Aurenne Mining

Mt Ida Gold Project

CLEARING PERMIT APPLICATION SUPPORTING INFORMATION

M 29/150, M 29/150, 29/151, 29/421

L 29/137, 29/139, 29/145, 29/153, 29/154,

G 29/29, G 29/30, P 29/2486, P 29/2521, P 29/2522
E 29/1007, 29/1008, 29/1073, 29/1127, 29/1128, 29/1130, 29/790, 29/921, 29/970, 29/971, 29/973, 29/991, 29/29/1007, 29/1014, 29/1016, 29/993

Aurenne Mining

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REV.	DATE	DESCRIPTION	AUTHOR	APPROVED
A	30 July 2021	Internal review	V Clarke	P Storey
0	4 August 2021	Final	V Clarke	P Storey

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1. Introduction

Aurenne Mining is developing the **Mt Ida Gold Project** (the Project), which is planned to be a 1.2-1.4 Mtpa gold mining operation using conventional carbon-in-leach technology. The Project area is in the Eastern Goldfields, 80 km west of Menzies, and 230 km north-northwest of Kalgoorlie (Figure 1), with little existing infrastructure. Access to the area is via the sealed Kalgoorlie-Leonora Highway to Menzies, and then along the well-maintained unsealed Menzies-Sandstone Road to 45 Mile Outcamp, and finally the Mt Ida Road just north of the Copperfield mining centre.

A Mining Proposal and Mine Closure Plan for early works for the Project has been submitted to the Department of Mines, Industry Regulation and Safety (DMIRS). A (early works) Works Approval for a wastewater treatment plant has been submitted to DWER, and this application for clearing for mining areas, infrastructure, tracks and ancillary areas will facilitate clearing for the Project mining and associated infrastructure, and prescribed premise activities. Clearing for early works will be undertaken according to relevant exemptions, namely *Regulation 5, Item 20 of the Environmental Protection (Clearing of Native Vegetation) Regulations 2004* for 'other' mineral activity (limited to up to 10 ha per tenement per financial year).

1.1 Project History

Aurenne Mining formed Aurenne ALT Resources Pty Ltd from the recently acquired ALT Resources and an additional subsidiary, MGK Resources, which holds tenements within the Project area relevant to this application. These areas are collectively called the Mt Ida Gold Project and include Bottle Creek (VB, Emu, Southwark and Boags existing and proposed pits) and Mt Ida (Tim's Find/Shepherd's Bush proposed pits). Mt Ida has an existing clearing permit (CPS 8763-1), which has not been utilised due to the transfer to Aurenne Mining and a new mining strategy.

The Project area has a long history of both pastoralism, prospecting, and mining. Bottle Creek was discovered in 1983 and mined by Norgold Ltd between 1988 and 1989 under the old NOI process but was prematurely shutdown due to a declining gold price in 1990 and processing/mining issues. The project produced 93,000 oz Au from two open pits (VB and Boags) in 18 months of operation. Remaining are two linear water-filled pits and rehabilitated landforms with relinquishment by Norgold/Rio Tinto in 2001.

1.2 Purpose of Document

This supporting information outlines Aurenne's proposed activities and therefore clearing requirements. It provides assurance that Aurenne is committed to understanding and managing the biodiversity values of its tenements and will apply the mitigation hierarchy (avoid, minimise, manage, and mitigate) to minimise impacts from any proposed clearing. The application form is provided in Appendix A.

As this is a new Project, it is Aurenne's intention to acquire strategic approvals to facilitate planning and development over the next 10 years. Rather than apply for piece-meal clearing permits over project areas we seek one Native Vegetation Clearing Permit (NVCP) over the consolidated tenements to streamline assessment, planning, construction and mine development activities.

DMIRS was contacted to understand the department's preference to either amend the existing CPS 8763; or apply for a new permit to effectively double the clearing area. DMIRS indicated that a new application is preferred with surrender of the existing permit once/if the new application is

approved (Damien Montague, Team Leader, Resource and Environmental Compliance Division, DMIRS, pers. comm. (email) 8/4/2021).

