communities.			6.2.5
	2.17.2	Construct the final landform in accordance with Section 2.17.2 of the EIS (RWC, 1990) to maintain long term safety of the landform.			6.2.3
	2.17.3	Construct the Murrawombie Waste Rock Emplacement such that any waste rock identified as potentially acid forming is encapsulated.			6.2.3
		Construct the landform so that the surface is free draining and suitable for revegetation with native groundcover, shrub and tree species.			
	2.17.4	Establish a stable, free draining landform.			6.2.3
		Minimise surface percolation of rainfall through doming the surface and applying an appropriate cover.			
		Maintain the integrity of the pad lining to minimise the spread of potential contamination.			



	1		1	P	age 2 of 10
Consent	Condition No. or Section	Requirement	Area	Timing	RMP Section
Murrawombie Mine Statement of Environmental Effects (Tritton, 2007)	5.14	Provide a landform for controlled grazing of livestock with a post-closure aim to provide a decommissioned site which consists of stable non-polluting structures that are vegetated with self-sustaining vegetation.	ML1280	During rehabilitation works	6.2.5
Murrawombie Mine Statement of Environmental Effects (RWC, 2015b)	2.6.3	The final land uses of disturbed areas would include agricultural and grazing activities reflecting the pre- mining land uses within the area.			6.2.5
Long-term Rel	habilitation Ob	ojectives			
Mine Closure Plan (2011)	Land Use	The Mine will be rehabilitated to accommodate pastoral activities on a combination of class 4 and class 5 land. Infrastructure will be removed, where possible, and all contaminated water sources will be rehabilitated. Fresh water sources will remain on site.	ML1280	During rehabilitation	6.2.5
	Water	Any contaminated water storage sites will be rehabilitated leaving only fresh water sources on site.			6.2.3.1
	Management	All clean water facilities will be left at all three sites. These will be used for grazing stock and wildlife around the area.			
		Environmental liabilities for some infrastructure will be transferred to future landholders such as bores, access roads and fences.			
	Open Voids	All open voids are to remain as open voids with the underground access to be closed up. Safety bunds will be constructed around the outside of the open pit to restrict all access.			6.2.2.1, 6.2.3
	Other	Murrawombie Waste Rock Emplacement areas will be covered with topsoil and re-seeded. Various flora species similar to pre-disturbance conditions will be distributed.			6.2.4, 6.2.5,
		Infrastructure, materials and rubbish will be removed and/or appropriately buried, areas will be reshaped and vegetated, and the site will be left clean, stable and tidy.			6.2.6
		Disturbed areas will be contoured to blend into the surrounding topography the ripped, topsoiled and seeded, if required, to promote natural regeneration of native vegetation communities.			
		Surface water drainage patterns will be reinstated to reduce the risk of unacceptable water ponding and/or erosion.			



ML1280, MPL294, MPL295 – Murrawombie Copper Mine

Report No. 117/62

Consent	Condition No. or Section	Requirement	Area	Timing	RMP Section
Mining Lea	ses				
ML1280,	4	Must prevent or minimise harm to the environment	ML1280	During	Noted
MPL294, MPL295		The holder of a mining lease must take all reasonable measures to prevent, or if that is not reasonably practicable, to minimise, harm to the environment caused by activities under the mining lease.		operation and rehabilitation	
		In this clause –		Terrabilitation	
		<i>harm</i> to the environment has the same meaning as in the <i>Protection of the Environment Operations Act</i> 1997.			
	5	Rehabilitation to occur as soon as reasonably practicable after disturbance			Noted
		The holder of a mining lease must rehabilitate land and water in the mining area that is disturbed by mining activities under the mining lease as soon as reasonably practicable after the disturbance occurs.			
	6	Rehabilitation must achieve final land use		During	2.3
		The holder of a mining lease must ensure that rehabilitation of the mining area achieves the final land use for the mining area.		rehabilitation	
		The holder of a mining lease must ensure any planning approval has been obtained that is necessary to enable the holder to comply with subclause (1).			
		The holder of the mining lease must identify and record any reasonably foreseeable hazard that presents a risk to the holder's ability to comply with subclause (1)			
		<b>Note –</b> clause 7 requires a rehabilitation risk assessment to be conducted whenever a hazard is identified under this subclause.			
		In this clause –			
		<i>final land use</i> for the mining area means the final landform and final land uses to be achieved for the mining area –			
		as set out in the rehabilitation objectives statement and rehabilitation completion criteria statement, and			
		for a large mine - as spatially depicted in the final landform and rehabilitation plan, and			
		if the final land use for the mining area is required by a condition of development consent for activities under the mining lease – as stated in the condition.			
		Planning approval means –			
		a development consent within the meaning of the Environmental Planning and Assessment Act 1979, or			
		an approval under that Act, Division 5.1.			



