Environmental Management Plan (Exploration)

Lake Throssell Project

This management plan must be referred to prior to commencing exploration activities at the Lake Throssell Project

Document ID: TGM-F-005 v3

Summary

This document provides a summary of environmental guidelines for conducting exploration activities for Trigg Mining's Lake Throssell Sulphate of Potash Project.

The objective of the Plan is to ensure compliance with relevant regulatory requirements and approvals, and to minimise impacts to the environment as far as reasonably practicable.

It should be read thoroughly by all staff and contractors during the induction process, and is relevant to all field staff involved in exploration activities on behalf of Trigg Mining.

Exploration information:

Program location:	Lake Throssell
Tenement ID:	E38/3065, E38/3483, E38/3537, E38/3458, E38/3544

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1. Introduction

Trigg Mining proposes to conduct exploration activities to support development of the Lake Throssell Sulphate of Potash Project (the Project). The Project is located approximately 180 km east of Laverton, within tenements E38/3065, E38/3458, E38/3438, E38/3537 and E38/3544.

1.1 Purpose

Trigg Mining recognises that exploration activities should be undertaken so as to avoid potential impacts to the environment or, where avoidance is not possible, to minimise and mitigate impacts as far as reasonably practicable.

The overall purpose of this Exploration Environmental Management Plan (EMP) is to support the exploration activities proposed to be undertaken to develop the Lake Throssell Project. Trigg Mining will endeavour to achieve the following environmental objectives with regard to implementing this EMP:

- Comply with all relevant legislative requirements and commitments
- Avoid, minimise and mitigate all identified risks to as low as reasonably practicable
- Ensure all personnel and contractors clearly understand their environmental obligations and responsibilities
- Achieve optimal environmental management outcomes through continuous improvement
- Meet community, traditional owner, and other stakeholder expectations for environmental management.

1.2 Proposed Activities

All proposed exploration activities will be described in Programme of Works (PoW) applications submitted to Department of Mines, Industry Regulation and Safety (DMIRS), and carried out in accordance with granted approvals. This EMP is designed to apply to ongoing exploration activities for the Project area, however only those activities approved under current PoWs will be undertaken.

Broadly, the proposed exploration programs to be undertaken may include:

- Hydrogeological investigations
- Resource drilling
- Metallurgical drilling
- Geotechnical investigations.

Activities associated with these programs may include (but are not limited to) drilling holes/wells, installation of drill pads, access tracks, causeways, sumps, test pits, laydown areas, and temporary camps.

2. Existing Environment

Trigg Mining has commissioned environmental assessments of the Project area to inform project planning and support the required environmental approvals for its exploration and major project approval.

Maia Environmental Consultancy has commenced a detailed flora and vegetation assessment, with survey events over multiple seasons in 2021, and further surveys proposed throughout 2022. Western Wildlife conducted a detailed fauna and habitat assessment for the Project in 2021 and is also undertaking further survey events in 2022.

This section provides an overview of key baseline environmental information for the Project area based on currently available information.

2.1 Protected and Significant Areas

- The Project area lies in an area listed as an Environmental Protection Authority (EPA) Redbook Recommended Conservation Reserves 1976-1991 area.
- Lake Throssell and surrounds is a Schedule 1 Area under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004.*
- Lake Throssell itself is an Environmentally Sensitive Area (ESA).
- None of the Project area lies in Department of Biodiversity, Conservation and Attractions (DBCA) Legislated Lands and Waters. The closest is Yeo Lake Nature Reserve, approximately 20 km to the south of the Project Area
- No DBCA Lands of Interest occur in or close to the Project Area (Blueprint Environmental Strategies, 2020).

2.2 Flora and Vegetation

The Project area falls within the Great Victoria Desert Central Bioregion (GVD 02) Subregion of the Great Victoria Desert Region of the Interim Biogeographic Regionalisation of Australia (IBRA).

The vegetation of the application area has been broadly mapped as Beard vegetation associations, as described in **Table 1** (Blueprint Environmental Strategies, 2020).

Table 1: Vegetation Associations

Number	Vegetation Description	Pre-European Extent (ha)	Current Extent (ha)	% Remaining
NA	Great Victoria Desert Region (WA)	21,829,016	21,829,016	100
18	Low woodland, open low woodland or sparse woodland: Mulga (*Acacia aneura*) and associated species	24,675,970	24,659,110	99.9
19	Low woodland or open low woodland: Other wattle (*Acacia* spp.), banksia (*Banksia* spp.), peppermint (*Agonis flexuosa*), cypress pine (*Callitris* spp.), casuarina (*Allocasuarina* spp.)	4,888,643	4,885,387	99.9
45	Tall Shrubland: Mallee: eucalypt shrubland (*Eucalyptus eremophila, E. redunca, E.* spp.)	358,724	358,724	100
125	Bare and Sparsely Vegetated Areas: Salt lake, Lagoon, claypan	3,940,746	3,536,992	89.8
676	Halophyll and Sarcophyll Communites Samphire: *Tecticornia* spp. communities in saline areas	2,110,508	2,087,974	98.9

NatureMap results showed 121 flora species have been recorded in the Project area. The dominant families were Chenopodiaceae (23 species), Fabaceae (16 species), Poaceae (14 species) and Asteraceae (12 species)

and dominant genus' were Acacia (12 species), Eremophila (10 species), Maireana (9 species) and Eucalyptus (7 species) (Blueprint Environmental Strategies, 2020).

Conservation Significant Vegetation

No Threatened Ecological Communities (TEC) listed under the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) or the WA *Biodiversity Conservation Act 2016* (BC Act) occur with the Project area.

No Priority Ecological Communities listed under the BC Act occur within the Project area (Blueprint Environmental Strategies, 2020) (Maia, 2021a) (Maia, 2021b).

Threatened Flora

One Threatened flora species listed under both the EPBC Act and BC Act has been recorded approximately 50 km southwest of the southern section of the Project area - *Seringia exastia* (Critically Endangered)[1]. It could potentially occur in the Project area (Maia, 2021b).

A single species listed under the DCBA as a Priority 3 (P3) flora species was recorded within the Project area (*Melaleuca apostiba*). A number of Priority Flora species have been identified within 100 km of the Project area, including the following:

- *Grevillea* sp. Victoria Desert P1
- *Comesperma viscidulum* (P4)
- *Calytrix warburtonensis* (P2)
- *Thryptomene nealensis* (P3)
- *Conospermum toddii* (P4)
- *Olearia arida* (P4) (Maia, 2021a) (Maia, 2021b) (Blueprint Environmental Strategies, 2020).

Weeds

No weed species listed on any of the national weeds lists or listed as a declared pest in Western Australia was located in the Project area.

Tamarix aphylla, which is a Weed of National Significance and a declared pest in WA, has been recorded within 100 km of the Survey Area previously. Fourteen other weed species have been located within 100 km of the Survey Area (Blueprint Environmental Strategies, 2020) (Maia, 2021b).

