



MOUNT GIBSON GOLD PROJECT ENVIRONMENTAL MANAGEMENT PLAN FOR MATTERS OF NATIONAL ENVIRONMENTAL SIGNIFICANCE (MNES)

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Crimson Metals Pty Ltd

ACN: 169 977 155

Declaration of accuracy

In making this declaration, I am aware that section 491 of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) makes it an offence in certain circumstances to knowingly provide false or misleading information or documents to specified persons who are known to be performing a duty or carrying out a function under the EPBC Act or the Environment Protection and Biodiversity Conservation Regulations 2000 (Cth). The offence is punishable on conviction by imprisonment or a fine, or both. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

A handwritten signature in black ink, appearing to be 'P. Criddle', written over a horizontal line.

Signed:

Full name: Paul Criddle – Chief Operating Officer

Organisation: Capricorn Metals Limited

Date: 06/03/2026

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1. INTRODUCTION

The Mount Gibson Gold Project (MGGP, the Proposal) is located approximately 280 km northeast of Perth and less than 10 km east from the Great Northern Highway, in the Avon Wheatbelt region of Western Australia (Figure 1). The Proponent of the MGGP is Crimson Metals Pty Ltd, a subsidiary of Capricorn Metals Ltd. Substantial mining occurred at the MGGP in the 1980's and 1990's and as a result, historical disturbance and infrastructure remain in the area.

Key elements of the Proposal include:

- 11 open pits
- Waste rock landform (WRLs)
- stockpiles
- haul and access roads
- crushing and processing plant
- heap leach facilities
- tailings storage facility (TSF)
- doré bar storage
- airstrip
- power station
- borefields, water pipelines and associated infrastructure
- ancillary buildings and laydown yards

The Proposal is estimated to process up to six million tonnes per annum (Mtpa) of ore over a 15 year operating mine life.

The Capricorn Environment Community and Heritage Policy is available internally on O: drive and externally at www.capmetals.com.au. The Policy will be communicated to our people during induction and will be posted on noticeboards at the Proposal and Business offices.

Environment, Community and Heritage Policy

As a growing resource development company, Capricorn Metals Pty Ltd (Capricorn) acknowledges that our operations have the potential to impact on environmental, community and heritage values. For this reason, Capricorn will adopt a systematic approach to understanding and managing potential impacts and to meet our Legal Obligations.

Our Commitment

We will strive to:

- Develop and implement environmental management systems, which enable us to conduct our business in a responsible and appropriate manner.
- Continually improve our environmental performance through setting environmental objectives and targets that are endorsed by senior management.
- Provide adequate resources for managing environmental performance.
- Comply with all applicable legislation, standards and codes of practice.
- Use all our resources efficiently, minimise waste generation and appropriately dispose of all waste to prevent pollution.
- Understand and acknowledge the expectations of all stakeholders in our operations for diligent environmental management and fully and regularly communicate our environmental performance.
- Engaging with local and Indigenous communities on the protection of their cultural heritage.
- Respect the rights of Indigenous Peoples and acknowledge their right to maintain their culture, identity, traditions and customs.
- Treat all employees and stakeholders with dignity, care and respect and recognise achievements and promote successful outcomes of work groups and individuals.

Our Goals

We will cause no environmental or cultural harm beyond that which is necessary to conduct our businesses and for which statutory approval has been received.

Our Responsibility

Every employee has a personal responsibility to maintain a high level of environmental and community awareness and we all must comply with this policy and any associated policies, procedures or processes.

Leaders at all levels in the group are required to communicate this policy to all our employees, contractors and visitors and involve them in its implementation. Our leaders must take all reasonable steps to protect the environment and communities our activities may impinge upon.

A handwritten signature in blue ink, appearing to read "Massey".

Kim Massey
Chief Executive Officer
June 2023

MGGP – Environmental Management Plan for MNES

This Environmental Management Plan (EMP) outlines how environmental issues related to Matters of National Significance (MNES) are addressed. This EMP has been developed as part of the Proposal referral to the Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) on 27 February 2024 (EPBC 2023/09745).

Compliance to this document, appendices and other referenced documents is mandatory and indicates the minimum compliance requirement for all Business Units, Projects and Contracts. Contractors working at the Proposal and mobilised using their own Management Systems must meet the requirements and expectations set by the Proponent in this area.

The following MNES have been identified as occurring in the Proposal Development Envelope and surrounds:

- *Eremophila viscida*
- Eucalypt Woodlands of the Western Australian Wheatbelt Threatened Ecological Community (TEC)
- *Leipoa ocellata* (Malleefowl)
- *Aphelocephala leucopsis* (Southern Whiteface)
- *Dasyurus geoffroyi* (Chuditch)

Detailed molecular analysis (Rix et. al., 2018) separated the EPBC listed (Endangered) *Idiosoma nigrum* in the Proposal area into *Idiosoma kopejtkaorum* and *Idiosoma formosum*. Neither *I. kopejtkaorum* nor *I. formosum* are currently listed under the EPBC Act, however, are listed as Endangered under State (WA) legislation (BC Act). Only the Lake Goorly Shield-backed Trapdoor Spider (*Idiosoma kopejtkaorum*) occurs at the Proposal. As advised by the Department of Climate Change, Energy, the Environment and Water (DCCEEW), any of the novel or split taxa derived from *Idiosoma nigrum* located at the Proposal are considered to be and are protected under the EPBC Act as the Shield-backed Trapdoor Spider (*Idiosoma nigrum*) until formal listing assessment has been completed.

The main potential environmental impacts to MNES from the Proposal are clearing of native vegetation/ fauna habitat, introduction or increase of weeds and feral fauna, and fauna mortality as a result of increased traffic and vehicle use. Further details and associated management actions are detailed in Sections 2, 8 and 9.

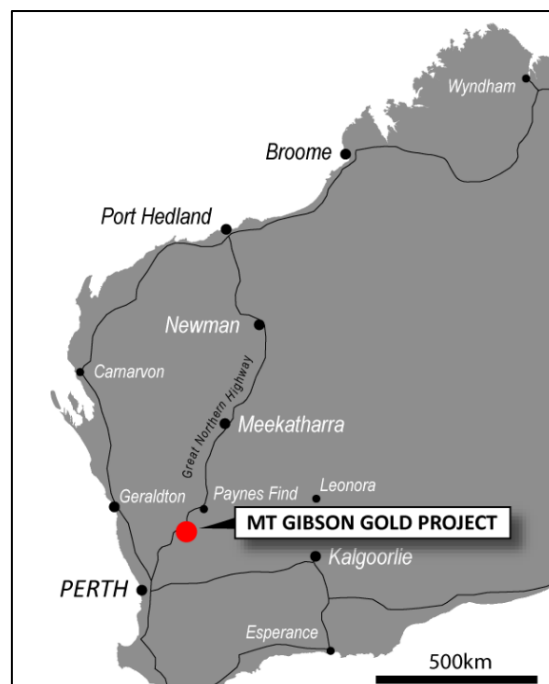


Figure 1: Proposal location

2. PROPOSAL DESCRIPTION

The MGGP involves construction and operation of an open pit gold mine; including the development of above and below water table open pits (via cutbacks of historically mined open pits), a Processing Plant, waste management facilities (Waste Rock Landform and Tailings Storage Facility) and supporting infrastructure (e.g. haul roads, workshops, offices). The indicative site layout of the Proposal is presented in Figure 2. The construction phase of the Proposal is expected to be 18 months, followed by a 15 year operations phase and an estimated five year decommissioning phase. Extensive surveys (Table 1), have been undertaken for the Proposal and the environmental context well defined, as outlined in further detail in the following sections.

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Table 2.1: Environmental surveys undertaken for the MGGP

Aspect	Survey Name	Survey Details
Flora and Vegetation	Detailed Flora and Vegetation Assessment. Mount Gibson Gold Project (FVC, 2023)	Survey area: Development Envelope and broader area Type: Two-phase detailed flora and vegetation assessment Timing: 27-30 September 2021 (Phase 1); 12-17 September 2022 (Phase 2)
	Mount Gibson Gold Project. Flora and Vegetation Survey of the Proposed Airstrip (Ecotec, 2023)	Survey area: Airstrip Development Envelope Type: Single phase reconnaissance flora and vegetation assessment and utilisation of high resolution drone footage Timing: 19 October and 1 November 2023
	Mount Gibson Gold Project. Targeted Flora and Vegetation Survey (TEPL, 2024)	Survey area: Development Envelope and broader area Type: Targeted flora and vegetation assessment Timing: 7-11 August 2024
Terrestrial Fauna	Mount Gibson Gold Project Basic and Targeted Fauna Survey (Biota, 2022)	Survey area: Development Envelope and broader area Type: Basic and targeted terrestrial fauna assessment Timing: 8-12 November 2021; 29 November – 3 December 2021
	Mount Gibson Gold Project Extended Area Basic and Targeted Fauna Survey (Biota, 2023)	Survey area: Development Envelope and broader area Type: Basic and targeted terrestrial fauna assessment Timing: 19-23 September 2022
	Mount Gibson Gold Project Assessment of Fauna Values (Bamford, 2024a)	Survey area: Development Envelope and broader area Type: Detailed and targeted terrestrial fauna assessment Timing: 30 October - 7 November 2023
	Mount Gibson Gold Project, Targeted Investigations into Significant Fauna (Bamford, 2024b)	Survey area: Development Envelope and broader area Type: Targeted terrestrial fauna assessment Timing: 16-24 October 2024
	Impact assessment of the Mt Gibson Gold Project in relation to the Lake Goorly Shield-Backed Trapdoor Spider (<i>Idiosoma kopejtkorum</i>) (Bennelongia, 2025a)	Survey area: Development Envelope and broader area Type: Targeted <i>Idiosoma</i> impact assessment Timing: 2 – 6 September 2024
	Targeted Survey for Extent of Occurrence (EOO) and Area of Occupancy (AOO) Expansion of the Lake Goorly Shield-Backed Trapdoor Spider (<i>Idiosoma kopejtkorum</i>) (Bennelongia 2025b)	Survey area: Broader area Type: Targeted <i>Idiosoma</i> EOO and AOO expansion Timing: 28 April – 2 May 2025

MGGP – Environmental Management Plan for MNES

Aspect	Survey Name	Survey Details
Subterranean Fauna	Mount Gibson Gold Project. Subterranean Fauna Baseline Survey and Assessment (Bennelongia, 2023)	Survey area: Development Envelope and broader area Type: Detailed stygofauna assessment Timing: 17-22 July 2023; 19-20 September 2023
	Mt Gibson Gold Project Additional Troglifauna Survey (Bennelongia, 2024b)	Survey area: Development Envelope and broader area Type: Phase 2 of detailed troglifauna assessment Timing: 5 March – 30 April 2024
	Mt Gibson Gold Project Additional Troglifauna Survey and Assessment (Bennelongia, 2025b)	Survey area: Development Envelope and broader area Type: Phase 3 of detailed troglifauna assessment Timing: 2 September – 6 November 2024
Water	Mount Gibson Gold Project Baseline Hydrology Study (Advisian, 2022)	Baseline hydrological assessment
	Mount Gibson Gold Project Phase 2 - Hydrology Study (Advisian, 2023)	Detailed hydrological assessment
	Mount Gibson Gold Project. H3 Level Pit Dewatering Assessment (EMM, 2024)	H3 level (DWER nomenclature) groundwater modelling assessment of pit dewatering.
Greenhouse Gas Emissions	Mount Gibson Gold Project Greenhouse Gas Assessment (Greenbase, 2023)	Greenhouse Gas Assessment
Soils	Mount Gibson Gold Project. Soil and Landform Assessment (MBS, 2023)	Survey area: Development Envelope Type: Detailed soil and landform assessment Timing: 15-16 November 2022
Air Quality	Mt Gibson Gold Project Air Quality Assessment (GHD, 2023a)	Air Quality Assessment
Noise	Mt Gibson Gold Project Acoustic Assessment (GHD, 2023b)	Noise Assessment

2.1 Flora and Vegetation

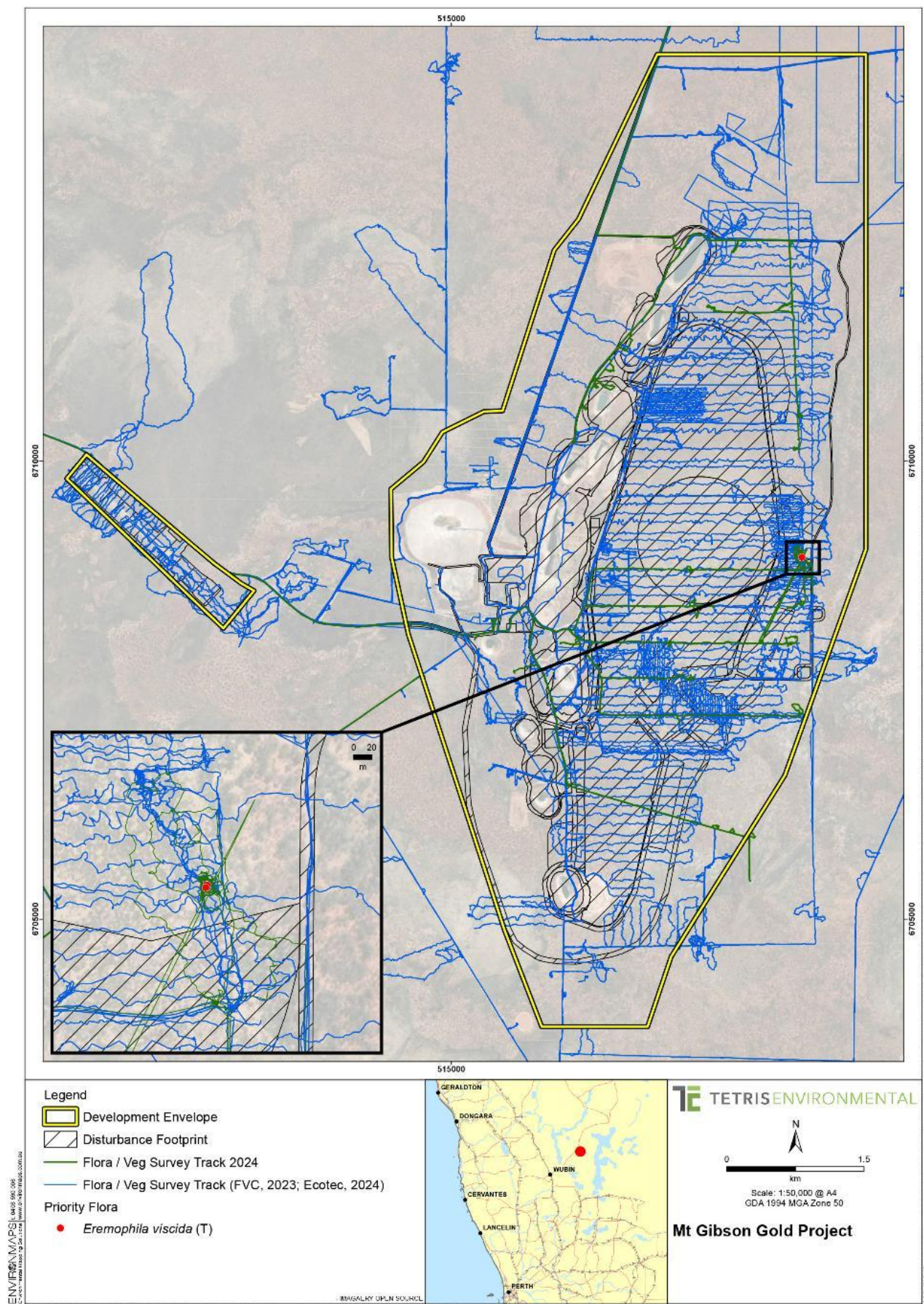
2.1.1 Flora

A total of 491 flora taxa from 57 families and 185 genera were recorded in the Development Envelope and surrounding area, including one taxon listed under the EPBC Act, *Eremophila viscida*.

Eremophila viscida (varnish bush) is a large, erect shrub 2 – 6 m tall with sticky, shiny, brown hairless branches, and hairless to finely glandular-hairy leaves 5 – 10 cm long by 1 cm wide. The flowers are tubular, about 2 cm long, and are solitary or sometimes in twos.

Eremophila viscida has a historical range of 290 km between Latham, Koorda, Carnamah, Ballidu, Pindar and Merredin in Western Australia. It appears to prefer areas associated with granite and salt lake systems and plants are more frequently found in runoff areas, including drainage lines or ephemeral creeks connected to granite outcrops. From surveys conducted prior to 2003, *Eremophila viscida* was known from 16 populations and approximately 816 individuals (FVC, 2003).

Extensive surveys within the Development Envelope, including targeted searching, recorded two individuals of *Eremophila viscida* within the eastern portion of the Development Envelope (Figure 3) on sandy loam over granite (FVC, 2023); however, had died by August 2024 (TEPL, 2024). The species is thought to have a life expectancy of approximately 20 years with fire or other disturbance being required for germination. It is possible that these plants are remnants of a small population that flourished after fire approximately 20 years ago in 2002 (TEPL, 2024).



2.1.2 Vegetation

Detailed vegetation surveys have identified 32 local vegetation types (VT) within the Development Envelope based on floristic classification analysis, as well as detailed investigation of species composition, topography, soils, and geographic location (FVC, 2023; Ecotec, 2023). These are summarised in Table 2 and presented in Figure 4.

FVC (2023) identified two local vegetation types within the Development Envelope as likely to support occurrences of the Commonwealth listed Threatened Ecological Community (TEC) 'Eucalypt Woodlands of the Western Australian Wheatbelt' ('WA Wheatbelt Woodlands'):

- VT12 - *Eucalyptus salubris* or *E. salmonophloia* woodland to tall woodland over *Acacia* spp., *Eremophila* spp. tall sparse shrubland over *Olearia muelleri*, *Maireana* spp., *Sclerolaena* spp., *Ptilotus* spp. low open shrubland over *Austrostipa* spp. isolated tussock grassland
- VT13 - *Eucalyptus salubris* woodland over *Exocarpos aphyllus* and *Eremophila* spp. isolated shrubs over *Tecticornia disarticulata*, *Frankenia setosa* and *Maireana* spp. low shrubland.

