6. Rehabilitation Implementation

6.1 Life Of Mine Rehabilitation Schedule

Based on current production rates and the extent of known mineralisation, and the current expiry date for DA 41/98, it is anticipated that mining operations at the Mine Site will be completed by end of 2027.

Prior to the cessation of mining operations, rehabilitation will be undertaken in areas which are no longer required for operational purposes.

Figure 8 depicts the current extent of disturbance at the Mine Site (i.e. the mining domains). **Plans 3** to **5** present the indicative rehabilitation schedule for the Mine Site by depicting those areas which will be rehabilitated during each 5-yearly increment between the commencement of this plan and Mine closure. It is noted that this schedule is applicable only until the completion of the Ecosystem and Land Use Establishment phase of rehabilitation operations within all Mining Domains (see Section 6.2). Approximate timings for the Ecosystem and Land Use Development phase of rehabilitation have not yet been defined as this phase will principally involve the monitoring and maintenance of completed rehabilitation works until completion criteria identified in Section 4.1 have been achieved.

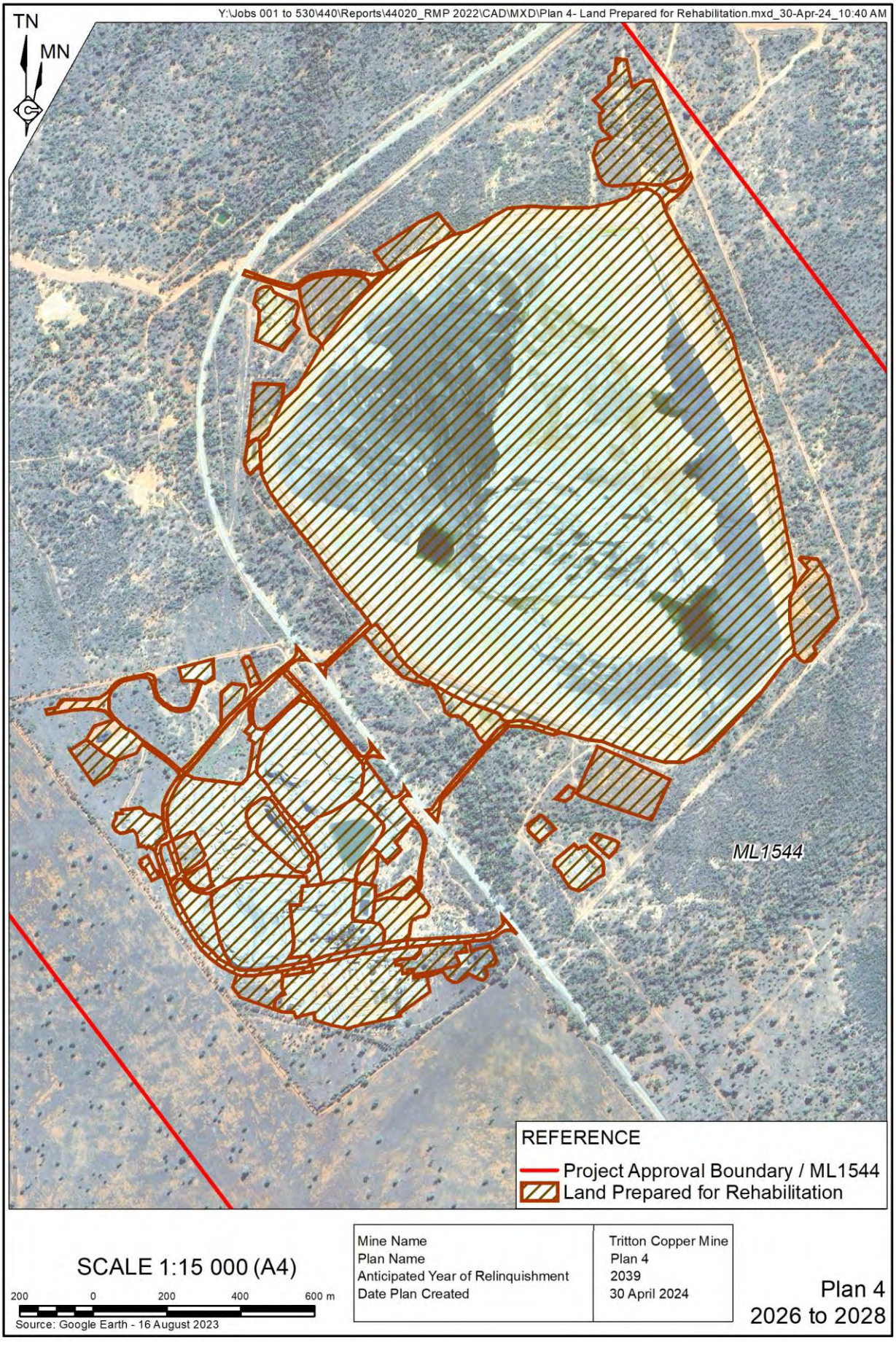
It is noted that successful rehabilitation of the Mine Site is dependent on the outcomes of rehabilitation research and trials identified in Section 9. Further studies are necessary to determine the causes and appropriate corrective action. As a result, the Company will focus on completion of a seed balance strategy, landform evolution modelling and a growth medium materials balance to ensure that rehabilitation is successful. As such, the life of mine rehabilitation schedule is indicative only and will be updated in future revisions of this plan as more information is obtained.

The rehabilitation schedule for the Mine Site is presented on **Plans 3** to **5** and summarised as follows.

- 2024 to 2026 (**Plan 3**):
  - Revegetation Strategy and Seed Collection and Procurement Strategy prepared
  - Preparation of numerical groundwater model (for all mines within the Tritton Copper Operations) and Post Closure Water Management Plan developed.
  - Land contamination and hazard assessment including remediation plan developed.
  - Tailings Storage Facility progressive rehabilitation and maintenance of batters.
  - Tailings Storage Facility capping concept design research and trials (if required). This may include Landform Evolution Modelling and consolidation assessments, as required.
  - Decommissioning of landfill (depending on remaining capacity).

- 2026 to 2030 (**Plan 4** and **5**):
  - Whole of site decommissioning, landform establishment, growth medium development and ecosystem and land use establishment and developments phases of rehabilitation to occur across all mining domains.
  - It is anticipated that the rehabilitation of all mining domains and the successful establishment of all final land use domains (up to the Ecosystem and Land Use Establishment phase, as a minimum) will be completed by 2028 with a further four years of monitoring and maintenance (to 2032).


Y:\Jobs 001 to 530\440\Reports\44020_RMP 2022\CAD\MXD\Plan 3- Active Disturbance V1.mxd_30-Apr-24_10:39 AM
TN
MN
ML1544
REFERENCE
Project Approval Boundary / ML1544
Active Disturbance
SCALE 1:15 000 (A4)
200 0 200 400 600 m
Source: Google Earth - 16 August 2023
Mine Name
Plan Name
Anticipated Year of Relinquishment
Date Plan Created
Tritton Copper Mine
Plan 3
2039
30 April 2024
Plan 3
2024 to 2026


Y:\Jobs 001 to 530\440\Reports\44020_RMP 2022\CAD\MXD\Plan 4- Land Prepared for Rehabilitation.mxd_30-Apr-24_10:40 AM
TN
MN
ML1544
REFERENCE
Project Approval Boundary / ML1544
Land Prepared for Rehabilitation
SCALE 1:15 000 (A4)
200 0 200 400 600 m
Source: Google Earth - 16 August 2023
Mine Name
Plan Name
Anticipated Year of Relinquishment
Date Plan Created
Tritton Copper Mine
Plan 4
2039
30 April 2024
Plan 4
2026 to 2028


Y:\Jobs 001 to 530\440\Reports\44020_RMP 2022\CAD\MXD\Plan 5 - Active Rehabilitation.mxd_30-Apr-24_10:41 AM
TN
MN
ML1544
REFERENCE
Project Approval Boundary / ML1544
Active Rehabilitation
SCALE 1:15 000 (A4)
200 0 200 400 600 m
Source: Google Earth - 16 August 2023
Mine Name
Plan Name
Anticipated Year of Relinquishment
Date Plan Created
Tritton Copper Mine
Plan 5
2039
30 April 2024
Plan 5
2028 to 2030

6.2 Phases of Rehabilitation and General Methodologies

6.2.1 Active Mining

The following subsections provide a summary of the status and actions that are in progress to support rehabilitation of the Mine Site. These management measures will be applied during the active mining phase as progressive rehabilitation or site management in readiness for future rehabilitation activities.

6.2.1.1 Soils and Materials

Existing Environment

Existing Assessments - Soils

The soils within and in the vicinity of the Mine Site were generally described as part of the EIS as including two main soil units as classified by Walker (1991). The ridgelines were representative of the Mineshaft Land System, and the lower slopes and drainage lines were representative of the Cobar Land System. The general characteristics of these soil systems varied across the Mine Site with basic soil characterisation provided for the general landscape; however, no detailed assessment of the in-situ soils was included as part of the EIS.

A *Soil Survey and Land Capability Report* prepared by Geoff Cunningham Natural Resource Consultants in February 2001 (GCNRC, 2001) described soils within the Mine Site in two units, namely:

- very deep, deep and moderate dermosols - within ridge tops, saddles and slopes; and
- very deep and deep red dermosols, very deep dermosols – within drainage flats.

Geoff Cunningham Natural Resource Consultants (2001) assessed the suitability of these soils for stripping and stockpiling for later use in rehabilitation and concluded that subject to operational measures that addressed the structural limitation and moderate to high erodibility, the soils were suitable for stripping and use in rehabilitation.

Existing Assessment – Capping Materials

Capping requirements for the Tailings Storage Facility are based on materials assessments undertaken for the *Murrawombie HLF Cover System and Landform Design* report prepared by O'Kane Consultants Pty Limited (O'Kane) for the nearby Murrawombie Copper Mine's Heap Leach Pads (O'Kane, 2018). The *Murrawombie HLF Cover System and Landform Design* (O'Kane, 2018) report includes a review of the available cover materials within the Murrawombie Copper Mine Site and development of a set of material properties for the topsoil and non-acid-forming (NAF) waste rock. The results of that assessment provide substantial information pertaining to the physical characterisation, erosion and stability parameters of the material. In summary, the in-situ materials are identified as being suitable for a moisture store-and-release cover system.