2.3 Fauna

Seven fauna habitats were identified in the Project area (Western Wildlife, 2021):

- Salt lake
- Samphire shrubland
- Gypsum dunes
- Sand dunes
- Sandplain
- Mulga woodland

[1] *Seringia exastia* was a species previously known from the Kimberley region, but a recent taxonomic study concluded that S. exastia and S. elliptica are the same species, and the two species have been synonymised under the oldest name – S. exastia. S. elliptica is common and widespread through the Pilbara region, central WA and the Northern Territory and it extends into South Australia. A nomination by the WA Threatened Species Scientific Committee (TSSC) to delist the species has recently been advertised on DBCA's website (DBCA, 2021b). However, until changes are officially made to the threatened species list, S. exastia is still legally listed as threatened flora.

- Breakaways

All of the habitats present are widespread in the region.

NatureMap identified a total of 87 fauna species in the area, made up of 62 bird species, 23 reptile species and 2 mammal species. The most common families were *Scincidae* (8 species), *Acanthizidae* (7 species), *Agamidae* (6 species) and *Meliphagidae* (6 species) (Blueprint Environmental Strategies, 2020). The observed assemblage for terrestrial fauna surveys conducted in 2021 included no frogs, 38 reptiles, 45 birds, 18 native mammals and five introduced mammals (Western Wildlife, 2021).

Conservation Significant Fauna

Conservation Significant Fauna potentially occurring within the Project area are shown in **Table 2.**

Table 2: Conservation Significant Fauna

Species	Conservation Status	Habitat	Likelihood of Occurrence
Birds			
Falco hypoleucos Grey Falcon	Vulnerable	Woodland and scrub types in arid lands.	Possible, although no habitat on salt lake.
Leipoa ocellata Malleefowl	Vulnerable	Dry inland scrub and mallee.	Possible, has been recorded in a 40 km radius as shown by NatureMap
Pezoporus occidentalis Night Parrot	Endangered	Inland plains, breakaways, samphire about salt lakes.	Possible on margins of salt lake.
Polytelis alexandrae Princess Parrot	Vulnerable	Arid shrubland; mulga, Desert oak, spinifex and trees along watercourses.	Possible, although no watercourses present.
Amytornis striatus subsp. *Striatus* Striated Grasswren (inland)	P4	Triodia and mallee.	Possible, has been recorded in a 40km radius as shown by NatureMap
Falco peregrinus Peregrine Falcon	Other Specially Protected Fauna	Most habitats	Likely to occur as foraging visitor
Apus pacificus Fork-tailed Swift	Migratory	Varied habitats, largely aerial proceeds storm fronts.	Possible, may overfly area.
Motacilla cinerea Grey Wagtail	Migratory	High altitudes near fast running water, annual visitor to northern Australia.	Unlikely based on distribution map.
Motacilla flava Yellow Wagtail	Migratory	Salt works, paddocks, marshes, grassy wetlands.	Unlikely based on distribution map.
Actitis hypoleucos Common Sandpiper	Migratory Wetlands	Banks, rocks, sandy beaches.	Possible.
Calidris acuminate Sharp-tailed Sandpiper	Migratory Wetlands	Widespread, coastal and interior wetlands.	Possible.
Calidris melanotos Pectoral Sandpiper	Migratory Wetlands	Grassy or lightly vegetated coastal and inland swamps.	Possible.
Charadrius veredus Oriental Plover	Migratory Wetlands	Dry plains, coastal.	Possible.
Mammals			
Sminthopsis psammophila Sandhill Dunnart	Endangered	Sandy habitats, usually with dunes and Triodia spp.	Possible – recently recorded 132 km west of the Project area
Sminthopsis longicaudata Long-tailed Dunnart	Endangered	Habitat is restricted to rugged, rocky outcrops of the western arid region of Australia.	**Likely – Identified during surveys.**

Species	Conservation Status	Habitat	Likelihood of Occurrence
Dasycercus blythi Brush-tailed Mulgara	P4	Spinifex Triodia spp. Grasslands on sand plains and the swales between low dunes.	**Likely – Identified during surveys.**
Macrotis lagotis Greater Bilby	Vulnerable	Open tussock grassland, mulga woodland/shrubland growing on ridges and rises, and hummock grassland (spinifex) growing on sandplains and dunes, drainage systems, salt lake systems and other alluvial areas.	Unlikely – may be locally extinct.
Notoryctes typhlops Southern Marsupial Mole	P4	Dunes and other sandy areas	**Likely – Identified during surveys.**
Nyctophilus major tor Central Long-eared Bat	P3	Roosts in tree hollows which are present mainly in the gypsum dune, Mulga woodland and sandplain habitats.	May occur in the Project area - though the habitats that these species rely on are relatively widespread in the region.
Reptiles			
Liopholis kintorei Great Desert Skink	Vulnerable	Arid sand flats, clay based loamy soils, vegetated with spinifex.	**Likely – Identified during surveys.**
Anilios margaretae Buff-snouted Blind Snake (Lake Throssell)	P2	Known only from Lake Throssell in arid interior of WA.	Possible, has been recorded in a 40 km radius as shown by NatureMap.

(Western Wildlife, 2021) (Blueprint Environmental Strategies, 2020) (Maia, 2021a) (Maia, 2021b)

Species recorded within the Project area during terrestrial fauna surveys include:

- Great Desert Skink (EPBC Vulnerable)
- Long-tailed Dunnart (Priority 4)
- Southern Marsupial Mole (Priority 4)
- Brush-tailed Mulgara (Priority 4) (Western Wildlife, 2021).

2.4 Hydrology

Surface Water

The proposed exploration area is located on Lake Throssell, which stretches approximately 50 km northeast-southwest and contains numerous microscale to macroscale islands of white gypsiferous dunes rising to 10 m. It is fed by localised drainages, the longest (less than 10 km) of which drains the Scarr Hills to the west of the lake. Numerous isolated mesoscale to macroscale claypans occur in the area.

The Yeo Lake/Lake Throssell system is recognised as a nationally important wetland (ANCA directory) and is classified into two wetland types:

- B2 (Inland wetland) – Seasonal and irregular rivers & streams
- B8 (Inland wetland) – Seasonal/intermittent saline lakes.

Lake Throssell is not designated as a Ramsar wetland.

Groundwater

Lake Throssell is located in the Officer Basin, in a wide shallow Cainozoic depression over undifferentiated Permian-Mesozoic sedimentary rocks. They were formerly part of a major river system (the Throssell Palaeoriver) which flowed south-east to the sea but are now internal draining lake systems.

The extensive linear Cainozoic sediments are characterised by chains of salt lakes containing shallow hypersaline groundwater. In the palaeovalleys, the basal palaeochannel aquifer is incised into Archean bedrock and is typically overlain by dense intervening clay. Both the basal sand and overlying materials within the palaeovalleys are saturated with hypersaline brine.

Lake Throssell is indicated as having high potential to be an aquatic Groundwater Dependent Ecosystem (GDE).