1.3 Location and Tenure

The Project is located north-northwest of Menzies and centres around the historic Mt Ida mining area (Figure 1). Table 1 contains a list of tenements relevant to the Project area applicable to this application, totally ~22,750 ha. Figure 2 shows the application area, Mt Ida Gold Project areas with the relevant tenements. Spatial files of the proposed clearing area are included with the application.

Aurenne holds additional tenements in the vicinity (relating to the Quinns project area to the north) but these areas are still in exploration/planning phase and are not within the current Mining Proposal planning.

Table 1 Application area tenements and project areas

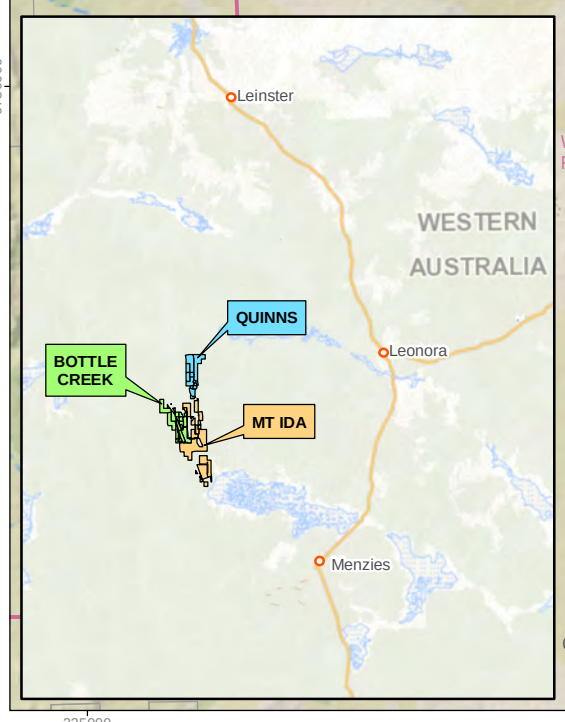
Tenement ID	AREA_HA	Type	Status	Holder	PROJECT
E 29/1007	718.39	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/1008	299.41	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/1014	511.85	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/1073	1473.63	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/1127	1499.18	EXPLORATION LICENCE	PENDING	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/1128	299.90	EXPLORATION LICENCE	PENDING	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/1129	299.85	EXPLORATION LICENCE	PENDING	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/921-I	3891.47	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/971	78.18	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
G 29/29	132.56	GENERAL PURPOSE LEASE	PENDING	MGK RESOURCES PTY LTD	Bottle Creek Project Area
G 29/30	70.26	GENERAL PURPOSE LEASE	PENDING	MGK RESOURCES PTY LTD	Bottle Creek Project Area
L 29/137	99.79	MISCELLANEOUS LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
L 29/145	32.22	MISCELLANEOUS LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
L 29/153	17.12	MISCELLANEOUS LICENCE	PENDING	MGK RESOURCES PTY LTD	Bottle Creek Project Area
L 29/154	48.07	MISCELLANEOUS LICENCE	PENDING	MGK RESOURCES PTY LTD	Bottle Creek Project Area
M 29/150	571.61	MINING LEASE	LIVE	AURENNE ALT RESOURCES PTY LTD	Bottle Creek Project Area
M 29/151	456.95	MINING LEASE	LIVE	AURENNE ALT RESOURCES PTY LTD	Bottle Creek Project Area
P 29/2486	184.67	PROSPECTING LICENCE	LIVE	MGK RESOURCES PTY LTD	Bottle Creek Project Area
E 29/1016	7848.97	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area
E 29/1130	1199.78	EXPLORATION LICENCE	PENDING	MGK RESOURCES PTY LTD	Mt Ida Project Area
E 29/790	710.31	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area
E 29/970	432.10	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area
E 29/973	813.23	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area
E 29/993	197.06	EXPLORATION LICENCE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area
L 29/139	88.22	MISCELLANEOUS LICENCE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area
M 29/421	438.12	MINING LEASE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area
P 29/2521	163.24	PROSPECTING LICENCE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area
P 29/2522	177.21	PROSPECTING LICENCE	LIVE	MGK RESOURCES PTY LTD	Mt Ida Project Area