The WA Wheatbelt Woodlands is classified as Critically Endangered under the EPBC Act and Priority 3 Priority Ecological Community (PEC) under State legislation (BC Act). It is endemic to southwestern WA and is located in the zone between the wetter forests of the south west coast and the low woodlands, mallee and shrublands of the semi-arid to arid interior (DoE 2015), covering an area of approximately 939,470 ha across Western Australia (MBS, 2020).

The WA Wheatbelt Woodlands has been subject to extensive clearing and fragmentation within the wheatbelt region as a result of large scale native vegetation clearing for agriculture development. The Proposal is located approximately 20 km north and 40 km east from the edge of the heavily cleared wheatbelt agricultural zone. The WA Wheatbelt Woodlands provides habitat and resources for a large number of fauna species due to the highly diverse and complex nature of the TEC (DoE 2015). Woodlands provide suitable habitat for a range of bird species, including the Threatened Malleefowl (DoE 2015).

Several key threats have been identified within the Approved Conservation Advice for the WA Wheatbelt Woodlands (DoE 2015), including:

- Clearance of native vegetation
- Loss of habitat and habitat for key native species
- Fragmentation into smaller, disconnected patches
- Impacts from invasive flora and fauna species
- Grazing pressure: including inappropriate grazing regimes by domestic stock and grazing of regrowth by native fauna
- Increased salinity and waterlogging of the landscape largely due to modification of the landscape and hydrology through over clearing
- Soil acidification
- Altered fire regimes
- Potential impacts of climate change, including altered fire and flooding regimes, decline in tree health due to prolonged drought and heat stress, and poor regeneration and recruitment.

The WA Wheatbelt Woodlands TEC occupies 350.3 ha within the Development Envelope and 27.5 ha within the Disturbance Footprint (Figure 5). Within the local area surrounding the Development Envelope (7 km radius), flora and vegetation assessments undertaken to support activities such as resource exploration have delineated additional eligible patches of the WA Wheatbelt Woodlands TEC, totaling ~2,050 ha outside of the Development Envelope. Proportionally the mapped extent of the WA Wheatbelt Woodlands TEC within the Development Envelope and Disturbance Footprint represents ~14.6% and 1.1% of the total mapped local extent (2,394.3 ha) respectively.

Table 2.2: Vegetation Types within the Development Envelope

Vegetation Type	Description
VT1	<i>Callitris columellaris</i> low woodland over <i>Acacia acuminata</i> and <i>Acacia obtecta</i> tall sparse shrubland over <i>Olearia pimeleoides</i> low sparse shrubland over <i>Amphipogon caricinus</i> var. <i>caricinus</i> low isolated tussock grasses
VT2	<i>Eucalyptus horistes</i> mallee woodland over <i>Acacia effusifolia</i> , <i>Acacia longisperma</i> and <i>Acacia prainii</i> tall closed shrubland over <i>Amphipogon carincinus</i> var. <i>caricinus</i> low sparse grassland
VT3	<i>Eucalyptus loxophleba</i> subsp. <i>supralaevis</i> and <i>Callitris columellaris</i> open woodland over <i>Acacia acuminata</i> and <i>Santalum acuminatum</i> tall open shrubland over <i>Microcorys</i> sp. Mt Gibson, <i>Alyxia buxifolia</i> and <i>Olearia muelerii</i> open shrubland over <i>Austrostipa</i> spp. and <i>Monochather paradoxus</i> sparse grassland
VT4	<i>Eucalyptus kochii</i> , <i>Eucalyptus capillosa</i> , <i>Eucalyptus horistes</i> and <i>Callitris columellaris</i> woodland over <i>Melaleuca stereophloia</i> and <i>Alyxia buxifolia</i> tall shrubland over <i>Monachather paradoxus</i> , <i>Amphipogon caricinus</i> var. <i>caricinus</i> and <i>Austrostipa elegantissima</i> sparse grassland
VT5	<i>Callitris columellaris</i> , <i>Eucalyptus ?kochii</i> and <i>Eucalyptus ?ceratocorys</i> woodland over <i>Acacia effusifolia</i> and <i>Alyxia buxifolia</i> tall open shrubland over <i>Amphipogon caricinus</i> var. <i>caricinus</i> low sparse tussock grassland
VT6	<i>Eucalyptus capillosa</i> low mallee woodland over <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i> , <i>Hakea francisiana</i> and <i>Acacia coolgardiensis</i> tall shrubland over <i>Phebalium canaliculatum</i> and <i>Hibbertia arcuata</i> low sparse shrubland over <i>Dianella revoluta</i> var. <i>divaricata</i> rushland
VT7	<i>Eucalyptus subangusta</i> and <i>Eucalyptus ewartiana</i> open mallee woodland over <i>Acacia anthochaera</i> and <i>Acacia effusifolia</i> shrubland over <i>Melaleuca leiocarpa</i> , <i>Microcorys</i> sp. Mt Gibson, <i>Philotheca nutans</i> and <i>Hakea scoparia</i> low open shrubland over <i>Amphipogon caricinus</i> isolated tussock grassland
VT8	<i>Eucalyptus kochii</i> open mallee woodland over <i>Melaleuca stereophloia</i> , <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i> and <i>Acacia acuminata</i> tall shrubland over <i>Philotheca brucei</i> low sparse shrubland over <i>Austrostipa trichophylla</i> and <i>Dianella revoluta</i> var. <i>divaricata</i> isolated sedges and grasses and <i>Waitzia acuminata</i> sparse herbland
VT9	<i>Eucalyptus leptopoda</i> subsp. <i>arctata</i> mallee woodland over <i>Allocasuarina corniculata</i> , <i>Acacia effusifolia</i> and <i>Melaleuca hamata</i> tall open shrubland over <i>Acacia longispinea</i> , <i>Hakea invaginata</i> and <i>Hysterobaeckea setifera</i> open shrubland over <i>Aluta aspera</i> subsp. <i>hesperia</i> low sparse shrubland over <i>Ecdeiocolea monostachya</i> open rushland
VT10	<i>Eucalyptus leptopoda</i> subsp. <i>arctata</i> isolated mallee trees over <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i> tall shrubland
VT11	<i>Eucalyptus loxophleba</i> subsp. <i>supralaevis</i> woodland over <i>Acacia acuminata</i> , <i>Eremophila oldfieldii</i> and <i>Acacia tetragonophylla</i> tall open shrubland over <i>Olearia muelleri</i> , <i>Ptilotus obovatus</i> and <i>Scaevola spinescens</i> low open shrubland over <i>Waitzia acuminata</i> low isolated forbs

Vegetation Type	Description
VT12	<i>Eucalyptus salubris</i> or <i>E. salmonophloia</i> woodland to tall woodland over <i>Acacia</i> spp., <i>Eremophila</i> spp. tall sparse shrubland over <i>Olearia muelleri</i> , <i>Maireana</i> spp., <i>Sclerolaena</i> spp., <i>Ptilotus</i> spp. low open shrubland over <i>Austrostipa</i> spp. isolated tussock grassland <u>Supports vegetation characteristic of the WA Wheatbelt Woodlands</u>
VT13	<i>Eucalyptus salubris</i> woodland over <i>Exocarpos aphyllus</i> and <i>Eremophila</i> spp. isolated shrubs over <i>Tecticornia disarticulata</i> , <i>Frankenia setosa</i> and <i>Maireana</i> spp. low shrubland. <u>Supports vegetation characteristic of the WA Wheatbelt Woodlands</u>
VT16	<i>Eucalyptus stowardii</i> low open mallee woodland over <i>Allocasuarina acutivalvis</i> , <i>Acacia assimilis</i> subsp. <i>assimilis</i> and <i>Acacia burkittii</i> tall shrubland over <i>Dodonaea inaequifolia</i> and <i>Melaleuca nematophylla</i> shrubland over <i>Hibbertia arcuata</i> and <i>Hemigenia ciliata</i> low sparse shrubland over <i>Xanthosia kochii</i> open herbland
VT17	<i>Acacia burkittii</i> , <i>Acacia duriuscula</i> and <i>Allocasuarina acutivalvis</i> tall shrubland over <i>Grevillea levis</i> and <i>Acacia synoria</i> sparse shrubland over <i>Hemigenia ciliata</i> and <i>Hibbertia glomerata</i> low sparse shrubland over <i>Ecdeiocolea monostachya</i> , <i>Dianella revoluta</i> var. <i>divaricata</i> , <i>Amphipogon caricinus</i> and <i>Borya sphaerocephala</i> sparse grassland
VT18	<i>Allocasuarina acutivalvis</i> , <i>Acacia effusifolia</i> and <i>Acacia longispinea</i> tall shrubland over <i>Calothamnus gilesii</i> and <i>Aluta aspera</i> low isolated shrubs over <i>Amphipogon caricinus</i> sparse tussock grassland.
VT19	<i>Acacia effusifolia</i> , <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i> tall shrubland over <i>Enekbatus stowardii</i> , <i>Philotheca deserti</i> subsp. <i>deserti</i> low open shrubland over <i>Amphipogon caricinus</i> var. <i>caricinus</i> sparse tussock grassland
VT20	<i>Acacia sibina</i> , <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i> and <i>Hakea invaginata</i> open shrubland over <i>Baeckea elderiana</i> , <i>Grevillea yorkrakinensis</i> and <i>Grevillea acacioides</i> low sparse shrubland over <i>Ecdeiocolea monostachya</i> , <i>Borya sphaerocephala</i> and <i>Stylidium limbatum</i> open rushland
VT21	<i>Acacia effusifolia</i> and <i>Acacia longispinea</i> tall closed shrubland over <i>Enekbatus stowardii</i> , <i>Olearia humilis</i> and <i>Gilberta tenuifolia</i> low sparse shrubland over <i>Amphipogon caricinus</i> var. <i>caricinus</i> sparse tussock grassland
VT22	<i>Acacia acuminata</i> , <i>Allocasuarina acutivalvis</i> subsp. <i>acutivalvis</i> , <i>Eremophila oldfieldii</i> subsp. <i>angustifolia</i> and <i>Melaleuca atroviridis</i> tall shrubland over <i>Dodonaea inaequifolia</i> low sparse shrubland over <i>Austrostipa elegantissima</i> isolated tussock grasses
VT23	<i>Acacia effusifolia</i> , <i>Acacia resinimarginea</i> and <i>Hysterobaeckea setifera</i> subsp. <i>setifera</i> shrubland over <i>Hemigenia ciliata</i> low sparse shrubland over <i>Ecdeiocolea monostachya</i> and <i>Dianella revoluta</i> var. <i>divaricata</i> sparse rushland
VT24	<i>Acacia duriuscula</i> , <i>Acacia acuminata</i> and <i>Melaleuca hamata</i> tall shrubland over <i>Mallestemon tuberculatus</i> and <i>Calycopeplus pauciflorus</i> open shrubland over <i>Hemigenia ciliata</i> low sparse shrubland over <i>Borya sphaerocephala</i> and <i>Dianella revoluta</i> sparse rushland
VT26	<i>Acacia effusifolia</i> , <i>Acacia resinimarginea</i> and <i>Hysterobaeckea setifera</i> subsp. <i>setifera</i> shrubland over <i>Hemigenia ciliata</i> low sparse shrubland over <i>Ecdeiocolea monostachya</i> and <i>Dianella revoluta</i> var. <i>divaricata</i> sparse rushland

MGGP – Environmental Management Plan for MNES

Vegetation Type	Description
VT27	<i>Acacia duriuscula</i> , <i>Acacia acuminata</i> and <i>Melaleuca hamata</i> tall shrubland over <i>Mallestemon tuberculatus</i> and <i>Calycopeplus pauciflorus</i> open shrubland over <i>Hemigenia ciliata</i> low sparse shrubland over <i>Borya sphaerocephala</i> and <i>Dianella revoluta</i> sparse rushland
VT28	<i>Melaleuca nematophylla</i> , <i>Acacia stereophylla</i> var. <i>stereophylla</i> tall closed shrubland over <i>Amphipogon caricinus</i> var. <i>caricinus</i> sparse tussock grassland
VT29	<i>Acacia effusifolia</i> , <i>Melaleuca</i> sp. 1 and <i>Melaleuca leiocarpa</i> tall closed shrubland over <i>Aluta aspera</i> subsp. <i>hesperia</i> open shrubland over <i>Amphipogon caricinus</i> var. <i>caricinus</i> open tussock grassland
VT30	<i>Melaleuca hamata</i> , <i>Acacia resinimarginea</i> and <i>Allocasuarina tessellata</i> tall closed shrubland over <i>Phebalium tuberosum</i> and <i>Hibbertia arcuata</i> low open shrubland over mixed species sparse herbland
VT31	<i>Exocarpos aphyllus</i> and <i>Eremophila</i> spp. isolated shrubs over <i>Tecticornia disarticulata</i> , <i>Frankenia setosa</i> and <i>Maireana</i> spp. low shrubland
1 (Ecotec)	<i>Allocasuarina acutivalvis</i> , <i>Melaleuca nematophylla</i> , <i>Melaleuca leiocarpa</i> , <i>Acacia effusifolia</i> tall shrubland over <i>Aluta aspera</i> , <i>Hysterobaeckea setifera</i> , <i>Phebalium tuberosum</i> shrubland on elevated sandplain with minor granite outcrop. Aligns with FVC Vegetation Unit 20/29
3 (Ecotec)	<i>Eucalyptus moderata</i> , <i>E. wubinensis</i> , <i>E. salmonophloia</i> woodland over <i>Acacia mackeyana</i> , <i>Melaleuca eleuterostachya</i> , <i>Acacia anthochaera</i> open shrubland over <i>Acacia andrewsii</i> , <i>Maireana georgei</i> low sparse shrubland on plains Aligns with FVC Vegetation Unit 6
4 (Ecotec)	<i>Eucalyptus moderata</i> , <i>E. capillosa</i> , <i>E. wubinensis</i> woodland over <i>Acacia mackeyana</i> isolated shrubs over <i>Olearia muelleri</i> , <i>Atriplex vesicaria</i> , <i>Maireana georgei</i> low open shrubland over <i>Sclerolaena diacantha</i> , <i>S. fusiformis</i> low open shrubland on plains Aligns with FVC Vegetation Unit 6
5 (Ecotec)	<i>Eucalyptus moderata</i> , <i>Eucalyptus wubinensis</i> , <i>E. celastroides</i> , <i>E. kochii</i> mallee woodland over <i>Tecticornia disarticulata</i> , <i>Olearia muelleri</i> , <i>Eremophila oppositifolia</i> low chenopod shrubland on elevated plains Aligns with FVC Vegetation Unit 4
7 (Ecotec)	<i>Eucalyptus moderata</i> , <i>E. kochii</i> open mallee woodland over <i>Acacia effusifolia</i> , <i>Allocasuarina acutivalvis</i> , <i>A. anthochaera</i> , <i>Melaleuca leiocarpa</i> , <i>M. hamata</i> , <i>Hakea minyma</i> closed tall shrubland over <i>Enekbatus stowardii</i> , <i>Homalocalyx thryptomenoides</i> , <i>Hysterobaeckea setifera</i> low open shrubland on sandplain Aligns with FVC Vegetation Unit 4/5