3. Potential Environmental Impacts

Without mitigation, potential impacts resulting from exploration activities may include:

Table 3: Potential Environmental Impacts

Activity	Potential Impacts
Land access	• Unauthorised land access resulting in non-compliance with legislation • Impacts to the environment • Impacts to Aboriginal areas of significance.
Site preparation and ground disturbance	• Unauthorised ground disturbance • Unauthorised clearing of conservation significant flora, and fauna habitat • Clearing outside of approved boundaries • Poor planning for rehabilitation • Damage to significant heritage sites.
Drilling activities	• Erosion • Contaminated soil and water from poor hydrocarbon management • Fauna impacts • Fauna deaths • Localised impacts to vegetation from excessive dust generation • Introduction of weeds - displacing native vegetation • Littering • Water availability attracting feral animals • Increased fire risk • Damage to significant heritage sites.
Decommissioning and closure	• Littering • Fauna death from entrapment in open drill holes • Erosion • Soil contamination.
Rehabilitation	• Failure to meet legislative rehabilitation requirements • Erosion • Poor revegetation success.

4. Exploration Activity Management

4.1 Drill holes off lake

Drill holes planned off the lake surface will require establishment of tracks through the vegetation to ensure safe access and a safe operational environment for the drill rig and crew.

- The majority of drilling programs will involve the use of a small, manoeuvrable truck mounted aircore rig; however, larger mud-rotary or diamond drill rigs may also be required.
- Rigs and support vehicles will stay on cleared tracks or formed causeways.
- Drill pads are preferentially located off tracks.
- Any groundwater encountered during drilling will be contained within sumps.

Figure 1: Example of off-lake drilling

4.2 Drill holes on non-perennial lakes

Should any planned drill holes occur within any non-perennial lake surfaces, the following practices must be implemented:

- Drilling needs to be carried out with specialised low impact drill rigs and similar low impact vehicles (i.e ATV's), to both prevent vehicle bogging and reduce impact on the surface during tramming to and between drill holes.
- Drilling may only be carried out on any "islands" containing remnant vegetation within the lake system once all appropriate statutory approvals have been received. When drilling on these surfaces, impacts on native vegetation need to be kept to as minimal as possible.
- Tramming between drill holes should utilise existing clearings such as playa lake surfaces and connecting tributaries, which will eliminate the need for any clearing work.
- Groundwater encountered during drilling should be contained within the playa lake surface.

Figure 2: Example of low impact vehicles used for on-lake drilling.

Figure 3: Example of groundwater and sample containment on lake surface

4.3 Drill hole locations & access

Drill lines / Access Tracks

Off lake access tracks or drill lines are required to enable drill rig and support vehicle access to proposed work sites. Clearing will initially be carried out using raised blade method and will be designed to avoid larger trees and significant vegetation, where possible. Some tracks may be upgraded to meet safe access requirements, which would involve drop blade clearing, and disturbance to a width of approximately 5 m.

Causeways

Construction of temporary causeways across sections of the lake surface, may be required in order to enable drill rig and support vehicle access.

- Causeways are located on the lake surface in areas where there is no native vegetation, or very minimal/sparse native vegetation.
- Surficial lake sediments will be used in the construction of the causeways and will be sourced from the lake surface immediately adjacent to the causeway. The disturbance for sourcing of this material is considered in the footprint for the causeways as addressed in the PoW applications.
- Causeways will be constructed by an amphibious excavator (or similar) using surficial lake sediments from either side of the proposed causeway.
- Causeways will be approximately ~5 m wide and ~0.5 m high, but may be locally higher to accommodate culverts.
- Surface water flows will be maintained during wetting events by the installation of appropriately sized and designed culverts.
- It is intended that causeways will temporarily remain in place to support future exploration activities, with the intent of minimising additional disturbance. Accordingly, Trigg Mining will notify the Department of extensions to rehabilitation obligations, where required.

4.4 Groundwater Investigation Bores

Groundwater monitoring and investigation bores are proposed to be installed to determine aquifer characteristics, brine production capacity and brackish water supply availability.

Trigg Mining will determine the optimal location for bores based on site characteristics and target aquifer location.

No taking of groundwater for water supply or operational use will be carried out as part of the exploration program. Any abstraction of water will be for bore development, test pumping, groundwater monitoring and investigation only.

Groundwater discharge will be managed to avoid adverse impacts to the environment. This may involve either discharge back down the drill holes, collection in sumps, or discharge to the salt lake surface (away from native vegetation).

All groundwater bore construction and management will be in accordance with approvals granted under the *Rights in Water and Irrigation Act 1914.*

4.5 Drill pad set-up & management

Drill site set-up and layout is specific to each type of drilling and can vary between drilling contractors. All drill sites are to be set up in consultation with the drilling contractor. Trigg Mining is responsible for providing safe and accessible drill sites, whilst all staff involved in the drilling activities are responsible for the following:

- Ensuring that drill sites are kept neat and tidy at all times.
- Ensuring that waste, sample, environmental and groundwater management procedures are followed.
- Ensuring that drill collars are plugged (temporarily while awaiting rehabilitation) and clearly marked following the conclusion of drilling. The hole ID, end of hole depth and coordinates should be written on the wooden peg.
- Ensure that environmental impact at each drill site is kept as minimal as possible.
- When preparing a PoW, ensure there is adequate space allowance on the drill pad for the drill rig, support truck, sump, chip sample area and geologist vehicle.

4.6 Drill Sumps

Sumps may be used to support drilling programs to contain saline groundwater encountered during palaeochannel drilling. For example, there are typically two sumps required per groundwater investigation bore hole, and one sump per aircore hole. The following should be observed:

- Typical drill sumps are approximately 4 m long, 3 m wide and 1 m deep. Refer to the program specific POW for approved sump dimensions.
    - For mud-rotary and diamond drilling programs, sumps are installed using excavating equipment.
    - For aircore programs, smaller sumps are required, which are usually hand cleared.
- When digging the sumps (provided an appropriate machine such as an excavator or backhoe is being used), the top 15 cm of topsoil should be pushed and stockpiled at the back of the sump (as shown in **Figure 4**). The sub-soil should then be excavated and also stockpiled **(Figure 5**).
- An egress ramp needs to be constructed within the sump to allow any animals who accidently fall in to escape (**Figure 6**).