225000 250000 275000

6800000 6775000 6750000

MOORE WILLS RD
LAWLESS MT IDA RD
LEONORA MT IDA RD
PERRINVALE RD
MENZIES NORTH WEST ROAD
RIVERINA SNAKE HILL RD
MENZIES NORTH WEST RD

STURT MEADOWS
PETERSON OUTCAMP
SHIRE OF LEONORA
SHIRE OF MENZIES
PERRINVALE
MITCHELL ROCKS
RIVERINA
YENDANG ROCK
WALLING ROCK
CHINGALING ROCK
ADELONG
LAKE BALLARD
Mount Ida



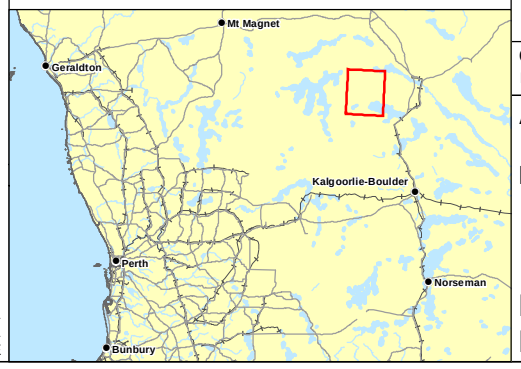
Legend
- Mt Ida Project Area
- Bottle Creek Project Area
- Quinns Project Area
- Tenement
- Local Government Authority Boundary
- Pastoral Station Boundary
- Road

0 2.5 5 10
km
Scale: 1:250,000 @ A3

N

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS

LOCALITY



- PASTORAL STATIONS DPLH 2021
- TENEMENTS SOURCED DPIRD 2021
- TOPOGRAPHY SOURCED OPEN SOURCE

CREATED BY	JOB	DATE	REVISION
ENVIRONMAPS	INT-MP/MCP	14/06/2021	0

AURENNE ALT RESOUCES PTY LTD

MT IDA GOLD PROJECT

Figure 1

LOCATION OF THE MT IDA GOLD PROJECT

ENVIRONMAPS Environmental Mapping Solutions | t: 0406 590 006 | www.environmaps.com.au

C:\GIS\Jobs\Aurenne\Mt Ida Gold Project - 210526\Figures\Figures Interim MP-MCP\MIGP_Location of the Mt Ida Gold Project_210614.mxd

240000 255000 270000

6780000 6765000 6750000

PERRINVALE RD
LEONORA MT IDA RD
Mount Ida
MITCHELL ROCKS
YENDANG ROCK
STEWARDS RD
MENZIES NORTH WEST RD
MENZIES NORTH WEST ROAD
LAKE BALLARD

E 29/971
E 29/1073
E 29/1128
E 29/921-I
E 29/1129
E 29/1127
E 29/1008
G 29/29
G 29/30
E-29/921-I
M 29/151
E 29/1007
P 29/2486
M 29/150
L 29/145
E 29/1014
L-29/137
E 29/1016
E 29/1130
E 29/993
M 29/2
M 29/165
E 29/973
E 29/790
E 29/970
M 29/94
M 29/143
E 29/771
E 29/970
P 29/2522
P 29/2521
E-29/790
M 29/421
L-29/139
E 29/969
E 29/969
E 29/991
E 29/964
E 29/895
E 29/1044
M 29/181
M 29/30
M 29/425
E 30/520
E 30/519
E 29/1133
E 29/1112
E 29/1121
E 29/1120
E 29/1072
E 29/640
E 29/1033
M 29/422
E 29/510-I
E 29/1131
M 29/408-I
E 29/1122
E 29/1097
M 29/414-I
E 29/893-I

BOTTLE CREEK
MT IDA
Leinster
Leonora
Menzies

Legend

- Mt Ida Project Area
- Bottle Creek Project Area
- Tenement
- Road

0 1.25 2.5 5
km

N

Scale: 1:150,000 @ A3

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS

LOCALITY

Mt Magnet
Geraldton
Kalgoorlie-Boulder
Perth
Norseman
Bunbury

- TENEMENTS SOURCED DPIRD 2021
- TOPOGRAPHY SOURCED OPEN SOURCE

CREATED BY	JOB	DATE	REVISION
ENVIRONMAPS	INT-MP/MCP	23/06/2021	0

AURENNE ALT RESOUCES PTY LTD

MT IDA GOLD PROJECT

Figure 2

LOCATION OF BOTTLE CREEK AND MT IDA PROJECT AREAS

ENVIRONMAPS
Environmental Mapping Solutions
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www.environmaps.com.au

