Mining Management Exploration Activities

Northern Territory of Australia – *Mining Management Act 2001*

It is recommended that the Mining Management Plan (MMP) is completed in conjunction with the user guide available on the Northern Territory Government website.

Section 1 – Project Details

Project Name Provide new or existing project name	Warrego Gold and Copper Exploration Project

Authorisation Number Insert existing authorisation number, where applicable	

Operator Name Use ASIC-ABR registered name (if a company), or name of the applicant	Tennant Consolidated Mining Group Pty Ltd
Operator ABN and ACN numbers	ABN 72 645 263 547

Location and Access Details Include brief description of the location, access details, and distance to nearest town or community	The project site is located approximately 44 km northwest of the Tennant Creek township, and approximately 39 km west of the Stuart Highway. On the Short Range (5659) 1:100,000 map sheet centred on GDA94 Z53 coordinates 376100E 7849200N. Access to the project site from Tennant Creek is approximately 3 km north of the town along the Stuart Highway, left on to Warrego Road for approximately 48 km, arriving at the private access Warrego gate. A key is required for access to the site.

Target Commodity Details Include target mineral commodities (i.e. gold, copper etc.)	Gold and copper

Mining Activities Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation. Drilling programs over a maximum of four years are supported and encouraged and can be staged. Please refer to the guidelines for further information.	TCMG proposes to undertake exploration activities to explore the remaining gold and copper reserves associated with the historic Warrego mine. This will inform feasibility studies into recommencement of mining. In the 2023 drill program TCMG proposes to begin exploration activities with 25 drill holes adjacent to and southeast of the historic Warrego mine pit. This includes drilling of 12 Reverse Circulation (RC) holes and 13 Diamond Drill Holes (DDH) for a total drill depth of 7,740 m. Further details are included in Appendix B of this MMP.

Proposed Schedule Include start and finish dates of ground disturbing work	The anticipated start date for activities is August 2023, with an anticipated end date of December 2023.

Mining Interest and Land Ownership

List the mining interests (titles), the title holder name/s, the title expiry date and the Property name/Land holder (e.g. pastoralist or Aboriginal land trust) for each title.

Title Number	Title Holder	Expiry Date	Underlying Property Name or Land Holder
ML30888	Tennant Consolidated Mining Group Pty Ltd	09/07/2025	Phillip Creek Station (NT Portion 000 – Parcel 408)

Delete or add rows as required

Please note a Land Access Agreement (LAA) is required for disturbance proposed on Pastoral Properties on Exploration Licence (EL).

……..

There is an existing Land Access Agreement between Emmerson Resources Limited and owners of the Phillip Creek Station, dated 4 March 2022. Meetings have been held with the owners of the Phillip Creek Station, with an in-principle agreement to operate pursuant to the existing Land Access Agreement. This will be formalised during the term of this MMP.

Native Title also exists over the entirety of ML30888: determination DCD2017/005 - Phillip Creek Pastoral Lease. The registered Native Title body corporate is the Warlmanpa Warumungu Aboriginal Corporation. An existing Indigenous Land Use Agreement (ILUA) is in place between the CLC and Giants Reef Exploration Pty Ltd. TCMG currently acts as an operator under this ILUA. The existing ILUA rights and obligations in relation to the Warrego ML will be formally novated to TCMG via deed of assignment during the term of this MMP.

Organisational Structure

Position Title	Name
Managing Director	Peter Main
Geology Manager	Steve Rose
Senior Geologist	Matt Golovanoff
Chief Operating Officer	Steve Murdoch
Project Manager	Andrew Harrington
Commercial Manager	AJ Larkin
Groundwater Manager & Principal Hydrogeologist	Ashish Mishra
Territory Manager	Michael Tennant
Environment & Sustainability Manager	Yemaya Smythe McGuinness
Chief Financial Officer	Jamie Morton

Delete or add rows for various position titles as required

Section 2 – Operator Self-Assessment of the Environmental Risk

The purpose of this self-assessment is to ensure Operators complete a project risk assessment of potential environmental impacts and are aware of other legislative obligations from various Agencies. As a result of this self-assessment, further information may be required in the form of a management plan to enable full assessment of the MMP. If you have any queries please contact a Mining Officer prior to submitting the MMP. Useful resources to assist with this self-assessment are provided in the User Guide.

Environmental considerations

ASSESSMENT ASPECT	YES or NO	ACTIONS REQUIRED (if answered YES)	APPENDED INFORMATION (e.g. evidence of consultation with DEPWS and/or management plan where required).
Step 1: Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area?	NO	The Operator must assess the likelihood of threatened species or their habitats occurring at or near the site. If the likelihood is high, then a "Significant Impact Assessment" must be undertaken and appended to this document. …….. The likelihood of threatened species or habitats occurring within the project site is considered low. Especially considering the disturbance history of the site.	e.g. - Consulted EPBC Protected Matters Search Tool and appended it to this document. - Consulted EPBC Protected Matters Search Tool and previous Biodiversity Management Plan, which is still current/related to the proposed work, appended to this document. …….. Refer to Warrego Gold Ore Treatment Plant MMP – Authorisation #1073-01 for further details of environmental assessments made.

ASSESSMENT ASPECT	YES or NO	ACTIONS REQUIRED (if answered YES)	APPENDED INFORMATION (e.g. evidence of consultation with DEPWS and/or management plan where required).
Step 2: Are there any known declared weeds within the proposed work area?	YES	Seek advice from DEPWS – Weed Management Branch to determine if weeds are present on site and ensure management measures are appropriate for the level of activity proposed and attach a Weed Management Plan (if required). …….. There are known noxious weeds within the project area. A Weed Management Plan for the Warrego project area has been prepared, and was approved by DITT to meet statutory requirements. This is included as Appendix A of this document. Implementation of this plan is currently underway.	Refer to Warrego Gold Ore Treatment Plant MMP – Authorisation #1073-01 for further details.
Step 3: Will you be using water from bores or other sources for the operation?	NO	Water related matters on mineral titles are no longer exempt from the *Water Act 1992.* Please consult with DEPWS Water Resources and/or familiarise yourself with the *Water Act* to ensure compliance under this Act when undertaking exploration activities.	No dewatering or water extraction is proposed within the scope of works for this MMP. A licence or permit under the *Water Act 1992* is not required.

Environmental assessment and cultural considerations

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
Step 4: Is your project likely to have a significant impact on the environment?	NO	Refer to the NTEPA Environmental Factors and Objectives Guideline. …….. Given the history of mining disturbance at the site, and the small amount of disturbance associated with the proposed exploration activities, the scope of works proposed in this MMP is not expected to have a significant impact on the environment.