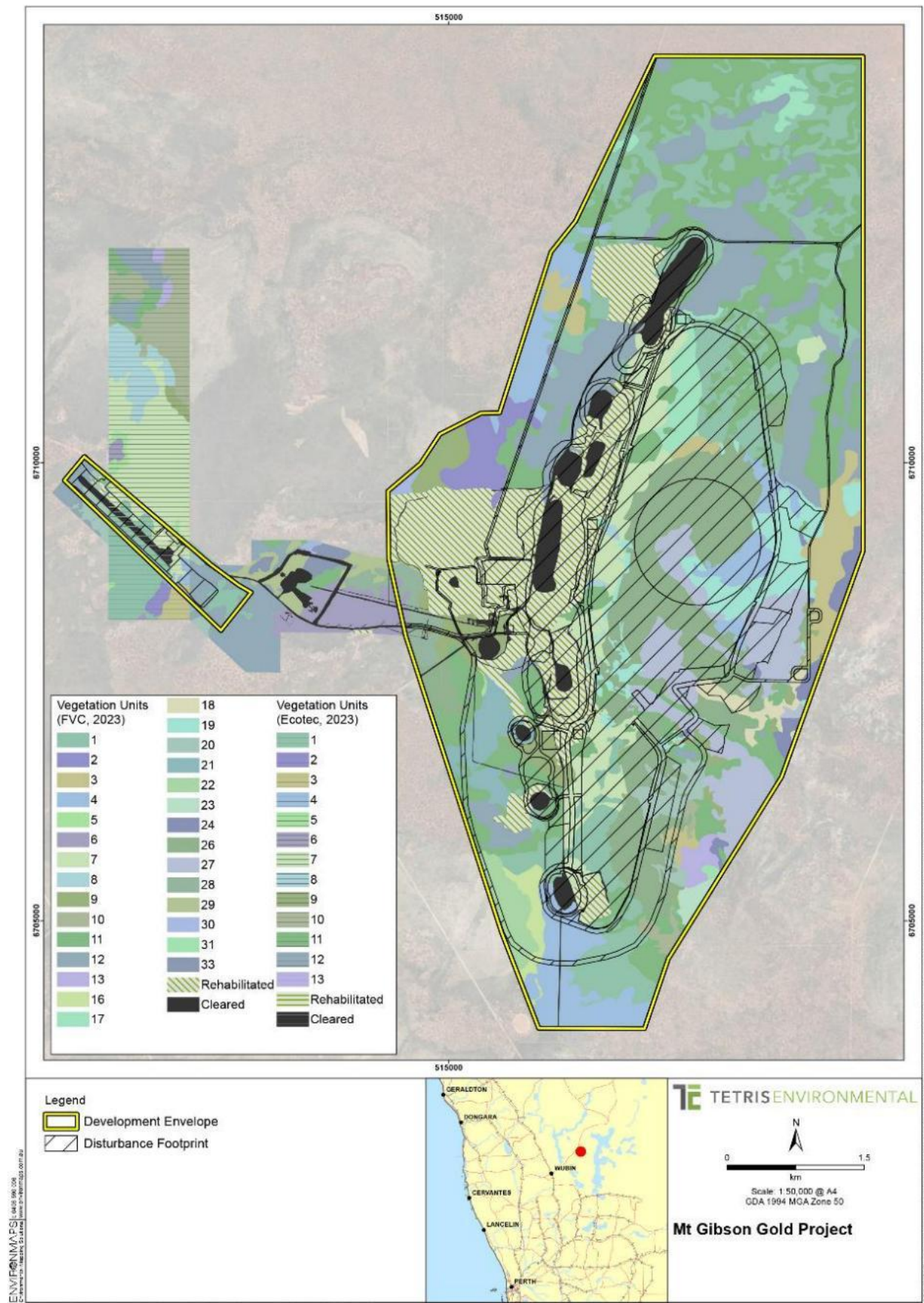


Figure 4: Vegetation Types within the Development Envelope

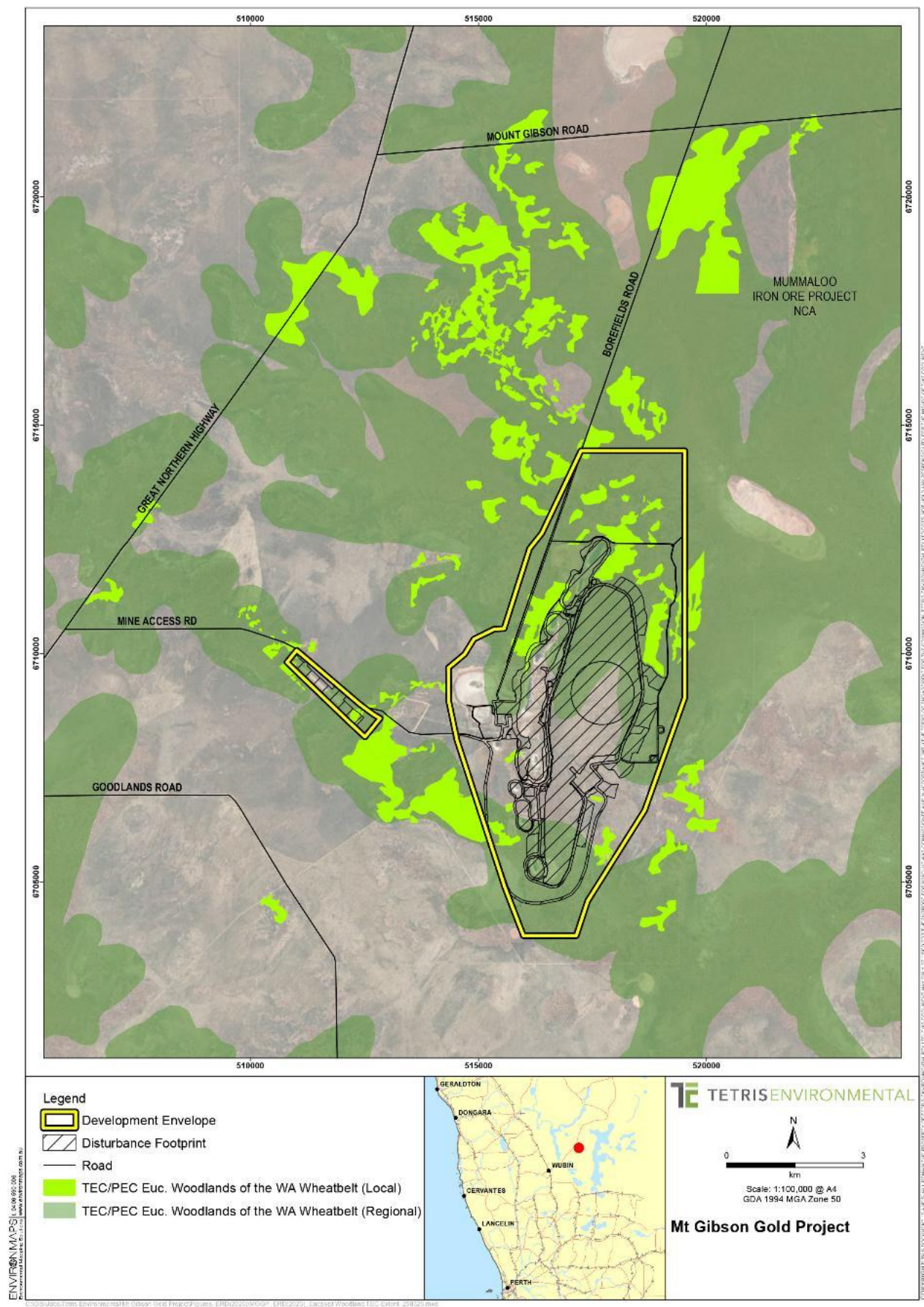


Figure 5: WA Wheatbelt Woodlands local extent

2.2 Terrestrial Fauna

Fauna surveys of the Development Envelope and surrounds recorded 90 vertebrate species; of which 24 were reptiles, 59 were birds and seven were mammals. An additional five species were recorded opportunistically outside in the wider Proposal (Biota 2022 and 2023; Bamford 2024). Three of these species are listed as MNES under the EPBC Act:

- *Leipoa ocellata* (Malleefowl)
- *Aphelocephala leucopsis* (Southern Whiteface)
- *Dasyurus geoffroii* (Chuditch)

Whilst not currently listed as a MNES, the Lake Goorly Shield-backed Trapdoor Spider (*Idiosoma kopejtkorum*) occurs within the Development Envelope. Detailed molecular analysis (Rix et. al., 2018) separated the EPBC listed (Endangered) *Idiosoma nigrum* in the Proposal area into *Idiosoma kopejtkorum* and *Idiosoma formosum*. Neither *I. kopejtkorum* nor *I. formosum* are currently listed under the EPBC Act, however, are listed as Endangered under State (WA) legislation (BC Act). Only *Idiosoma kopejtkorum* is known to occur in the Proposal. As advised by the Department of Climate Change, Energy, the Environment and Water (DCCEEW), any of the novel or split taxa derived from *Idiosoma nigrum* located at the Proposal are considered to be and are protected under the EPBC Act as the Shield-backed Trapdoor Spider (*Idiosoma nigrum*) until formal listing assessment has been completed.

2.2.1 *Leipoa ocellata* (Malleefowl)

Malleefowl (*Leipoa ocellata*) are listed as Threatened (Vulnerable) species under both State (BC Act) and Commonwealth legislation (EPBC Act 1999). A National Recovery Plan (DCCEEW, 2024b) is in place which describes the species' distribution, habitat and population, and identifies known threats to the species.

The Malleefowl is found in semi-arid to arid shrublands and low woodlands, especially those dominated by mallee and/or acacias. A sandy substrate and an abundance of leaf litter are required for breeding. Densities of the birds are generally greatest in areas of higher rainfall and on more fertile soils where habitats tend to be thicker and there is an abundance of food plants. Across Australia, Malleefowl have a huge potential range and occur on a variety of land tenures primarily comprising Aboriginal land, State and Federal Government land (in the form of national parks, reserves and unallocated Crown Land), pastoral leases and private land (DCCEEW, 2024b). As of December 2018, the estimated population size across Australia was 18,700 mature individuals (DCCEEW, 2018).

240 Malleefowl mounds have been recorded in the Development Envelope and surrounds (Figure 6), of which 71 (outside the Development Envelope) were identified by Lidar and have not yet been verified. Eight inactive mounds occur within the Disturbance Footprint.

The most recent survey in 2024 (Bamford 2024b) recorded 16 active mounds, with two of these occurring within the Disturbance Footprint (Figure 6). This indicates at least 16 pairs of Malleefowl in the local area, with an estimated density of occurrence at 0.09 pairs/1 km². Typical breeding density ranges from 0.04 to 5.5/km², but commonly around 1/km² (Bamford, 2024b).

The extent of Lidar mounds, including those that have not been verified as Malleefowl mounds, demonstrates that breeding by Malleefowl is widespread in the local area but is not evenly distributed. Bamford (2024a) noted that while Malleefowl may utilise all habitats within the survey area (for foraging, movement through the landscape, etc.), two VSAs appear to be strongly favoured for the construction of nest mounds: VSA 1 - *Acacia Shrubland* and VSA 2 - *Allocasuarina Shrubland*, particularly VSA 2 (Figure 7). Table 3 details the areas of each VSA recorded in the Development Envelope and surrounds

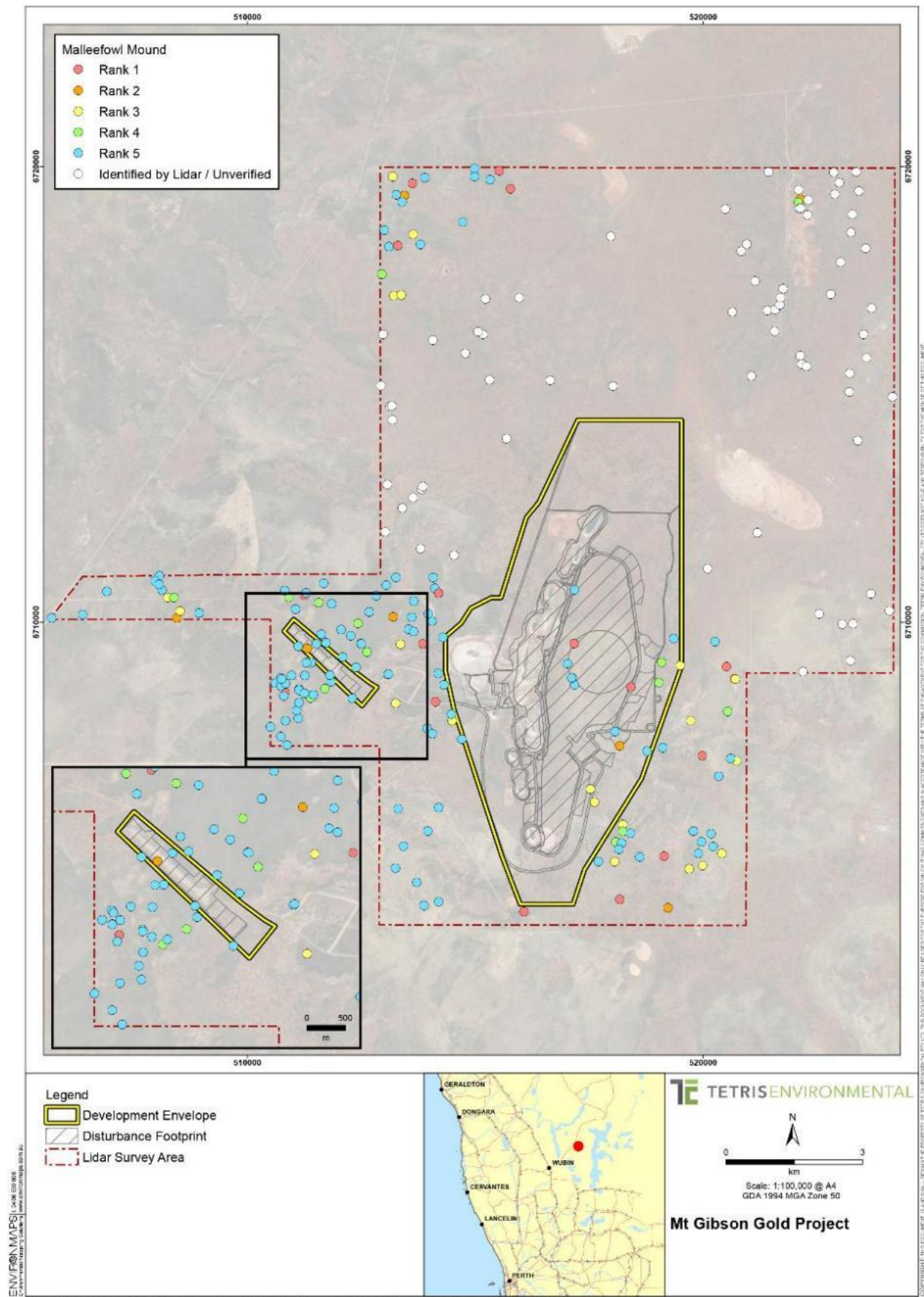


Figure 6: Malleefowl mounds recorded in the Development Envelope and surrounds

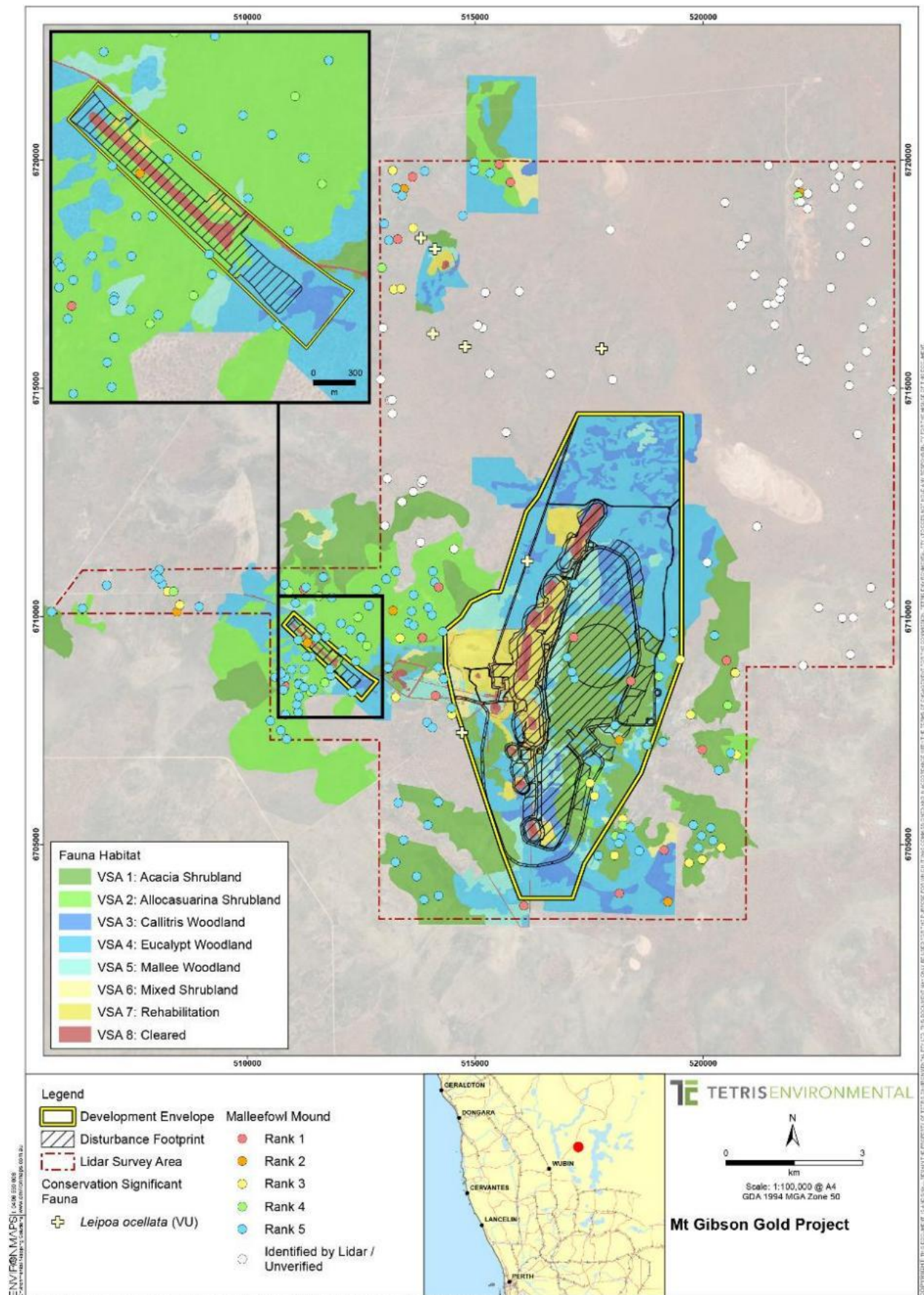


Figure 7: Malleefowl mounds and VSAs recorded in the Development Envelope and surrounds

Table 2.3: Mapped Vegetation and Substrate Associations

VSA	Total mapped (ha)	Total within Development Envelope (ha)	Total within Disturbance Footprint (ha)
VSA 1: Acacia shrubland	1,329	823.5	528.2
VSA 2: Allocasuarina shrubland	605	73.1	40.6
VSA 3: Callitris woodland	636	462.6	138.4
VSA 4: Eucalypt woodland	2,467	1,313.6	248.2
VSA 5: Mallee woodland	613	394.6	220.8
VSA 6: Mixed shrubland	124	32.8	0.6
VSA 7: Rehabilitation	477	75.1	35.6
VSA 8: Cleared	203	645.0	399.2
Total	6,454	3,820.2	1,611.6

2.2.2 *Aphelocephala leucopsis* (Southern Whiteface)

The Southern Whiteface is a small, stocky, thornbill-like bird with a brown dorsum, white belly, dark brown wings and a black tail with a narrow white tip. Adult birds are approximately 11.5 cm in length with a cream-coloured eye, grey legs and a stubby dark grey bill of finch-like appearance (DCCEEW, 2023a). This species is listed as Vulnerable under the EPBC Act, and in 2021, there was an estimated 477,000 mature individuals in the wild.

Southern whiteface occurs across most of mainland Australia south of the tropics, from the north-eastern edge of the Western Australian Wheatbelt east to the Great Dividing Range (DCCEEW, 2023a). Preferred habitat for this species is described broadly as open woodlands and shrublands in a range of landscape positions, from ranges to plains (Bamford, 2024a). In the Murchison and Yilgarn, it favours loam to clayey-loam flats that support scattered eucalypts and widely spaced mounded shrubs (including species of acacia, chenopods and saltbush), with open ground supporting low shrubs and herbs between (M. Bamford pers obs). The mixture of dense shrubs and open spaces supporting low shrubs and herbs appears to be important (Bamford, 2024a).