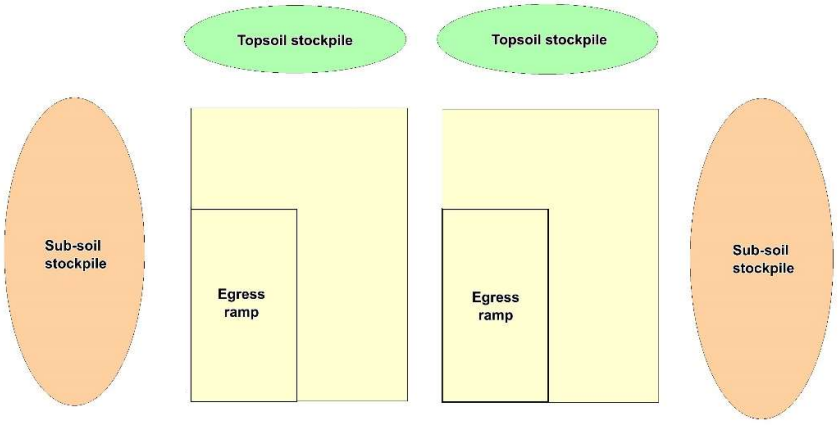

Figure 4: Example layout of sump

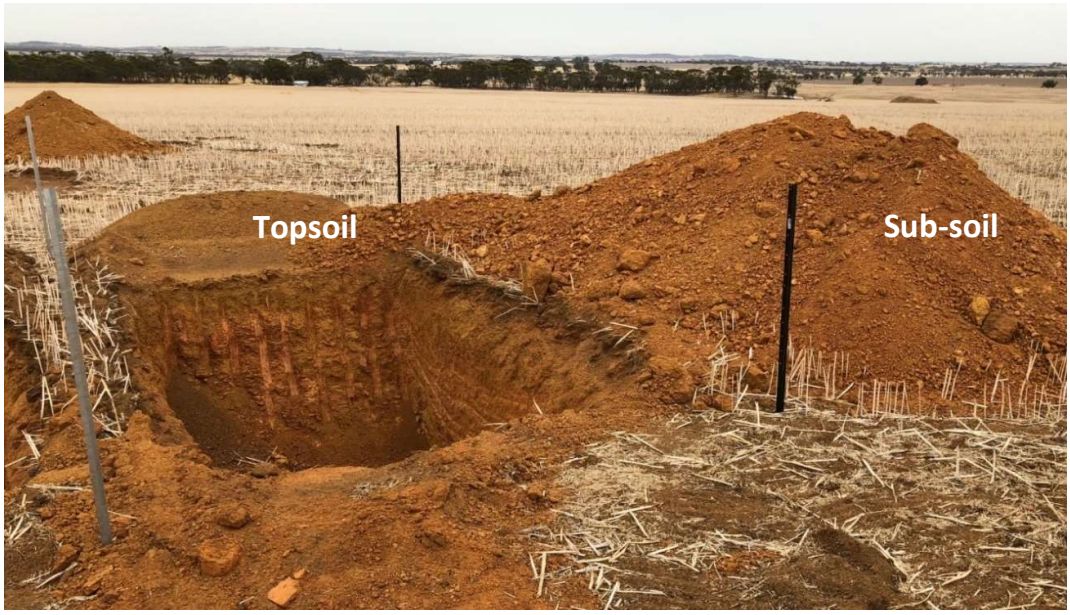

Figure 5: Example of topsoil (back) and sub-soil (side) stockpile layout

Figure 6: Example of egress ramp built on the left-hand side of the sump

4.7 Camps and Laydown Areas

A desktop risk assessment and on-ground inspection will be undertaken prior to ground disturbance and installation of proposed temporary camps and laydown areas. The location of camps and laydown areas will be selected with the following in mind:

- Naturally open areas or pre-disturbed areas
- Minimal impact to native vegetation
- Avoidance of conservation significant flora or fauna
- Avoidance of registered or recognised heritage sites
- Avoidance of areas prone to flooding
- Central to the exploration activities to reduce travel time.

Temporary camps are proposed to remain in place as necessary to support ongoing exploration programs. Therefore, Trigg Mining may request extension of the rehabilitation requirements for the camps. Once the infrastructure is no longer required, all buildings and other facilities will be removed and the disturbance rehabilitated, i.e. soil scarified and stockpiled topsoil and vegetation respread.

A typical layout of a temporary camp is proved in **Figure 7**.

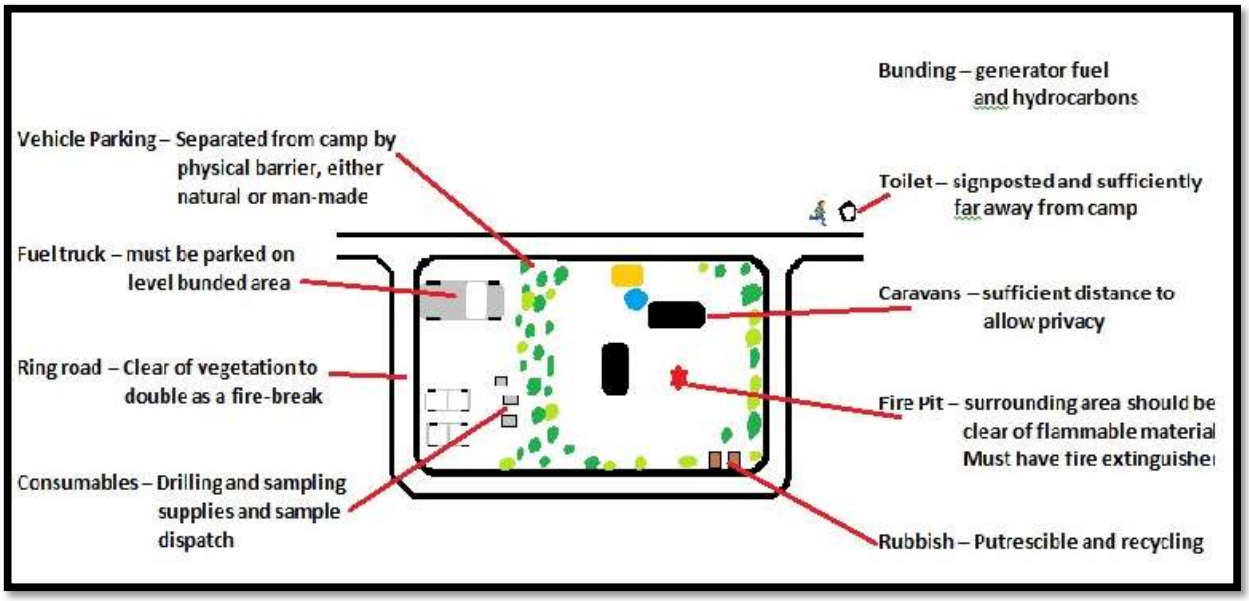

Figure 7: Typical temporary exploration camp layout

The facilities to be installed for the camp may typically include, but not be limited to:

- Mobile caravans
- Mobile building to support a crib room, kitchen and office
- Diesel fuel storage <100,000 Litres and compliant with all relevant dangerous goods codes of practice, for example double sleeved and bunded
- Small diesel generators
- Potable water tank
- Raw water tank.

Initially, toileting facilities are proposed to involve installation of shallow drill holes for use as makeshift drop toilets. A number of drill holes will be installed within the vicinity of the camp and appropriately capped. These holes will then be progressively opened used as required to support the camp.