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
Step 5: Are there Aboriginal sacred sites in the Project area?	NO	Sacred Sites are protected under the NT *Aboriginal Sacred Sites Act 1989* and administered by the Aboriginal Areas Protection Authority (AAPA). It is recommended that advice be sought from AAPA in relation to sacred site protection. …….. There are no recorded or registered sacred sites, exclusion zones or restricted work areas within the project site as defined by the ML30888 boundaries. An AAPA certificate (C2003/081) that covers ML30888 was obtained by Giants Reef in 2003. TCMG obtained an abstract of records from AAPA in March 2023 to understand any registered or recorded sacred sites, and any exclusion zones and / or restricted works areas previously identified within its project areas. None were identified in ML30888. It is known that there are culturally significant trees (5659-020 to 5659-022) along the Wiso Road to the west of the project site. No access to site is planned along this section of road. The nearest culturally significant tree is 1.7 km away from the border of ML30888, and further from the proposed works. These trees will not be impacted by the proposed works. TCMG will apply for an AAPA Certificate for the scope of the proposed works contained in this MMP prior to undertaking these activities. Any identified sacred sites or heritage values will be managed according to all instructions given within certificates, and to avoid any damage or disturbance.

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
Step 6: Are there archaeological and heritage sites in the Project area?	NO	Heritage and archaeology sites are protected in the NT. NT Department of Territory Families, Housing and Communities (DTFHC) administers the *Heritage Act 2011.* Seek advice in relation to protection of heritage and archaeological sites. …….. There are no recorded heritage or archaeological sites, places or objects within the project site. A search of the Northern Territory Heritage Register was undertaken by the Heritage Branch of Territory Families, Housing and Communities for the Warrego mine site (ML30888). With advice provided to TCMG on 29 March 2023, including a search of the Heritage Branch archaeological database for known archaeological places located both within the subject site and adjacent to; and an assessment of the likelihood of unrecorded archaeological places within the subject site. The search found there are no known archaeological places and no declared heritage places or objects within the subject site. The likelihood of unrecorded archaeological places existing was assessed as *unlikely.*

Section 3 – Amendments

As per Section 41(3) of the *Mining Management Act*, an MMP reviewed and amended under Section 41(1)(a) is to have amendments made since the previous MMP submission clearly identified.

Section	Amendment
N/A	This is the first MMP for this scope of works.

Delete or add rows as required

Section 4 – Activities Proposed for this MMP only

Provide relevant EL numbers

Mining Interests (i.e. titles)	**ML30888**
Number and type of proposed exploration drill holes	Total 25 drill holes (12 Reverse Circulation & 13 Diamond Drill Holes)
Maximum depth of proposed holes (m)	Total estimated drill depth of 7,740 m. Maximum depth of 673 m for any one hole.
Number and size of drill pads to be cleared (Length: m x Width: m)	25 drill pads, each 20 m x 20 m.
Total area of drill pads to be cleared (ha)	Total area of 1 ha.
Number of proposed water bores	None
Is drilling likely to encounter groundwater in multiple or confined aquifers? (Y, N, unsure) If answering yes, please provide the number of exploration holes where this is likely to occur	It is anticipated a single, unconfined shallow aquifer will be encountered by all drill holes. Sumps will be constructed to the side of the drill pads to catch any groundwater runoff produced by the drilling.
Number of costeans	None
Volume to backfill costeans (Length: m x Width: m x Depth: m)	N/A
Number of bulk sample pits	N/A
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	N/A
Bulk sample pits approved under *Mineral Titles Act*? (Y or N). If Yes provide approval	N/A
Line/track clearing: (length m x width m)	None

Mining Interests (i.e. titles)	ML30888
Area of proposed line/track clearing (ha)	N/A
Camp area to be cleared (ha)	None
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation	The diamond drillers will camp on the tenement for the duration of the drilling program. A self-contained caravan and portable ablutions facility will be mobilised to site. This will be within the footprint of existing infrastructure on site. All waste will be collected and removed from the tenement at the conclusion of the drill program.
Other	Sumps will be constructed to the side of the drill pads to catch any groundwater runoff produced by the drilling – and in the case of diamond drilling, to mix drilling fluids and retain cuttings from the returned drilling fluids. Sumps will be lined. These will be constructed within the disturbance area of the drill pads.
Total proposed area of disturbance (ha)	1 ha

Staging approach based on disturbance can be proposed and will be considered by the Department.

Section 5 – Previous Disturbance (for existing Authorisations only)

The 'Disturbance Tracking' spreadsheet must be completed and attached to the MMP submission to complete this section. The spreadsheet is available on the departmental web page where this template is located.

……..

N/A. This is the first MMP for this scope of works.

Section 6 – Environmental Management

By checking these shaded boxes, you are agreeing to implement the following minimum environmental management standards on the project area. Where boxes have been left unchecked, justification is required.

6.1	Y	Blade-up approach for clearing will be used (i.e. no windrows, leave root stock and topsoil)
6.2	Y	Significant vegetation will be avoided during clearing (i.e. large trees, specimens providing habitat or food sources, riparian vegetation, and threatened species)
6.3	Y	Vegetation clearing during, and immediately after rainfall events, will be avoided
6.4	Y	Vegetation clearing will be kept to the minimum required to safely traverse vehicles and drill rigs along tracks and drill pads
6.5	N/A	Where blade-up techniques cannot be employed, topsoil and vegetation will be stockpiled appropriately for rehabilitation purposes
6.6	Y	All employees and contractors will be trained and inducted in relation to the management of environmental risks in the work area, including weeds, waterways, threatened species, soil erosion, sacred sites and heritage areas
6.7	Y	Sumps will be lined or tanks of appropriate size to contain water, sediment and drilling fluids encountered during drilling, will be used
6.8	Y	Sumps, drill holes, and fuel stores will be located away from environmentally significant areas and water courses
6.9	Y	Excavations (sumps, costeans and pits) will be appropriately ramped to allow fauna egress
6.10	Y	Drill holes will be securely capped immediately after drilling
6.11	Y	Vehicle hygiene measures will be employed to prevent the introduction and spread of invasive species and pathogens when mobilising vehicles and equipment from one location to another
6.12	Y	Hydrocarbon spills will be minimised using liners and drip trays under machinery, and appropriately sized spill-kits available in the event of a spill
6.13	Y	Hazardous substances (including hydrocarbons) will be stored and handled in accordance with relevant Australian Standards
6.14	Y	**Hydrocarbons will be stored in lined and bunded areas**
6.15	Y	**Waste will be stored securely while on-site to minimise windblown rubbish and access by feral animals**
6.16	Y	**Waste will be removed off-site and disposed of at an appropriate waste management facility**
6.17	Y	**All environmental incidents will be reported to the Department in accordance with Section 29 of the *Mining Management Act.***
6.18	Y	**Acid and Metalliferous Drainage (AMD) and Potentially Acid Forming (PAF) material derived from drilling cuts will be managed to avoid AMD and PAF related issues on site.**

6.19	N/A	**Radioactive/NORM drill cuttings will be managed to avoid radiation related issues on site.**
6.20	Y	**Dust management will be implemented on site.**

Justification and alternative management measures:

Section 7 – Rehabilitation and Closure

By checking these shaded boxes, you are agreeing to implement the following minimum rehabilitation standards on the project area. Where boxes have been left unchecked, justification is required.