Surveys for the Southern Whiteface, including opportunistic observations, yielded six observations during 2024 (each observation a party of two to six birds), one within the Development Envelope and five outside (Figure 8). Additionally, during 2023, a flock of up to three birds was opportunistically observed on several occasions in the area surrounding the Mummalo Iron Ore Mine (approximately eight km to the north-west of the Proposal).

20

2.2.3 *Dasyurus geoffroii* (Chuditch)

The Chuditch (*Dasyurus geoffroii*) is listed as Vulnerable under the EPBC Act and is the largest carnivorous marsupial occurring in Western Australia. At maturity it is about the size of a small domestic cat, with males weighing around 1.3 kg and females around 0.9 kg. The Chuditch is distinguishable from other mammals by its brown hair with white spots, large, rounded ears, pointed muzzle and non-hopping gait. The tail is about three quarters of the head and body length (DEC, 2012).

Chuditch are opportunistic feeders, foraging primarily on the ground at night. They may climb trees to obtain prey or to escape from predators. In the arid zone, their diet consists of live mammals, carrion, lizards, frogs and invertebrates and will also scavenge for food scraps around campsites and consume the remains of animals killed on roads. Wild chuditch usually die before their fourth year; the average life span for established adults is two years (DEC, 2012).

This species previously occurred throughout arid and semi-arid Australia but is now restricted to south-west Western Australia (DCCEEW, 2024a). The population size is estimated to be up to 15,000 individuals (AWC, 2024). The major portion of the remaining natural populations occur in varying densities in jarrah (*Eucalyptus marginata*) forests and woodlands in the south-west corner of WA, and in woodlands, mallee shrublands and heaths along the south coast. There are also occasional records from drier woodland and mallee shrubland in the Wheatbelt and Goldfield Regions (DEC, 2012).

Until recently, the Chuditch was locally extinct in the Proposal region, but it has been the subject of a reintroduction programme by the Australian Wildlife Conservancy, with 44 individuals translocated to its privately owned ex-pastoral station known as the Mount Gibson Wildlife Sanctuary in 2023 (AWC, 2024). The Sanctuary is located east of the Proposal and covers over 130,000 ha, including a 7,800 ha predator free, fenced area.

Chuditch have a large home range, with females in the deeper south-west occupying 55-120 ha and males ranging over 400 ha or more. In semi-arid woodland Chuditch occurred at an average density of 0.039 individuals/km², with home ranges as small as 189 ha (a female) and as large as 2,125 ha (a male) (Bamford, 2025).

2.2.4 *Idiosoma kopejtkorum* (Lake Goorly Shield-backed Trapdoor Spider)

Idiosoma kopejtkorum is a member of the northern clypeatum-clade with a restricted distribution in the north-eastern Wheatbelt bioregion and is only found in a small area surrounding Lake Goorly (Rix et al. 2018), in Eucalypt Woodland and Acacia Shrubland. Current data shows the species has an estimated extent of occurrence of 4,930 km² and an area of occupancy of approximately 300 km² (Bennelongia 2025a).

Females spend their entire life in the burrow or within its proximity. Gene flow is therefore facilitated by male biased dispersal. The species becomes dormant during the drier months of the year from November to February (DSEWPC, 2013).

Bennelongia mapped 509 mygalomorph spider burrows across the Development Envelope and surrounds resulting from the reconnaissance and three rounds of survey (Bennelongia 2025a) and an additional 222 mygalomorph spider burrows during the EOO/AOO expansion survey (Bennelongia, 2025b). An additional 28 confirmed *Idiosoma kopejtkorum* burrows have been recorded outside the Development Envelope during exploration surveys (TEPL 2025a,b and c) and there are an additional 51 confirmed *Idiosoma kopejtkorum* burrows outside the Development Envelope from various other sources, particularly Rix et al. (Bennelongia, 2025b). This equates to a dataset of 810 mygalomorph spider burrows.

Following all surveys, Bennelongia (2026) refined the mygalomorph dataset to improve the categorisation of burrows and their probability of being *Idiosoma kopejtkorum*. Table 2.4 defines the categories used and Table 2.5 presents the results of all surveys.

There are 283 confirmed *Idiosoma kopejtkorum* burrows, including 250 recorded as active. Of these 250 confirmed active burrows, 42 occur within the Development Envelope, of which 20 occur within the Disturbance Footprint (Table 2.5).

Applying the precautionary principle, there are also 55 active burrows that are likely *Idiosoma kopejtkorum* within the Development Envelope, of which 18 occur within the Disturbance Footprint. Inactive burrows (other than those confirmed to be *Idiosoma kopejtkorum*) have been excluded from impact estimates as there is no certainty they were ever used by *Idiosoma kopejtkorum*.

Table 2.4: Definition of *Idiosoma kopejtkorum* burrow definitions

Category	Definition
Likelihood	
Confirmed (known) <i>Idiosoma kopejtkorum</i>	Specimens confirmed to be the target species by either burrow dig, non-lethal DNA sampling, endoscope, or have been referenced on the literature (Rix et al 2018; Biota 2021).
Likely <i>Idiosoma kopejtkorum</i>	Specimens without direct confirmation of being <i>Idiosoma kopejtkorum</i> but with a burrow morphology indicative of <i>Idiosoma kopejtkorum</i> and where endoscope inspection failed to confirm the specimen was <i>Idiosoma kopejtkorum</i> (i.e., no direct confirmation but all signs point to the specimen being true <i>Idiosoma kopejtkorum</i> , nearby confirmed records).
Probable <i>Idiosoma kopejtkorum</i>	Specimens where there are sufficient reasons to believe they belong to the genus <i>Idiosoma</i> , however, there is not enough data to suggest they are <i>Idiosoma kopejtkorum</i> (broken lids, empty/old burrows, twigline burrow not in moustache arrangement, no nearby confirmed records).
Confirmed <u>not</u> <i>Idiosoma kopejtkorum</i>	Specimens that burrow morphology was conclusive enough to suggest they did not belong to the genus <i>Idiosoma</i> or when burrows were inspected via burrow dig/endoscope and evidence suggested they belong to taxa other than <i>Idiosoma kopejtkorum</i> .
Activity	
Active	Burrow appears to be maintained/structurally sound, animal present
Inactive	Burrow appears to be old, damaged or occupied by another animal

Table 2.5: *Idiosoma kopejtkorum* burrow categories

Category	Active Burrows				Inactive Burrows				Total all burrows
	Outside DE ¹	Inside DE ¹	Total Active	Within DF ¹	Outside DE ¹	Inside DE ¹	Total Inactive	Within DF ¹	
Confirmed (known) <i>Idiosoma kopejtkorum</i>	208	42	250	20	31	2	33	0	283
Likely <i>Idiosoma kopejtkorum</i>	24	55	79	18	9	4	13	0	92
Probable <i>Idiosoma kopejtkorum</i>	64	61	125	22	34	19	53	7	178
Confirmed <u>not</u> <i>Idiosoma kopejtkorum</i>	83	65	148	46	39	70	109	25	257
Total all burrows	379	223	602	106	113	95	208	32	810

Molecular analysis and morphological inspection of reference specimens collected across different localities identified *Idiosoma kopejtkorum* and four other *Idiosoma* species in the area: the undescribed species *Idiosoma* 'MYG222' and *Idiosoma* 'BMYG238', the Coolgardie shield-backed trapdoor spider *Idiosoma intermedium*, and an undescribed species from the *nigrum*-group and part of the *Idiosoma formosum* complex, namely *Idiosoma* 'BMYG229' (*formosum*-complex).

In response to a request by DCCEEW to undertake an *Idiosoma kopejtkorum* population estimate, Bennelongia (2025a) calculated the potential burrow density per hectare within the Development Envelope and Disturbance Footprint using the following formulas:

Development Envelope

- 1) Probability burrows belong to *Idiosoma kopejtkorum*: $(30 \text{ } Idiosoma \text{ kopejtkorum} \text{ burrows} / 40 \text{ inspected burrows}) \times 100 = 75\%$ probability burrows within the Development Envelope belong to *Idiosoma kopejtkorum*.
- 2) *Idiosoma kopejtkorum* (listed as *Idiosoma nigrum*) burrow density: $(158 \text{ active (Likely or Probable) burrows} / 25.84 \text{ ha within Development Envelope}) \times 75\% = \text{density of } 4.6 \text{ } Idiosoma \text{ kopejtkorum} \text{ (listed as } Idiosoma \text{ nigrum) burrows per ha within the Development Envelope.}$

Disturbance Footprint

- 1) Probability burrows belong to *Idiosoma kopejtkorum* (listed as *Idiosoma nigrum*): $(20 \text{ } Idiosoma \text{ kopejtkorum} \text{ burrows} / 31 \text{ inspected burrows}) \times 100 = 65\%$ probability burrows within the Disturbance Footprint belonging to *Idiosoma kopejtkorum*.
- 2) *Idiosoma kopejtkorum* (listed as *Idiosoma nigrum*) burrow density: $(61 \text{ Likely or Probable active burrows} / 14.04 \text{ ha within Disturbance Footprint}) \times 65\% = \text{density of } 2.8 \text{ } Idiosoma \text{ kopejtkorum} \text{ burrows per ha within the Disturbance Footprint.}$

Using the above densities and hectares of preferred habitat (VSA 4 Eucalypt Woodland) within the Development Envelope (1,313.6 ha) and Disturbance Footprint (248.2 ha), there are an estimated:

- 6,042 individuals within the Development Envelope $(1,313.6 \text{ ha} \times 4.6 \text{ density} = 6,042)$
- 695 individuals within the Disturbance Footprint $(248.2 \text{ ha} \times 2.8 \text{ density} = 695)$

Applying the precautionary principle and estimating population size across all remnant habitats (VSA 1-6) of the Development Envelope (3,100.2 ha) and Disturbance Footprint (1,176.8 ha), noting the estimation does not take in to account habitat preferences and applies density equally across all remnant VSA's therefore the estimation will be exaggerated, there could be up to:

- 14,261 individuals within the Development Envelope $(3,100.2 \text{ ha} \times 4.6 \text{ density} = 14,261)$

3,295 individuals within the Disturbance Footprint $(1,176.8 \text{ ha} \times 2.8 \text{ density} = 3,295).$

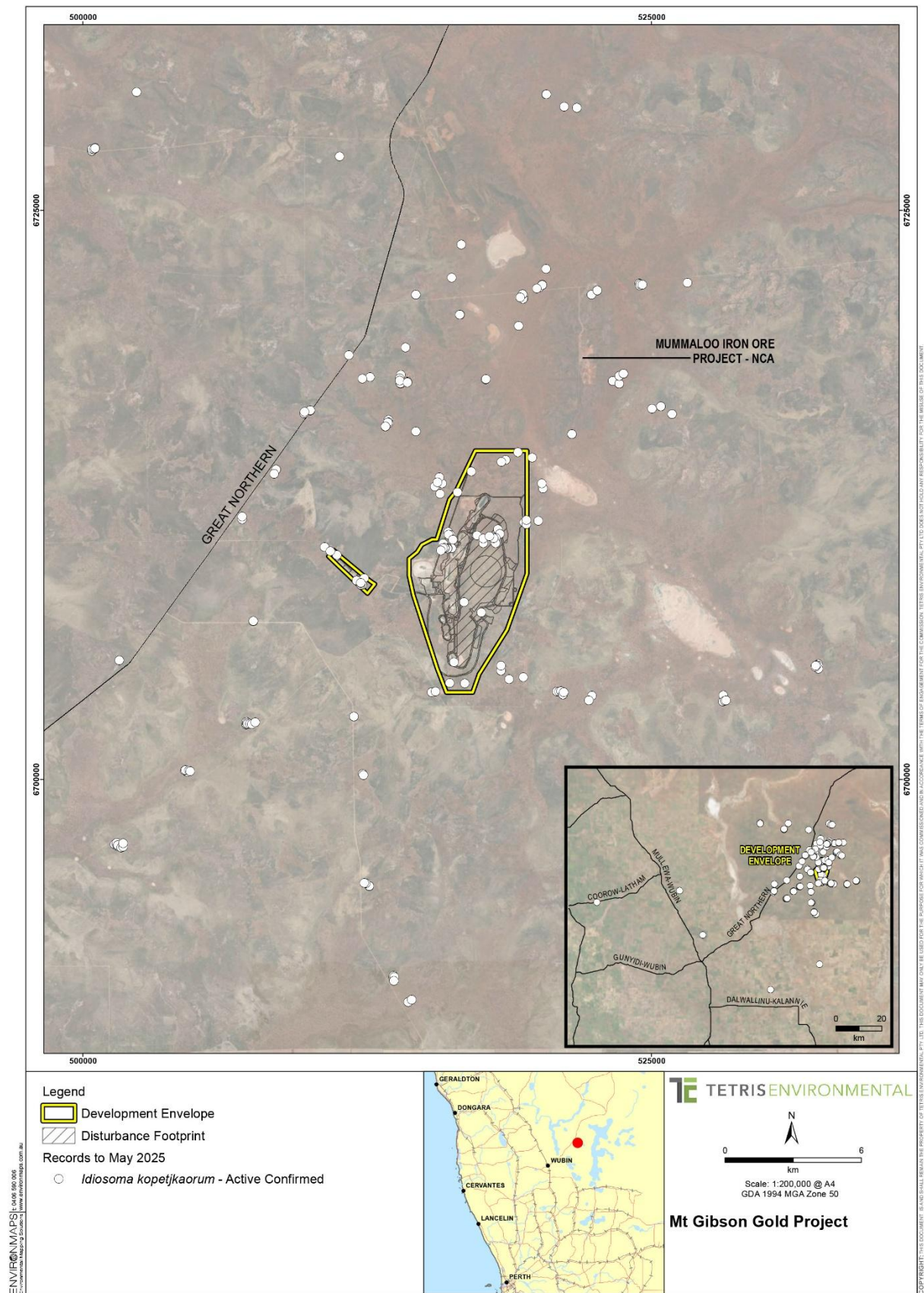
MGGP – Environmental Management Plan for MNES


Figure 9: Confirmed active *Idiosoma kopejkaorum* burrows within the Development Envelope and surrounds

3. POTENTIAL ENVIRONMENTAL IMPACTS AND RISKS

This section outlines the potential environmental impacts and risks to MNES identified in the Development Envelope and surrounds as a result of Proposal implementation. A risk assessment has been undertaken for each potential impact using the methodology outlined in the Environmental Management Plan Guidelines (DCCEE, 2024).

3.1 Potential impacts

3.1.1 Land clearing and degradation

Clearing of vegetation will be required for the development of the site. If not adequately managed, there is a risk that clearing could occur outside the approved Disturbance Footprint or impact MNES.

Land clearing for Proposal development will result in the direct removal of:

- 1,213 ha of native vegetation/fauna habitat, including 27.5 ha of WA Wheatbelt Woodlands
- Two active (in 2024) and eight inactive Malleefowl mounds
- 20 confirmed active and 18 likely active *Idiosoma kopejtkorum* burrows.

Land clearing also has the potential to fragment areas of native vegetation into separated smaller areas of vegetation. The establishment of vehicle access may result in minor fragmentation; however, this will be limited in extent and will not inhibit the natural processes of the existing community.

3.1.2 Weeds

Weeds have the potential to outcompete native species, reducing quantity of food or nesting material available to fauna. Movement of vehicles and machinery, ground disturbance, vegetation clearing, soil handling and storage can introduce, transport and promote establishment of weeds in the Proposal area. Weeds in the Proposal area predominately occur on previously disturbed land; however, are not currently degrading the structure and composition of native vegetation communities and are symptomatic of disturbance (i.e. from historical mine activities).

None of the weed species recorded in the Disturbance Footprint are Weeds of National Significance (Centre for Invasive Species Solutions, 2023) or Declared Pests on the Western Australian Organism List (DPIRD, 2023b). However, *Rumex vesicarius* (Ruby Dock) is an invasive species that can rapidly colonise disturbed areas. The seeds are salt tolerant and form a persistent seed bank within the soil that can last for many years (Schatral and Osborne, in FVC 2023).

Weeds such as *Rumex vesicarius*, *Cleretum papulosum*, *Carrichtera annua* and *Mesembryanthemum* spp., are known to occur in areas of the WA Wheatbelt Woodlands, particularly adjacent to disturbances where edge effects are apparent. Weeds are identified as a key threat to the TEC (Department of the Environment 2015).

3.1.3 Feral and invasive fauna

Feral predators, predominately cats and foxes, are found throughout the region and can be attracted to rubbish tips and domestic waste storage. This can lead to increased populations of feral predators and subsequent impact on native fauna in the area.

Grazing by introduced fauna such as rabbits has the potential to lower WA Wheatbelt Woodlands TEC resilience by grazing on new germinants and preventing growth of key species. When rabbit numbers are greater than 0.5 rabbits per hectare, the recruitment and regeneration of plants are inhibited, which may cause many species to become locally extinct (DEE, 2016).

The impact of introduced predators on the Malleefowl is uncertain, but in some situations the red fox and cat do have adverse impacts on populations. The risk to Malleefowl from invasive species is considered moderate (Bamford, 2024b). Camera monitoring by AWC at the Mount Gibson

Wildlife Sanctuary has recorded feral cats preying on adult Malleefowl, illustrating the predation threat to all Malleefowl and not just chicks or young adults, thought to be the main target for feral cats.

A possible minor impact could occur to Southern Whiteface from invasive species. Within the local area, the species is present (in suitable habitat) at densities comparable with other studies, which suggests the local population is stable and tolerating current densities of introduced predators. However, a decline in small, sedentary birds can occur around mine sites, apparently due to an increase in the abundance of predatory birds attracted to the site due to an increase in food supply (Bamford, 2024b).