Consent	Condition No. or Section	Requirement	Area	Timing	RMP Section
Mining Leas	ses (Cont'd)				
Mining Leases ML1280, MPL294, MPL295 (Cont'd)	7	Rehabilitation risk assessment         The holder of a mining lease must conduct a risk assessment (a rehabilitation risk assessment) that –         identifies, assesses and evaluates the risks that need to be addressed to achieve the following in relation to the mining lease –         the rehabilitation objectives,         the rehabilitation completion criteria,         for large mines – the final land use as spatially depicted in the final landform and rehabilitation plan, and         identifies the measures that need to be implemented to eliminate, minimise or mitigate the risks.         The holder of the mining lease must implement the measures identified.         The holder of a mining lease must conduct a rehabilitation risk assessment –         for a large mine – before preparing a rehabilitation management plan, and         for a small mine – before preparing the rehabilitation outcome documents for the mine, and         whenever a hazard is identified under clause 6(3) – as soon as reasonably practicable after it is identified, and         whenever given a written direction to do so by the Secretary.	ML1280	During construction, operation and rehabilitation	3
	8	Application of Division This Division does not apply to a mining lease unless— the security deposit required under the mining lease is greater than the minimum deposit prescribed under the Act, section 261BF in relation to that type of mining lease, or the Secretary gives a written direction to the holder of the mining lease that this Division, or a provision of this Division, applies to the mining lease.	operatio and rehabilitat During constructio operatio and	construction, operation	Noted
	9	General requirements for documents A document required to be prepared under this Division must— be in a form approved by the Secretary, and Note— The approved forms are available on the Department's website. Include any matter required to be included by the form, and if required to be given to the Secretary—be given in a way approved by the Secretary.		During construction, operation and rehabilitation	This Plan



ML1280, MPL294, MPL295 – Murrawombie Copper Mine

Report No. 117/62

	O an all the		1	P	age 5 of 10
Consent	Condition No. or Section	Requirement	Area	Timing	RMP Section
Mining Leas	ses (Cont'd)				
ML1280,	10	Rehabilitation management plans for large mines	ML1280	During	This
MPL294, MPL295 (Cont'd)		The holder of a mining lease relating to a large mine must prepare a plan (a rehabilitation management plan) for the mining lease that includes the following—		construction, operation and	Plan
(cont d)		a description of how the holder proposes to manage all aspects of the rehabilitation of the mining area,		rehabilitation	
		a description of the steps and actions the holder proposes to take to comply with the conditions of the mining lease that relate to rehabilitation,			
		a summary of rehabilitation risk assessments conducted by the holder,			
		the risk control measures identified in the rehabilitation risk assessments,			
		the rehabilitation outcome documents for the mining lease,			
		a statement of the performance outcomes for the matters addressed by the rehabilitation outcome documents and the ways in which those outcomes are to be measured and monitored.			
		If a rehabilitation outcome document has not been approved by the Secretary, the holder of the mining lease must include a proposed version of the document.			
		A rehabilitation management plan is not required to be given to the Secretary for approval.			
		The holder of the mining lease—			
		must implement the matters set out in the rehabilitation management plan, and			
		if the forward program specifies timeframes for the implementation of the matters—must implement the matters within those timeframes.			
	11	Amendment of rehabilitation management plans		During	Noted
		The holder of a mining lease must amend the rehabilitation management plan for the mining lease as follows—		construction, operation and	
		to substitute the proposed version of a rehabilitation outcome document with the version approved by the Secretary—within 30 days after the document is approved,		rehabilitation	
		as a consequence of an amendment made under clause 14 to a rehabilitation outcome document—within 30 days after the amendment is made,			
		to reflect any changes to the risk control measures in the prepared plan that are identified in a rehabilitation risk assessment—as soon as practicable after the rehabilitation risk assessment is conducted,			
		whenever given a written direction to do so by the Secretary—in accordance with the direction.			