A refund of security related to completed rehabilitation on site requires the submission of a rehabilitation report including photographs, an updated security calculation and updated disturbance tracking spreadsheet to the Department.

7.1	Y	Drill holes will be plugged below ground level at a minimum depth of 0.4 metres and soil mounded to prevent subsidence, within 6 months of completion of drilling.
7.2	Y	Drill holes encountering multiple or confined aquifers will be grouted with concrete.
7.3	Y	Drill samples/spoil will be returned down drill holes, buried in sumps, or removed from site.
7.4	Y	All drill hole and access markers including flagging tape, wooden markers and star pickets will be removed from site.
7.5	Y	Cut and fill drill pads will be re-contoured to be consistent with the surrounding terrain.
7.6	N/A	Drill pads and compacted areas along the contour (on sloping ground) will be ripped/scarified of and tracks will be cross-ripped (zig-zag).
7.7	N/A	Tracks will be rehabilitated, including pushing in all windrows, unless otherwise agreed in writing by the land holder or appropriate third party.
7.8	Y	Appropriate erosion and sediment controls will be installed where erosion is evident or likely to occur.
7.10	N/A	Access through watercourses will be removed and banks restored.
7.11	Y	All previously disturbed areas will be stable, with no evidence of active soil erosion.
7.12	Y	All excavations will be backfilled within 6 months of their completion.
7.13	N/A	All water bores will be decommissioned unless otherwise agreed in writing by the land holder or appropriate third party.
7.14	Y	All rubbish and infrastructure will be removed from site.
7.15	N/A	Topsoil will be replaced and vegetation re-established.
7.16	Y	Contaminated soils (e.g. hydrocarbon or hazardous chemicals) will be rehabilitated or removed from site.
7.17	Y	Monitoring will be undertaken following the wet season or a significant rainfall event.

Justification and alternative management measures:

Given the disturbance history of the proposed drill areas, rehabilitation of tracks, replacement of topsoil and revegetation is not thought to be required – as no new areas of disturbance will occur, no new tracks will be made, and no topsoil will be removed or stockpiled.

No watercourses will be encountered, and no water bores will be constructed within the scope of these works.

Section 8 – Required Attachments

8.1	N/A	Initial Application for Authorisation or variation of Authorisation (only if details on the form have subsequently changed).
8.2	N/A	Nomination of Operator Form, where required
8.3	Y	Security Calculation Spreadsheet
8.4	N	Evidence of Land Access Agreement if operating on an Exploration Licence (EL) on Pastoral Lease (e.g. two-ways exchange of email) …….. The existing Land Access Agreement is a confidential document.
8.5	N/A	Disturbance tracking spreadsheet (for existing Authorisations)
8.6	Y	Spreadsheet with coordinates of proposed drill holes or polygons of target areas …….. Details of proposed drill holes are included in Appendix B of this MMP.
8.7	N	KML/shape files/track logs of proposed tracks, camp sites and proposed drill holes or polygons of target areas …….. Coordinates of the proposed drill holes are included in Appendix B of this MMP. No new disturbance related to tracks or camp sites are expected.
8.8	Y	Map(s) of the work area(s) showing: 1. title boundaries and title numbers 2. current and proposed drill holes, or polygons of target areas 3. current and proposed tracks 4. rehabilitated areas 5. camp sites 6. heritage sites or significant environmental areas 7. environmental constraints …….. A map showing the relevant features is included in Appendix B of this MMP.
8.10	N/A	Radiation Management Plan (if applicable)
8.12	Y	Document(s) being appended in relation to Section 2 (if any): - A Weed Management Plan for the project area is included in Appendix A.

Appendix A. Warrego Weed Management Plan

Weed Management Plan

Warrego Project

Tennant Consolidated Mining Group

www.ecoz.com.au

DOCUMENT CONTROL RECORD

Job	EZ21152
Document ID	206713-34
Author	Jose F. C. Wenceslau

DOCUMENT HISTORY

Rev	Reviewed by	Approved by	Issued to	Date
1	Ray Hall	Ray Hall	Client	12/10/2021
2	Ray Hall	Ray Hall	Client	04/02/2022
3	Ray Hall	Ray Hall	Client	04/02/2022

Recipients are responsible for eliminating all superseded documents in their possession.

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1 INTRODUCTION

Tennant Consolidated Mining Group (TCMG) owns and operates gold and copper exploration on ML30888 known as, Warrego Project, located at Warrego Road, 50 km northwest of Tennant Creek, Northern Territory. The site is in care and maintenance. EcOz were engaged to prepare a weed management plan – this document – to fulfil commitments under the *Mining Management Act 2001* (MM Act).

1.1 Scope & objectives

The scope of this weed management plan is to outline the weed management measures that will be implemented to prevent the introduction and spread of weeds during activities at the site

The objectives of this weed management plan are to:

- Comply with all applicable legislation, regulations, conditions and regional weed management plans.
- Address the specific weed management requirements of station owners.
- Provide controls for all project activities to avoid introducing new weed species into the project area.
- Avoid or control the spread of existing weed species into new areas within the project area.
- Detail the monitoring, reporting and incident response procedures appropriate for the management measures.

The weed management plan is applicable to all activities associated with the site, and will be used by all personnel (including contractors) involved in project activities.

1.2 Site Manager

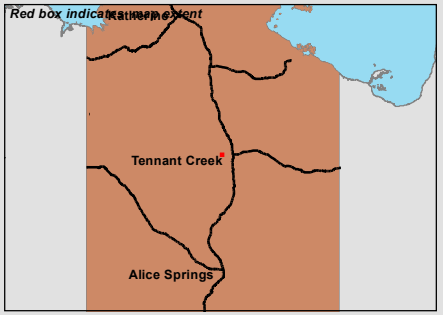
Warrego Project has a dedicated site manager, whose contact details are the following:

Justin Hankinson, Warrego Site Manager, Tel: 08 8962 0000, Email: justin.hankinson@barkly.nt.gov.au

2 PROJECT AREA

2.1 Project components

The former Warrego mine and mill infrastructure area has been in care and maintenance for many years and is the area of interest for this weed management plan.