C:\GIS\Jobs\Aurenne\Mt Ida Gold Project - 210526\Figures\Figures Interim MP-MCP\MIGP_Location of Bottle Creek and Mt Ida_210623.mxd

2. Proponent

Aurenne Mining is registered to Aurenne Group Holdings Pty Ltd. The Aurenne Group of companies is a mining and exploration enterprise that holds Aurenne ALT Resources Pty Ltd, Aurenne Ularring Pty Ltd and MGK Resources Pty Ltd; Table 2 sets out the company details in order of hierarchy and subsidiary companies. Appendix B contains the letter of authorisation for Chief Operating Officer, Peter Storey to sign on behalf of Aurenne Mining entities and relevant company extracts.

Table 2 Proponent hierarchical structure and details

Entity	ABN/ACN
Aurenne Group Holdings (Aurenne Mining)	627857176
Aurenne ALT Resources PTY LTD	168 928 416
Aurenne Ularring PTY LTD	640 687 618
MGK Resources PTY LTD	611 002 709

3. Proposed Activities

The MIG Project is developing the following deposits in Stage 1 of mine planning:

- **Bottle Creek** consists of Emu, Southwark, Cascade, VB North, VB and Boags
- **Mt Ida** consists of Tim's Find and Shepherd's Bush (Figure 2).

Forrest Belle and Boudie Rat (**Quinns**) are also held by Aurenne Mining but are not included in this application and will be the subject of a later stage of mining and therefore a separate NVCP as the Project develops.

3.1 Disturbance Area and Site Plan

The Application Area is shown in Figure 3. It is up to 1,00 ha within a ~22,500 ha tenement area.

An indicative site plan is provided in Figure 4. There may be minor changes to the layout during the detailed design phase but the clearing required to facilitate mine, supporting infrastructure and associated infrastructure will not change substantially in area.

Clearing within the proposed clearing area will follow the mitigation hierarchy of avoid, minimise and mitigate/manage. Any proposed clearing over the next 10 years will have current (within five year) survey undertaken to understand and avoid any significant environmental and/or heritage values. Concurrent approvals through Programme of Works, Mining Proposal, Works Approvals etc will also ensure that any clearing is planned and appropriate to the project.

240000 255000 270000

6780000 6765000 6750000

PERRINVALE RD
LEONORA MT IDA RD
Mount Ida
MITCHELL ROCKS
YENDANG ROCK
STEWARDS RD
MENZIES NORTH WEST RD
MENZIES NORTH WEST ROAD
LAKE BALLARD
EXCLUDED FROM APPLICATION AREA

E 29/971 E 29/1073 E 29/1128 E 29/921-I E 29/1129 E 29/1127 E 29/1008 G 29/29 E-29/921-I G 29/30 M 29/151 E 29/1007 P 29/2486 M 29/150 L 29/145 L 29/154 L 29/153 E 29/1014 L-29/137 E 29/1016 E 29/993 E 29/1130 M 29/2 M 29/165 E 29/973 E 29/790 E 29/970 M 29/94 M 29/129 E 29/771 P 29/2522 P 29/2521 E-29/790 M 29/421 L-29/1397 E 29/991 E 29/969 E 29/969

E 29/640 E 29/510-I E 29/1033 M 29/422 E 29/1072 E 29/1131 M 29/408-I E 29/1122 E 29/1097 E 29/1120 M 29/414-I E 29/1112 E 29/1044 E 29/895 E 29/893-I E 29/964 E 29/1121 M 29/181 M 29/30 M 29/325 E 29/1133 E 30/520 E 30/519

Leinster
Leonora
Menzies
Mount
BOTTLE CREEK
MT IDA

Legend

- Application Area
- Mt Ida Project Area
- Bottle Creek Project Area
- Tenement
- Road