Feral predators have the potential to have a major impact on Chuditch. The red fox has been implicated in the decline of Chuditch across much of its range, so the reintroduced population is likely to be vulnerable to this predator and to any increase in its abundance. Such changes in the abundance of introduced species can occur in association with disturbance during mining and an increase in food supply from inappropriately stored food waste (Bamford, 2024b).

Predators and invasive species are likely to affect spider populations mainly at a local scale; however, it is possible that invasive species will occur in undisturbed habitats outside of the Development Envelope. Bennelongia (2025a) determined that the potential impact of invasive species on *Idiosoma kopejtkorum* is moderate; given that any individuals remaining within the Development Envelope after habitat clearing has occurred may be at risk of being predated or outcompeted for resources by invasive species, which could also affect and reduce reproductive success in the local area.

3.1.4 Fauna mortality

The loss of native fauna individuals due to vegetation clearing and/or vehicle strikes will be unavoidable and may include individuals of conservation significance. However, the MNES fauna species recorded or considered likely to occur within the Proposal are mobile and can move to adjacent habitats. Fauna habitat types are common in the locality and exist contiguously with the Proposal, which will continue to provide habitat for displaced fauna species. The Proposal is not expected to result in significant fauna species populations' loss or long-term decline.

As *Idiosoma kopejtkorum* have sedentary habits and live in permanent burrows, land clearing activities such as bulldozing or vegetation removal often result in complete destruction of burrows, and given that spiders cannot flee from disturbances quickly, any individuals which are not directly killed by burrow destruction are likely to perish by other causes (predators, crushed by driving, desiccation). Therefore, in applying the precautionary principle, it is assumed that individuals within the Disturbance Footprint are unlikely to survive, however this will not have a long term impact on the survival of the species more broadly. Mortality during construction and life of mine is considered as a moderate impact based on the potential impacts to individuals that may remain after land clearing, and the potential risk of completely extirpating the local population, and potential risks of failed recolonisation after the mine has closed (Bennelongia, 2025a).

3.1.5 Noise and vibration

Excessive noise and/or vibrations can interrupt fauna communication or displace fauna. Noise modelling demonstrated that under worst-case meteorological conditions, there is regulatory compliance of assigned day and night LA10 noise levels at all sensitive receptors that fall under regulatory guidelines (GHD, 2023b).

Assessment of blasting noise and vibration levels indicated that levels are below the relevant blasting noise and vibration criteria.

Malleefowl at other mine sites suggest the species is very tolerant of noise, having been observed to continue working on a mound and returning to a mound <50m from a major haul road. One male continued to work a mound within <50m of clearing being carried out and continued to maintain that mound until the end of the season (Bamford, 2024b). The risk of impact to Malleefowl from noise is considered negligible.

There is no public information on the tolerance of Southern Whiteface to noise available; however, the species has been recorded foraging within 25 m of the Mummaloo accommodation camp and therefore would have been regularly exposed to noise, light, and movement of vehicles and people. The risk of impact to this species from noise is considered negligible (Bamford, 2024b).

The effect of disturbance (noise, vibration or lighting) on Chuditch is uncertain, however there are records of them entering suburban gardens (e.g. to prey on domestic chickens), suggesting the species is tolerant of disturbance (Bamford, 2024b).

Disturbances such as noise, and vibration may impact populations of *Idiosoma kopejtkorum* by affecting their biological processes. Given that prey capture by *Idiosoma* species is often based on vibration cues generated by the prey, noise pollution from heavy machinery or vehicles can generate vibrations or ambient noise that mask or confuse the natural important vibratory signals. Additionally, whilst unlikely, excessive vibration from machinery operation or vehicle traffic could cause sensory overload, creating misleading and/or missed hunting opportunities, or false defensive responses to non-threatening vibrations Bennelongia (2025a). It has been suggested that vibrations from vehicles and exploration drilling have the potential to affect nearby trapdoor spider populations (DCCEEW 2024b), however, no immediate or short term effects of vibrations on the survival of *Idiosoma nigrum* have been found (Bennelongia (2025a).

A three year *Idiosoma nigrum* monitoring program was undertaken at the Jack Hills and Weld Range in the Midwest region of WA (approximately 400 and 260 km north of the Proposal respectively) with the aim of determining whether spider populations are impacted by vibrations from exploration activities. The research program concluded vibrations were not a factor affecting survival of the *Idiosoma nigrum* (Phoenix, undated a & b). Additionally, the significant survey effort undertaken at the Proposal in 2024 for *Idiosoma* spp., recorded evidence of a reproducing female within 15 m of a drill pad and active burrows next to heavily used access tracks and other historical disturbances.

Bennelongia (2025a) concluded the potential impact of this component to be minor. At a local scale, impacts are expected to be moderate and affect those individuals in the Development Envelope but outside the Disturbance Footprint. At a regional scale, impacts are likely to be minor, with noise and vibration not expected to have impacts at a regional scale.

3.1.6 Lighting

Artificial lighting from infrastructure and machinery may impact fauna within the Proposal area during the construction and operational phases. Lighting has the potential to disrupt native fauna by attracting predators and making it easier to locate prey, delaying the onset of activity in nocturnal species and reducing the available time for foraging or commuting (DCCEEW, 2023b), or attracting nocturnal species to feed on food sources attracted to light (e.g. insects, or frogs and reptiles congregating to feed on the insects attracted to the light).

Based on observations of Malleefowl at other mine sites, the birds are very tolerant of light. They have been observed to continue working on a mound and subsequently returning to a mound <50m from a major haul road, with one male working a mound within <50m of clearing being carried out and continued to maintain that mound until the end of the season (Bamford, 2024b). The risk of impact to Malleefowl from lighting is considered negligible.

There is no information available on the tolerance of Southern Whiteface to disturbance (dust, noise, vibration or lighting), however a party foraging within 25 m of the Mummaloo accommodation camp was recorded in 2023; therefore these birds would have been regularly exposed to noise, light, and movement of vehicles and people. The risk of impact to this species from lighting is considered negligible (Bamford, 2024b).

The effect of disturbance (noise, vibration or lighting) on Chuditch is uncertain, however there are records of them entering suburban gardens (e.g. to prey on domestic chickens), suggesting the species is tolerant of disturbance (Bamford, 2024b). The risk of impact to this species from lighting is considered negligible (Bamford, 2024b).

Light pollution could affect *Idiosoma kopejtkorum* as they are nocturnal hunters that rely on darkness and camouflage (burrow) to effectively capture their prey. Artificial lighting can affect prey's natural (nocturnal) activity patterns, reducing the spiders' ability to catch prey. Additionally, it may increase the risk of predators within well-lit areas as wandering males and dispersing juveniles will become easier to detect under artificial lighting Bennelongia (2025a).

Bennelongia (2025a) concluded the potential impact for this component to be minor. At a local scale, impacts are expected to be moderate and affecting those individuals in the Development Envelope but outside the Disturbance Footprint. At a regional scale, impacts are likely to be minor, with light not expected to have impacts at a regional scale as lighting will not extend outside the Development Envelope.

3.1.7 Dust

Dust can settle on vegetation, resulting in deaths and alteration to the structure of fauna habitat. Dust deposition levels at the Proposal are predicted to be low. Matsuki et.al (2016) found no evidence of negative impacts on plant health due to dust deposition in semi-arid environments. Plants in semi-arid environments are exposed to dust naturally and may be less likely than plants in more mesic landscapes to suffer from short-term impacts of dust. These plants often have morphological adaptations that capture and retain moisture (Matsuki 2016).

Studies investigating the impacts of dust deposition on various species of Eucalyptus have shown that while some negative impacts on physiological processes may be observed, overall, they are resistant to high levels of dust deposition (GHD 2023a). Due to the low rates of deposition, dust is considered unlikely to cause damage to native vegetation, including the WA Wheatbelt Woodlands.

Uncontrolled dust emissions have the potential to affect *Idiosoma kopejtkorum* burrow construction and operation by clogging burrow entrances and trapdoors which the spiders rely on to ambush prey. It consequently affects the spider's ability to hunt and could force them to spend more energy on cleaning and maintaining duties. Dust could potentially seep into the burrow itself, clogging air passages and altering microclimate within the burrow. If dust enters the burrows, the spiders' respiratory structures (book lungs) could be compromised, particularly in juvenile stages.

Bennelongia (2025) concluded the potential impact for this component to be minor. At a local scale, impacts are expected to be moderate and affecting those individuals in the Development Envelope but outside the Disturbance Footprint. At a regional scale, impacts are likely to be minor, given dust can reach populations even outside of the Development Envelope if not managed.

3.1.8 Saline water use

The use of saline water for dust suppression has the potential to run off into drainage lines, resulting in a reduction in water quality, vegetation death, or changes in soil quality inhibiting vegetation growth.

Dust suppression with saline water on unsealed roads appears to have a limited impact on surrounding vegetation (Loch & Squires 2010), providing that saline water application is limited to the road surface and appropriate runoff capture measures (such as table drains) are used.

3.1.9 Altered fire regimes

Fire is a natural part of the Australian landscape, and most vegetation communities are adapted to periodic fires. However, changes in the natural fire regime may result in changes in the species composition and/or structure of the vegetation. Altered fire regimes can reduce suitable habitat available to fauna, including MNES.

Inappropriate fire regime has the potential to lower WA Wheatbelt Woodlands TEC resilience by destroying growth of germinants or preventing vegetation reaching maturity.

Fire may have the same medium term impact to Chuditch as habitat clearing due to its destructive nature (DEC, 2012). Broad scale, high intensity fires destroy den logs, protective cover and remove prey biomass (particularly large invertebrates) and homogenise large areas of habitat.

Large fires are a major threat to the conservation of Malleefowl and whole populations may suddenly be eliminated from vast areas that are burnt, and even if there are nearby sources for recolonisation, recovery in the burnt area to densities that occurred before the fire appears to be very slow, requiring 30 to 60 years (DCCEEW, 2024d).

The Proposal may increase the risk of bushfires through the use of machinery that may generate sparks, the use of flammable liquids and idling vehicles being present in areas of ground vegetation.

Alternatively, naturally occurring bushfires could be reduced in extent through the landscape if they are controlled by the Proposal to prevent loss of human life and infrastructure. In both circumstances, potential impacts to local biodiversity could include direct loss of fauna, flora and vegetation, prevention of natural ecosystem function (habitat loss, food sources) and germination of fire dependent flora species.

3.1.10 Changes to surface hydrology patterns and quality

Removal of and placement of infrastructure over catchment areas can alter runoff volumes, potentially impacting downstream environments such as sheet flow-dependent vegetation.

Placement of infrastructure or materials across drainage lines without diversion may result in ponding upstream and subsequent soil water logging resulting in vegetation deaths.

Leaching and deposition of material or runoff containing sediment and other contaminants have the potential to impact the quality of surface water and groundwater adversely. Impacts on the downstream environment may occur as a result.

Flooding of infrastructure due to inappropriate surface water management or failure of diversion structures or bunding leads to infrastructure damage or bund overtopping, and the discharge of stored chemicals and hydrocarbons has the potential to contaminate soil and cause vegetation death.

3.1.11 Ineffective rehabilitation

Soil compaction during clearing and infrastructure development in the construction and operation phases, has potential to limit rehabilitation success such as by restricting root growth of flora, decreasing water infiltration or increasing runoff and erosion. This is considered a low impact as standard rehabilitation practices, including ripping to break up compacted soil, is undertaken as required by the Mining Act.

Poor planning and ineffective methods of conducting rehabilitation work can result in unstable, poorly performing landforms, including poor vegetation cover which can subsequently result in slope instability and ongoing erosion issues. Additionally, inappropriate storage of topsoil can result in sterilisation of the soil and subsequent poor performance in rehabilitation.

4. ENVIRONMENTAL MANAGEMENT MEASURES

The Proponent will implement various measures to avoid, mitigate and manage direct and indirect impacts on MNES. These measures may be specific to phases of the Proposal or will be implemented over the life of the Proposal

4.1 Environmental Management Actions

Environmental management actions, performance targets and monitoring for each potential impact are outlined in Table 4. The responsibilities of personnel ensuring the implementation of these controls are described in Section 6.

Table 4.1: Environmental management actions, performance targets and monitoring

Potential impact	Relevant MNES	Proposal phase	Management actions	Timeframe for implementation	Performance outcome	Monitoring
Habitat loss and fragmentation Unauthorised clearing of vegetation outside approved boundaries results in impact to MNES or their habitat	- Eucalypt Woodland TEC <i>Eremophila viscida</i> - Malleefowl - Chuditch <i>Idiosoma kopejtkorum</i> - Southern Whiteface	Construction Operation	- Clearing kept to the minimum required for the Proposal (maximum Disturbance Footprint of 1,612 ha) - Clearing undertaken progressively and only when necessary - Site Disturbance Permit system with strict survey controls and sign off by the Registered Manager prior to clearing - GIS records and demarcation of MNES outside the Disturbance Footprint and inside the Development Envelope. - Induction and specific training where necessary highlights the importance of clearing protocols - Demarcation of <i>Eremophila viscida</i> exclusion area	Ongoing from Year 1	- No clearing of vegetation occurs outside the approved areas of disturbance. - No exceedance of approved area of disturbance. - Clearing is undertaken in accordance with internal Site Disturbance Permits. - The induction program will be completed for all onsite personnel and contractors. - All clearing personnel have signed off that they have read and understood the Site Disturbance Permit conditions prior to clearing.	- Pre and post clearing survey. - Quarterly drone aerial imagery. - Quarterly reconciliation of the Site Disturbance Permits issued vs. the actual area of disturbance.
Weeds Spread of existing weeds, or introduction of new weeds results in adverse impacts to WA Wheatbelt Woodlands or MNES fauna habitat	- Eucalypt Woodland TEC <i>Eremophila viscida</i>	Construction Operation Decommissioning	- Machinery and equipment are cleaned prior to being mobilised to site and inspected on arrival (not permitted to work until appropriately cleaned) - Weed surveys and control using herbicide or manual removal. - Annual targeted control <i>Rumex vesicarius</i> (Ruby Dock), already present in the Development Envelope. - Vegetation and topsoil stripped from areas containing Ruby Dock stockpiled separately, treated for physical signs of weed growth before being reused in rehabilitation and closely monitored after use in rehabilitation with residual weeds treated as appropriate.	Ongoing from Year 1	- Machinery and equipment have passed a weed & hygiene inspection - No increase in diversity of Declared Plants or Weeds of National Significance. - No increase in the distribution of existing weeds at site from baseline data. - No increase in the distribution of Ruby Dock at site from baseline data.	Annual weed survey.
Introduced fauna Feral predators, (predominately cats and foxes which are found throughout the region) are attracted to Proposal rubbish and waste, leading to increased populations of the feral predators and subsequent impact to MNES fauna.	- Malleefowl - Chuditch <i>Idiosoma kopejtkorum</i> - Southern Whiteface	Construction Operation	- Putrescible landfill managed in accordance with the <i>Environmental Protection (Rural Landfill) Regulations 2002</i> - Domestic waste securely stored to minimise access by feral animals. - Feral fauna eradication programs undertaken as required using licenced service providers. - Implement animal sightings register and encourage site personnel to report sightings of feral fauna (cats, dogs, foxes) - Ongoing funding provided to key regional NGO stakeholders (e.g. AWC) for regional feral animal management	Ongoing from Year 1	- No reduction in Malleefowl population size (number of active mounds as an indicator) as a result of Proposal implementation. - No clearing of active Malleefowl mounds during breeding season. - No reduction in Chuditch population size (radio-tracked individuals as an indicator) as a result of Proposal implementation	- Annual Malleefowl mound monitoring of Rank 1 to Rank 3 mounds to determine activity - Annual motion camera monitoring of active Malleefowl mounds - Annual feral predator camera trap assessments - Annual review of AWC Chuditch radio-tracking data - Environmental Personnel will monitor and record reported observations of feral animals
Fauna mortality Increased road traffic, open trenches or vegetation clearing, results in mortality of MNES fauna.	- Malleefowl - Chuditch <i>Idiosoma kopejtkorum</i>	Construction Operation	- Implement an animal sightings register and encourage site personnel to report sightings of MNES fauna. - All incidences of harm to MNES fauna are investigated and measures adopted to prevent reoccurrence of similar events - Suitably trained personnel on site at to handle injured fauna	Ongoing from Year 1	- No reduction in Malleefowl population size (number of active mounds as an indicator) as a result of Proposal implementation. - No active Malleefowl mounds cleared during breeding season.	- Annual Malleefowl mound monitoring of Rank 1 to Rank 3 mounds to determine activity - Pre clearing survey (as required during breeding season)