Legend

- Minor road
- Track
- ML30888

0 0.1 0.2 0.4

Kilometres

MAP INFORMATION

Scale: 1:20,000 @ A4
Projection: GDA 1994 MGA Zone 52
Date Saved: 13/10/2021
Client: Tennant Consolidated Mining Group
Mapper: JW

DATA SOURCE

Topographic data: Geoscience Aust.
Project data: TCMG
Imagery: Landsat

Path: Z:\01 EcOz_Documents\04 EcOz Vantage GIS\EZ21152 - Warrego Weed MP - Tennant Consiolidated Mining\01 Project Files\Fig 2-1 Location Map.mxd

Figure 2-1. Location Map

3 LEGAL REQUIREMENTS

This following legislation, statutory obligations and guidelines were considered during the preparation of this weed management plan.

3.1.1 Minerals Laws and Regulations

The MM Act requires submission of a Mining Management Plan (MMP) for approval, prior to any mining activity (including exploration or operational activities) taking place. This weed management plan represents a component of the 2021 MMP, as required by the regulations.

3.1.2 Weeds Management Act

This NT Act aims to:

> *Protect the Territory's economy, community, industry and environment from the adverse impact of weeds*

It declares undesirable species of plants as weeds, and requires these species to be controlled, eradicated or prevented from entering the NT, depending on their classification. Under that Act, weeds are classified into one of three classes:

- Class A declared weed – to be eradicated
- Class B declared weed – growth and spread to be controlled
- Class C declared weed – not to be introduced into the NT (all Class A and B weeds are also Class C)

The Act specifies how weeds in each of the classes must be treated. Weed management plans for specific weeds are endorsed under this Act. The Commonwealth government has also categorised some species as Weeds of National Significance (WoNS).

3.1.3 Management plans and guidelines

Statutory Weed Management Plans

These plans are legal documents containing specific information about management requirements for certain high priority weeds. Section 5 lists weeds that are present or have the potential for introduction onto Warrego Project site, and notes those with an associated statutory weed management plan.

Guidelines and standards

The following guidelines associated with the management of weeds in the NT have also been considered during the preparation of this WMP:

- *Northern Territory Weed Management Handbook* (Weed Management Branch, 2018)
- *Northern Territory Weed Data Collection Manual* (Weed Management Branch, 2015)
- *Tennant Creek Regional Weeds Strategy (2021-2026).* (DEPWS, 2021)

4 WEED RISK MITIGATION MEASURES

The MMP risk assessment process identified the weed introduction and/or spread risks associated with the scope of this project. Table 4-1 documents these risks, as well as the mitigation measures that will be implemented for their reduction.

Table 4-1. Weed risk and mitigation measures

Weed risk	Mitigation measures	Measurement criteria	Responsible person
Introduction of new weed species to Warrego Project site from plant and vehicles.	All vehicles / machinery /equipment entering the EP to be cleaned and free of soil and vegetative matter, and have a valid weed hygiene declaration	A register of vehicle / equipment / machinery inspection is kept.[1] Spot checks on vehicle / equipment / machinery to ensure inspections are completed correctly	TCMG Dedicated Weed Officer
	Site environmental inductions for all personnel and contractors to include vehicle weed hygiene requirements	All project staff undertake an environmental induction, to be recorded in the TCMG Training Register	TCMG Dedicated Weed Officer
Weed spread in Warrego Project site resulting from vehicles/plant traversing existing weed infestations	All infestations of declared weeds are mapped; all personnel and contractors made aware of existing infestation locations and trained in the identification of existing weeds	All project staff undertake an environmental induction, to be recorded in the TCMG Training Register Weed maps and factsheets included as part of environmental induction All operational staff to attend weed identification training delivered by the NT Weed Management Branch	TCMG Dedicated Weed Officer
	All vehicles, machinery and equipment to stay on formed access tracks, except for those involved in clearing	All vehicle movements tracked via in-vehicle management systems or similar	TCMG Dedicated Weed Officer
	If infestations are identified during the 2020 program, they will be demarcated and avoided, where possible, via a detour around the infestation	Maintain demarcation during operations and inspect (and rectify if needed) daily	TCMG Field Representative
	If infestations cannot be avoided, treat prior to traversing using methods set out in Table 6-1.	Work plan to reflect additional tasks required	
	Vehicles/plant to be cleaned and free of soil and vegetative matter prior to	Spot checks on vehicle / equipment / machinery to ensure inspections are	TCMG Field Representative / TCMG Dedicated

Weed risk	Mitigation measures	Measurement criteria	Responsible person
	moving beyond infestation	completed correctly	Weed Officer
Existing weed distribution not fully known due to survey conducted outside of prime growth period	Further monitoring to be undertaken, as set out in Section 7 of this document	Annual reporting against this WMP, as per Section 7.3	TCMG Dedicated Weed Officer

5 WEED SPECIES

Warrego Project site has been systematically surveyed by the Barkly Weeds Office of the DEPWS Weed Management Branch. The last survey was performed on the 15 of July 2019 by Nathanael Mills, the Weeds Officer of the Barkly Regional Council, and Justin Hankinson, as the Health & Safety Officer of the Barkly Regional Council. Surveys focused on the former campsite and rehabilitated areas.

The diversity of weeds observed within the areas targeted for survey was low, with records of only four declared weed species. The Fulgida rope cactus (*Cylindropuntia fulgida*) was the most abundant weed recorded, corresponding to 56% of the records, all occurring on the former campsite area. There were also six records of prickly pears (*Opuntia* sp.) and one Parkinsonia (*Parkinsonia aculeata*) in the former campsite area and six Rubber bush (*Calotropis procera*) recorded in the rehabilitated areas.