0 1.25 2.5 5 km

Scale: 1:150,000 @ A3

N

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS

LOCALITY

Mt Magnet, Geraldton, Kalgoorlie-Boulder, Perth, Norseman, Bunbury

- TENEMENTS SOURCED DPIRD 2021
- TOPOGRAPHY SOURCED OPEN SOURCE

CREATED BY	JOB	DATE	REVISION
ENVIRONMAPS	SNVCP	9/08/2021	0

AURENNE ALT RESOUCES PTY LTD

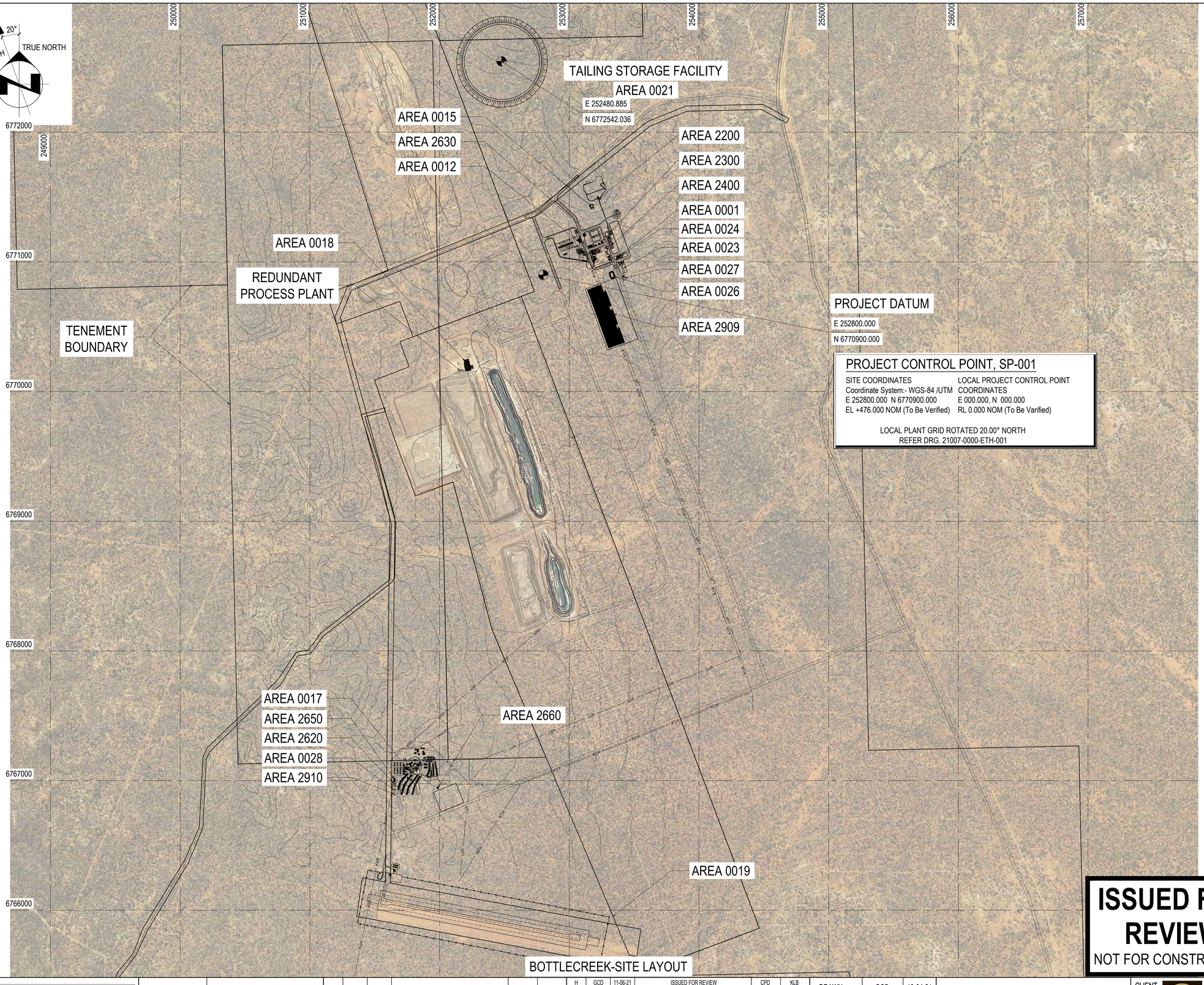
MT IDA GOLD PROJECT

Figure 3

APPLICATION AREA

ENVIRONMAPS Environmental Mapping Solutions | t: 0406 590 006 | www.environmaps.com.au