O'Kane subsequently provided a follow-up memorandum regarding the applicability of the *Murrawombie HLF Cover System and Landform Design* (O'Kane, 2018) report for the capping and closure of the Tailings Storage Facility. The memorandum, *Tritton Mine – Closure TSF*

Cover System Suitability Assessment (O'Kane, 2023) states that the underlying assumptions of the existing conceptual design report are considered by O'Kane to be suitable for the Tailings Storage Facility. Further information on capping is provided in Section 6.2.3.4.

Ongoing Controls

Growth Medium

Soil resources are stripped and stockpiled within the Mine Site for use in rehabilitation activities. In general, the soil stockpiles are no greater than 2m in height to ensure viability of stockpiled material. Furthermore, the surface of stockpiles is left 'rough' to encourage infiltration of water and reduce erosion and loss of material. Passive revegetation of stockpile surfaces is permitted to occur to further reduce erosion and promote biological activity within the soils during stockpiling periods. Stockpiles are located away from operational areas and are clearly designated to reduce as far as practicable inadvertent damage to stockpiled resources.

Capping Material

NAF waste rock material for use in capping of the final Tailings Storage Facility is stored within the NAF Waste Rock Emplacement (see **Figure 2**). Further information on the NAF Waste Rock Emplacement is provided in Section 6.2.1.4. Depending on the results of contamination assessments, the ROM Pad may provide an additional source of NAF material for use in rehabilitation. For the purposes of this RMP, the material within the ROM Pad has been excluded until testing results can show the total available material.

Controls to be Implemented

Soil and material resources within the Mine Site will continue to be managed in accordance with existing management practices.

Rehabilitation Requirements

- Topsoil and Subsoil (Growth Medium)

  Based on current disturbances, approximately 61,634m^3 of growth medium will be required for the rehabilitation of the Mine Site, excluding material required for capping of the Tailings Storage Facility.

  In addition to the above, to achieve a nominal depth of 100mm across the upper surface of the Tailings Storage Facility, approximately 157,510m^3 of topsoil will be required.

  Based on the current growth medium stockpile register, approximately 152,700m^3 of growth medium is currently stockpiled within the Mine Site, consisting of 143,100m^3 of topsoil and 10,960m^3 of subsoils.

- Capping Material

  Based on the anticipated final landform and the current conceptual cover system of the Tailings Storage Facility (i.e. approximately 157.51ha at a depth of 400mm of waste rock), approximately 0.63Mm^3 of NAF waste rock will be required for capping. Approximately 0.55Mm^3 of NAF waste rock is currently stockpiled within the NAF Waste Rock Emplacement based on the 2022 Annual Report for the Mine.

Based on the above, there is potential for a deficit in growth medium of approximately 66,200m^3, or 30% of the total requirement.

Based on current stockpile volumes, and excluding ongoing production of waste rock, a potential deficit of NAF waste rock of approximately 0.08Mm^3 could occur. However, based on current production rates, the Company does not anticipate any deficit of materials would occur at the cessation of mining.

Notwithstanding the above, the Company will undertake a materials balance to quantify all stockpiled material within the Mine Site that is available for use in rehabilitation. The materials balance will be used to assess potential impacts from soil loss, such as through erosion and/or contamination.

6.2.1.2 Flora

Existing Environment

The EIS for the Mine includes a general commitment to revegetate areas of the Mine Site with native tress and shrub species comparable with pre-existing vegetation and plant communities.

Existing Assessments

A series of flora field surveys have been undertaken within the Mine Site since 1996 for preparation of the original EIS (RWC, 1998). Geoff Cunningham Natural Resource Consultants undertook flora surveys in October 1996 (GCNRC, 1998). In general, significant clearing of vegetation for agricultural production and historical mining activities occurred prior to development of the Mine Site, and much of the observed native vegetation was identified as regrowth. Notwithstanding, larger areas of remnant and/or mature regrowth native plant communities were identified as occurring within the disturbance boundary of the Tailings Storage Facility.

The most recent field surveys were undertaken in February 2010 by EnviroKey. EnviroKey (2010) reported the results of its field surveys as well as referring to the results of the surveys completed in 1996. The findings of EnviroKey (2010) are summarised as follows.

- Field surveys identified a total of 94 flora species within the study area. This indicates a moderate level of flora species richness.
- No threatened flora or Rare or Threatened Australian Plant species have been identified within the Mine Site. A single threatened Cobar Greenhood Orchid has previously been identified in field surveys to the south of the Tailings Storage Facility.
- Five different plant communities were identified (see **Figure 5**):
  - Poplar Box – Gum Coolabah and White Cypress Pine Shrubby Woodland mainly in the Cobar Peneplain Bioregion (Benson ID103);
  - Poplar Box Grassy Woodland on flats mainly in the Cobar Peneplain and Murray – Darling Depression Bioregions (Benson ID105);

- White Cypress Pine Woodland on sandy loams in central NSW wheatbelt (Benson ID70);
- GreenMallee – White Cypress Pine very tall Mallee Woodland on gravel rises mainly in the Cobar Peneplain Bioregion (Benson ID176); and
- Derived Tussock Grassland of the Central Western Plains and Lower Slopes of NSW (Benson ID250).

All five are widespread across the region and are not consistent with any endangered ecological communities.

Target Vegetation

The proposed final vegetation types and covers are shown on **Plan 1** and include:

- Native Ecosystem Area – consisting of modified native and exotic grassland plant communities within the Tailings Storage Facility mining domain; and
- Agricultural – Grazing – consisting of modified native and exotic woodland plant communities within all remaining areas of the Mine Site excluding the Active Mining Area and Water Management Area mining domains.

In summary, no specific Plant Community Types are proposed to be established as part of the final land use. Rather, the final vegetation types will consist of modified plant communities comprised of mixed native species commensurate with surrounding vegetation and land uses. It should be noted that the vegetation of the final landform of the Tailings Storage Facility will be required to function as part of the store and release cover design of the facility. Further information is provided in Section 6.2.3.3.

For the Native Ecosystem Areas, DnA Environmental (2023) concludes that modified native and exotic grasslands similar to those in the surrounding derived grassland areas are likely to provide the most reliable outcomes and sustainability of the vegetation cover system in the longer-term within the Native Ecosystem Areas. Exotic species may be considered suitable for use with native species within areas proposed to be managed for agricultural production where ongoing maintenance would form part of typical land management practices. Exotic species may also be used for more-rapid stabilisation of surfaces where required, to give time for native species to establish and eventually out-compete exotic species in the long term.

For the Agricultural – grazing areas, the reference plant communities will be the modified Poplar Box Grassy Woodlands (Benson ID103 and 105) that are common within and in the vicinity of the Tritton Copper Operations. DnA Environmental (2023) states that all remnant vegetation within the ML's, including the reference sites, have been subjected to some form of disturbance, in particular clearing, over grazing, erosion and "woody weed invasion". The reference sites are, however, typical of the local environment.

More information on species selection is provided in Section 6.2.5.3.

Controls to be Implemented

General Management of Flora

Management of flora within the Mine Site is undertaken generally in accordance with the *Flora and Fauna Management Plan*, *Land Management Plan* and *Weed Management Plan.* During rehabilitation, each Plan will continue to be used to guide implementation of programs to limit and reduce impacts to native flora and fauna within the Mine Site. Management of existing flora populations and resources within the Mine Site will help to maintain genetic integrity and ecosystem resilience throughout operations including rehabilitation.

Propagation Resource Management

Revegetation strategies will likely include a combination of the use of seeds and tubestock, where relevant. Management of seed resources is further discussed in Section 9.2.1.

Two main sources of seed material will be used during rehabilitation of the Mine Site:

- in-situ seed bank and other vegetative material within stockpiled growth medium; and
- seed collected from surrounding areas within and in the vicinity of the Mine Site that are owned and/or controlled by the Company, and areas where access and collection are permitted.

All seed and propagation material collection will be undertaken by or in consultation with suitably qualified revegetation practitioners.

DnA state that the areas of derived native grassland within and in the vicinity of the Mine Site are suitable for use as a source of propagation material. Dominant grasses within the local native pastures typically set seed early October – November (spring) and March – April (autumn) depending on seasonal conditions. DnA states the follow methods would be suitable for collection of mature seeds from surrounding native pastures.

- Hand collection (brushcutters, scythes, mower catchers).
- Mechanical brush-harvesters.
- Baling using conventional farm machinery.
- Silage harvesters.

In addition to the above, DnA identifies that planning for harvesting periods will be critical and will require consideration of the following key components.

- Identifying suitable areas for harvesting, including consideration of:
  - low weed density;
  - high diversity and abundance of desired species;
  - accessibility; and
  - proximity to the rehabilitation area to minimise costs;
- Engaging specialist contractors with suitable equipment, if required.

- Ensuring appropriate access rights are attainted, where required.
- Ensuring appropriate handling of collected materials.

As a result of the continued implementation of the above management plans and revegetation strategies, flora-related risks to rehabilitation are considered to be low.

6.2.1.3 Fauna

Existing Environment

Existing Assessments

A series of fauna field surveys have been undertaken within the Mine Site since 1996 for preparation of the original EIS (RWC, 1998). Countrywide Ecological Service undertook fauna surveys between 1 and 5 October 1996 (CES, 1998). The most recent field surveys were undertaken in February 2010 by EnviroKey. EnviroKey (2010) reported the results of its field surveys as well as referring to the results of the surveys completed in 1996. The findings of EnviroKey (2010) are summarised as follows.

- Field surveys identified a total of 125 fauna species within the study area. This indicates a high level of faunal species richness.
- A total of 17 threatened fauna species listed under the *Threatened Species Conservation Act 1995* have been identified or have the potential to occur within the Mine Site. Five of these species are also listed in under the *Environmental Protection and Biodiversity Conservation Act 1999*.
- A single migratory bird species (the White-throated Needletail), listed under the EPBC Act, was recorded during the field surveys.
- EnviroKey (2010) concluded that several of the species identified in the CES (1998) surveys are no longer likely to occur within the Mine Site based on the habitat conditions observed during field surveys.

Target Fauna and Habitat

No specific target fauna species are identified as part of the proposed rehabilitation objectives for the Mine Site.

Notwithstanding the above, rehabilitation completion criteria relating to management of grazing pressure from native and introduced species will require specific management practices during rehabilitation. In addition, Condition 22 of DA41/98 requires the establishment of a permanent alternative water source for fauna due to presence of water within the Tailings Storage Dam. The Environmental Pond was established as an alternative water source and is to be retained as part of the final landform.