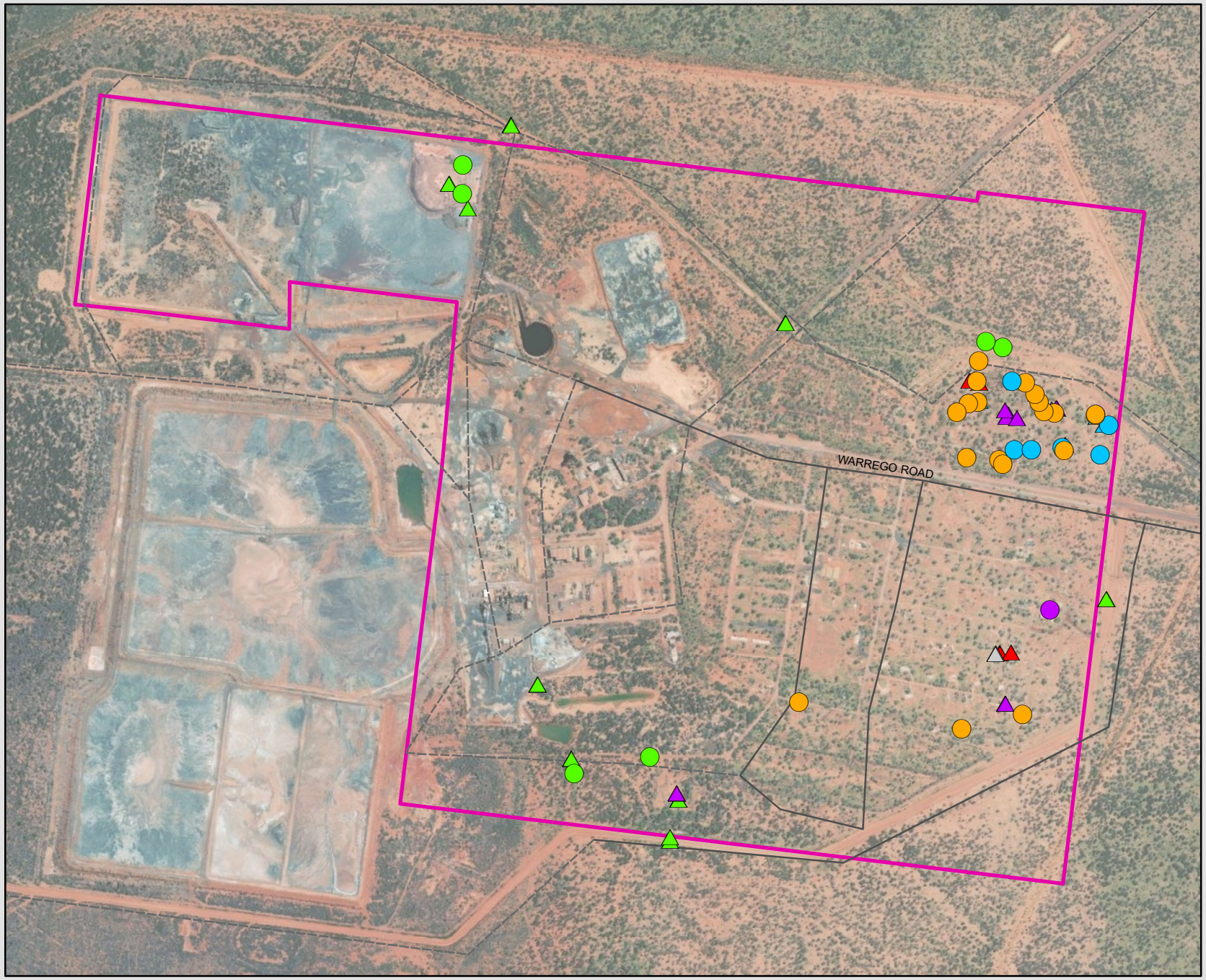
Table 5-1. Declared weed species recorded on Warrego Project site

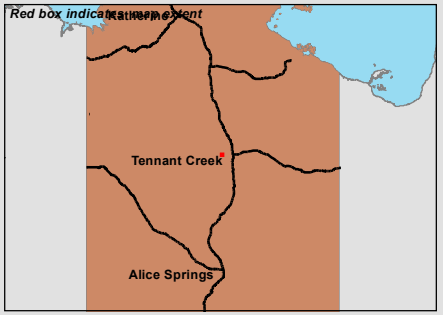
Common name	Scientific name	Weeds of National Significance	NT Class	Status in the Tennant Creek Regional Strategy	Occurs in the Project area
Fulgida rope cactus	*Cylindropuntia fulgida*	Y	A/C	Eradication	Y
Prickly pears	*Opuntia* sp.	Y	A/C	Eradication	Y
Parkinsonia	*Parkinsonia aculeata*	Y	B/C	Strategic Control	Y
Rubber Bush	*Calotropis procera*	-	B/C	Strategic Control	Y

A desktop search through NR Maps was performed on 29 July 2021 to investigate historical records of all weed species within 50 km from Warrego Project site. These records are a compilation of past surveys as late as 2014 and provide insights of other weed species with the potential to also occur in the project area. These are listed in Table 5-2.

Table 5-2. Other weeds recorded within 50 km from Warrego Project site

Common name	Botanical name	Weeds of National Significance	NT Class	Status in the Tennant Creek Regional Strategy
Rope cactus species	*Austrocylindropuntia* spp., *Cylindropuntia* spp.	Y	A	Eradication
Bellyache bush	*Jatropga gossypiifolia*	Y	A	Eradication
Prickly Acacia	*Vachellia nilotica (previously Acacia nilotica)*	Y	A	Eradication
Athel pine	*Tamarix aphylla*	Y	A	Strategic Control
Parthenium	*Parthenium hysterophorus*	Y	A	Alert Weed
Star burr	*Acanthospermum hispidum*	Y	B	-
Neem	*Azadirachta indica*	-	B	Strategic Control
Hyptis	*Hyptis suaveolens*	-	B	Contain Regional Spread
Khaki weed	*Alternanthera pungens*	-	B	Assist Interested Parties
Mossman River grass	*Cenchrus echinatus*	-	B	Weed of Concern
Buffel grass	*Cenchrus ciliaris*	-	-	Weed of Concern





Legend

- Minor road
- Track
- ML30888

2019 Weed Records

- Parkinsonia
- Prickly pears
- Rubber bush
- Rope cactus - fulgida

Historical Weed Records

- Parkinsonia
- Prickly pears
- Rubber bush
- Athel pine
- Bellyache bush

0 0.1 0.2 0.4
Kilometres

MAP INFORMATION
Scale: 1:13,083 @ A4
Projection: GDA 1994 MGA Zone 52
Date Saved: 13/10/2021
Client: Tennant Consolidated Mining Group
Mapper: JW

DATA SOURCE
Topographic data: Geoscience Aust.
Project data: DEPWS
Imagery: Landsat

Path: Z:\01 EcOz_Documents\04 EcOz Vantage GIS\EZ21152 - Warrego Weed MP - Tennant Consiolidated Mining\01 Project Files\Fig 5-2 Map of weed occurrences within or adjacent to the project area.mxd

Figure 5-2. Map of weed occurrences within or adjacent to the project area

6 ANNUAL ACTION PLAN

The annual action plan in Table 6-1 details the survey and control activities for weeds recorded within Warrego Project site. Treatment suggestions are based on the *NT Weed Management Handbook* (Weed Management Branch, 2018).