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Potential impact	Relevant MNES	Proposal phase	Management actions	Timeframe for implementation	Performance outcome	Monitoring
	Southern Whiteface		- Fauna inspections for MNES undertaken in areas immediately prior to clearing commencing. Should any MNES fauna be identified, clearing activities will be postponed until the fauna have moved (or been moved by suitably qualified personnel) from the area. - No Malleefowl mounds cleared during breeding season without prior assessment of mound activity (in accordance with the National Malleefowl Monitoring Manual (National Malleefowl Recovery Team 2020)). Active mounds (as determined by the National Malleefowl Monitoring Manual) will not be cleared during Malleefowl breeding season. - Where the mine development schedule permits, clearing adjacent to likely or probable active burrows will be avoided during <i>Idiosoma</i> reproductive season (Sept.-Nov) to reduce impact on active populations and mortality of wandering males or settling juveniles - Prior to clearing a local area of Disturbance Footprint, AWC radio tracking records will be reviewed to determine confirmed Chuditch denning habitat/ possible Chuditch presence within clearing area. If found to be present, particularly during the breeding season (roughly August to November/December), individual tree hollows will be checked, and clearing of these will be supervised by a zoologist. - All excavations or trenches >1 m deep will be secured against animal entry or have egress provided - Progressive clearing in one direction to allow fauna to escape - All road kill to be moved a minimum of 20 m from the road to reduce the risk of further mortality on carrion species feeding on road kill. - Potential fauna water resources minimised and permanent water sources contained through fencing where appropriate. - Induction and specific training where necessary highlights the importance of clearing protocols.		- No reduction in Chuditch population size (radio-tracked individuals as an indicator) as a result of Proposal implementation - Injury or death of MNES or other fauna is minimised or avoided - No evidence of MNES fauna being trapped within the mining Proposal area	- Annual review of AWC Chuditch radio-tracking data - Environmental Personnel will monitor and record total number of vehicle strikes - Environmental Personnel will monitor and report on incidents of fauna entrapment - Field monitoring for MNES presence within the Development Envelope
Light Excessive light interrupts MNES fauna communication or displaces fauna of MNES	- Malleefowl - Chuditch <i>Idiosoma kopejtkorum</i> - Southern Whiteface	Construction Operation	Implement best practice lighting design in accordance with the National Light Pollution Guidelines for Wildlife (DCCEEW, 2023b)	Ongoing from Year 1 until the end of the operation phase	- Light spill is limited in accordance with the National Light Pollution Guidelines for Wildlife (DCCEEW, 2023b) - Lighting will be checked quarterly for compliance with National Light Pollution Guidelines for Wildlife (DCCEEW, 2023b)	Report observations of fauna attraction to artificial lighting. Environmental Personnel to record all reports and investigate
Dust Dust emanating from mining related activities causes adverse impact to adjacent vegetation, including to MNES flora or vegetation.	- Eucalypt Woodland TEC <i>Eremophila viscida</i> <i>Idiosoma kopejtkorum</i> - Southern Whiteface	Construction Operation	- Dust suppression using water trucks will be continuous on unsealed roads, in the pit and other open areas. - Dust suppression using water trucks undertaken on the ROM and during materials handling activities. Strict traffic management rules implemented (e.g., keeping to designated tracks, maximum vehicle speed limit of 60 km/hr). - Disturbed areas progressively rehabilitated as they become available and are no longer required for ongoing operations. - In excessively windy conditions when dust emissions cannot be adequately controlled, operations adjacent to MNES (e.g. TEC,	Ongoing from Year 1 until the end of the operation phase	- No reduction in patch size and quality of the WA Wheatbelt Woodlands TEC outside the Development Envelope as a result of Proposal implementation. - No reduction in quality fauna habitat outside the Development Envelope as a result of Proposal implementation. - No reduction in the quality and quantity of <i>Eremophila viscida</i>	- Bi-annual passive dust sampling - Annual vegetation health monitoring - Quarterly vegetation/flora health monitoring of <i>Eremophila viscida</i> critical habitat - Bi-annual drone survey/multispectral imaging

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Potential impact	Relevant MNES	Proposal phase	Management actions	Timeframe for implementation	Performance outcome	Monitoring
			<i>Eremophila critical</i> habitat) will be postponed until dust suppression can abate dust emissions.		populations or habitat outside the Development Envelope as a result of Proposal implementation.	
Contamination of soil or water resources Saline water enters drainage lines, resulting in MNES flora or vegetation death, or changes in soil quality inhibiting MNES vegetation growth Spills of hydrocarbons or chemicals contaminate soils or water resources	- Eucalypt Woodland TEC <i>Eremophila viscida</i> - Malleefowl - Chuditch <i>Idiosoma kopejtkorum</i> - Southern Whiteface	Construction Operation	Saline Water - Unsealed roads will be designed and constructed to minimise saline water runoff into undisturbed areas. - Tailings and saline water pipelines occurring adjacent to native remnant vegetation will be located within v-drains/bunded corridors and inspected daily. - Water trucks will be fitted with dribble bars to minimise spray drift near vegetation. Hydrocarbon Spills - Spills will be contained and cleaned up promptly and disposed of correctly (e.g., to the approved bioremediation facility). Equipment for containing and cleaning up spills will be provided in readily accessible areas where the risk of spills is high. Spill training will be provided to all relevant personnel. - Control of contamination will be managed through other State environmental approvals including a Mining Proposal (under the Mining Act) and Works Approval (under the EP Act Part V). - Hydrocarbons and chemical reagents will be stored in accordance with <i>Dangerous Goods Safety Act 2004</i> to ensure the safety of personnel and protection of the environment.	Saline Water Ongoing from Year 1 until end of the operation phase Hydrocarbon Spills Ongoing from Year 1 until end of the decommissioning phase	Saline Water - No reduction in patch size and quality of the WA Wheatbelt Woodlands TEC outside the Development Envelope as a result of Proposal implementation. - No reduction in quality fauna habitat outside the Development Envelope as a result of Proposal implementation. - No reduction in the quality and quantity of <i>Eremophila viscida</i> populations or habitat outside the Development Envelope as a result of Proposal implementation. Hydrocarbon Spills - All spills are cleaned up and remediation is carried out in accordance with the site procedure. - No contamination occurs outside approved disturbance areas. - No contamination remains post-closure.	Saline Water - Annual vegetation health monitoring - Bi-annual drone survey/multispectral imaging - Monthly vegetation/flora health monitoring Hydrocarbon Spills - Quarterly review and analysis of spill reporting data, including confirmation of appropriate clean up as soon as practicable. - Weekly inspections of work areas to ensure spills and contaminated soil are addressed.
Fire Hot work use or vehicle movement results in unplanned fires, altering natural fire regime and impacting MNES or habitat.	- Eucalypt Woodland TEC <i>Eremophila viscida</i> - Malleefowl - Chuditch <i>Idiosoma kopejtkorum</i> - Southern Whiteface	Construction Operation	- Appropriate fire suppression appliances and equipment will be maintained on site and employees trained in their use. - Flammable materials will be stored onsite and handled in accordance with the applicable safety standards - During the bushfire season, the fire danger status will be monitored daily through the State managed (DFES) website. - For “hot-work” activities, a risk assessment will be completed considering forecast weather, fire hazard ratings and site conditions. - Access tracks and fencelines used as firebreaks within the Proposal regularly maintained. - Smoking only be permitted in designated areas.	Ongoing from Year 1 until the end of the operation phase	- No uncontrolled or unplanned fires occur. - Vegetation fuel loads are maintained at sustainable levels. - Flammable materials are stored onsite in accordance with the applicable safety standards.	- Bi-annual drone survey/multispectral imaging - Environmental Personnel will monitor and record all fire events reported - Field monitoring, undertaken by Environmental Personnel or Staff and contractors during operations
Surface water quality/quantity Mining activity and infrastructure placement results in changes to surface hydrology patterns and quality, subsequently resulting in indirect loss of MNES and/or habitat.	- Eucalypt Woodland TEC <i>Eremophila viscida</i> - Malleefowl	All phases	- Existing surface water flow regimes maintained with the installation and maintenance of surface water/drainage infrastructure. - Drainage management infrastructure will be installed to maintain surface water flows across the Proposal.	Ongoing from Year 1 until the end of the operation phase	No reduction in the health of vegetation associated with downstream drainage channels, as a result of proposal implementation.	- Annual vegetation health monitoring - Quarterly vegetation/flora health monitoring of <i>Eremophila viscida</i> critical habitat

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Potential impact	Relevant MNES	Proposal phase	Management actions	Timeframe for implementation	Performance outcome	Monitoring
	- Chuditch <i>Idiosoma kopejtkorum</i> - Southern Whiteface		In the event of care and maintenance, water management structures will be inspected and remediated prior to and during the cessation of work.		- No evidence of sediment deposition outside of the Disturbance Footprint. - Drainage management infrastructure inspected following heavy rain events to identify and remediate any sedimentation built up within the diversions and/or erosion damage.	- Bi-annual drone survey/multispectral imaging - Surface water monitoring utilising data loggers to capture baseline and operational flows (periodically after rainfall events)
Ineffective rehabilitation Poor planning and ineffective methods of conducting rehabilitation work can result in unstable, poorly performing landforms, including poor vegetation cover which can subsequently result in slope instability and ongoing erosion issues. Inappropriate storage of topsoil can result in sterilisation of the soil and subsequent poor performance in rehabilitation. Habitat values are not returned following rehabilitation	- Eucalypt Woodland TEC <i>Eremophila viscida</i> - Malleefowl - Chuditch <i>Idiosoma kopejtkorum</i> - Southern Whiteface	All phases	- Undertake rehabilitation, decommissioning, monitoring and contingencies as described in the approved MCP, submitted per requirements of the State legislated Mining Act. - Rehabilitation will be undertaken progressively - Topsoil will not be stripped or handled in wet or dusty conditions - Store topsoil in stockpiles of no more than 2m vertical height to reduce the loss of seed viability and biotic activity - Stockpiles located away from drainage lines and active areas - Clearly signpost stockpiles to deter traffic and inadvertent removal - Any seeding or planting undertaken during rehabilitation will use species of local provenance	Ongoing from Year 1	- Rehabilitation activities undertaken as described in the approved MCP, submitted per requirements of the State legislated Mining Act. - Rehabilitation completion criteria have been met as described in the approved MCP, submitted per requirements of the State legislated Mining Act. - Stockpiles monitored annually for weeds and control measures implemented	Rehabilitation monitoring undertaken as described in the approved MCP, submitted per requirements of the State legislated Mining Act

4.2 Corrective Actions

Table 5 outlines the corrective actions for occurrences that involve or may lead to harm of MNES.

Initial environmental incident/ non-compliance notifications to relevant authorities will occur within 24 hours of detection of the incident/non-compliance.

An internal investigation will be completed within a target timeframe of one month of detection of the incident/non-compliance, however this may vary depending on the nature of the incident. The results of the investigation (including corrective actions) will be provided to relevant authorities.

Table 4.2: Corrective actions for occurrences involving MNES.

Category	Scenario	Corrective action
Habitat loss and fragmentation	Vegetation clearing extends beyond the approved Proposal footprint.	- Stop work at that location - Physically mark the intended clearing extent - Immediately stabilise disturbed soils - Rehabilitate the disturbed area - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
	Vegetation clearing does not proceed progressively or beyond that immediately required	Adjust vegetation clearing processes and timing to align with the proposed sequential and progressive clearing practices.
	Clearing not undertaken in accordance with approved internal Site Disturbance Permit	- Stop work at that location - Review unauthorised clearing against approved Disturbance Footprint - If clearing occurs outside the approved Disturbance Footprint – rehabilitate the disturbed area and report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
Weeds	Machinery or equipment commences work prior to site inspection for cleanliness	- Stop work at that location - Machinery moved to designated area (e.g. washpad) for cleaning - Undertake quarterly monitoring for one year at all locations machinery has worked, for presence of weeds
	Weed survey determines increase in diversity of Declared Plants/ Weeds National Significance, or increase in distribution from baseline data	Increase weed control frequency/intensity
Introduced fauna	Malleefowl mound monitoring indicates a reduction in population size not attributable to natural factors (e.g. climatic conditions)	- Commence internal investigation - Increase feral predator eradication frequency/intensity
	AWC Chuditch monitoring data indicates a reduction in population size not attributable to natural factors (e.g. climatic conditions), or identifies deaths within the Disturbance Footprint	- Commence internal investigation in collaboration with AWC - Increase feral predator eradication frequency/intensity, review site clearing procedures and speed limits as relevant to cause of decline

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Category	Scenario	Corrective action
Fauna mortality	Malleefowl mound monitoring indicates a reduction in population size not attributable to natural factors (e.g. climatic conditions)	- Commence internal investigation - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Increase feral predator eradication frequency/intensity if required
	Active malleefowl mounds cleared during breeding season	- Stop work at that location - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
	AWC Chuditch monitoring data indicates a reduction in population size not attributable to natural factors (e.g. climatic conditions), or identifies deaths within the Disturbance Footprint	- Commence internal investigation in collaboration with AWC - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Increase feral predator eradication frequency/intensity, review site clearing procedures and speed limits as relevant to cause of decline
	Fauna are injured or killed during vegetation clearing or by vehicles	- Personnel trained in fauna handling assesses animal and arranges transfer to a wildlife carer or vet - Dead MNES fauna are collected and preserved before donating to approved collectors (e.g. WA Museum) - Roadkill too damaged for preservation will be moved at least 20 m off the road - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
	MNES fauna being trapped within the mining Proposal area.	An investigation will be undertaken to determine the cause of MNES fauna being trapped in the mining area.
Light, noise and vibration	Blasting and vibration levels are above regulatory noise and vibration criteria Noise levels do not comply with regulatory requirements of assigned day and night LA10 noise levels outside the Disturbance Footprint.	- Stop work at that location - Undertake maintenance of equipment or machinery, or revise construction method to comply with regulatory requirements
	Lighting does not comply with the National Light Pollution Guidelines for Wildlife (DCCEE, 2023b)	Redirect lights or install light shields as appropriate to limit light to required areas
Dust	Monitoring identifies a reduction in quality of fauna habitat outside the Development Envelope not attributable to natural factors (e.g. climatic conditions)	- Increase use of dust suppression in that area - Review/reduce speed limits in that area - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
	Monitoring identifies a reduction in quality or patch size of WA Wheatbelt Woodland TEC (e.g. climatic conditions)	
	Monitoring identifies a reduction in quality or quantity of <i>Eremophila viscida</i>	

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Category	Scenario	Corrective action
	populations or critical habitat outside the Development Envelope	
	Rehabilitation is not undertaken progressively	- Stabilise disturbed soils and increase weed control effort within rehabilitation areas in the short term. - Increase rehabilitation effort to meet the schedule.
Contamination of soil or water resources	Saline or tailings water enters undisturbed areas through pipeline failure	- Immediately turn off pipeline and contain spill - Implement spill response procedure - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
	Saline water used for dust suppression runs off into undisturbed areas	- Stop work in that location - Contain spill to approved disturbance areas - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
	Spills not cleaned up and remediated	- Immediately clean up the spill and remediate the area - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
	Contamination occurs outside approved areas of disturbance	- Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Development and implement a remediation plan for areas of contamination.
Fire	Fires from the Proposal reach vegetation outside the Development Envelope	- Small fires – extinguish using onsite firefighting equipment in accordance with safety procedures. - Larger fires – initiate emergency response procedures and engage external emergency services. - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
Surface water quality/quantity	Monitoring identifies a reduction in health of vegetation associated with downstream drainage channels	- Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence
Ineffective rehabilitation	Monitoring identifies rehabilitation is not progressing towards completion criteria	- Review rehabilitation activities against the design/schedule in the approved MCP. - If necessary, undertake rectification works of rehabilitated areas (e.g. erosion control, additional seeding/planting/weed control) - Rehabilitation monitoring and remedial actions (as required) will continue until agreed completion criteria are met

5. OBJECTIVES AND OUTCOMES

Environmental outcomes for the Proposal and MNES are detailed in Table 6 and have been developed in consideration of the outcome-based conditions policy (DoE, 2016a) and outcome-based conditions guidance (DoE, 2016b). A performance audit against achieving the target outcomes will be undertaken annually.

Table 5.1: Target Environmental Outcomes

Environmental factor	Risk pathway	Proposal Phase	Target outcome	Performance criteria	Monitoring
WA Wheatbelt Woodlands TEC Fauna habitat <i>Eremophila viscida</i>	Unauthorised clearing of vegetation outside approved boundaries resulting in impact to flora, ecosystems and/or fauna habitat.	Construction Operation	Progressive removal of no more than 1,213 ha of native vegetation within the Development Envelope. No impact to vegetation and habitat outside approved areas of disturbance.	No clearing of vegetation occurs outside the approved areas of disturbance. No exceedance of approved area of disturbance. Clearing is undertaken in accordance with internal Site Disturbance Permits.	Pre and post clearing survey Quarterly drone aerial imagery Quarterly reconciliation of the Site Disturbance Permits issued vs. the actual area of disturbance.
	Weed species result in adverse impacts to vegetation	All phases	The Proposal is implemented in such a way as to prevent the introduction of Declared Plants (as listed under the <i>BAM Act</i>) or Weeds of National Significance not previously recorded at the site. The spread of existing introduced flora species is prevented.	No increase in diversity of Declared Plants or Weeds of National Significance. No increase in the distribution of existing weeds at site from baseline data.	Annual weed survey.
		All phases	Existing Ruby Dock populations are adequately controlled to prevent the spread and colonisation in proposed clearing and rehabilitated surfaces.	No increase in the distribution of Ruby Dock at site from baseline data.	
	Mining activity and infrastructure placement results in a reduction of downstream surface water volume Surface water flows transport sediment and/or contaminants outside the Disturbance Footprint, resulting in an adverse impact on surface water quality.	All phases	Natural surface flows are maintained to prevent upstream and downstream impacts to flora and vegetation. No sediment or contaminant deposition occurs outside the approved areas of disturbance.	No reduction in the health of vegetation associated with downstream drainage channels, as a result of proposal implementation. No evidence of sediment deposition outside of the Disturbance Footprint.	Annual vegetation health monitoring Bi-annual drone survey/multispectral imaging Surface water monitoring utilising data loggers to capture baseline and operational flows (periodically after rainfall events)
	Hot work use of vehicle movement results in unplanned fires, altering natural fire regime and impacting flora, vegetation, fauna and/or fauna habitat.	Construction Operation	Vegetation outside the Development Envelope remains unburnt as a result of proposal implementation.	No fires from the Proposal reach vegetation outside the Development Envelope.	Bi-annual drone survey/multispectral imaging
	Dust emanating from mining-related activities causes adverse impacts on adjacent vegetation, including the conservation of significant flora or vegetation.	Construction Operation	Patch size and quality of the WA Wheatbelt Woodlands TEC outside the Development Envelope is maintained.	No reduction in patch size and quality of the WA Wheatbelt Woodlands TEC outside the Development Envelope as a result of Proposal implementation.	Bi-annual passive dust sampling Annual vegetation health monitoring Bi-annual drone survey/multispectral imaging
			The Proposal is implemented in such a way as to prevent the degradation of fauna habitat from dust deposition.	No reduction in quality fauna habitat outside the Development Envelope as a result of Proposal implementation.	
			Quality and quantity of <i>Eremophila viscida</i> habitat inside the Development Envelope is maintained.	No reduction in the quality and quantity of <i>Eremophila viscida</i> populations or habitat inside the Development Envelope as a result of Proposal implementation.	Bi-annual passive dust sampling Quarterly vegetation/flora health monitoring of <i>Eremophila viscida</i> critical habitat

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Environmental factor	Risk pathway	Proposal Phase	Target outcome	Performance criteria	Monitoring
Malleefowl	Increased road traffic or vegetation clearing for the Proposal results in Malleefowl mortality.	Construction Operation	Implementation of the Proposal such that impacts to conservation significant fauna does not increase their conservation status or result in a significant reduction in population.	No reduction in Malleefowl population size (number of active mounds as an indicator) as a result of Proposal implementation.	Annual Malleefowl mound monitoring of Rank 1 to Rank 3 mounds to determine activity
				No clearing of active Malleefowl mounds during breeding season.	Pre clearing survey (as required during breeding season)
	Increased feral predator numbers/activity results in predation of Malleefowl	Construction Operation	The Proposal is implemented in such a way as to prevent the increase of feral predators (to Malleefowl) in the Development Envelope.	No increase in feral predator visitation to active Malleefowl mounds during breeding season compared with baseline data No increase in feral fauna populations compared with baseline data	Annual motion camera monitoring of active Malleefowl mounds Annual review of AWC feral fauna eradication results

6. RISK ASSESSMENT

The risk assessment and analysis process assesses the likelihood of the potential impacts occurring and the consequences of the event **after** management controls have been put in place. Likelihood and consequence definitions, as per the Environmental Management Plan Guidelines (DCCEEW, 2024) are provided in Table 7 and Table 8.