Ongoing Controls

Ongoing management of fauna within the Mine Site is undertaken in accordance with the *Flora and Fauna Management Plan.* General management activities include:

- establishment of alternative clean water sources;
- regular fauna monitoring;
- exclusion of stock from vegetated areas of the Mine Site;
- regular pest monitoring and control;
- reduction in speed of mobile and heavy equipment in areas known to be populated or used by fauna;
- providing training and awareness to employees and contractors; and
- installation of fauna underpasses or access areas e.g. under haul roads.

Controls to be Implemented

The *Flora and Fauna Management Plan* will continue to be implemented during rehabilitation for general management of fauna within the Mine Site.

Management of grazing pressure through agricultural activities, exclusion fencing, and feral and native animal control programs will continue to be implemented to manage risks relating to the establishment of vegetation communities.

As a result of the continued implementation of the above management plans, fauna-related risks to rehabilitation are considered to be low.

6.2.1.4 Rock/Overburden Emplacement

Existing Environment

Waste Rock Emplacement

Two classes of waste rock, namely non-acid forming (NAF) and potentially acid forming (PAF) waste rock are generated at the Mine Site. PAF waste rock is placed underground within completed mining stopes, or if brought to the surface, temporarily stored on the ROM Pad prior to placement and encapsulation within the Tailings Storage Facility. NAF waste rock is temporarily stored on the surface within the NAF Waste Rock Emplacement for use as part of operations and for use in rehabilitation (see **Figure 2**).

Operational uses of NAF waste rock within the Mine Site include road base and other minor infrastructure such as rock-lined drains and bunding. A significant proportion of the NAF waste rock is forecast for use in capping of the Tailings Storage Facility during rehabilitation.

Approximately 0.82Mm^3 of NAF waste rock is currently stored within the NAF Waste Rock Emplacement.

Capping

The Tailings Storage Facility will require capping as part of landform establishment and closure of the Mine Site. Based on preliminary capping designs, in consideration of the *Murrawombie HLF Cover System and Landform Design* (O'Kane, 2018) (see Section 6.2.1.1), approximately 0.61Mm^3 of NAF waste rock will be required for closure of the facility. Stockpiled material within the NAF Waste Rock Emplacement may also be salvaged for use in closure of the Heap Leach landforms of the nearby Murrawombie Mine Site (see **Figure 1**).

The Company does not anticipate that capping of any other landforms within the Mine Site will be required.

Ongoing Controls

Management of NAF and PAF waste rock is undertaken in accordance with the *Waste Rock Characterisation and Management Plan 2023*.

Placement of NAF waste rock within the NAF Waste Rock Emplacement occurs on a campaign basis. As the landform is not required as part of the final landform of the Mine Site, no specific design or management requirements are in place for the material other than those required to maintain a stable landform during operation.

Where required, suitable non-acid forming waste rock is processed to produce crushed road base material. That waste rock is transported from the underground mine and placed within the road base preparation area. As required, contract mobile crushing and screening plant equipment is bought to the Mine Site and the stockpiled material is crushed, screened and stockpiled. That road base is used for the sheeting of roads at surface and underground or is exported for use by or on behalf of a road authority.

Further information on the management of NAF and PAF material within the Mine Site is presented in Section 6.2.1.8. Information in the construction and management of the Tailings Storage Facility, including capping design, is presented in Section 6.2.3.4.

Controls to be Implemented

NAF waste rock from the Waste Rock Emplacement will be used in all progressive and final rehabilitation activities. It is expected that all NAF waste rock will be used for these activities, such that the Waste Rock Emplacement will be reduced to a height consistent with the surrounding topography at the time of mine closure. Technical designs for waste rock material intended to remain at the surface following mine closure require a final slope at a grade of 1V:3H to improve stability and general safety. A geotechnical assessment of the final landform will be undertaken prior to relinquishment to confirm the final stability of all terminal faces and domain slopes. As a result, slopes and slope management are considered to be a low risk to rehabilitation success at the Mine.

Geochemical/contamination assessments undertaken as part of decommissioning and closure of key landforms will be used to confirm final capping requirements.

In the event that additional suitable waste rock is required for the construction of surface infrastructure to achieve the final landform, the Company will explore options involving alternative waste rock sources such as transporting waste rock from the Company's other mine sites in Girilambone. Approval for these activities will be sought where required.

Management of NAF and PAF waste rock will be undertaken in accordance with the *Waste Rock Characterisation and Management Plan*. In summary, likely volumes of PAF waste rock will initially be identified based on resource definition drilling. Further characterisation will be undertaken during routine grade control drilling and geological inspection to enable separate management of NAF, PAF and ore material.

6.2.1.5 Waste Management

Existing Environment

Management of all wastes generated at the Tritton Operations is undertaken in accordance with the *Waste Management Plan 2021*. Management of the use and disposal of hydrocarbons and chemicals is also undertaken in accordance with the *Hydrocarbon and Chemical Management Plan 2021*.

Waste produced at the Mine is classified into different categories. These include:

- **Process Wastes**: includes acid sulphate soils, overburden material, coal rejects, general mine wastes, topsoil's, subsoil's and filter cake.
- **Non-process Waste**: includes any solid or liquid (or combination) that is leftover, surplus or an unwanted by-product whether of value or not, that is generated at any Straits operation.
- **Non-hazardous waste:** Wastes which are not ignitable, corrosive, reactive or toxic.
- **Hazardous Waste:** Any waste containing significant quantities of a substance that may present danger to human health and/or the environment when released into the environment or is improperly managed.

Process Waste Management

Management of overburden (i.e., topsoils and subsoils) is discussed in Section 6.2.1.1.

Management of waste rock is discussed in Sections 6.2.1.4 and 6.2.1.8.

Management of tailings/processing residue is discussed in Section 6.2.1.9.

Modification 8 of DA 41/98 permits the importation and disposal of drill cuttings from exploration projects within the Tritton Operations and Company's exploration tenements within the Tailings Storage Facility. This activity will commence following approval of the *Disposal Management Plan*.

Drill cuttings are emplaced within discrete cells excavated within the Tailings Storage Facility. The location of each cell is determined in consideration of perimeter embankments and the decant pond.

Non-process Waste Management

Waste disposal and materials handling practices at the Mine aim to mitigate and manage any risks to the environment, including current and future land uses. In most cases, non-production waste will be collected on the Mine Site and removed for disposal or recycling by a suitably qualified contractor. **Table 13** presents an estimate of the non-production waste and briefly describes how each class of waste is stored and subsequently removed from Mine Site.

Table 13
Non-Production Waste Management

Waste Type	Storage / Management	Removal / Disposal
General waste (including food scraps)	Covered bins or skips located within lunch rooms, offices, outside workshops and elsewhere as required. Where these bins are located in open areas they are fitted with animal proof lids.	Collected on a regular basis by a licensed contractor and transported to an appropriately licensed facility for processing. Minor amounts of inert waste disposed in site landfill (refer Figure 2)
General Recyclables	Covered bins or skips located within lunch rooms, offices, outside workshops and elsewhere as required. Where these bins are located in open areas they are fitted with animal proof lids.	Collected on a regular basis by a licensed contractor and transported to an appropriately licensed facility for recycling.
Waste Oils and Greases	Stored in IBC's and 205L waste drums placed within the bunded hydrocarbon waste storage area. Where required, smaller, temporary storage containers may be positioned close to work areas, with the contents of those containers transferred to a larger storage tank prior to collection.	Collected on a regular basis by a licensed contractor and transported to an appropriately licensed facility for recycling.
Batteries	Placed within a covered and marked used battery storage area until removed from Mine Site.	Collected on a regular basis by a licensed contractor and transported to an appropriately licensed facility for recycling.
Tyres	Placed within a marked used tyre storage area until removed from the Mine Site or used for another purpose.	Tyres will be disposed of at a licensed waste management facility or removed by a third party approved to recycle tyres.
Scrap Metal	Stored in a specified area within the workshop area or elsewhere as required.	Collected on a regular basis by a scrap metal recycler.
Waste Water	Treated in the on-site Sewage Treatment Plant.	The on-site system will be pumped out by a licenced contractor on an as needs basis.

Management measures targeting the treatment and disposal of contaminated waste materials (e.g. contaminated growth medium) are detailed in Section 6.2.2.

Onsite- Landfill

Operation of the onsite Landfill (see **Figure 2**) is undertaken in accordance with EPL 11254 and all relevant industry guidelines. Disposal (landfilling) of inert and solid waste within the Landfill is permitted under the following conditions of EPL 11254.

- L2.3 - Inert Waste Class 1 – includes general inert wastes.
- L2.4 – Inert Waste Class 2 – includes inert wastes that are not physically, chemically, or biologically treated or processed.
- L2.5 – Solid Waste Class 1 – includes inert and/or solid putrescible wastes, asbestos waste (including asbestos waste in bonded matrix and asbestos fibre and dust waste resulting from the removal of thermal or acoustic insulating materials or from processes involving asbestos material, and dust from ventilation collection systems).

EPL 11254 permits the receival of permitted wastes from the Murrawombie and North East Mines, managed under EPL 4501.

Ongoing Controls

Monitoring of all waste facilities, including the Landfill, is a key component of the Surface Operations Monthly Inspection Checklist. Completed checklists are kept on file and a summary is provided as part of each Annual Environmental Management Report. Further information is provided in the *Waste Management Plan*.

Controls to be Implemented

Closure and rehabilitation of the Landfill is generally described in Section 7 of the *Waste Management Plan*. In summary, the Landfill will be capped using available material (i.e. NAF waste rock and/or growth medium), profiled to a gentle slope generally commensurate with surrounding natural landforms, and revegetated in accordance with the final land use as shown on **Plan 1**.

Closure of the Landfill will be undertaken in accordance with the NSW EPA's Solid Waste Landfill Guidelines.

6.2.1.6 Geology and Geochemistry

Existing Environment

The Company has been operating the Mine since 2003 and has continued intermittent exploration within the Mine Site and on adjacent land since that time. As a result, the geology and mineralisation of the Mine Site is well understood.

The Tritton deposit is a hydrothermal source massive sulphide mineralisation in a metamorphosed seafloor sediment host. Copper mineralisation occurs within three zones within the Tritton ore body namely:

- Upper Zone – identified as being steeply dipping tabular with a characteristically higher bornite to chalcopyrite ratio within mineralisation.
- Central Zone – containing a deposit scale fold producing a thickening of the mineralisation with syncline and anticline forms mineralised. Chalcopyrite is notably enriched in the fold hinge of the syncline.
- Lower Zone – less well defined by diamond drilling, however the ore body geometry appears to return to a steeply dipping tabular mineralised form.