Table 6-1. Annual action plan

Weed species	Management objective	Survey / monitoring time/s	Treatment time/s	Herbicide	Rate	Weed growth stage, method, and comments
Rope Cactus & Prickly Pears	Eradicate	Year round	Year round	Triclopyr 600 g/L	800 mL / 60 L (diesel)	Seedlings, juvenile, adults (individuals or infestations): Foliar spray entire plant surface, ensuring all plant surfaces are completely covered with spray-mix to the point of runoff. Avoid spraying plants that appear stressed.
				Triclopyr 240 g/L + Picloram 120 g/L	1 L / 60 L (diesel)	
Parkinsonia	No spread	End of wet season – March	March to May	Aminopyralid 8 g/L + Triclopyr 300 g/L + Picloram 100 g/L	350 mL / 100 L or 3 L / ha	Seedling (individuals and infestation): Foliar spray of plants up to 2 m or 2 years old. Uptake Spraying Oil required. Avoid spraying if plants are stressed or bearing pods
				Triclopyr 240 g/L + Picloram 120 g/L	1 L / 60 L (diesel)	Seedling or adult (individuals or infestation): Basal bark < 5 cm stem diameter Cut stump > 5 cm stem diameter
				Tebuthiuron 200 g/kg	1.5 g / m^2	Seedling or adult (individuals or infestation): Granulated herbicide - ground applied Do not use within 30 m of desirable trees or apply to continuous area > 0.5 ha. Do not use if fire is eminent. Apply when there is soil moisture or prior to rain
Rubber Bush	No spread	Wet season – October to March	Wet and early dry season – October to June	Triclopyr 300 g/L + Picloram 100 g/L + Aminopyralid 8 g/L	750 mL / 100 L (water) 500-750mL / 100 L (water)	Seedling (individuals or infestation): Foliar spray. Check label for recommended adjuvant product.
				Triclopyr 240 g/L +	1 L / 60 L (diesel)	Adult (individuals and infestation): Basal bark < 5cm

Weed species	Management objective	Survey / monitoring time/s	Treatment time/s	Herbicide	Rate	Weed growth stage, method, and comments
				Picloram 120 g/L	1 L / 10 L (diesel) 1 L / 60 L (diesel)	stem diameter. Spray all stems. Spray to point of runoff. Thin Line up to 5cm stem diameter Cut stump > 5cm stem diameter
				Tebuthiuron (200g/kg)	1.5-2g/m2	Seedling or adult: Application to black clay soils in conjunction with seasonal rainfall. Spread granules according to density of the infestation.
				Fluroxypyr (333g/L)	3 L / 100 L (diesel)	Adult: Cut stump method for plants up to 10cm diameter and 3m high.
Weed Free Areas	Prevent the introduction of weeds	Year round	Immediately if weeds are found	*Treatment will depend on the weed species*		

7 WEED MONITORING

The requirements for weed monitoring within each component of the project area are outlined above in Section 6. Additional to the survey / monitoring times listed in Table 6-1, monitoring for weed incursions will be ongoing during operations, as all operational staff will have a responsibility to report new weed incursions to TCMG' dedicated weed officer. Should new weed incursions be identified during monitoring, control will be undertaken during recommended treatment times, and follow-up surveys will be within three months to ensure effective eradication of the incursions.

Annual weed monitoring should take place across the entire Warrego site and be targeted to a time when seasonal and rainfall conditions are likely to have resulted in recent growth.

7.1 Notification procedure

All new weed incursions will be reported to the NT Weed Management Branch by TCMG's site manager. Initial notification will be verbal, followed by written notification of preliminary species identification and location within seven working days.

7.2 Recording

All weed monitoring and survey activities will be recorded in accordance with *the NT Weed Data Collection Guidelines* available at: https://nt.gov.au/environment/weeds/weed-mapping-and-data-sharing.

The following attributes of any new weed infestations will be recorded into a GPS-enabled device:

- Site ID
- Weed name
- ID confidence
- Date of record
- Coordinate information
- Recorder / organisation
- Infestation size
    - 5 m diameter
    - 20 m diameter
    - 50 m diameter
    - 100 m diameter
- Infestation density
    - 1 = Absent, no weeds of this species in the area
    - 2 = < 1%; very few, not many weeds
    - 3 = 1 – 10%; more than one or two isolate plants
    - 4 = 11 – 50%; Many plants, covering up to half the area
    - 5 = > 50%; Weed forms the dominant cover

Weed data will be submitted as an Excel spreadsheet to the Weeds Management Branch (refer to Appendix A for an example template).

7.3 Reporting

TCMG' weed management officer will submit annual reporting against this WMP as a component of the MMP environmental reporting requirements. This will include

- Details of activities implemented to address weed spread and introduction risks
- Submission of all weed data collected
- Details of survey and monitoring events, including dates, personnel, maps and track data
- An overview of weed control events and success rates.

This annual report will be submitted for review to the Department of Industry Tourism and Trade – Mines Division.