A quantitative approach has been used whereby values are assigned to the likelihood and consequence rankings. These values are used to determine the risk ranking from the DCCEEW (2024) risk matrix, provided as Table 9.

Table 6.1: Likelihood of potential impact occurring.

Measure of likelihood	How likely is it that this event/issue will occur after control strategies have been put in place
Highly likely	Is expected to occur in most circumstances
Likely	Will probably occur during the life of the project
Possible	Might occur during the life of the project
Unlikely	Could occur but considered unlikely or doubtful
Rare	May occur in exceptional circumstances

Table 6.2: Consequence of potential impact.

Measure of consequence	What will be the consequence/result if this issue does occur
Minor	Minor incident of environmental damage that can be reversed
Moderate	Isolated but substantial instances of environmental damage that could be reversed with intensive efforts
High	Substantial instances of environmental damage that could be reversed with intensive efforts
Major	Major loss of environmental amenity and real danger of continuing
Critical	Severe widespread loss of environmental amenity and irrecoverable environmental damage

Table 6.3: Risk rating.

Likelihood	Consequence				
	Minor	Moderate	High	Major	Critical
Highly likely	Medium	High	High	Severe	Severe
Likely	Low	Medium	High	High	Severe
Possible	Low	Medium	Medium	High	Severe
Unlikely	Low	Low	Medium	High	High
Rare	Low	Low	Low	Medium	High

Table 6.4: Risk Assessment

Risk	Likelihood	Consequence	Initial Risk Rating	Management actions	Likelihood	Consequence	Residual Risk Rating	Performance Criteria	Triggers	Corrective Actions	Monitoring
Habitat loss and fragmentation Unauthorised clearing of vegetation outside approved boundaries results in impact to MNES or their habitat	Likely	High	High	- Clearing kept to the minimum required for the Proposal (maximum Disturbance Footprint of 1,612 ha) - Clearing undertaken progressively and only when necessary - Site Disturbance Permit system with strict survey controls and sign off by the Registered Manager prior to clearing - GIS records and demarcation of MNES outside the Disturbance Footprint and inside the Development Envelope. - Induction and specific training where necessary highlights the importance of clearing protocols - Demarcation of <i>Eremophila viscida</i> exclusion area	Rare	High	Low	- No clearing of vegetation occurs outside the approved areas of disturbance. - No exceedance of approved area of disturbance. - No clearing of MNES outside the approved Disturbance Footprint - The induction program will be completed for all onsite personnel and contractors. - All clearing personnel have signed off that they have read and understood the Site Disturbance Permit conditions prior to clearing.	Vegetation clearing extends beyond the approved Disturbance footprint. Vegetation clearing does not proceed progressively or beyond that immediately required Clearing not undertaken in accordance with approved internal Site Disturbance Permit	- Stop work at that location - Physically mark the intended clearing extent - Immediately stabilise disturbed soils - Rehabilitate the disturbed area - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence Adjust vegetation clearing processes and timing to align with the proposed sequential and progressive clearing practices. - Stop work at that location - Review unauthorised clearing against approved Disturbance Footprint - If clearing occurs outside the approved Disturbance Footprint – rehabilitate the disturbed area and report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence	- Pre and post-clearing survey - Quarterly drone aerial imagery - Quarterly reconciliation of the Site Disturbance Permits issued vs. the actual area of disturbance.
Weeds Spread of existing weeds or introduction of new weeds results in adverse impacts to WA Wheatbelt Woodlands or MNES fauna habitat	Likely	Moderate	Medium	- Machinery and equipment are cleaned prior to being mobilised to site and inspected on arrival (not permitted to work until appropriately cleaned) - Weed surveys and control using herbicide or manual removal. - Annual targeted control <i>Rumex vesicarius</i> (Ruby Dock), already present in the Development Envelope.	Unlikely	Moderate	Low	- Machinery and equipment have passed a weed & hygiene inspection - No increase in diversity of Declared Plants or Weeds of National Significance. - No increase in the distribution of existing	Machinery or equipment commences work prior to site inspection for cleanliness	- Stop work at that location - Machinery moved to designated area (e.g. washpad) for cleaning - Undertake quarterly monitoring for one year at all locations machinery has worked, for presence of weeds	Annual weed survey

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Risk	Likelihood	Consequence	Initial Risk Rating	Management actions	Likelihood	Consequence	Residual Risk Rating	Performance Criteria	Triggers	Corrective Actions	Monitoring
				Vegetation and topsoil stripped from areas containing Ruby Dock stockpiled separately, treated for physical signs of weed growth before being reused in rehabilitation and closely monitored after use in rehabilitation with residual weeds treated as appropriate				- weeds at site from baseline data. - No increase in the distribution of Ruby Dock at site from baseline data.	Weed survey determines increase in diversity of Declared Plants/ Weeds National Significance, or increase in distribution from baseline data	Increase weed control frequency/intensity	
Introduced fauna Feral predators, (predominately cats and foxes which are found throughout the region) are attracted to Proposal rubbish and waste, leading to increased populations of the feral predators and subsequent impact to MNES fauna.	Possible	Moderate	Medium	- Putrescible landfill managed in accordance with the <i>Environmental Protection (Rural Landfill) Regulations 2002</i> - Domestic waste securely stored to minimise access by feral animals. - Feral fauna eradication programs undertaken as required using licenced service providers. - Implement animal sightings register and encourage site personnel to report sightings of feral fauna (cats, dogs, foxes) - Ongoing funding provided to key regional NGO stakeholders (e.g. AWC) for regional feral animal management	Unlikely	Moderate	Low	- No reduction in Malleefowl population size (number of active mounds as an indicator) as a result of Proposal implementation. - No clearing of active Malleefowl mounds during breeding season. - No reduction in Chuditch population size (radio-tracked individuals as an indicator) as a result of Proposal implementation	Malleefowl mound monitoring indicates a reduction in population size not attributable to natural factors (e.g. climatic conditions) AWC Chuditch monitoring data indicates a reduction in population size not attributable to natural factors (e.g. climatic conditions), or identifies deaths within the Disturbance Footprint	- Commence internal investigation - Increase feral predator eradication frequency/intensity	- Annual Malleefowl mound monitoring of Rank 1 to Rank 3 mounds - Annual review of AWC Chuditch radio-tracking data - Environmental Personnel will monitor and record reported observations of feral animals
Fauna mortality Increased road traffic, open trenches or vegetation clearing, results in mortality of MNES fauna.	Likely	High	High	- Implement an animal sightings register and encourage site personnel to report sightings of MNES fauna. - All incidences of harm to MNES fauna are investigated, and measures are adopted to prevent the reoccurrence of similar events - Suitably trained personnel on-site to handle injured fauna - Fauna inspections for MNES undertaken in areas immediately prior to clearing commencing. Should any MNES fauna be identified, clearing activities will be postponed until the fauna have moved (or been moved by suitably qualified personnel) from the area.	Possible	High	Medium	- No reduction in Malleefowl population size (number of active mounds as an indicator) due to Proposal implementation. - No clearing of active Malleefowl mounds during the breeding season. - No reduction in Chuditch population size (radio-tracked individuals as an indicator) as a result of Proposal implementation - Injury or death of MNES or other fauna is minimised or avoided	Malleefowl mound monitoring indicates a reduction in population size not attributable to natural factors (e.g. climatic conditions) Active Malleefowl mounds cleared during breeding season	- Commence internal investigation - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Increase feral predator eradication frequency/intensity if required - Stop work at that location - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence	- Annual Malleefowl mound monitoring of Rank 1 to Rank 3 mounds - Pre-clearing survey (as required during breeding season) - Annual review of AWC Chuditch radio-tracking data - Environmental Personnel will monitor and record total number of vehicle strikes - Environmental Personnel will monitor

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Risk	Likelihood	Consequence	Initial Risk Rating	Management actions	Likelihood	Consequence	Residual Risk Rating	Performance Criteria	Triggers	Corrective Actions	Monitoring
				- No Malleefowl mounds cleared during the breeding season without prior assessment of mound activity (in accordance with the National Malleefowl Monitoring Manual (National Malleefowl Recovery Team 2020)). Active mounds (as determined by the National Malleefowl Monitoring Manual) will not be cleared during Malleefowl breeding season. - Where the mine development schedule permits, clearing adjacent to likely or probable active burrows will be avoided during <i>Idiosoma</i> reproductive season (Sept.-Nov) to reduce impact on active populations and mortality of wandering males or settling juveniles - Prior to clearing a local area of Disturbance Footprint, AWC radio tracking records will be reviewed to determine confirmed Chuditch denning habitat/ possible Chuditch presence within clearing area. If found to be present, particularly during the breeding season (roughly August to November/December), individual tree hollows will be checked, and clearing of these will be supervised by a zoologist. All excavations or trenches >1 m deep will be secured against animal entry or have egress provided - Progressive clearing in one direction to allow fauna to escape - All road kill to be moved a minimum of 20 m from the road to reduce the risk of further mortality on carrion species feeding on road kill. - Potential fauna water resources minimised and permanent water sources contained through fencing where appropriate. - Induction and specific training where necessary highlights the importance of clearing protocols.				No evidence of MNES fauna being trapped within the mining Proposal area	AWC Chuditch monitoring data indicates a reduction in population size not attributable to natural factors (e.g. climatic conditions), or identifies deaths within the Disturbance Footprint	- Commence internal investigation in collaboration with AWC - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Increase feral predator eradication frequency/intensity, review site clearing procedures and speed limits as relevant to cause of decline	- and report on incidents of fauna entrapment - Field monitoring for MNES presence within the Development Envelope
									Fauna are injured or killed during vegetation clearing or by vehicles	- Personnel trained in fauna handling assesses animal and arranges transfer to a wildlife carer or vet - Dead MNES fauna are collected and preserved before donating to approved collectors (e.g. WA Museum) - Roadkill too damaged for preservation will be moved at least 20 m off the road - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence	
									MNES fauna being trapped within the mining Proposal area	An investigation will be undertaken to determine the cause of MNES fauna being trapped in the mining Proposal area.	

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Risk	Likelihood	Consequence	Initial Risk Rating	Management actions	Likelihood	Consequence	Residual Risk Rating	Performance Criteria	Triggers	Corrective Actions	Monitoring
Light Excessive light interrupts MNES fauna communication or displaces fauna of MNES	Possible	Minor	Low	Implement best practice lighting design in accordance with the National Light Pollution Guidelines for Wildlife (DCCEEW, 2023b)	Unlikely	Minor	Low	- Light spill is limited in accordance with the National Light Pollution Guidelines for Wildlife (DCCEEW, 2023b) - Lighting will be checked quarterly for compliance with National Light Pollution Guidelines for Wildlife (DCCEEW, 2023b)	Lighting does not comply with the National Light Pollution Guidelines for Wildlife (DCCEEW, 2023b)	Redirect lights or install light shields as appropriate to limit light to required areas	Report observations of fauna attraction to artificial lighting. Environmental Personnel to record all reports and investigate
Dust Dust emanating from mining related activities causes adverse impact to adjacent vegetation, including to MNES flora or vegetation.	Possible	Minor	Low	- Dust suppression using water trucks will be continuous on unsealed roads, in the pit and other open areas. - Dust suppression using water trucks undertaken on the ROM and during materials handling activities. Strict traffic management rules implemented (e.g., keeping to designated tracks, maximum vehicle speed limit of 60 km/hr). - Disturbed areas progressively rehabilitated as they become available and are no longer required for ongoing operations. - In excessively windy conditions when dust emissions cannot be adequately controlled, operations adjacent to MNES (e.g. TEC, <i>Eremophila critical</i> habitat) will be postponed until dust suppression can abate dust emissions.	Unlikely	Minor	Low	- No reduction in patch size and quality of the WA Wheatbelt Woodlands TEC outside the Development Envelope as a result of Proposal implementation. - No reduction in quality fauna habitat outside the Development Envelope as a result of Proposal implementation. - No reduction in the quality and quantity of <i>Eremophila viscida</i> populations or habitat inside the Development Envelope as a result of Proposal implementation.	Monitoring identifies a reduction in quality of fauna habitat outside the Development Envelope not attributable to natural factors (e.g. climatic conditions) Monitoring identifies a reduction in quality or patch size of WA Wheatbelt Woodland TEC (e.g. climatic conditions) Monitoring identifies a reduction in the quality or quantity of <i>Eremophila viscida</i> populations or critical habitat inside the Development Envelope Rehabilitation is not undertaken progressively	- Increase use of dust suppression in that area - Review/reduce speed limits in that area - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Stabilise disturbed soils and increase weed control effort within rehabilitation areas in the short term. - Increase rehabilitation effort to meet the schedule.	- Bi-annual passive dust sampling - Annual vegetation health monitoring - Bi-annual drone survey/multispectral imaging <i>Eremophila viscida</i> - Bi-annual passive dust sampling - Quarterly vegetation/flora health monitoring of <i>Eremophila viscida</i> critical habitat
Contamination of soil or water resources Saline water enters drainage lines, resulting in MNES flora or vegetation death, or changes in soil quality inhibiting MNES vegetation growth Spills of hydrocarbons or chemicals contaminate soils or water resources	Likely	Minor	Low	- Unsealed roads will be designed and constructed to minimise saline water runoff into undisturbed areas. - Tailings and saline water pipelines occurring adjacent to native remnant vegetation will be located within bunded corridors, inspected daily and may be installed with telemetry systems and pressure sensors. - Water trucks will be fitted with dribble bars to minimise spray drift near vegetation. - Spills will be contained and cleaned up promptly and disposed of correctly (e.g., to the approved bioremediation facility). Equipment for containing and cleaning up spills will be provided in readily accessible areas where the risk of spills is high.	Unlikely	Minor	Low	Saline Water - No reduction in patch size and quality of the WA Wheatbelt Woodlands TEC outside the Development Envelope as a result of Proposal implementation. - No reduction in quality fauna habitat outside the Development Envelope as a result of Proposal implementation. - No reduction in the quality and quantity of <i>Eremophila viscida</i> populations or habitat	Saline or tailings water enters undisturbed areas through pipeline failure Saline water used for dust suppression runs off into undisturbed areas	- Immediately turn off pipeline and contain spill - Implement spill response procedure - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Stop work in that location - Contain spill to approved disturbance areas - Report to relevant authorities	Saline Water - Annual vegetation health monitoring - Bi-annual drone survey/multispectral imaging - Quarterly vegetation/flora health monitoring of <i>Eremophila viscida</i> critical habitat Hydrocarbon Spills - Quarterly review and analysis of spill reporting

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Risk	Likelihood	Consequence	Initial Risk Rating	Management actions	Likelihood	Consequence	Residual Risk Rating	Performance Criteria	Triggers	Corrective Actions	Monitoring
				Spill training will be provided to all relevant personnel. - Control of contamination will be managed through other State environmental approvals including a Mining Proposal (under the Mining Act) and Works Approval (under the EP Act Part V). - Hydrocarbons and chemical reagents will be stored in accordance with Dangerous Goods Safety Act 2004 to ensure the safety of personnel and protection of the environment.				outside the Development Envelope because of Proposal implementation. Hydrocarbon Spills - All spills are cleaned up and remediation is carried out in accordance with the site procedure. - No contamination occurs outside approved disturbance areas. - No contamination remains post-closure	Spills not cleaned up and remediated Contamination occurs outside approved areas of disturbance	- Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Immediately clean up the spill and remediate the area - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence - Development and implement a remediation plan for areas of contamination.	data, including confirmation of appropriate clean up as soon as practicable. Weekly inspections of work areas to ensure spills and contaminated soil are addressed.
Surface water quality/quantity Mining activity and infrastructure placement results in changes to surface hydrology patterns and quality, subsequently resulting in indirect loss of MNES and/or habitat.	Likely	Minor	Low	- Existing surface water flow regimes maintained with the installation and maintenance of surface water/drainage infrastructure. - Drainage management infrastructure will be installed to maintain surface water flows across the Proposal. - In the event of care and maintenance, water management structures will be inspected and remediated prior to and during the cessation of work.	Unlikely	Minor	Low	- No reduction in the health of vegetation associated with downstream drainage channels, as a result of proposal implementation. - No evidence of sediment deposition outside of the Disturbance Footprint. - Drainage management infrastructure inspected following heavy rain events to identify and remediate any sedimentation built up within the diversions and/or erosion damage.	Monitoring identifies a reduction in health of vegetation associated with downstream drainage channels	- Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence	- Annual vegetation health monitoring - Bi-annual drone survey/multispectral imaging - Surface water monitoring utilising data loggers to capture baseline and operational flows (periodically after rainfall events)