C:\GIS\Jobs\Aurenne\Mt Ida Gold Project - 210526\Figures\Figures_SNVCP_2021\SNVCP_ApplicationArea_210809.mxd



Mount Ida AREA LEGEND (revision date:-3rd June 2021)		
FACILITY	AREA	DESCRIPTION
00	00	OVERALL SITE - GENERAL
00	01	ADMINISTRATION - MINE OFFICE
00	02	PROCESSING MAINTENANCE OFFIC_MUSTER_ROOM
00	03	LABORATORY
00	04	OHS & ERT
00	05	ENTRY AND PARKING
00	06	WAREHOUSE
00	07	REAGENT STORAGE AT WAREHOUSE
00	08	LUBE STORE AT WAREHOUSE
00	09	HV MAINTENANCE OFFICE AND CREW MUSTER
00	10	HAUL TRUCK PARKING
00	11	HV-LV WORKSHOP
00	12	HV-LV WASH BAY
00	13	TYRE BAY
00	14	WELDING BAY
00	15	OILY WATER POND & DISPOSAL
00	16	MECHANICAL - ELECTRICAL WORKSHOP
00	17	PERMANENT ACCOMMODATION CAMP
00	18	TEMPORARY ACCOMMODATION CAMP
00	19	AIRFIELD
00	20	SITE ROADS
00	21	TAILINGS STORAGE FACILITY
00	22	WASTE AND MATERIAL RECYCLING FACILITY
00	23	CORE YARD FACILITIES
00	24	COMMUNICATIONS ROOM, ADMINISTRATION
00	25	CAMP WORKSHOP AND CHEMICAL STORAGE
00	26	EMERGENCY POND
00	27	RECYCLING YARD
00	28	COMMUNICATIONS ROOM, PERMANENT CAMP
21	00	PROCESS PLANT PIPERACK
22	00	CRUSHING
22	10	CRUSHER FEED
22	20	CRUSHING
22	30	COARSE ORE STOCKPILE
23	00	MILL GRINDING & CLASSIFICATION
23	10	COARSE ORE RECLAIM & SAG MILL
23	20	PEBBLE CRUSHING
23	30	BALL MILL
23	40	CYCLONE CLUSTER
23	50	GRAVITY CIRCUIT
24	00	LEACHING & ADSORPTION
24	10	TRASH SCREENING
24	20	LEACH FEED THICKENING
24	30	LEACH AND ADSORPTION
24	40	CARBON SAFETY SCREENING
25	00	ELUTION CIRCUIT
25	10	ACID WASH
25	20	ELUTION
25	30	ELECTROWINNING
25	40	GOLD ROOM
25	50	CARBON REGENERATION KILN
26	00	AIR, WATER & FUEL SERVICES
26	10	PLANT & INSTRUMENT AIR
26	11	WATER TREATMENT COMPRESSED AIR
26	20	RAW WATER
26	21	GLAND WATER
26	30	PROCESS WATER
26	40	PERMANENT CAMP FIRE SUPPRESSION WATER
26	41	PROCESS PLANT FIRE SUPPRESSION WATER
26	50	POTABLE WATER
26	51	PROCESS PLANT POTABLE WATER
26	52	CAMP POTABLE WATER
26	53	AIRFIELD POTABLE WATER
26	60	WASTE WATER
26	61	PROCESS PLANT WASTE WATER
26	62	CAMP WASTE WATER
26	63	AIRFIELD WASTE WATER
26	70	DIESEL STORAGE AND DISTRIBUTION
26	71	AIRFIELD REFUELLING
26	80	HV-LV VEHICLE REFUELING
26	81	AIRFIELD REFUELING
26	90	LPG STORAGE AND DISTRIBUTION
27	00	REAGENTS MIXING & STORAGE
27	10	CYANIDE MIXING & STORAGE
27	20	LIME MIXING & STORAGE
27	30	FLOCCULANT MIXING & STORAGE
27	40	HYDROCHLORIC ACID STORAGE
27	50	SODIUM HYDROXIDE MIXING & STORAGE
27	60	ANTI-SCALANT STORAGE
28	00	TAILS THICKENING & DISPOSAL
28	10	TAILS THICKENING
28	20	TAILS DISPOSAL
29	00	ELECTRICAL DISTRIBUTION & CONTROLS
29	01	POWER GENERATION & DISTRIBUTION
29	02	MEDIUM VOLTAGE SWITCH ROOMS
29	03	PROCESS PLANT SWITCHROOMS, TRANFORMERS AND MCC's
29	04	CONTROL ROOM - PROCESS PLANT
29	05	PROCESS INSTRUMENTATION
29	06	PROCESS CONTROL
29	07	FIRE DETECTION
29	08	SECURITY SYSTEM
29	09	PV CELLS (SOLAR PANELS) FARM
29	10	EMERGENCY POWER, PERMANENT CAMP
29	11	POWER GENERATION, TEMPORARY CAMP