	Condition			P	age 6 of 10
Consent	No. or Section	Requirement	Area	Timing	RMP Section
Mining Leas	ses (Cont'd)				
ML1280,	12	Rehabilitation outcome documents	ML1280	0	4.2, 5.1
MPL294, MPL295 (Cont'd)		The holder of a mining lease must prepare the following documents ( <i>the rehabilitation outcome documents</i> ) for the mining lease and give them to the Secretary for approval—		construction, operation and	
(001110)		the <i>rehabilitation objectives statement</i> , which sets out the rehabilitation objectives required to achieve the final land use for the mining area,		rehabilitation	
		the <i>rehabilitation completion criteria statement</i> , which sets out criteria, the completion of which will demonstrate the achievement of the rehabilitation objectives,			
		for a large mine, the <i>final landform and rehabilitation plan</i> , showing a spatial depiction of the final land use.			
		If the final land use for the mining area is required by a condition of development consent for activities under the mining lease, the holder of the mining lease must ensure the rehabilitation outcome documents are consistent with that condition.			
	13	Forward program and annual rehabilitation report		During	11
		The holder of a mining lease must prepare a program (a <i>forward program</i> ) for the mining lease that includes the following—		construction, operation and	
		a schedule of mining activities for the mining area for the next 3 years,		rehabilitation	
		a summary of the spatial progression of rehabilitation through its various phases for the next 3 years,			
		a requirement that the rehabilitation of land and water disturbed by mining activities under the mining lease must occur as soon as reasonably practicable after the disturbance occurs.			
		The holder of a mining lease must prepare a report (an <i>annual rehabilitation report</i> ) for the mining lease that includes—			
		a description of the rehabilitation undertaken over the annual reporting period,			
		a report demonstrating the progress made through the phases of rehabilitation provided for in the forward program applying to the reporting period,			
		a report demonstrating progress made towards the achievement of the following-			
		the objectives set out in the rehabilitation objectives statement,			
		the criteria set out in the rehabilitation completion criteria statement,			
		for large mines—the final land use as spatially depicted in the final landform and rehabilitation plan.			



ML1280, MPL294, MPL295 – Murrawombie Copper Mine

	Condition			<u>г</u>	age 7 of 10
Consent	No. or Section	Requirement	Area	Timing	RMP Section
Mining Leas	es (Cont'd)				
ML1280, MPL294,	13 (Cont'd)	If a rehabilitation outcome document has not been approved by the Secretary, the holder of the mining lease must rely on a proposed version of the document.	ML1280		
MPL295 (Cont'd)		The holder of the mining lease must give the forward program and annual rehabilitation report to the Secretary.			
		In this clause— annual reporting period means each period of 12 months commencing on—			
		the date on which the mining lease is granted, or			
		if the Secretary approves another date in relation to the mining lease- the other date			
	14	Amendment of rehabilitation outcome documents and forward program	]	During construction, operation and	Noted
		This clause applies to-			
		a rehabilitation outcome document if it has been approved by the Secretary, and			
		a forward program if it has been given to the Secretary.		rehabilitation	
		The holder of a mining lease must not amend a document to which this clause applies that relates to the mining lease unless—			
		the Secretary gives the holder a written direction to do so, or			
		the Secretary, on written application by the holder, gives a written approval of the amendment.			
		The holder of the mining lease must amend the document in accordance with the Secretary's direction or approval.			
		Nothing in this clause prevents the holder of a mining lease preparing a draft amendment for submission to the Secretary for approval.			