Once more regular or long-term exploration programs are proposed, more substantial wastewater facilities may be installed. This may involve a wastewater tank and wastewater treatment system approved through the local shire under the *Health Act 1911* (this may be a septic tank with leach drains or an equivalent waste water treatment system). Suitable approval under a PoW and, if necessary, under Part V of the *Environmental Protection Act 1986* will also be obtained prior to installation of these facilities.

Laydown areas may be used for the temporary storge of tools, vehicles or equipment, parking, or similar. Laydown areas may also be used as launch sites for access to the lake surface. As for the camps, laydown areas may remain in place to support ongoing exploration activities. Trigg Mining may, therefore, seek to extend the rehabilitation requirements for these laydown areas.

5. Environmental Management

5.1 Ground Disturbance and Clearing

- All ground disturbance and clearing will be undertaken in accordance with Trigg Mining's Ground Disturbance and Clearing Procedure, as shown in Appendix A
- Trigg Mining will complete and implement the Land Clearing Request Form for all proposed exploration activities (Appendix B)
- All ground disturbance and clearing will be tracked on a Land Clearing Register (example shown in Appendix C).

5.2 Vegetation Management and environmentally sensitive areas

- No native vegetation is to be removed or damaged unless approval has been granted by the relevant statutory authorities and representatives of the relevant native title group. In particular, native vegetation disturbance is only permitted in accordance with a Native Vegetation Clearing Permit
- Vegetation clearing will only be carried out in approved areas, such as access tracks and drill pads, and must stay within designated buffer zones as outlined in approved PoW's.
- Access tracks and drill pads will be planned and constructed in a way that avoids significant vegetation where possible.
- Clearing will be carried out using a raised blade, where possible.
- Drill hole location pegs are not to be moved unless authorised by the Trigg Mining site supervisor.

5.3 Local fauna management

Trigg Mining is committed to protecting local fauna and associated habitats within the Lake Throssell project. All staff and contractors on site are to be mindful of this and avoid interfering with or damaging/harming and local fauna or associated habitats, while observing the following:

- Ground disturbance activities will be undertaken during daylight hours only
- Driving at night-time will be avoided wherever possible, to minimise fauna interactions.
- When constructing access tracks and drill pads in the field, staff are to be mindful of any nests, burrows etc and avoid them where possible.
- Vehicles to remain on designated tracks and drill pads throughout the exploration program.
- Any drilling sumps constructed need to include an egress ramp or slope to allow any trapped animals to escape.

- Staff are not to interfere with any nests or other habitats during field activities.

It has been noted that Malleefowl (*Leipoa ocellate*), may occur within the Project area. Malleefowl create nests comprised of a large mound of soil covering a central core of leaf litter that can span up to 5 m in diameter and 1 m in height (**Figure 9**). Care must be taken by all staff and contractors on site during exploration activities (in particular the construction of access tracks and drill pads) not to disturb or destroy any Malleefowl nests. All staff must observe a 50 m no-go buffer zone around any nests encountered, and not disturb any Malleefowl birds spotted in the field.

If any Malleefowl birds or nesting sites are spotted during exploration activities, the location coordinates should be taken (along with a photo if possible) so that a Department of Parks & Wildlife "Fauna Report Form" can be completed and submitted to DPAW.

Figure 8: Malleefowl bird

Figure 9: A Malleefowl bird and nesting site

5.4 Weed Hygiene and Vehicle Inspections

Vehicle hygiene and biosecurity inspections should be completed on all vehicles involved in field exploration activities as follows:

- A pre-mobilisation inspection will be conducted of all field vehicles (be the company or contractor) prior to arrival to field areas, or prior to moving from one field area to another.

All field vehicles should be checked according to the following guidelines:

- Thoroughly check all tyre treads for evidence of weeds, seeds/burrs and soil. Also check any void spaces in the tyre rims.
- Thoroughly check all mud-flaps for evidence of caked soil/mud and/or vegetation (including grasses, sticks, seeds/burrs etc).
- Thoroughly check the under-carriage of the vehicle for evidence of vegetation (grasses, weeds, seeds/burrs) and caked-on mud/soil.
- Check that the floor mats in all vehicles are free of any foreign weed or seed material.
- Thoroughly check the vehicles for evidence of any oil leaks or other issues that could lead to environmental contamination on site.

If any evidence of potential contaminants (soil/seeds) is found, the affected area must be cleaned down and subsequently re-inspected. Only vehicles that have passed the inspection are permitted to enter field areas.

5.5 Fire Management

When conducting field activities during the fire danger season, all Trigg Mining field crews and contractors will abide by any total fire bans issued by the Department of Fire and Emergency Services (DFES) where applicable, and cease all field work until the movement ban is lifted by DFES. Furthermore, either the Trigg Mining site

supervisor or the drilling supervisor may also suspend drilling activities independent of DFES if they feel field conditions are contributing to an unacceptable fire risk.

Any hot work activities such as welding, grinding or bit sharpening should only be carried out at a location deemed safe by the Trigg Mining site supervisor, with all necessary precautions to be taken (as per the relevant SWI). The Trigg Mining field supervisor should check the DFES website each night for any proposed total fire bans within the relevant shire council area - www.dfes.wa.gov.au.

Fire extinguishers will be available on site during exploration drilling activities.

5.6 Waste management

All personnel will maintain a high standard of housekeeping around the workplace including within vehicles. Suitable storage of rubbish and waste shall be provided while field activities are being conducted, and rubbish and unnecessary equipment is to be removed from site regularly.

Field consumables should be properly secured to prevent being spread around by strong winds (i.e sample bags, packaging etc).

Putrescible waste will be store and secured in appropriate containers to avoid attracting native fauna or pests.

5.7 Hydrocarbons & chemicals

All Trigg Mining staff and contractors must ensure that any hydrocarbons and chemicals used during a drilling program are stored appropriately, with every effort made to avoid any environmental contamination:

- Hydrocarbons (i.e diesel, hydraulic oil, hammer oil etc) should be stored appropriately in a bunded area, especially when being used around the rig.
- Any chemicals shall have appropriate MSDS sheets stored and easily accessible on site. All chemicals are to be stored in an appropriate and responsible manner.
- Spill kits will be available at all exploration drilling locations.
- Any spills (hydrocarbon or otherwise) need to be reported to the site supervisor immediately, with proper remedial action taken. Any contaminated soil should be collected, removed off site, and disposed of at an appropriate disposal facility.

6. Native Title and Aboriginal Heritage

The area of exploration licenses E38/3065, E38/3483, E38/3458 and portions of E38/3544 and E38/3537 are subject to the Ngaanyatjarra Lands Determination, made by the Federal Court of Australia in June 2005 and 2008 (WAD 6004/04). The majority of tenement E38/3544 falls within the Yilka Determination. Portions of E38/3537 to the east of the Great Central Hwy fall within the determination for the Nangaanya Ku (**Figure 10**).