Ongoing Controls

The geochemical characteristics of waste rock were considered during preparation of the *Waste Rock Characterisation and Management Plan*, which incorporates the management of waste rock at the Mine Site and the Company's other operations. The waste rock has previously been assessed for its net acid generation potential, that is, the potential for sulphide materials within the waste rock to oxidise to form a low pH or acidic leachate when exposed to oxygen. Section 6.2.1.4 describes the approved strategy for waste rock management and Section 6.2.1.8 describes the risks associated with material prone to acid mine drainage.

Controls to be Implemented

As a result of the historic mining and exploration activities undertaken within the Mine Site and surrounding land, and the proposed approach to managing waste rock at the Mine Site, the risks associated with unknown or unexpected geological or geochemical features is considered to be low. Based on the above, the *Waste Rock Characterisation and Management Plan* will continue to be implemented.

6.2.1.7 Material Prone to Spontaneous Combustion

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

6.2.1.8 Material Prone to Generating Acid Mine Drainage

Existing Environment

As described in Section 6.2.1.4, and Section 6.2.1.6, PAF waste rock has previously been generated at the Mine Site and within the Company's other operations in the region. PAF waste rock is identified based on resource definition drilling.

Management of potentially acid generating material within the Mine Site is identified as a key control due to the significant volume of waste rock that will be required for use in rehabilitation, and due to the use of waste rock for road base material within and outside of the Mine Site.

Ongoing Controls

The *Waste Rock Characterisation and Management Plan 2023* describes the process for testing, separation and management of acid forming materials.

If known or suspected PAF material is encountered during mining operations, PAF waste rock may be:

- left in-situ; or
- placed directly underground within completed stopes; or
- brought to surface and temporarily stored within the ROM Pad and:
  - encapsulated within the Tailings Storage Facility, or;
  - mixed with tailings for deposition within the Tailings Storage Facility.

The Company undertakes regular geochemical monitoring for high-risk landforms within the Mine Site, namely, the Tailings Storage Facility and NAF Waste Rock Emplacement. In addition to regular visual inspections of recently deposited waste rock, monthly sampling of waste rock and tailings is undertaken to assess:

- Total Sulfur;
- Acid-Neutralising Capacity (ANC);
- Net Acid Production Potential (NAPP);
- Net Acid Generation (NAG).
- Visual inspection of recently deposited waste rock (monthly).

If visible sulfides are identified, or nominated NAPP and NAG criteria are exceeded for the NAF Waste Rock Emplacement, the material is relocated underground or placed within the Tailings Storage Facility for disposal. A follow-up investigation is then undertaken to identify primary controls that resulted in placement of PAF material within the NAF Waste Rock Emplacement.

Controls to be Implemented

The *Waste Rock Characterisation and Management Plan 2023* will continue to be implemented during operations to ensure that sufficient NAF material is available for use in rehabilitation. Following the cessation of mining operations, targeted testing of materials may be undertaken to ensure as far as practicable that PAF contamination is below criteria levels.

Given the continued implementation of the *Waste Rock Characterisation and Management Plan 2023,* the risk of acid mine drainage resulting from the ongoing operation of the Mine is considered to be low.

6.2.1.9 Ore Beneficiations Waste Management (Reject and Tailings Disposal)

Existing Environment

Tailings waste material produced at the Processing Plant comprise of finely ground rock with a considerable portion of pyrite, quartz and other sulphides and negligible quantities of residual processing reagents.

Tailings are pumped from the Processing Plant as slurry into the Tailings Storage Facility, where the tailings settles, drains and consolidates. The water contained in the slurry is extracted using a relocatable pump and is transported to the Process Water Dam, from where it is reused in the Processing Plant or Paste Fill Plant.

Table 14 presents a summary of tailings characterisation testing that has occurred over the life of the Mine. In summary, tailings have an average Total Sulphur of 10.4 wt%S (based on daily assay data). Net Acid Production Potential (NAPP) results were in the order of 150 kgH2SO4/t and two samples returning NAPP of 230-430 kgH2SO4/t.

Excavation of tailings from within the Tailings Storage Facility is permitted to occur for use within the Murrawombie Mine's Pastefill Plant.

Ongoing Controls

The Tailings Storage Facility utilises conventional upstream embankments.

Decant water is collected within a central Decant Pond within the Tailings Storage Facility. Decant water is transferred where required to the Process Water Ponds for re-use within the Processing Plant.

Further information on the final landform of the Tailings Storage Facility is provided in Section 6.2.3.3.

Controls to be Implemented

Current tailings management practices will continue to be implemented prior to the completion of processing operations.

Information on current strategies for capping and closure of the Tailings Storage Facility is presented in Section 9.2.4.

Table 14
Tailings Characterisation Test Results

Source	Available information	AMD characteristics
Girilambone project EA (1990)	Limited tailings characterisation (wt% S and wt% CaO)	4.4 wt%S [MPA = 135 kgH_2SO_4/t] wt% CaO [equivalent to ANC[1] of 53 kgH_2SO_4/t] Therefore a NAPP[2] of 82 kgH_2SO_4/t
Tritton EA (1998)	4 tailings samples tested for NAPP. Concluded that "tailings had potential to generate considerable levels of acidity".	NAPP ranged from 35 to 54 kgH_2SO_4/t [equivalent to 1.14 and 1.76 wt%S]
2006, unknown reference	2 tailings samples	NAPP of 230 to 430 kg H_2SO_4/t.
Constellation Geochemistry Assessment (RGS, 2022)	Considered 2 Tritton tailings samples as surrogate for constellation tailings	Total S of 7.84-8.01 wt%S ANC of 52-106 kgH_2SO_4/t $NAPP_{CRS}$ of 153-157 kgH_2SO_4/t
Note 1: Acid-neutralising Capacity Note 2: Net Acid Production Potential.		
Source: After Table 7 of *Waste Rock Characterisation and Management Plan 2023*.		

6.2.1.10 Erosion and Sediment Control

Existing Environment

Erosion and sediment controls implemented at the Mine Site are described in detail in the *Water Management Plan 2023* and *Erosion and Sediment Control Plan – Tritton Mine 2015*. There are moderate risks to erosion and sediment control associated with the development and operation of the Mine. A *Soil Survey and Land Capability Report* prepared in February 2001 (GCNRC, 2001) included assessment of the physical attributes of the soil within the Mine Site and therefore the erodibility of the various soil units. In summary, assessment of particle size, dispersion percentage and dispersibility (through Emerson Aggregate Tests) concluded that the erosion potential was moderate to high if suitable groundcover was not maintained.

Ongoing Controls

The *Water Management Plan 2023* and the *Erosion and Sediment Control Plan – Tritton Mine 2015* incorporate specific design, construction and maintenance protocols for erosion and sediment control structures in accordance with the requirements of Landcom (2004) and DECC (2008).

Erosion monitoring of rehabilitated sections of the Tailings Storage Facility is undertaken annually to assess performance and identify remediation/management actions. Fixed monitoring locations established within rehabilitation and analogue sites have been established. At each location, fixed reference pegs are installed to allow for cross sectional measurement of observed rill/gullies. If erosion within rehabilitation monitoring locations is more than 30% higher than erosion monitoring sites, remediation activities will commence.

Controls to be Implemented

The *Water Management Plan 2023* and *Erosion and Sediment Control Plan – Tritton Mine 2015* will continue to be implemented throughout rehabilitation of the Mine Site.

Erosion and sedimentation risks are likely to change as areas of the Mine Site progress through the stages of rehabilitation. The Company will undertake periodic reviews of relevant management plans in consideration of landform and land use changes as part of the rehabilitation and closure planning process. Additional erosion monitoring locations may be established across the Mine Site, as required.

Temporary erosion and sediment control measures that may be implemented during high erosion-risk periods/activities include but are not limit to the following.

- Installation of sediment fencing and/or straw bale filters to manage impacts of increased sediment generation on existing water management infrastructure and other downstream environments.
- Use of relatively fast germinating/establishing temporary ground stabiliser species such as sterile and/or agricultural pasture species (depending on advice from revegetation specialists.
- Use of organic/synthetic mulches and/or surface binding agents.

6.2.1.11 Ongoing Management of Biological Resources for use in Rehabilitation

Seedbank Management

Management of stockpiled growth medium is described in Section 6.2.1.1.

Management of stockpile seedbanks includes the following.

- Stripping of vegetation with soils to maintain existing seedbanks and other biologically active components of soils.
- Stockpiling methods which promote plant development and growth and minimise soil loss.
- Regular pest and weed monitoring and management, including weed control, to reduce pressure from grazing and competition.

Management of existing vegetation and plant communities within and in the vicinity of the Mine Site helps maintain ecosystem resilience and productivity. As the sourcing of propagation material from locally occurring species form the basis of revegetation strategies for the Mine Site (excluding exotic pasture species), these activities form part of an overall risk management strategy for management of biological resources.

Required Topsoil Depths

Current rehabilitation planning anticipates a minimum depth of 100mm of growth medium will be required for revegetation activities.

Propagation of Resources for Revegetation

Propagation of plant material will primarily be undertaken via germination of seed material, and primarily directly from material sown within areas undergoing revegetation.

Salvage and Storage of Habitat Structures

Salvage of habitat features for rehabilitation has progressively occurred over the development of the Mine Site. In general, habitat features such as tree hollows and large rocks have been directly relocated to non-disturbed areas of the Mine Site. Minor volumes of biological resources (i.e. woody material) have been stockpiled outside of key operational areas. Biological resource stockpiles are recorded in the Biological Stockpile Register, including the location and type of stockpile as well as a photographic record. It should be noted that no specific rehabilitation objectives relate to fauna and/or fauna habitat.

During any further disturbance activities, any significant habitat features will be salvaged and in first instance placed directly within un-disturbed areas of the Mine Site. If direct placement is not practicable, resources will either be stockpiled in existing stockpile locations, or within a new stockpile and subsequently recorded within the Biological Stockpile Register.

6.2.1.12 Mine Subsidence

Underground mining methods are modified to suit the grade and geometry character of the ore body, which will be determined over time as more data becomes available from drilling and development within the mineralisation.

Minor subsidence risk will remain for any underground mining operation however the depth of the orebody below surface and the nature of surrounding rock mass makes this extremely unlikely. The backfilling of mined stopes with waste and/or paste fill will further reduce the risk of subsidence due to mining.

6.2.1.13 Management of Potential Cultural and Heritage Issues

Existing Environment

Aboriginal Heritage

The *Cultural Heritage Management Plan 2023* includes locations of 13 scar trees and a single isolated site identified in previous surveys undertaken for the EIS (RWC, 1998). The scar trees were considered to be of 'possible' Aboriginal origin. Of the identified trees, only two were located in proximity of areas of mining disturbance. These items were considered to be of low Aboriginal heritage significance at the time of the surveys and have since been relocated prior to disturbance.