Consent Section	Requirement	Area	Timing	RMP Sectior
Mining Leases (Cont'd)				I
Mining Leases (Cont'd) ML1280, 15 MPL294, MPL295 (Cont'd)	Times at which documents must be prepared and given           The holder of a mining lease must do the following before the end of the initial period—           prepare a rehabilitation management plan, and           prepare rehabilitation outcome documents and give them, other than the rehabilitation completion criteria statement, to the Secretary for approval, and           prepare a forward program and give it to the Secretary.           The holder of the mining lease must prepare a forward program and annual rehabilitation report and give them to the Secretary before—           60 days after the last day of each annual reporting period, commencing with the annual reporting period in which the forward program was given to Secretary under subclause (1)I, or           a later date approved by the Secretary.           A rehabilitation completion criteria statement relating to completion of rehabilitation during a period covered by a forward program must be given to the Secretary for approval when the forward program is required to be given to the Secretary.           The holder of the mining lease must prepare updated rehabilitation outcome documents for the mining lease and give them to the Secretary.           A rehabilitation completion criteria statement is not required to be given to the Secretary under subclause (4) unless a rehabilitation completion criteria statement has already been given to the Secretary under subclause (4) unless a rehabilitation completion criteria statement has already been given to the Secretary under subclause (3).           The Secretary may, by written notice, direct the holder of a mining lease to prepare, or give to the Secretary, a document required to be prepared under t	ML1280	During construction, operation and rehabilitation	This Plan



ML1280, MPL294, MPL295 – Murrawombie Copper Mine

	Condition				
Consent	No. or Section	Requirement	Area	Timing	RMP Section
Mining Leas	ses (Cont'd)				
ML1280,	16	Certain documents to be publicly available	ML1280	During	Noted
MPL294, MPL295		This clause applies to the following documents—		construction, operation	
Cont'd)		a rehabilitation management plan,		and	
		a forward program,		rehabilitation	
		an annual rehabilitation report.			
		The holder of a mining lease must make a document to which this clause applies publicly available by—			
		publishing it on its website in a prominent position, or			
		if the holder does not have a website providing a copy of it to a person —			
		on the written request of a person, and			
		without charge, and			
		within 14 days after the request is received.			
		If a document is published on the website of the holder of the mining lease, the holder must ensure that it is published—			
		for a rehabilitation management plan-within 14 days after it is prepared or amended, or			
		for a forward program or an annual rehabilitation report—within 14 days after it is given to the Secretary or amended,			
		Personal information within the meaning of the <i>Privacy and Personal Information Protection Act 1998</i> is not required to be included in a document made available to a person under this clause.			
	17	Records demonstrating compliance		During	Noted
		The holder of a mining lease must create and maintain records of all actions taken that demonstrate compliance with each of the conditions set out in this Part.		construction, operation and	
		<b>Note—</b> The Act, sections 163D and 163E provide for the form in which records must be kept and the period for which they must be retained.		rehabilitation	



	Condition			Pa	ge 10 of 10
Consent	No. or Section	Requirement	Area	Timing	RMP Section
Mining Leas	ses (Cont'd)				
ML1280, MPL294, MPL295 (Cont'd)	18	Report on non-compliance         The holder of a mining lease must provide the Minister with a written report detailing any non-compliance with—         a condition of the mining lease, or Note— The Act, section 364A contains provisions relating to the use and disclosure of information provided under this condition.         a requirement of the Act or this Regulation relating to activities under the mining lease.         The holder of the mining lease must provide the report within 7 days after becoming aware of the non-compliance.         The holder of the mining lease must ensure the report—         identifies the condition of the mining lease, or the requirement of the Act or this Regulation, to which the non-compliance relates, and	ML1280	During construction, operation and rehabilitation	Noted
		describes the non-compliance and specifies the date or dates on which, or the period during which, the non-compliance occurred, and describes the causes or likely causes of the non-compliance, and describes the action that has been taken, or will be taken, to mitigate the effects, and to prevent any recurrence, of the non-compliance.			



### 2.3 Final Land Use Statement

The final land use for the Mine Site were described in the EIS for the Mine (RWC, 1990) and subsequent environmental assessments and Mining Operations Plans. Condition 2 of DA 1/91 states that development is to be undertaken in accordance with the Environmental Impact Assessment (EIS) (RWC, 1990). Section 2.17.1 of the EIS states that the final landform features would, as far as practicable, blend with the existing topography. In summary the expected final land uses of the disturbed areas would include agricultural and grazing activities reflecting the pre-mining land uses within the area and the use of neighbouring properties.