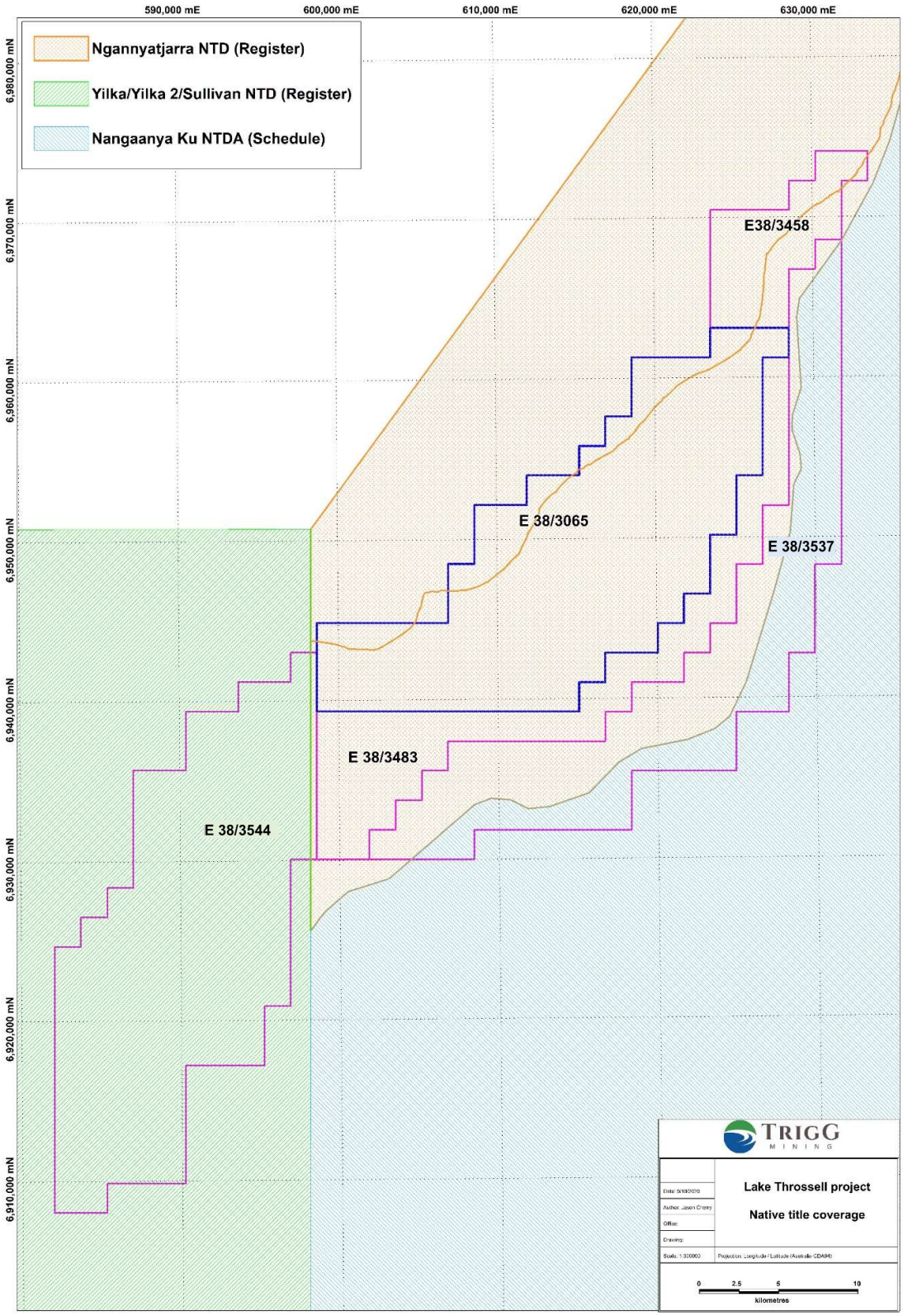

Figure 10: Native Title coverage over the Lake Throssell project

In 2018, Trigg Mining and K2O Minerals negotiated an agreement with the Yarnangu Ngaanyatjarraku Parna (Aboriginal Corporation) in its capacity as the registered native title body corporate in respect of the land the subject of the Ngaanyatjarra Lands Determination, to facilitate the grant exploration tenements and to govern the carrying out of exploration activities on the tenement.

Lake Throssell (and the surrounding area) is an important and significant place to the Ngaanyatjarra people and forms part of a Bilby dreaming story that covers a large area within the Gibson Desert. Trigg Mining acknowledges and respects the traditional land owners of the Lake Throssell project and is committed to acting with integrity and transparency on all matters relating to Aboriginal cultural heritage and lands. Prior to any ground disturbing exploration activities taking place, Trigg Mining will work closely with the Ngaanyatjarra people to ensure that no proposed access tracks or drill sites will interfere with any known sites of significance.

Trigg Mining executed an agreement with the Nangaanya-Ku Traditional Owners in October 2021 which covers portions of tenement E38/3537 within the Lake Throssell Project area. This determination area falls to the east of the Great Central Road, where minimal exploration for the Lake Throssell Project is proposed.

Trigg Mining has executed an agreement with the Yilka Traditional Owners to support exploration activities with its determination areas. The majority of tenement E38/3544 for the Lake Throssell Project falls within this determination area.

In Western Australia, the *Aboriginal Heritage Act* (1972) protects all aboriginal sites. It is against the law for any exploration staff or contractors to disturb a site or move/remove any artefacts. To manage potential risks of disturbance to Aboriginal heritage sites, the following will be implemented:

- Prior to commencement of exploration activities, a desktop assessment of potential heritage sites will be conducted, and activities planned so as to avoid identified sites.
- Trigg Mining will consult with Traditional Owners regarding its activities.
- Prior to the commencement of ground disturbance activity, Aboriginal heritage surveys, under the *Aboriginal Heritage Act 1972,* will be conducted.
- If during the course of exploration activities any staff or contractors discover potential aboriginal artefacts:
    - The site is not to be disturbed, and any exploration activities in the vicinity should be halted.
    - The site coordinates are to be recorded, along with photographs of the potential artefacts, so the information can be provided to the Ngaanyatjarra people by the Trigg site supervisor.

7. Photo monitoring

Photo Monitoring Points (PMP's) are used to document the quality of rehabilitation efforts and overall environmental impact on the drilling site. These photos are then used when submitting exploration rehabilitation reports to the statutory authorities.

A representative number of drill sites should be chosen for PMP's, which will be dependent on the size and scope of the drilling program (for large programs spread across multiple areas, a representative number of sites will be selected from each area worked in).

The photos must include the drill hole ID number and a significant landmark (if possible) for comparison purposes.

Photos will be taken:

- before earthworks/drilling
- after completion of earthworks/drilling
- on completion of rehabilitation.

8. Rehabilitation

The type and timing of rehabilitation work is largely program specific. Trigg Mining aims to have as minimal environmental impact as possible, with drill site rehabilitation playing a large part in this. As a general rule, once a drill hole has been completed:

- All rubbish and waste materials should be collected and removed from the drill site.
- All equipment no longer being used should be removed from the drill site.
- The site should be checked for any unreported spills or leaks. If any are identified, the contaminated soil should be cleaned up and disposed of at a landfill.
- The drill collar should be temporarily plugged.
- Any sample bags remaining at the drill site should be secured so that no loose items can blow away.
- Check to ensure that high visibility flagging is in place and secure around any sumps filled with drilling mud.