Aboriginal cultural heritage will continue to be managed under the existing *Cultural Heritage Management Plan 2023.* Existing management measures relating to Aboriginal cultural heritage will be continued until site relinquishment. Given the highly disturbed nature of the existing landscape it is not likely that any items of cultural significance remain to be located.

Historic Heritage

Two-mine related relics (steel winch and headframe winder) have previously been identified in the vicinity of the former Bonnie Dundee Copper Mine site, including a steel winch and the remains of a headframe winder outside of its original context. Following a heritage significance assessment, neither of the relics qualified as heritage items (CWA&HS, 1997).

No items or locations of non-Aboriginal heritage significance have been identified within the Mine Site. It is not expected that rehabilitation of the Mine Site will present any risks to non-Aboriginal heritage.

Post-mining Heritage Obligations

No specific post-mining management obligations are or will be required following rehabilitation of the Mine Site.

Ongoing Controls

Management of heritage across the Tritton Copper Operations is undertaken in accordance with the *Cultural Heritage Management Plan 2023*, which identifies the key management structure and responsibilities for all personnel and contractors.

Key management measures relating to heritage include the following.

- Heritage training as part of site inductions for all personnel and contractors.
- Avoid disturbance of all known heritage sites within the Mine Site as far as practicable.
- Requirement for Surface Disturbance Permits prior to any disturbance, including vegetation removal.
- Exclusion of all activities within 50m of a known heritage site without specific approval from the General Manager.
- Implementation of an Unexpected Finds Protocol.
- Installation of temporary fencing/flagging around identified heritage sites within 50m of proposed disturbance areas.

Controls to be Implemented

During rehabilitation, management of heritage within the Mine Site will continue to be undertaken in accordance with the *Cultural Heritage Management Plan 2023*.

No specific management measures, assessments, or approvals are anticipated to be required as part of rehabilitation and relinquishment of the Mine Site.

6.2.1.14 Exploration Activities

No further surface exploration activities are anticipated to occur within the Mine Site prior to relinquishment. Notwithstanding the above, all exploration-related disturbance will be rehabilitated in accordance with relevant guidelines and industry best practice. This may include the following key activities.

- Removal and/or lawful disposal of all consumables and waste.
- Removal of drill cores.
- Cap and rehabilitate all drillholes.
- Removal of all surface infrastructure and mobile plant.
- Visual assessment of residual disturbance/rehabilitation areas to identify potential contaminants.

6.2.2 Decommissioning

6.2.2.1 Site Security

Access to the Mine Site is restricted by rural fencing. Fencing is inspected on a regular basis and access of public to the Mine restricted. Considering the remote location of the Mine Site and restricted access there will be minimal risk to public safety.

6.2.2.2 Infrastructure to be Removed or Demolished

Table 15 presents a list of the site features to be decommissioned to achieve the final land use, including identification of key management actions that may be required. While no conditional requirements for the decommissioning of specific infrastructure are included as part of the approval for the Mine, general commitments for the removal of key infrastructure are included as part of the EIS, as shown in **Table 3**. Notwithstanding, any infrastructure not required for the final land use will be subject to engineering assessments to identify potential risks associated with closure and decommissioning activities, where required.

6.2.2.3 Buildings, Structures and Fixed Plant to be Retained

Figure 7 shows key infrastructure and structures to be retained as part of the final land use. **Table 16** identifies key infrastructure to be retained including key actions required to support retention. All infrastructure to be retained will be surveyed and recorded on a plan (or suitable alternative) with a suitable caveat developed to provide that they are readily identifiable for future land holders.

Table 15
Requirements for Infrastructure to be Removed or Demolished

Domain[1]	Assets	Decommissioning and Demolition Requirements	Key Actions Required
1 – Infrastructure Area	Roads: Including unsealed haul and access roads.	Access to the Mine Site will be retained, including the principal access road through the main operational area. All remaining roads will be rehabilitated.	None required.
	Buildings: Includes administration buildings, workshops and amenities as well as areas used for activities ancillary to mining such as container storage, equipment storage, carparks and graveyards.	All buildings to be removed or demolished will have all services disconnected before demolition and removal of rubble to the landfill facility located within the Mine Site.	Preliminary Contamination Assessment to identify potential unknown contamination (possible). Decommissioning / Integrity Assessment to confirm infrastructure for removal/retention (likely).
	Processing: Includes the three-stage crushing circuit, Processing Plant and Paste Fill Plant.	All processing infrastructure will be demolished/salvaged or otherwise removed following closure of the Mine Site.	Preliminary Contamination Assessment to identify potential unknown contamination (likely). Decommissioning / Integrity Assessment to confirm infrastructure for removal/relocation (likely).
	Mine Infrastructure: Including two existing ventilation fans and an emergency ladder escape way for underground mining operations.	All surface infrastructure removed (excluding that required for cap). Voids capped in accordance with guidelines.	Engineering report for design of final capping (possible). Engineering Assessment prior to sign-off (likely)
	Other: ROM Pad and stockpiled material areas.	All stockpiled material removed as part of mining/processing/rehabilitation operations or placed underground within completed mining areas.	Preliminary Contamination Assessment to identify potential contamination from storage of PAF material (likely)
	Other: Landfill Includes area developed for purpose of waste placement. The landfill has been constructed with a clay liner with permeability no greater than 1 x 10^{-9}.	Waste material is placed in accordance with EPL 11254. Decommissioning will involve covering the surface with NAF waste rock and profiling of the final landform to be consistent with surrounding topography.	None required.
2 – Tailings Storage Facility	The Tailings Storage Facility has been constructed to an elevation of approximately 266m AHD (i.e. approximately 13m above the natural ground surface).	All pipes and infrastructure will be removed and disposed at an appropriate landfill facility and the surface of the Tailings Storage Facility appropriately shaped and covered.	None required.

Table 15 (Cont'd)
Requirements for Infrastructure to be Removed or Demolished

Domain[1]	Assets	Decommissioning and Demolition Requirements	Key Actions Required
3 – Water Management Area	Clean Water Includes clean water diversions/drains, the Raw Water Dam, two sediment retention basins, the Environmental Pond and the Landfill Drainage Dam.	Drainage channels are for both clean water diversion and management of run-off. The Raw Water Dam is used for temporary storage of water sourced via the water pipeline from the Murrawombie Copper Mine (Raw Water Pond). The Environmental Pond is a water storage that captures clean water runoff and water for native fauna. The Landfill Drainage Dam is designed to capture any runoff from the Landfill area.	Contamination Assessment for Landfill Drainage Dam, Raw Water Pond, Landfill Drainage Dam, and sediment retention basin (possible). Engineering Assessment for Raw Water Dam, and sediment basins to confirm suitability for retention (possible).
	Potentially Contaminated Water Includes the Containment Dam, Process Water Dam and any potentially contaminated water diversions/drainage.	The Containment Dam is used to capture runoff within infrastructure areas and the Waste Rock Emplacement. The Process Water Dam is used to temporarily store water using for processing activities. All potentially contaminated water storage structures will be removed from the final landform or decontaminated and rehabilitated for use a farm dam.	Contamination Assessment for Containment Dam and Process Water Dam (likely).
4 – Overburden Emplacement Area	Includes the Road Base Preparation Area and non-acid forming Waste Rock Emplacement.	None. Roads to be removed as per Infrastructure Domain.	None required.
5 – Active Mining Area (Box Cut and Decline)	Includes the box cut and decline underground mining infrastructure.	All access to underground workings will be removed or sealed.	Engineering report for design of final capping (possible). Engineering Assessment prior to sign-off (likely)
8 – Other (Topsoil Stockpiles)	Includes all stockpiles of topsoil and subsoil material preserved for rehabilitation activities.	All material removed during rehabilitation.	None required.

Note 1: Domains as shown in **Figure 8**

Source: Tritton Resources Pty Ltd

Table 16
Requirements for Infrastructure to be Retained

Domain[1]	Assets	Requirements for Retention	Key Actions Required
1 – Infrastructure Area	Roads: Including unsealed haul and access roads.	Access to the Mine Site will be retained, including the principal access road through the main operational area. Minor internal roads may be retained to support post-mining land use.	Engineering Assessment for the roads and intersection (access points) to be retained (possible).
	Buildings: Includes administration buildings, workshops and amenities as well as areas used for activities ancillary to mining such as container storage, equipment storage, carparks and graveyards.	Any building/infrastructure identified as being suitable for retention to support post-mining land uses will need to be assessed for permissibility and safety/condition. Services such as electricity and water will be required to be similarly assessed prior to retention.	Engineering Assessment for structures to be retained to identify risk/opportunities, as well as potential maintenance requirements. (likely). Confirmation of permissibility regarding retention of structures (likely). Modification of DA 41/98 to allow retention of structures (pending confirmation of existing permissibility).
	Processing: Includes the three-stage crushing circuit, Processing Plant and Paste Fill Plant.	No infrastructure to be retained.	None required.
	Mine Infrastructure: Including two existing ventilation fans and an emergency ladder escape way for underground mining operations.	Capping of ventilation shafts in accordance with guidelines. Location of capped shafts clearly shown on appropriate plans.	Engineering report for design of final capping (possible). Engineering Assessment prior to sign-off (likely)
	Other: ROM Pad and stockpiled material areas.	No infrastructure to be retained.	None required.
	Other: Landfill Includes area developed for purpose of waste placement. The landfill has been constructed with a clay liner with permeability no greater than 1 x 10^{-9}.	Landfill capped in accordance with relevant guidelines. No other infrastructure retained.	None required.
2 – Tailings Storage Facility	The Tailings Storage Facility has been constructed to an elevation of approximately 266m AHD (i.e. approximately 13m above the natural ground surface).	All surface infrastructure such as pipelines removed from landform. Final landform shaped and capped in accordance with relevant capping design assessments/studies.	Capping and Closure Design (certain).