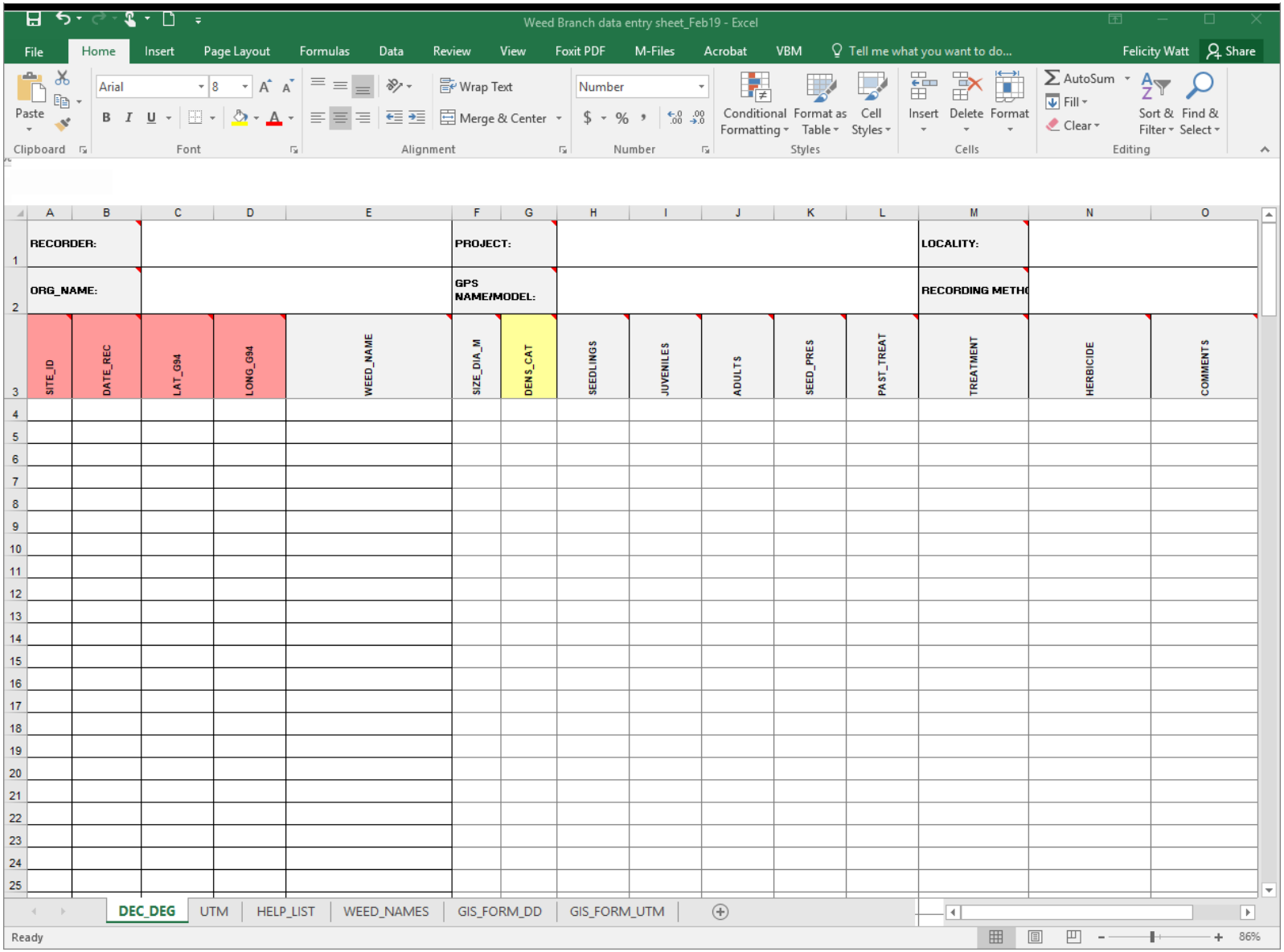
8 REFERENCES

Department of Environment, Parks and Water Security (DEPWS) (2021). *Tennant Creek Regional Weeds Strategy (2021-2026).* Darwin, Northern Territory.

Weed Management Branch (2018) *Northern Territory Weed Management Handbook*, Department of Environment and Natural Resources, Northern Territory Government, Palmerston NT.

Weed Management Branch (2015). *Northern Territory Weed Data Collection Manual*, Department of Environment and Natural Resources, Northern Territory Government, Palmerston NT.

APPENDIX A WEED CONTROL RECORDING TEMPLATE



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Appendix B. Proposed drill holes

Proposed Drill Holes for Warrego Drilling 2023

Tennant Mining is proposing to drill 12 Reverse Circulation holes and 13 Diamond holes within ML30888 during the 2023 drill program. Details of the proposed drill holes are outlined in Table 1 and Table 2 below; and the location of the proposed drill holes are shown in Figure 1 and Figure 2 below.

Table 1. Proposed RC drill holes

RC Program	GDA94 MGA 94 Z53					
HOLE_ID	EAST	NORTH	RL	DEPTH	AZIMUTH	DIP
PHW_RC01	376358	7849724	309.4	30	240	-60
PHW_RC02	376356	7849747	309.0	20	240	-60
PHW_RC03	376338	7849940	310.0	185	240	-60
PHW_RC04	376201	7849865	309.5	115	240	-60
PHW_RC05	376353	7850045	309.0	145	240	-60
PHW_RC06	376336	7850035	309.2	110	240	-60
PHW_RC07	376321	7850050	309.0	100	240	-60
PHW_RC08	376301	7850061	309.0	85	240	-60
PHW_RC09	376335	7849688	309.6	210	60	-70
PHW_RC10	376294	7849687	309.0	180	60	-70
PHW_RC11	376361	7849726	309.4	115	60	-70
PHW_RC12	376320	7849749	309.0	150	60	-70

Table 2. Proposed DDH drill holes

DDH Program	GDA94 MGA94 Z53					
HOLE_ID	EAST	NORTH	RL	TD	AZIMUTH	DIP
PHW_DDH1	376706	7849671	309.1	530	240	-70
PHW_DDH2	376656	7849643	308.9	455	240	-70
PHW_DDH3	376652	7849687	309.1	478	240	-70
PHW_DDH4	376605	7849659	309.1	399	240	-70
PHW_DDH5	376604	7849705	309.2	449	240	-70
PHW_DDH6	376568	7849684	308.9	369	240	-70
PHW_DDH7	376542	7849715	309.0	354	240	-70
PHW_DDH8	376525	7849751	309.6	368	240	-70

PHW_DDH9	376735	7849642	309.2	540	240	-70
PHW_DDH10	376685	7849613	308.9	446	240	-70
PHW_DDH11	376838	7849655	309.1	670	240	-70
PHW_DDH12	376785	7849625	309.3	564	240	-70
PHW_DDH13	376862	7849623	309.0	673	240	-70