Final land uses within the Mine Site will include the following.

- Native Ecosystem Area (Grassland and Woodland) includes revegetated areas containing flora species assemblages and ecosystem characteristics consistent with the surrounding vegetation community types (see Section 6.2.5).
- Agricultural Area (Grazing) includes areas that will be rehabilitated in a manner suitable for agricultural purposes, consistent with land capability prior to mining disturbance and the surrounding topography.
- Water Storage Area includes the Raw Water Dam and Duck Pond and other sediment basins or containment dams.
- Infrastructure Area includes the hardstand and associated access roads.
- Final Void Area the Murrawombie Open Cut final void.

Final land use and rehabilitation plans for the Mine Site are presented in Section 5. It is noted that the proposed final land uses will not interfere with the use of existing reserves within the Mine Site.

### 2.4 Final Land Use and Mining Domains

The Form and Way: Rehabilitation Management Plan for Large Mines (July 2021) guideline defines a domain as follows.

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

#### 2.4.1 Final Land Use Domains

**Table 4** defines the final land use domains for the Mine Site and **Plan 1** displays the final land use domains for the Mine Site. For reference, **Figure 7** presents the most recently approved final land use for the Mine Site, as defined by the final Mining Operations Plan (2015).



## Table 4Final Land Use Domains

Final Land Use Domain	Domain ID <sup>1</sup>	Domain Description
Native Ecosystem Area (Woodland)	A	Includes the Murrawombie Waste Rock Emplacement not suitable for pastoral activity.
Native Ecosystem Area (Grassland)	A	Includes areas that will be rehabilitated to grassland, without shrubs or trees, where a mid- or over-storey of vegetation may adversely impact on the stability of the final landform (i.e. the upper surface and embankments of the Heap Leach Pads). It should be noted that the principal purpose of the vegetation cover will be as part of the functioning capped landform.
Agricultural Area - Grazing	В	Includes areas that will be rehabilitated to be suitable for light grazing agricultural purposes (i.e. areas of mine-related disturbance, stockpiles, ROM Pad and infrastructure and access tracks not being retained).
Water Storage Area	G	Includes all water management infrastructure to be retained for the final land use (i.e. the Raw Water Dam and Duck Pond and other sediment basins or containment dams).
Infrastructure Area	I	Includes all significant built infrastructure to be retained or constructed for the final land use (e.g. the access road).
Final Void Area	J	Includes the Murrawombie Open Cut final void.
Note 1: See Plan 1		



#### 2.4.2 Mining Domains

**Table 5** defines the mining domains for the Mine Site and Figure 8 displays the mining domains for the Mine Site.

	Domain	
Mining Domain	ID <sup>1</sup>	Domain Description
Infrastructure Area	1	Includes the administration and workshop area, the Copper Cementation Plant and miscellaneous infrastructure (i.e. access roads, sheds and a graveyard area). This also includes all remaining areas that have been disturbed through mining activities (i.e. the ROM Pads).
Heap Leach Pads	2	Includes the heap leach material storage area (i.e. all embankments, access tracks and drainage structures).
Water Management Area (Clean Water)	3	Water management structures that capture clean water from undisturbed areas within the Mine Site or that are used as temporary storage locations for water sourced under licence from the Bogan River (i.e. the Raw Water Dam and Duck Pond and other sediment basins or containment dams).
Water Management Area (Contaminated Water)	3	Includes all sediment dams used to manage potentially contaminated or chemical- laden water associated with the Heap Leach Pads or with runoff from waste rock material that has the potential to be acid forming. (i.e. the containment dams, Pregnant Liquor Ponds, sediment basins and the inactive sediment dam).
Overburden Emplacement Area	4	Includes the Murrawombie Waste Rock Emplacement.
Active Mining Area (Open Cut Void)	5	Includes the Murrawombie Open Cut final void.
Other (Topsoil Stockpile Area)	8	Includes topsoil and subsoil stockpiles.
Note 1: See Figure 7		

#### Table 5 Mining Domains



REHABILITATION MANAGEMENT PLAN Report No. 117/62

#### TRITTON RESOURCES PTY LTD ML1280, MPL294, MPL295 – Murrawombie Copper Mine