Table 16 (Cont'd)
Requirements for Infrastructure to be Retained

Domain[1]	Assets	Requirements for Retention	Key Actions Required
3 – Water Management Area	Clean Water Includes clean water diversions/drains, the Raw Water Dam, two sediment retention basins, the Environmental Pond and the Landfill Drainage Dam.	All water management / storage infrastructure to be retained is suitable for post-mining land use.	Contamination Assessment for infrastructure to be retained (likely). Engineering Assessment for infrastructure to be retained to confirm suitability for retention (possible).
	Potentially Contaminated Water Includes the Containment Dam, Process Water Dam and any potentially contaminated water diversions/drainage.	All potentially contaminated water management / storage infrastructure not suitable for retention is removed.	Contamination Assessment to identify potential retention of infrastructure (possible) Engineering Assessment for infrastructure to be retained to confirm suitability for retention (possible).
4 – Overburden Emplacement Area	Includes the Road Base Preparation Area and non-acid forming Waste Rock Emplacement.	No infrastructure to be retained.	None required.
5 – Active Mining Area (Box Cut and Decline)	Includes the box cut and decline underground mining infrastructure.	Portal is sealed in accordance with guidelines. Final void is geotechnically stable. Access to final void prevented as far as practicable.	Engineering report for design of final capping (possible). Engineering Assessment prior to sign-off (likely). Geotechnical Assessment for final void stability (likely).
8 – Topsoil Stockpiles	Includes all stockpiles of topsoil and subsoil material preserved for rehabilitation activities.	No infrastructure to be retained.	None required.
All Domains	All assets/ infrastructure to be retained.	All assets are appropriately documented on all relevant plans / approvals / titles.	Decommissioning / closure report prepared by a suitably qualified persons. Sign-off from landowner(s) / responsible parties.
Note 1: Domains as shown in **Figure 8**			
Source: Tritton Resources Pty Ltd			

6.2.2.4 Management of Carbonaceous / Contaminated Material

Existing Environment

Risks to contaminated or polluted land principally relate to the potential for formation of acid sulphate soils or operational contamination relating to hydrocarbon and reagent management. Based on the above, the following areas/components of the Mine Site would have the potential for the occurrence of contaminated material (see **Figure 2**).

- Workshop area (medium risk); and
- ROM Pad (high risk);
- Surge Pile (medium risk);
- Crushing and Screening Plant (low-medium risk);
- Processing Plant (medium risk);
- Processing Pond (medium risk);
- Sediment Dams (high risk);
- Bioremediation Facility (low-medium); and
- all other contaminated water management infrastructure (i.e. drains, Settling Pond) (low-medium risk).

Ongoing Controls

Management of risks associated with handing, storage, and use of contaminated or otherwise hazardous material is undertaken in accordance with the following.

- *Waste Rock Characterisation and Management Plan* – for the identification and management of PAF material.
- *Environmental Management Plan* for general environmental management, including handling of hazardous material.
- *Water Management Plan 2023* and *Erosion and Sediment Control Plan* – for identification and management of water management infrastructure.
- *Pollution Incident Response Management Plan*.

The Company has operated the Mine Site since 2003, and during the intervening period has not experienced significant issues relating to hydrocarbon management. Hydrocarbons and other chemicals are stored in specified areas on site, with hydrocarbons stored in bunded areas in accordance with the AS1940. Any identified contamination will either be remediated or removed prior to site relinquishment.

Controls to be Implemented

Contamination Assessment

Risk controls identified as part of the rehabilitation risk assessment include implementation of survey and testing within historical mining areas to identify unknown contamination risks, and contamination assessments within all known ‘at risk’ areas (see previous subsection), with all

consequent remediation activities undertaken as required. Following remediation, validation sampling will be used to identify residual contamination and verification of the concentration of any detected compounds against relevant guidelines. Further information is provided in Section 9.2.3.

Removal and Management of Contaminated Material

Contaminated material identified in exceedance of relevant guidelines may be:

- treated in-situ;
- excavated for treatment either on-site or off-site; or
- excavated for disposal either on-site (e.g., for disposal of PAF) or at a licenced disposal vicinity.

If required, handling and treatment plans for contaminated material may be developed by or in consultation with suitably qualified persons.

Timing of Testing and Remediation Activities

In general, contamination assessments where risks are considered by the Company to be more known/understood, will be undertaken during the decommissioning phase of rehabilitation. Timing of any remediation activities will depend on the extent of contamination (i.e., volume/area of contaminated material, and any requirements for use of said material as part of landform development or growth medium development. The outcomes of the material balance within the Mine Site will be used to identify and prioritise any relevant contamination assessments, as required.

It is therefore not expected that contaminated land or pollution will present a risk to rehabilitation of the Mine Site.

6.2.2.5 Hazardous Materials Management

Existing Environment

The risks associated with hydrocarbon contamination have been addressed in relation to contaminated or polluted land (Section 6.2.2.4).

Ongoing Controls

Ongoing controls regarding the handling, storage, use and disposal of hazardous materials is undertaken in accordance with:

- *Environmental Management Plan* for general environmental management, including handling of hazardous material;
- *Hydrocarbon and Chemical Management Plan*; and
- *Pollution Incident Response Management Plan*.

Controls to be Implemented

Risk controls identified as part of the rehabilitation risk assessment include a hazardous materials assessment/audit to be undertaken prior to decommissioning of areas/infrastructure with relatively increased use/occurrence of hazardous materials. That assessment will be used to identify the location and volume of hazardous materials within the Mine Site, including a qualitative assessment of the condition of all storage infrastructure.

In summary, due to existing management measures implemented for hazardous material transport, handing and storage it is not expected that hazardous materials will present a risk to rehabilitation of the Mine Site.

6.2.2.6 Underground Infrastructure

Existing Environment

Underground infrastructure that will require specialist capping/closure includes the portal within the Box Cut and three ventilation shafts/emergency access/egress points.

Other infrastructure associated with underground mining generally includes pipelines, electrical transmission cables, communication lines, and other removable infrastructure such as rooms and emergency bunkers.

Controls to be Implemented

The portal decline will be sealed to prevent access in accordance with relevant guidelines. Existing security fencing will be retained during and after sealing and decommissioning to prevent unauthorised access to underground workings. Services and infrastructure associated with the vent rises will be disconnected and removed prior to the shaft being sealed, with temporary security fencing established during sealing works to prevent unauthorised access.

Salvageable infrastructure that can be relocated or sold will be removed where practicable. No specialist assessments or otherwise relating to salvageable infrastructure are anticipated to be required.

Groundwater levels within the underground workings will be left to return to natural levels. No discharge of groundwater is expected to occur, and no specific measures to manage groundwater accumulation in underground workings are considered necessary. Quarterly groundwater quality sampling will continue to be undertaken for a minimum of two years following cessation of mining operations.

6.2.3 Landform Establishment

6.2.3.1 Water Management Infrastructure

Infrastructure to be Retained

Key mining-related water management infrastructure to be retained is identified in **Table 17.**

Table 17
Water Management Infrastructure

Structure	Retained or Removed	Treatment / Action Required
Containment Dam	Removed	Contamination Assessment.
Process Water Dam	Removed	Contamination Assessment.
Raw Water Dam	Removed (unless safe to retain)	Contamination Assessment. Engineering Assessment, including spillway design (if retained).
Landfill Drainage Dam	Removed (unless safe to retain)	Engineering Assessment, including spillway design (if retained).
Environmental Pond	Retained	Engineering Assessment, including spillway design.
Sediment Dam 1	Retained	Contamination Assessment. Engineering Assessment, including spillway design.
Sediment Dam 2	Retained	Contamination Assessment. Engineering Assessment, including spillway design.
Diversion Drain 1	Retained	Contamination Assessment.
Diversion Drain 2	Retained	Contamination Assessment.

Several pre-Mining farm dams are located within the Mine Site that have not been impacted by Mine-related activities (excluding surface water monitoring) will be retained to support final land use. As these structures have not been impacted by mining, no rehabilitation activities are required.

It is expected that water management infrastructure will be one of the final areas to be rehabilitated and subject to the ongoing requirements of the Company's other operations.

All potentially contaminated water storage structures will be removed from the final landform or decontaminated and rehabilitated for use as a farm dam. The water pipeline infrastructure will be removed from the Raw Water Pond and the dam profiled and filled. The lining of the Containment Dam and Process Water Dam will be removed, and the area assessed for contamination. Any contaminated material will be removed to the Tailings Storage Facility. The Containment Dam will be retained in the final landscape as a farm dam. The Process Water Dam will be backfilled and profiled consistent with use for grazing. The Containment Dam and Environmental Pond will be retained in the final landscape for use as a farm dam.

Confirmation of the water management and water storage infrastructure required and/or suitable for the final landform and land use will form part of the Post-closure Water Management Strategy (see Section 9.2.2).

6.2.3.2 Final Landform Construction: General Requirements

The proposed final landform of the Mine Site is shown on **Plans 1** and **2**, and consists of:

- water management/storage infrastructure (see Section 6.2.3.1)
- a capped TSF (see Section 6.2.3.3);
- a final void (see Section 6.2.3.4); and
- a generally safe, stable, and non-polluting landform.

The following presents an overview of the general requirement of the key design aspects of the above.

Geotechnical

Geotechnical-related risks to rehabilitation of the Mine Site include stability of the TSF embankments, and stability of final void walls.

The design and construction of the TSF is undertaken in accordance with detailed engineering assessment/design reports prepared by suitably qualified persons. The design of the embankments is determined based on results from extensive geotechnical and geochemical testing of embankment and tailing materials. Operational performance/stability is monitored and assessed during active mining, and any unstable embankments are identified and repaired during operational phases in consultation with relevant Government agencies.

The geotechnical stability is a critical factor of the design of the Box Cut and is monitored regularly as part of ongoing operational monitoring. Monitoring data is used to confirm predicted performance and identify potential modes or points of failure.

During the landform establishment phase of rehabilitation, additional geotechnical assessments may be undertaken to identify risks and/or opportunities relating to long-term geotechnical stability of the final landform.

Geochemical

Geotechnical constraints relating to rehabilitation of the Mine Site are identified in Sections 6.2.1.6 and 6.2.1.8. In summary, geochemical constraints are not considered to present a significant risk during landform establishment.

Erosion

The principle erosion-related risk in regard to the final landform will be the long-term erosional stability of the Tailings Storage Facility.

In consideration of the recommendation of O'Kane (2018, 2023), design of the final capping for the Tailing Storage Facility includes utilisation of a store and release cover system, with channelised drainage systems to support drainage of excess rainfall. The final slope of the capped landform will be approximately 1° to 3° to encourage infiltration and functioning of the store and release cover. Channelised drains would utilise low permeability liners and coarse rip-rap armour to prevent scouring of the channel over time.

Erosion modelling will also form part of Landform Evolution Modelling undertaken as part of rehabilitation planning (see Section 9.2.5)

Visual Amenity

The final landform of the Mine Site will be generally consistent with the surrounding landscape and capable of supporting native ecosystem and agricultural grazing. Excluding the Tailing Storage Facility embankments and the final void, the gentle slopes of the final landform will be relatively consistent with the pre-mining landscape. Impacts to visual amenity are not considered to be a significant risk due to the location of the Mine Site, and prevalence of native vegetation.