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

PIE
Plant and Infrastructure Engineering

DRAWING No.	REFERENCE DRAWING TITLE	No	BY	DATE	REVISION DETAILS	CHKD	APPR
21007-0017-GEN-001	PERNMANENT CAMP						
21007-0000-GEN-002	OVERALL GENERAL ARRANGEMENT						

No	BY	DATE	REVISION DETAILS	CHKD	APPR
H	GCD	11-06-21	ISSUED FOR REVIEW	CPD	KLB
G	GCD	07-06-21	RE-ISSUED FOR REVIEW	CPD	KLB
F	GCD	28-05-21	RE-ISSUED FOR REVIEW	CPD	KLB
E	GCD	14-05-21	RE-ISSUED FOR REVIEW	ELL	KLB
D	GCD	07-05-21	RE-ISSUED FOR REVIEW	CPD	KLB
C	GCD	03-05-21	RE-ISSUED FOR REVIEW	CPD	KLB
B	GCD	26-04-21	ISSUED FOR CLIENT REVIEW	CPD	KLB
A	GCD	19-04-21	FIRST ISSUE	CPD	KLB

DRAWN	GCD	19-04-21	
CHECKED	CPD	19-04-21	
DESIGNED			
DES. APPR			
PROJ APPR			

360 3D
Level 5 LTA Building, 118 Perea St. Legaspi Village, Makati City, Philippines 1200
Telefax +63 2 8931838 website: www.360-global.com

CLIENT: Aurenne Group Mining

SCALE 1:15000
ALL DIMENSIONS IN MILLIMETRES
SIZE A1

TITLE: MT. IDA GOLD PROJECT
SITE ARRANGEMENT
OVER ALL SITE LAYOUT

REV No: A B C D E F G H

DRAWING No: 21007-0000-GEN-001

S:\proj\PIE\21007-BottleCreek\Drawing\2D\GEN\21007-0000-GEN-001.dwg

3.2 Other Approvals

A suite of concurrent approvals will be sought to facilitate the activities at the Mt Ida Gold Project; a summary of these and the relevant legislation is provided in Table 3.