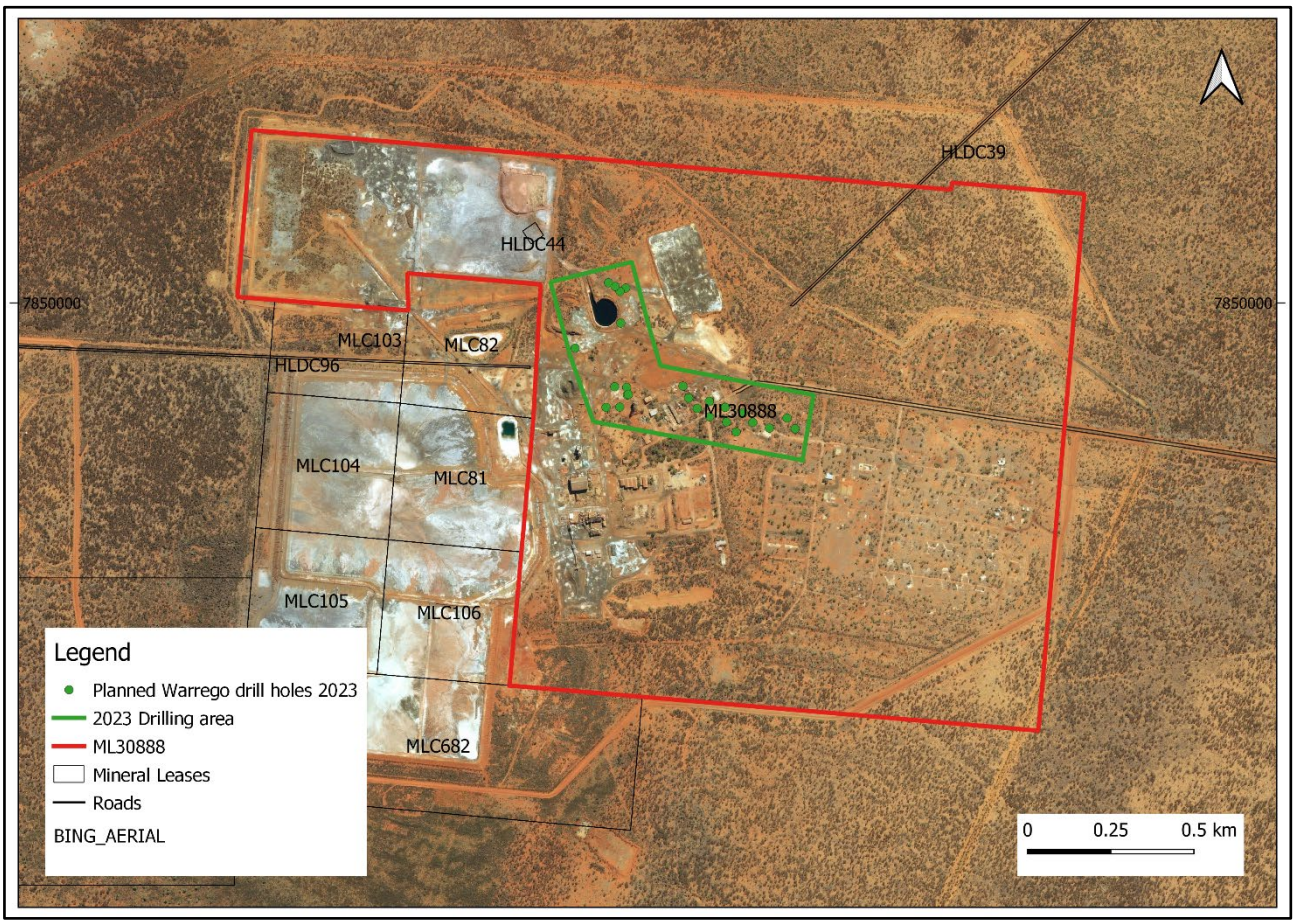

Figure 1. Area of planned drilling for 2023 showing the location of planned drill holes within ML30888

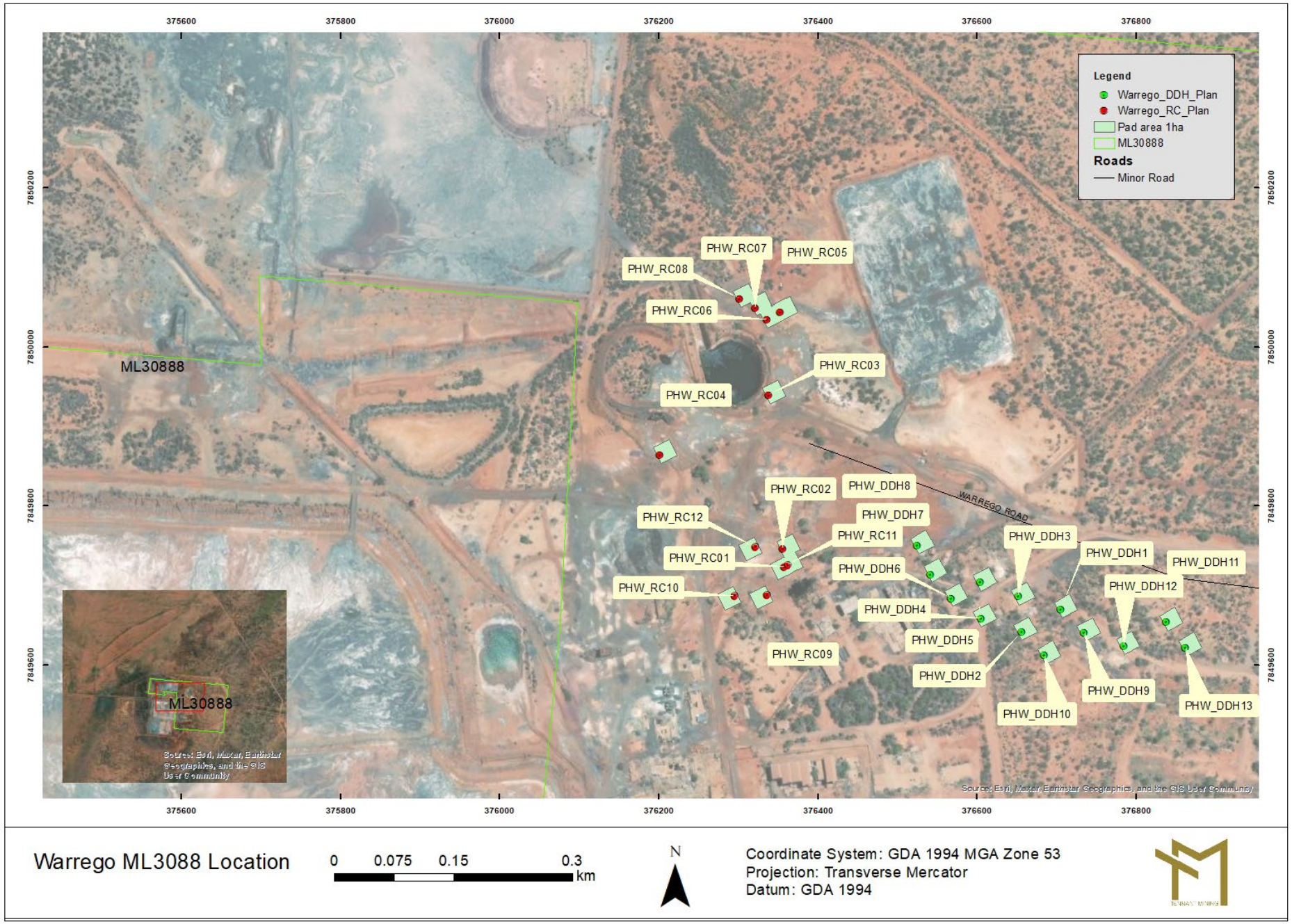

Figure 2 Location of proposed Warrego drill holes and drill pads for 2023