6.2.3.3 Final Landform Construction: Reject Emplacement Areas and Tailings Dams

No reject emplacement areas are proposed to be retained as part of the final landform.

Conceptual capping designs (see Section 6.2.1.1) are considered capable of supporting the proposed final land use. In summary, waste rock located within the NAF Waste Rock Emplacement will be used to cap the Tailing Storage Facility. The remaining surface will be rehabilitated to mixed native grassland consistent with the surrounding landscape. The intended design of the capping of the Tailings Storage Facility will be to limit as far as practicable the potential for infiltration of water into the facility. The current conceptual capping design utilises a traditional store and release covers system. Further information on the conceptual capping design for the Tailings Storage Facility is presented in Section 9.2.4.

The long term land use strategy for the Tailings Storage Facility is to return the land to light grazing and native vegetation (native grasses) conservation, though agricultural capacity will remain limited by environmental conditions. The Tailings Storage Facility will be capped with approximately 400mm to 900mm NAF waste rock material, covered with a layer of topsoil and shaped to support a store and release cover system. This rehabilitation strategy is consistent with advice received regarding closure of the Heap Leach Pads at the Murrawombie Copper Mine (O'Kane, 2018) (see **Appendix 2**). The Conceptual Cover and Landform Design was prepared with consideration of local geology, climatic conditions and management available capping materials. As these are all similar factors for the Tritton Copper Mine, the conclusions of the O'Kane Consulting advice are assumed to similarly apply to closure of the Tailings Storage Facility (O'Kane, 2023). Revegetation will involve seeding with shallow rooted native grass species to provide a stabilising groundcover. All livestock and feral species will be restricted from the Tailings Storage Facility, to limit grazing pressures, until such time as vegetation is suitably established. Erosion and sediment controls will be implemented to allow drainage of excess surface water. A geotechnical assessment of the final landform will be undertaken prior to relinquishment to confirm the final stability of all terminal faces and domain slopes.

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

The final void will have a maximum depth of approximately 25mbgl or 249m AHD. The total area of the final void as a final land use domain is approximately 2.2ha.

The final void will be secured by a safety bund, fenced and access restricted through a lockable gate. Clean water diversions will be established to divert clean water from entering the void. All access to underground workings will be sealed or otherwise made inaccessible.

6.2.3.5 Construction of Creek / River Diversion Works

No creek or river diversions are proposed as part of the rehabilitation works and closure of the Mine Site.

6.2.4 Growth Medium Development

Material Characterisation

Risk controls identified as part of the rehabilitation risk assessment include geochemical characterisation of growth medium and capping materials during stripping. Further testing may be implemented to identify risks and opportunities relating to material characterisation such as fertility, erodibility, and the potential use of ameliorants, if required.

Ameliorants and Strategies

Depending on the results of existing or future material characterisation assessments, amelioration and/or selective handling strategies may be required to be developed and implemented.

Amelioration, if required, may include the use/application of fertilisers and/or organic matter. In consideration of the proposed final land use for the Mine Site, largely consisting of agricultural grazing, typical agricultural products and machinery will likely be highly applicable and therefore no specialist strategies or equipment is anticipated to be required.

Erosion and Sediment Control

Ongoing monitoring and management of existing surface water management infrastructure during all phases of rehabilitation will help to ensure that all necessary infrastructure is functioning as intended/required.

Temporary erosion and sediment controls that may be used during establishment of groundcovers are identified in the *Erosion and Sediment Control Plan – Tritton Mine* and may include the use of sediment fencing, straw bale filters.

The application of mulches, including plant matter or Hydromulch, may be required during periods of elevated erosion risk. In general, rehabilitation scheduling will be undertaken in consideration of long-term meteorological patterns to determine optimal timing for key activities and as such, the application of mulches is not anticipated to be required outside of exceptional circumstances.

Growth Medium Establishment

Deep ripping of in-situ substrates will be implemented where required to promote water infiltration and encourage root penetration and development. Ripping will occur along contours to reduce erosion risks on sloped landforms, where practicable. Topsoils/subsoils will be placed within or adjected to areas undergoing rehabilitation and material will be spread and shaped using appropriate machinery such as bulldozers and graders. Tillage of surfaces to integrate substrates and promote water infiltration may be implemented where required.

Seasonal Considerations

Table 18 presents a summary of the regional climate statistics, as recorded at the Nyngan Airport AWS (051039), located approximately 47km southeast of the Mine Site. An AWS is located near the town of Girilambone (and the other mines within the Tritton Copper Operations) and approximately 20km northeast; however, that station (Girilambone (Okeh) AWS Site No. 51164) has only been operational since 2017 and therefore long term seasonal information cannot be determined at this time.

In summary, average temperatures are higher throughout December to March when mean temperatures are above the annual average. Rainfall follows a similar distribution, with above annual average rainfall (36.8mm) occurring in January, February and March. Average 9am show more seasonal variation compared to windspeeds at 3pm. Average 9am and 3pm windspeeds are higher than the annual average from October to March, and from September to February, respectively.

Table 18
Regional Climate Statistics

Statistics	Jan	Feb	Mar	Apr	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Mean Max Temp (°c)	34.4	33.4	30.6	25.7	20.7	17.1	16.5	18.5	22.7	26.7	30.1	25.8
Mean Min Temp (°c)	19.6	19.3	16.5	11.9	7.8	5.0	3.8	4.7	7.8	11.5	15.1	11.7
Mean Rainfall (mm)	51.2	46.3	41.9	34.2	35.6	33.8	28.7	29.5	27.6	34.2	36.0	445.6
Mean 9am Wind Speed (km/h)	13.6	13.3	12.9	10.9	9.6	8.7	9.2	10.3	12.6	13.7	13.8	11.8
Mean 3pm Wind Speed (km/h)	12.8	12.0	12.0	10.8	10.5	11.2	12.1	13.1	14.1	14.2	13.4	12.4
Source: Bureau of Meteorology Climate Data Online – Nyngan Airport (051039), accessed 17/03/2023												

Consideration of long-term regional, and short-term local meteorological patterns will be undertaken during the planning of key rehabilitation activities, such as during landform establishment and growth medium development. In general, as rainfall is relatively consistently low, impact from high rainfall events is not anticipated to present significant risks to rehabilitation outside of extreme weather conditions.

Should adverse conditions delay vegetation establishment, the following management and mitigation measures may be implemented by the Company.

- Increase frequency/scope of routine/targeted inspections.
- Apply measures to increase soil water holding capacity such as mulch.
- Apply additional growth medium if erosion of existing material is considered unacceptable.
- Commission additional specialist reports/assessment to ascertain scope of potential impacts and identify any remedial actions, such as supplementary planting or revision of target species selection.

6.2.5 Ecosystem and Land Use Establishment

A *Revegetation Strategy*, including a *Seed Collection and Procurement Strategy*, is currently being prepared for the Company by DnA Environmental (DnA). These documents will be used to guide ecosystem and land use establishment at the Mine Site. The following subsections present a summary of the Revegetation Strategy that will be applied to the ecosystem and land use establishment phase of rehabilitation.

6.2.5.1 Seasonal Considerations

Long-term regional climate statistics are described in **Table 18** and Section 6.2.4.

Due to the regional and local climate conditions of the Mine Site, drought conditions are likely to occur at least partially throughout rehabilitation. Drought conditions have the potential to impact rehabilitation activities through the following.

- Reduced ecosystem functioning and resilience within existing plant communities can reduce the total quantity and overall viability of propagation material such as seeds. In addition, herbivory impacts may be greater as systems are less able to regenerate.
- Elevated temperatures reduce in-situ seedbank material through increased metabolism and consequently reduced viability.
- Permanent water sources such as the Environmental Pond within the Mine Site may attract elevated numbers of herbivorous pests.
- Delays to and failure of germination.
- Increased plant mortality during vulnerable periods (i.e., reduced root depth/density).

Notwithstanding the above, the use of naturally occurring species that are adapted to local conditions (see Section 6.2.5.3) will increase the resilience of the revegetated landscape of the Mine Site and reduce reliance on external inputs.

6.2.5.2 Revegetation Methodology

Revegetation Using Seeds

DnA has identified a combination of revegetation methods that may be used for revegetation at the Mine Site, summarised as follows.

- Seed sowing of a mix of species identified in **Table 19**, using:
  - hand broadcasting;
  - seed spreaders;
  - brush-matting;
  - hydro-mulching; and / or
  - aerial sowing.
- Direct seed application, facilitated by strategic planning for seed collection to occur simultaneously with final landform completion to provide the following benefits:
  - seed can be directly distributed onto revegetation areas;
  - long-term storage not required;
  - no drying or processing of seed required;
  - native seeds are adapted for natural burial; and
  - need for pre-treatments is reduced as the seed is allowed to weather and germinate naturally when conditions are optimum.

- Seed-bearing native pasture hay application, to provide the following benefits:
  - effective in early stope stabilisation for highly sodic and dispersive soils (refer Section 6.2.1.1) (DnA, 2023);
  - accelerates soil and ecological development and function;
  - decomposition of hay provides nutrients and organic matter required for sustaining microbial function and plant growth;
  - provides immediate soil surface protection and protection against erosion; and
  - provides an additional source of local grassland seed.

To ensure adequate seed availability for rehabilitation activities, a *Seed Collection and Procurement Strategy* will be conducted, which will include a seed inventory and forecast, supported by a seed collection and procurement strategy to ensure that an adequate seed collection schedule is in place (see Section 9.2.1).

Revegetation Using Tubestock

A combination of the seeding and planting techniques will be utilised by the Company for revegetation of the Mine Site. Tubestock will be ordered, as required, in accordance with the Revegetation Strategy

Tubestock of tree and shrub species will be planted in accordance with the Revegetation Strategy and summarised as follows.

- Where practicable, local provenance seed will be collected and supplied to a local and qualified nursery provider at least six to twelve months prior to planting to allow adequate propagation time. Other sources of material may be required to be used depending on availability of resources.
- Tubestock will be at least 25cm in height and have a well-established root system.
- Planting will be undertaken by an experienced planting team between April and August after suitable rainfall events have resulted in suitable soil moisture conditions.
- Where practicable, plants will be watered in on the day of planting to settle soil around the root ball and remove voids which would otherwise increase the rate of moisture loss around the plant. Watering in will take place no more than 24 - 48 hours post planting.
- During the three to six month establishment period, the frequency of watering will depend on the prevailing climatic conditions at the time of planting and thereafter. Watering will be frequent enough to maintain adequate soil moisture to prevent water stress and repressed growth during establishment.
- On average, the density of mature tubestock will be 150 stems per hectare accounting for up to 50% mortality. The density of juvenile or shrub trees will be approximately 600 shrubs per hectare.
- Tubestock will be planted approximately 8 to 12m apart.