When rehabilitating diamond drilling sites:

- The sumps should preferably be completely dry before rehabilitation.
- The sub-soil stockpiled on the side of the sumps should be pushed in first. If possible (depending on the machine being used) progressively compact the sub-soil several times as it is being backfilled.
- Once all the sub-soil has been backfilled, drag the stockpiled topsoil across the rehabilitated sump.
- Use the collar cutter to cut the PVC collar below the surface (minimum of 500 mm depth) and remove the cut portion of casing so the hole can be plugged or capped.

For aircore and RC holes, once the relevant sampling has been completed:

- The aircore chip sample piles and any cyclone spoil piles should be scraped into the drilling sump for burial.
- If there is a PVC collar in the ground, use the collar cutter to cut the PVC below the surface (minimum of 500 mm depth) and remove the cut portion of casing so the hole can be plugged.
- The hole should be plugged a minimum of 500 mm below the surface (1 m is preferred) with either a concrete plug or Octoplug. The remaining hole should then be backfilled and topsoil re-spread.
- The wooden peg should be removed from the site, along with any other remaining items.
- Any vegetation that was cleared to the sides of the drill pad should be dragged back across the pad and re-spread to promote re-seeding.

Tracks and causeways once established, provide access for exploration activities. Where possible, it is intended that future activities will continue to utilise these established tracks and causeways, with the intent of minimising additional disturbance. Future activities are however results dependent. Accordingly, Trigg Mining will notify the department of any extensions required, or complete rehabilitation.
When rehabilitation is required:

- Tracks will be scarified, making sure to break up compacted soils. Stockpiled topsoil and any cleared vegetation will be dragged back across the tracks to encourage revegetation and tracks will be closed off (where possible) to discourage further access.

- Causeway rehabilitation will involve the causeway being dug up and the materials (originally surficial lake sediments) being side-cast and/or re-spread back onto the lake surface. Any culverts will be removed and transported off site.

Figure 11: Example of aircore sample piles on the drill pad surface (off lake drilling)

Figure 12: Example of aircore sample piles on the drill pad surface (on-lake drilling)

9. References

Blueprint Environmental Strategies. (2020). *Desktop Flora and Fauna Assessment - Lake Throssell.* Perth: Unpublished report for Trigg Mining Limited.

Maia. (2021a). *Trigg Mining Limited: Lake Throssell Project Area, Flora and Vegetation Reconnaissance Survey, February 2021.* Perth: Unpublished report for Trigg Mining Limited.

Maia. (2021b). *Trigg Mining Limited: Lake Throssell Project Area - Exploration Tracks Targeted Flora and Vegetation Survey, October 2021.* Perth: Unpublished report for Trigg Mining Limited.

Western Wildlife. (2021). *Lake Throssell Potash Project: Detailed Vertebrate Fauna Survey 2021 - Draft Interim Report.* Perth: Unpublished report for Trigg Mining.

Appendices

Appendix A – Ground Disturbance and Clearing Procedure

1. Purpose

This procedure outlines the process to be implemented to manage ground disturbance and clearing associated with Trigg Mining's (TGM) exploration projects.

The key objective of the procedure are:

- Avoid disturbance and clearing outside approved areas
- Minimise adverse impacts to the environment to as low as reasonably practicable
- Maintain integrity and seed viability in stripped topsoil and cleared vegetation for use in rehabilitation.

2. Scope

The procedure apply to all site disturbance and clearing activities that TGM have control and influence over.

3. Definitions

ALARP	As Low as Reasonably Practicable
Clearing	Clearing is defined under the *Environmental Protection Act 1986* as: a) the killing or destruction of; or b) the removal of; or c) the severing or ringbarking of trunks or stems of; or d) the doing of any other substantial damage to, some or all of the native vegetation in an area, and includes the draining or flooding of land, the burning of vegetation, the grazing of stock, or any other act or activity, that causes — the killing or destruction of; or the severing of trunks or stems of; or any other substantial damage to, some or all of the native vegetation in an area.
Disturbance	Any disturbance to the ground surface, including: • areas of native vegetation (clearing), and • areas where there is no vegetation present (not clearing) - such as previously cleared areas or naturally un-vegetated ground, for example salt lakes.
EHS	Environment, Health and Safety

5. Accountabilities

Director	• Ensuring sufficient resources are available to support implementation of the procedure • Ensuring an ongoing process for review of the procedure
Exploration Manager	• Ensures compliance with this procedure • Ensures compliance with approval and legislative requirements related to ground disturbance and clearing • Communicates the requirements of this procedure to field workers and contractors • Manages disturbance and clearing activities on site
Environment Manager	• Obtains required approvals to support ground disturbance and clearing activities • Provides advice to the Exploration Manager on applicable approvals and environmental obligations related to ground disturbance and clearing • Prepares and submits required environmental reports in accordance with legislative requirements
Field Workers and Contractors	• Operates in accordance with this procedure

6. Procedure

No.	Description	Responsibility
1	Identify area of land requiring disturbance. Produce a map that clearly shows the location and size of the area to be disturbed, and the location of any features which are to be avoided (e.g. heritage sites, conservation significant flora)	Exploration Manager
2	Verify that all the necessary approvals exist for the proposed clearing (PoW and/or NVCP).	Exploration Manager
3	Access tracks and drill pads will be planned and constructed in a way that avoids significant vegetation where possible, and clearing will be carried out using a raised blade.	Exploration Manager
4	Check that the area is within the boundaries approved by DMIRS for disturbance/clearing using spatial information and on-ground observations.	Exploration Manager
5	Inspect any earthworks equipment that has arrived at site or may have been used in an area where weed species are recorded. Ensure the underside of the machinery and implements are free of weed seeds, pieces of vegetation and caked mud or earth. Any machinery that is not free of weed seeds, vegetation or caked earth must not be allowed to operate until it is thoroughly cleaned.	Exploration Manager
6	Hold a pre-start meeting with the exploration personnel to ensure they are advised of the following: ▪ The exact requirements of the earthworks (e.g. where the clearing pegs are located); ▪ Any clearing conditions specified in the permit;	Exploration Manager