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Risk	Likelihood	Consequence	Initial Risk Rating	Management actions	Likelihood	Consequence	Residual Risk Rating	Performance Criteria	Triggers	Corrective Actions	Monitoring
Fire Hot work use or vehicle movement results in unplanned fires, altering natural fire regime and impacting MNES or habitat.	Highly Likely	Major	Severe	- Appropriate fire suppression appliances and equipment will be maintained on site and employees trained in their use. - Flammable materials will be stored onsite and handled in accordance with the applicable safety standards. - During the bushfire season, the fire danger status will be monitored daily through the State managed (DFES) website. - For “hot-work” activities, a risk assessment will be completed considering forecast weather, fire hazard ratings and site conditions. - Access tracks and fencelines used as firebreaks within the Proposal regularly maintained. - Smoking only be permitted in designated areas	Rare	Major	Medium	- No uncontrolled or unplanned fires occur. - Vegetation fuel loads are maintained at sustainable levels. - Flammable materials are stored onsite in accordance with the applicable safety standards.	Fires from the Proposal reach vegetation outside the Development Envelope	- Small fires – extinguish using onsite firefighting equipment in accordance with safety procedures. - Larger fires – initiate emergency response procedures and engage external emergency services. - Report to relevant authorities - Undertake internal investigation and implement relevant corrective actions to reduce recurrence	- Bi-annual drone survey/multispectral imaging - Environmental Personnel will monitor and record all fire events reported - Field monitoring, undertaken by Environmental Personnel or Staff and contractors during operations
Ineffective rehabilitation Poor planning and ineffective methods of conducting rehabilitation work can result in unstable, poorly performing landforms, including poor vegetation cover which can subsequently result in slope instability and ongoing erosion issues. Inappropriate storage of topsoil can result in sterilisation of the soil and subsequent poor performance in rehabilitation. Habitat values are not returned following rehabilitation	Likely	High	High	- undertake rehabilitation, decommissioning, monitoring and contingencies as described in the approved MCP, submitted per requirements of the State legislated Mining Act. - rehabilitation will be undertaken progressively - topsoil will not be stripped or handled in wet or dusty conditions - store topsoil in stockpiles of no more than 2m vertical height to reduce the loss of seed viability and biotic activity - stockpiles located away from drainage lines and active areas - clearly signpost stockpiles to deter traffic and inadvertent removal - Any seeding or planting undertaken during rehabilitation will use species of local provenance	Unlikely	High	Medium	- Rehabilitation activities undertaken as described in the approved MCP, submitted per requirements of the State legislated Mining Act. - Rehabilitation completion criteria have been met as described in the approved MCP, submitted per requirements of the State legislated Mining Act. - Stockpiles monitored annually for weeds and control measures implemented	Monitoring rehabilitation is not progressing completion criteria identifies not towards	- Review rehabilitation activities against the design/schedule in the approved MCP. - If necessary, undertake rectification works of rehabilitated areas (e.g. erosion control, additional seeding/planting/weed control) - Rehabilitation monitoring and remedial actions (as required) will continue until agreed completion criteria are met	Rehabilitation monitoring undertaken as described in the approved MCP, submitted per requirements of the State legislated Mining Act.

7. ENVIRONMENTAL MANAGEMENT ROLES AND RESPONSIBILITIES

All our people are responsible for ensuring they comply with the company's Environmental Management requirements and that any action or inaction on their part does not result in harm to the environment. Environmental Management responsibilities are outlined in Table 11. Delegation of responsibilities may occur to ensure that Environmental Management activities are co-ordinated at an appropriate level; however, accountability remains with the person designated those responsibilities. Capricorn also expects this general principle of line management accountability to apply to all its Contractors.

Table 7.1: Roles and Responsibilities of Personnel

Role	Responsibilities
Managing Director Chief Operating Officer	- Awareness of environmental legislation - Understanding of Capricorn's approach to environmental management, as outlined in this EMP - Ensuring sufficient resources are available for the effective implementation of this plan - Ensuring direct reports remain accountable for delivering and performing in accordance with the requirements of this Plan
General / Registered Managers	- Awareness of environmental legislation, licences, permits and approvals applicable to site - Understanding of Capricorn's approach to managing environmental aspects relevant to site - Understanding of Capricorn's approach to environmental management, as outlined in this EMP - Accountable for ensuring that the resources are available to support the implementation of this EMP - Ensuring that all incidents in their area of responsibility are reported and investigated in accordance with corporate requirements - Carrying out inspections of work areas and reporting and / or correcting conditions in their area of responsibility - Ensuring that all personnel under their responsibility have been trained, assessed and are competent for the tasks they are performing and are supervised in the performance of their work
Superintendents Supervisors	- Accountable for the implementation of this EMP where it is relevant to their area of responsibility - Awareness of environmental legislation, licences, permits and approvals applicable to site - Detailed understanding of Capricorn's approach to managing environmental aspects relevant to site - Ensuring that all incidents in their area of responsibility are reported and investigated in accordance with corporate requirements - Carrying out inspections of work areas and reporting and / or correcting conditions in their area of responsibility
Environmental Personnel	- Undertaking audits / inspections to ensure compliance with this EMP and legal and other requirements - Review of this EMP - Environmental compliance reporting as outlined in this EMP - Awareness of environmental legislation, licences, permits and approvals applicable to site - Detailed understanding of Capricorn's approach to managing environmental aspects relevant to site

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Role	Responsibilities
	• Provide training, specific to environmental matters and this EMP, to employees and contractors
All Staff, including Contractors	• Awareness of environmental legislation, licences, permits and approvals applicable to site • Awareness of Capricorn's approach to managing environmental aspects relevant to site • Awareness of Capricorn's approach to environmental management, as outlined in this EMP • Reporting to their Supervisor, all environmental incidents and near misses at the time of their occurrence

8. REPORTING

Reporting is undertaken as per legislative requirements and permit conditions. These include the Annual Environmental Performance Report (internal), Annual Environment Reports (statutory reporting to government) and publicly through the corporate Sustainability Report.

For each reporting period, standard report content will include:

- Environmental monitoring, analysis and evaluation
- Audit of compliance of the EMP and performance targets listed in the EMP
- Occurrences of incidents, non-compliance and corrective actions implemented

Additionally, all personnel must report and record all incidents and near-misses for learning purposes and to determine if the regulator is to be notified. Incidents must be reported to external regulatory authorities in accordance with the timeframe outlined in environmental approval documents.

9. ENVIRONMENTAL TRAINING

All personnel will be required to undertake an induction before entering site, including an environmental component which highlights the environmental risks of the Proposal, required conservation and management actions and potential consequences for individuals and the company of not meeting environmental responsibilities.

As a minimum, training comprises the corporate and site inductions, both of which contain an environmental component. Other training and awareness can be delivered through toolbox meetings, presentations and refreshers.

An annual program of environmental training requirements must be developed and implemented.

All training records for the Proposal will be maintained in a site training register. Contractors will maintain their own records, and where requested, will make these available to Capricorn.

Training records will be made accessible to the individual and relevant departments such as Human Resources and Environment as appropriate.

As a minimum, training records will include details on who has been trained, the date the training was received, what the training course covered, what competencies or qualifications were achieved or obtained and the identification of the training provider.

10. EMERGENCY CONTACTS AND PROCEDURES

Emergency contacts for environmental incidents/emergencies are:

- Registered Manager or Authorised Delegate
- Mining Superintendent/Supervisor
- Environmental Department

Environmental incidents/emergencies will be managed in the following order:

- Control: Control the source of the incident/emergency
- Contain: Prevent the spread of the incident/emergency
- Clean up: Clean the area, remove contaminants where required
- Investigate incident root causes and define corrective actions
- Report to relevant internal and external stakeholders

Events that either cause, or have the potential to cause, harm or contamination of the environment will be reported and investigated as stipulated in the Incident Reporting Procedure. The Capricorn Incident Report Form will be used to report all incidents occurring on the MGGP to the Capricorn system.

The MGGP will maintain a register of all incidents in the Capricorn Incident Management Systems STEMS, which include:

- Initial Incidents are logged in STEMS within 24 hours
- All relevant documents and photos are uploaded with the report
- Incidents are monitored, updated and closed out within the required timeframes.

Incidents are classified with a potential consequence ranking between 1 (minor) and 5 (major). For incidents with a potential consequence ranking of 3 or greater, a Formal Root Cause ICAM Investigation will be undertaken in accordance with the standard ICAM methodology and will be led by a trained and competent ICAM facilitator.

Corrective and preventative actions arising from an incident investigation will be recorded within the incident record on STEMS for monitoring to closeout. For high potential events, a review of all corrective actions associated with high potential events will be followed up within three (3) months of the incident date to ensure the risks have been effectively controlled.

All regulatory reporting for the Proposal will be undertaken by the Registered Manager, Environmental Department or delegate.

11. AUDIT AND REVIEW

11.1 Environmental auditing

Auditing of implementation and effectiveness of this plan will be undertaken annually by the Environmental Department or suitably qualified alternative. The audit will include a review of compliance with this EMP, including against the performance outcomes and monitoring identified in this EMP.

From time to time, external third party auditing of the Proposal may take place. This may include but not be limited to Management Systems Certification audits and Regulatory inspections.

11.2 Environmental Management Plan review

On a biennial basis, a formal review of this EMP will be conducted by the Environment team. Any changes to this EMP that results in a significant change to environmental outcome will be referred to the relevant regulatory authorities for approval prior to implementation of such change.

12. BIBLIOGRAPHY

- Advisian (2023). *Mt Gibson Gold Project Phase 2 Hydrology Study*. Unpublished report prepared for Tetris Environmental Pty Ltd, July 2023.
- Advisian (2022). *Mt Gibson Gold Project Baseline Hydrology*. Unpublished Memorandum prepared for Tetris Environmental, October 2022.
- Australian Wildlife Conservancy (AWC) (2024). *Western Quoll / Chuditch*. Online, available at: <https://www.australianwildlife.org/wildlife/western-quoll-chuditch>. Accessed August 2024.
- Bamford Consulting Ecologists (Bamford) (2024a). *Mount Gibson Gold Project Fauna Assessment*. Unpublished report prepared for Tetris Environmental, February 2024.
- Bamford Consulting Ecologists (Bamford) (2024b). *Mount Gibson Gold Project, Targeted Investigations into Significant Fauna*. Unpublished report prepared for Tetris Environmental, November 2024.
- Bennelongia Environmental Consultants (2024). *Mount Gibson Targeted Mygalomorph Survey*. Unpublished report prepared for Tetris Environmental Pty Ltd, August 2024.
- Bennelongia Environmental Consultants (2025). *Impact assessment of the Mt Gibson Gold Project in relation to the Lake Goorly Shield-Backed Trapdoor Spider (Idiosoma kopejtkorum)*. Unpublished report prepared for Tetris Environmental Pty Ltd, May 2025.
- Bennelongia Environmental Consultants (2026). *Idiosoma kopejtkorum* Consolidated Master Dataset. Unpublished dataset prepared for Tetris Environmental Pty Ltd, February 2026.
- Biota Environmental Sciences (2023). *Mount Gibson Gold Project Extended Area Basic and Targeted Fauna Survey*. Unpublished report prepared for Tetris Environmental Pty Ltd, January 2023.
- Biota Environmental Sciences (2022). *Mount Gibson Gold Project Basic and Targeted Fauna Survey*. Unpublished report prepared for Tetris Environmental Pty Ltd, May 2022.
- Centre for Invasive Species Solutions (2023). *Weeds Australia*. Available at: <https://weeds.org.au/overview/>. Accessed July 2023.
- DEC (2012). *Chuditch (Dasyurus geoffroii) National Recovery Plan*. Government of Western Australia, Department of Environment and Conservation, July 2012. Available at: <https://www.dcceew.gov.au/environment/biodiversity/threatened/recovery-plans/dasyurus-geoffroii-2012>. Accessed August 2024.
- DEE (2016). *Threat abatement plan for competition and land degradation by rabbits*. Department of the Environment and Energy, 2016. Available at: <https://www.dcceew.gov.au/environment/biodiversity/threatened/threat-abatement-plans/approved>.
- DCCEEW (2024a). *Species Profile and Threats Database. Dasyurus geoffroii — Chuditch, Western Quoll*. Australian Government, Department of Climate Change, Energy, the Environment and Water. Available at: <https://epbcpublicportal.awe.gov.au/all-referrals/project-referral-summary/?id=b8dae71f-5dfa-eb11-80c6-00505684c137>. Accessed August 2024.
- DCCEEW (2024b). *National Recovery Plan for the Malleefowl*. Australian Government, Department of Climate Change, Energy, the Environment and Water. Available at: <https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/recovery/malleefowl>. Accessed November 2024.
- DCCEEW (2023a). *Conservation Advice for Aphelocephala leucopsis (southern whiteface)*. Australian Government, Department of Climate Change, Energy, the Environment and Water. Available at:

<https://www.environment.gov.au/biodiversity/threatened/species/pubs/529-conservation-advice-31032023.pdf>. Accessed August 2024.

DCCEEW (2023b). *National Light Pollution Guidelines for Wildlife*. Australian Government, Department of Climate Change, Energy, the Environment and Water. Available at: <https://www.dcceew.gov.au/sites/default/files/documents/national-light-pollution-guidelines-wildlife.pdf>. Accessed August 2024.

DoE (2016a). *Outcomes-based conditions policy*. Available at <https://www.dcceew.gov.au/environment/epbc/publications/outcomes-based-conditions-policy-guidance>. Accessed September 2024.

DoE (2016b). *Outcomes-based conditions guidance*. Available at <https://www.dcceew.gov.au/environment/epbc/publications/outcomes-based-conditions-policy-guidance>. Accessed September 2024.

DoE (2015). *Approved Conservation Advice (including listing advice) for the Eucalypt Woodlands of the Western Australian Wheatbelt*. Available at <http://www.environment.gov.au/biodiversity/threatened/communities/pubs/128-conservation-advice.pdf>. Accessed June 2023.

DPIRD (2023a). *Natural Resource Information for Western Australia*. Available at: <https://dpir.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f>. Accessed May 2023.

DPIRD (2023b). *Western Australian Organism List*. Available at: <https://www.agric.wa.gov.au/organisms>. Accessed July 2023.

DSEWPC (2013). *Approved Conservation Advice for Idiosoma nigrum (shield-back spider)*. Department of Sustainability, Environment, Water, Population and Communities, April 2013. Available at: <https://www.environment.gov.au/biodiversity/threatened/species/pubs/66798-conservation-advice.pdf>. Accessed August 2024.

Ecotec (2023). *Mount Gibson Gold Project. Flora and Vegetation Survey of the Proposed Airstrip. Revision 1*. Unpublished report prepared for Tetris Environmental, December 2023.

EMM (2024). *H3 level pit dewatering assessment*. Unpublished report prepared for Capricorn Metals Ltd, January 2024.

Focused Vision Consulting (2023). *Detailed Flora and Vegetation Assessment. Mount Gibson Gold Project*. Unpublished report prepared for Tetris Environmental Pty Ltd, July 2023.

GHD (2023a). *Mt Gibson Gold Project Air Quality Assessment*. Unpublished report prepared for Tetris Environmental, July 2023.

GHD (2023b). *Mt Gibson Gold Project Acoustic Assessment*. Unpublished report prepared for Tetris Environmental, July 2023.

Greenbase (2023). *Mount Gibson Gold Project Greenhouse Gas Assessment. Version 1.5*. Unpublished report prepared for Tetris Environmental, December 2023.

Johnson, S.L., and Commander, D.P (2006). *Midwest minerals province – groundwater resource appraisal*. Department of Water, Hydrological Record Series, Report No. HG17, 34pp.

Loch, R.J., and Squires, H (2010). *Runoff quality impacts of dust suppression using saline water*. Vienna, Austria: European Geosciences Union General Assembly. Retrieved from https://www.researchgate.net/publication/241534140_Runoff_quality_impacts_of_dust_suppression_using_saline_water.

MBS Environmental (2023). *Mt Gibson Gold Project Soil and Landform Assessment*. Unpublished report prepared for Tetris Environmental, March 2023.

- Phoenix Environmental Sciences (undated a). Jack Hills Iron Ore Project. Unpublished fact sheet. Retrieved from <https://www.phoenixenvironmentalsciences.com.au/cms/uploads/Phoenix-Environmental-Crosslands-Resources-Pty-Ltd-Jack-Hills-Stage-I-iron-Ore-Project-34.pdf>.
- Phoenix Environmental Sciences (undated b). Weld Range Iron Ore Project. Unpublished fact sheet. Retrieved from <https://www.phoenixenvironmentalsciences.com.au/cms/uploads/Phoenix-Environmental-Sinosteel-Midwest-Corporation-Ltd-Weld-Range-Iron-Ore-Project-34.pdf>.
- Rix, M. G., J. A. Huey, S. J. B. Cooper, A. D. Austin, and M. S. Harvey (2018). *Conservation systematics of the shield-backed trapdoor spiders of the nigrum-group (Mygalomorphae, Idiopidae, Idiosoma): integrative taxonomy reveals a diverse and threatened fauna from southwestern Australia*. ZooKeys 756:1–121.
- Tetris Environmental Pty Ltd (TEPL) (2024). *Mount Gibson Gold Project, Survey of Eremophila viscida Habitat and Eucalypt Woodlands of the Western Australian Wheatbelt*. Unpublished report, prepared for Crimson Metals Pty Ltd, November 2024.
- Tetris Environmental Pty Ltd (TEPL) (2025a). Mount Gibson Gold Project, Phase 7 Hydro Targeted Fauna Survey. Unpublished report, prepared for Crimson Metals Pty Ltd, August 2025.
- Tetris Environmental Pty Ltd (TEPL) (2025b). Mount Gibson Gold Project, Sabre Targeted Fauna Survey Unpublished report, prepared for Crimson Metals Pty Ltd, October 2025.
- Tetris Environmental Pty Ltd (TEPL) (2025c). Mount Gibson Gold Project, Highway Targeted Fauna Survey Unpublished report, prepared for Crimson Metals Pty Ltd, November 2025.