6.2.5.3 Target Species

Table 19 presents an indicative and non-exhaustive list of species identified by DnA that may be used during revegetation of the native ecosystem and agricultural grazing areas of the Mine Site (refer **Figure 7**). The species listed in **Table 19** represent those which have been identified within analogue sites as being representative of the target vegetation types.

Table 19
Murrawombie Copper Mine Rehabilitation Species List

Page 1 of 3

Growth Form	Scientific Name	Common Name
Trees	*Acacia doratoxylon*	Currawang
	Acacia excelsa	Ironwood
	Brachychiton populneus	Kurrajong
	Callitris glaucophylla	White Cypress Pine
	Eucalyptus intertexta	Gum Coolibah
	Eucalyptus populnea	Bimble Box
	Eucalyptus viridis	Green Mallee
	Geijera parviflora	Wilga
Shrubs	*Acacia deanei*	Deane's Wattle
	Acacia decora	Western Silver Wattle
	Acacia hakeoides	Hakea Wattle
	Acacia oswaldii	Miljee
	Dodonaea viscosa subsp. cuneata	Wedge-leaf Hopbush
	Dodonaea viscosa subsp. mucronata	A Hopbush
	Eremophila deserti	Turkey Bush
	Eremophila longifolia	Emubush
	Eremophila mitchellii	Budda
	Eremophila sturtii	Turpentine
	Senna artemisioides subsp filifolia	Punty Bush
	Senna artemisioides subsp. X artemisioides	Silver Cassia
	Senna artemisioides subsp. zygophylla	Senna
Sub-shrubs	*Atriplex semibaccata*	Creeping Saltbush
	Atriplex spinibractea	Spiny-fruit Saltbush
	Atriplex stipitata	Mallee Saltbush
	Chenopodium desertorum	Mallee Goosefoot
	Enchylaena tomentosa	Ruby Saltbush
	Maireana microphylla	Eastern Cottonbush
	Maireana villosa	Blue Pearlbush
	Ptilotus sessilifolius var. sessilifolius	Crimson Foxtail
	Ptilotus spathulatus	Pussy Tails
	Salsola australis	Buckbush
	Sclerolaena muricata	Black Roly Poly
	Sclerolaena parviflora	Mallee Copperburr

Table 19 (Cont'd)
Murrawombie Copper Mine Rehabilitation Species List

Growth Form	Scientific Name	Common Name
Herbs	*Brachyscome ciliaris var. ciliaris*	Variable Daisy
	Calotis cuneifolia	Purple Burr Daisy
	Calotis lappulacea	Yellow Burr Daisy
	Chrysocephalum apiculatum	Common Everlasting
	Convolvulus erubescens	Australian Bindweed
	Einadia nutans	Climbing Saltbush
	Erodium crinitum	Blue Storksbill
	Glycine tabacina	Variable Glycine
	Leptorhynchos tetrachaetus	Beauty Buttons
	Maireana enchylaenoides	Wingless Fissure Weed
	Minuria leptophylla	Minnie Daisy
	Oxalis perennans	Yellow Wood-sorrel
	Portulaca oleracea	Pigweed
	Ptilotus polystachyus	Long Tails
	Ptilotus spathulatus	Pussy Tails
	Rhodanthe corymbiflora	Small White Sunray
	Rhodanthe floribunda	Common White Sunray
	Sida corrugata	Corrugated Sida
	Sida cunninghamii	Ridge Sida
	Solanum ellipticum	Velvet Potato Bush
	Solanum ferocissimum	Spiny Potato Bush
	Swainsona microphylla	Poison Swainson-pea
	Vittadinia cuneata	Fuzzweed
	Vittadinia pterochaeta	Rough Fuzzweed
	Vittadinia sulcata	A Fuzzweed
	Wahlenbergia stricta	Tall Bluebell
	Xerochrysum bracteatum	Golden Everlasting
Grasses	*Anthosachne [Elymus] scabra*	Common Wheatgrass
	Aristida behriana	Bunch Wiregrass
	Aristida jerichoensis	No. 9 Wiregrass
	Aristida ramosa	Threeawn Grass
	Austrostipa scabra	Speargrass
	Bothriochloa macra	Red Grass
	Chloris truncata	Windmill Grass
	Chloris ventricosa	Tall Windmill Grass
	Cynodon dactylon	Couch
	Digitaria divaricatissima	Umbrella Grass
	Enneapogon intermedius	Nineawn
	Enneapogon nigricans	Blackheads
	Enteropogon acicularis	Curly Windmill Grass

Table 19 (Cont'd)
Murrawombie Copper Mine Rehabilitation Species List

Growth Form	Scientific Name	Common Name
	Eragrostis parviflora	Lovegrass
	Eragrostis setifolia	Neverfail
	Eriochloa creber	Cup Grass
	Monachather paradoxus	Bandicoot Grass
	Panicum effusum	Hairy Panic
	Paspalidium constrictum	Knottybutt Grass
	Rytidosperma caespitosum	Wallaby Grass
	Sporobolus caroli	Fairy Grass
	Themeda triandra	Kangaroo Grass
	Thyridolepis mitchelliana	Mulga Mitchell Grass
	Walwhalleya subxerophila	Cane Panic

6.2.5.4 Management of Emergent Vegetation

Management measures to be implemented for protection of emergent and/or juvenile vegetation may include:

- exclusion of vehicles and stock from revegetation area;
- increased monitoring frequency to identify effectiveness of revegetation methodologies and for early identification of potential risks; and
- increased frequency of weed and pest monitoring and controls prior to, during, and following vegetation establishment to ensure pest pressure is kept to a minimum while vegetation is more at-risk.

6.2.6 Ecosystem and Land Use Development

6.2.6.1 Weed and Pest Management and Monitoring Program

Weeds are currently managed through the protocols contained within the *Weed Management Plan 2023*, involving bi-annual controls that include spraying and physical removal of weeds, where necessary. Feral animals are monitored through regular visual inspections and reactive measures such as short-term baiting programs.

While weeds and non-native fauna are a risk to revegetation success, it is expected that they will continue to be managed until such time as the completion criteria are met and ML1544 relinquished. It is anticipated that weeds and non-native fauna will remain in the final landform, however the pervasiveness of species will be consistent or below that of the surrounding landscape.

6.2.6.2 Environmental Management and Monitoring Program

Surface Water

Risks to surface water quality principally relate to pollution through failure of the Tailings Storage Facility, sediment-laden runoff or hydrocarbon spills and acid mine drainage. The surface water management system including the locations of sediment dams and a description of the surface water monitoring program is provided in the *Water Management Plan 2023* and *Erosion and Sediment Control Plan – Tritton Mine 2015*, while management of potentially acid forming materials is described in the *Waste Rock Characterisation and Management Plan 2023*. Subject to the continued implementation of these plans, residual risks to rehabilitation are considered to be minor.

The Tailings Storage Facility is regularly monitored and has been constructed to limit the risk of failure. As a result, the risk to surface water quality remains moderate (principally based on the potential consequences of these impacts), however the likelihood of an event occur is limited as much as practically possible.

Groundwater

The Company has prepared a *Remedial Action Plan: Tailings Storage Facility (ML1544) 2013* (RAP) (Environmental Strategies, 2013) in response to monitored increases in the standing water level within the Tailings Storage Facility. Investigations associated with preparation of the RAP found evidence of groundwater mounding beneath the Tailings Storage Facility, but no evidence of contamination of the groundwater through interaction with the Tailings Storage Facility. The final conclusions of the RAP were that the naturally occurring groundwater mounding was consistent with the higher mass of the Tailings Storage Facility materials compressing the aquifer. No remediation was considered necessary as remediation pumping of groundwater from beneath the Tailings Storage Facility was found to be having a neutral effect on the groundwater setting.

The Company currently holds groundwater access licence 31090 for dewatering of the underground workings at the Mine Site.

Based on the conclusions of the *Remedial Action Plan: Tailings Storage Facility (ML1544)2013* and the ongoing monitoring of the groundwater setting specified in *Water Management Plan 2023* the risk to groundwater quality remains moderate (principally based on the potential consequences of these impacts). The Company considers that the likelihood of an event occurring has been limited as much as practically possible.

6.2.6.3 Revegetation Management and Monitoring

Ecological management of rehabilitated lands will consist of regular monitoring, review and response to identify any revegetation and maintenance requirements to achieve final land use. Monitoring will consist of a combination of regular visual inspections undertaken by Company personnel and semi-regular formal monitoring assessments undertaken by suitably qualified persons. The Company will undertake a photo-point and annual monitoring program for all rehabilitated areas of the Mine Site as they are progressively rehabilitated. The Company will report the results of the monitoring program in the Annual Rehabilitation Report. All information collected by Company personnel will be made available during formal monitoring assessments, if required.

In response to outcomes of the monitoring program, the Company will undertake maintenance or remedial works as required, which will be reported on in the Forward Program. These may include the following.

- Earthworks or stabilisation measures to repair erosion;
- Repair drainage structures and de-silt sediment control structures;
- Additional seeding or planting;
- Application of fertilisers and/or mulches;
- Application of gypsum or lime to control pH and improve soil structure;
- Fencing maintenance and repair;
- Irrigation system maintenance and repair;
- Bushfire management; and
- Implementation of weed and pest control measures.

6.2.6.4 Land Management and Infrastructure Maintenance

Site infrastructure including roads, security and stock-proof fencing, safety bunds and signage will be inspected on an annual basis. Additionally, infrastructure vulnerable to erosion (e.g. unsealed roads, safety bunds, clean water diversions will be inspected following significant rainfall events (i.e. ≥25mm within 24 hours).

Summarised results of infrastructure inspections as well as records of annual infrastructure maintenance activities and costs will be included as part of an Annual Rehabilitation Report until relinquishment.

6.3 Rehabilitation of Areas Affected by Subsidence

No incidences of mine subsidence have been identified as occurring within the Mine Site or as a result of mining operations associated with the Mine. As outlined in Section 6.2.1.12, subsidence represents a low risk to rehabilitation at the Mine Site. As such, no specific subsidence-related management and maintenance programs are required at the Mine.