	▪ The location where vegetation and topsoil are to be stockpiled or re-spread (if stated); and ▪ The location of any environmental or rehabilitated areas that are to be avoided.	
7	When constructing access tracks and drill pads in the field, staff are to be mindful of and not interfere with any nests, burrows, or other fauna habitats during clearing activities and to avoid them where possible.	Earthworks Operator& Exploration Manager
8	On drill pads, once vegetation has been removed, commence the removal of topsoil to the depth specified by the Exploration Manager and in accordance with the POW/NVCP. Push the topsoil to the area where it is to be stored. If the topsoil is to be stockpiled elsewhere, push the topsoil into an area where it can be easily loaded and removed.	Exploration Manager
9	Ensure the topsoil stockpile is less than two meters high and is not located in an area where it can be inundated by water, driven over or disturbed.	Exploration Manager
10	During earthworks, regularly inspect the activities and ensure the conditions of this procedure and associated approval documents are complied with.	Exploration Manager
11	Should any non-compliance with the permit conditions or this procedure, or the potential disturbance of an environmental or rehabilitated area be noticed or suspected, immediately stop the earthworks until the issues are solved.	Earthworks Operator& Exploration Manager
12	Undertake a post-clearing inspection, recording the final area of disturbance, location of the vegetation and topsoil stockpiles, volume and date.	Exploration Manager
13	Ensure all clearing is reported in the annual environmental report submission	Environment Manager

Appendix B – Land Clearing Request Form

TRIGG MINING	Lake Throssell – Land Clearing Request Form	Request Form # Land Clearing Form.docx Revision No: 1- Issue Date: February 2022

Under no circumstances shall any clearing of vegetation take place without consent from Regulatory Authorities and without approval by this fully completed and signed Land Clearing Request Form (LCRF).

This form is to be completed by the applicant and forwarded to the Environmental Supervisor at least 7 working days prior to any proposed land clearing.

ONLY WORK SPECIFIED ON THIS PERMIT IS APPROVED TO BE PERFORMED. Permit No: _____

Step 1: Proposed Activities (Applicant)

Applicant Name:		**Application Date:**	
Work Group:		**Tenement:**	
Site:		**Proposed Area (ha)**	
Location (GPS):			
Clearing Plan attached	A detailed plan showing coordinates and boundary of proposed clearing, boundaries of clearing approved by DMIRS, locations of any areas of significance to be avoided (conservation significant species, drainage lines, heritage) and locations of vegetation and topsoil stockpiles **must be attached.**		☐ **Yes**
Proposed Commencement Date:		**Proposed Completion Date:**	
Description of Proposed Ground Disturbance			

Step 2: Site Assessment (Compliance Manager / Environmental Supervisor)

				Yes	No	NA
1	DMIRS has granted approval for (circle one) Access Track / Exploration Area	**Approval Type**	**Approval ID #**			
		PoW		☐	☐	☐
		Clearing Permit		☐	☐	☐
2	Total Area Approved for Activity Type in PoW (ha)					
3	Area previously cleared or approved for Activity Type in PoW (ha)					
4	Area available for Activity Type (Area in Check 2 – Area in Check 3)					
5	Is sufficient area available to be cleared for the Activity Type in the POW/?			☐	☐	☐
6	Total Area Approved under Native Vegetation Clearing Permit					
7	Area previously cleared in Native Vegetation Clearing Permit					
8	Area available for clearing under Native Vegetation Clearing Permit (Area in Check 6 – Area in Check 7)					
9	Is sufficient area available to be cleared under the Native Vegetation Clearing Permit?			☐	☐	☐
10	Have drainage lines been identified with clearly marked buffer zones?			☐	☐	☐
11	Have requirements for stormwater management been included in Step 4 – Conditions?			☐	☐	☐
12	Has a physical area inspection been undertaken? (Attach photos)			☐	☐	☐
13	Have the Land Clearing Register and spatial data layers been reviewed and updated?			☐	☐	☐
14	Confirm that the area is outside all known heritage areas.			☐	☐	☐

Step 3: Acknowledgement and Acceptance

Standard Conditions	All vehicles and plant equipment must be properly maintained to avoid spills and minimise air and noise pollution.
	Prior to works commencing all vehicles must be quarantine inspected to ensure they are clean of soil, weeds and seeds.
	Signage must be erected to prevent public accessing the area.
	A pre-start meeting must be held immediately prior to the clearing works being conducted to ensure that all permit conditions have been met.
	Vegetation and topsoil (to a depth of at least 0.3m) must be removed and placed in designated stockpiles.

	Topsoil stockpiles must be located within the permitted area, no higher than 2m and are clearly signed.	
	Clearing must be supervised by a suitably qualified experienced person.	
Additional Conditions and Comments	**(Example: drainage, vehicle access, erosion control)**	
Acknowledgment	A map referenced with the corresponding permit number has been attached to this LCRF.	☐ **Yes**
	The proposed area is clearly marked by a surveyor with survey pegs and flagging tape.	☐ **Yes**
	A copy of the POW/NVCP has been provided to the site supervisor and person conducting the disturbance.	☐ **Yes**
	All conditions imposed under this permit are understood by all parties.	☐ **Yes**

I understand and accept all conditions stated in this approval and any associated permits and procedures. I will ensure that all conditions are strictly adhered to by myself and colleagues. The person/s carrying out this work will retain an approved copy of this permit in the work area and in all machinery at all times. Handover of this LCRF will be undertaken at shift each change.

Managing Director	**LCRF Conditions Accepted?**	☐ **Yes**	☐ **No (Permit Retracted)**
	(name):	***Date:***	***Signature:***
Compliance Manager	**LCRF Conditions Accepted?**	☐ **Yes**	☐ **No (Permit Retracted)**
	(name):	***Date:***	***Signature:***
Operator / Person Conducting Disturbance	**LCRF Conditions Accepted?**	☐ **Yes**	☐ **No (Permit Retracted)**
	(name):	***Date:***	***Signature:***

Step 4: Post Disturbance Confirmation (Compliance Manager)		
Date activity was completed		
Date the final disturbance area was surveyed		
Name of surveyor		
A post clearing inspection has been conducted.	☐ **Yes**	
Actual Clearing Area for Activity Type (e.g. Transport and service infrastructure, mining void).	**Activity Type**	**Area (ha)**
The Land Clearance Register has been updated?	☐ **Yes**	
Additional Comments		
The Compliance Manager must retain copies of the signed clearing permit, the survey pick-up of the final cleared area, photos and the updated land clearing register.		

Appendix C – Land Clearing Register Example

Approved POWs

POW	Mine Activity Type	Approved Area	Disturbance Total	Rehabilitation Total	Approved Area Remaining
POW 85863	Tracks	0	3.4068	0	-3.4068
	Drill Pads	0	0.3383	0	-0.3383
POW 85888	Tracks	12.38	2.2723	0	10.1077
	Drill Pads	0.74	0.1112	0	0.6288

CPS

Date		Approved Clearing	Total Clearing	Clearing Remaining
8988/1 -		9.76	6.1286	3.6314

Instructions

Pre-filled data do not edit
Manually enter data
Choose from drop down menu
Auto-updating cells

Disturbance/Clearing Register

POW	Mine Activity Type	Date	Disturbance/Clearing	Rehabilitation	Comments
POW 85888	Tracks		2.2723	0	
POW 85888	Drill Pads		0.1112	0	
POW 85863	Tracks		3.4068	0	
POW 85863	Drill Pads		0.3383	0	