Table 3 Environmental legislative requirements

Relevant legislation	Environmental factor regulated	Relevant approval/requirement
Commonwealth		
Environment Protection & Biodiversity Conservation Act 1999	Biodiversity	Not Applicable (NA) – No MNES will be significantly impacted by the Project. Mallee Fowl in a MNES that utilisies the habitats of the Project area but no active mounds have been located and habitats exist in better condition outside the Project area both locally and regionally
State		
Biodiversity Conservation Act 2016	Biodiversity	No listed Threatened flora/fauna will be impacted or require taking or relocation. Priority 1 flora *Jacksonia lanicarpa* was found at a few locations but is known from a wide distribution of 800 km from west of Mt Magnet to Cundeelee and therefore no significant impact to its conservation status will result from any loss of individuals
Environmental Protection Act 1986 (EP Act) – Part V	Biodiversity/ Water Resources	Prescribed premise activities; an application is submitted for WWTP; future application for dewatering, processing, putrescible waste, etc
EP Act – Part V Clearing of Native Vegetation	Biodiversity	Clearing Permit (CPS 8763/1) approves clearing of up to 424.9 ha of native vegetation within the (Mt Ida) Tims Find area. CPS8763 will be surrendered should this strategic application be approved
EP Act, Part IV	Biodiversity/ Water Resources	NA – Proposal does not warrant referral to the EPA for assessment as no referral criteria triggered
Rights in Water and Irrigation Act 1914 (RIWI Act)	Water Resources	A licence to take water has been granted under Section 5C of the RIWI Act by DWER. GWL204119(1) provides an annual water entitlement of 250,000kL and authorises the taking of water at several locations for dewatering for mining and dust suppression and mining camp purposes. Pit lakes will be dewatered to utilize water for mine processing. Additional/amended water licencing will be required as the Project develops
Mining Act 1978	Biodiversity Water resources Mine closure	Interim Mining Proposal and Mine Closure Plan (MP/MCP) is submitted for early (non-mining) works. A full MP/MCP to detail disturbance and operations is in draft for submission Q4 2021. Ongoing reporting requirements are imposed as tenement conditions
Mining Rehabilitation Fund Act 2012	Rehabilitation and Mine Closure	Disturbance for the mining area will been reported (and levies paid) on commencement of compulsory reporting. Disturbance and contributions to the MRF will continue until relinquishment
Aboriginal Heritage Act 1972	Aboriginal Heritage	Surveys (3) have been completed over the Project area. No sites were identified; no Section 18 required
Conservation and Land Management Act 1984	Conservation estate/Biodiversity	NA – Project is not located within or adjacent to any lands managed for the purpose of conservation
Dangerous Goods Safety Act 2004 and supporting regulations	Water Resources Land and Soils	Dangerous goods licence may be required; a specialist contractor will be sought to action application

Relevant legislation	Environmental factor regulated	Relevant approval/requirement
OTHER STATUTORY REQUIREMENTS		
Mines Safety & Inspection Act 1994 and Mining Safety & Inspection Regulations 1995	N/A	A Project Management Plan will be submitted to the DMIRS in accordance with this Act and Regulations. All operations will occur in accordance with the Act
Local Government Act 1995	Planning & Development	Building and Planning approval from Shire for WWTP and village construction
Department of Health WA	Potable water/WWTP	Use and treatment of wastewater and potable water will be obtained

4. Stakeholder Engagement

The principal stakeholders identified for the Project are the Shire of Menzies and the pastoral lease holders within which the Project is located (Perrinvale and Riverina Stations) both currently held by Zenith Australia Group.

Aurenne Mining made initial contact to introduce the business and the Project in Q1 2021. Following this, face-to-face meetings have taken place with both parties and data and information sharing has progressed. Aurenne is committed to open and collaborative engagement with all stakeholders and maintain a Stakeholder Register to track all interactions.

There is no Native Title that exists over the Project area but Aurenne ALT Resources has engaged with Traditional Owners from the Leonora area who have connection to country in which the Project sits. One desktop assessment and two on country surveys have occurred (2019, 2020, 2021). No sites have been recorded within the Project area (R. O'Connor 2019; A J Rayner 2019 and 2021).

4.1 Heritage

The Project is within the locality of Ularring, a small Western Australian rural location within the local government area of Menzies, located approximately 475 km from Perth covering an area of 26,564 km^2. Ularring has a recorded population of 4 residents (Australia's Guide 2021).

The Mt Ida area has an historic value from a social perspective for the goldrush history still evident in the local area with gravesites, mining shafts and remnants of past goldrush towns. Less is known of the Aboriginal utilisation but evidence in artefact scatters in the local area remains. Given the lack of permanent water or springs, the area may have been less frequently visited (O'Connor 2019).

The PMST results recorded no World or National Heritage places (DAWE 2021)(Appendix C).

4.1.1 Aboriginal Heritage

A desktop assessment conducted by consulting anthropologist Rory O'Connor (2019) (Appendix D) noted that "no registered Aboriginal sites or other heritage places within those parts of the five tenements listed … which make up this Prospect. One previous report is listed in the DPLH database as relevant to E29/1008, M29/151, L29/137, E29/1007 and M29/150, namely the March 2009 Assessment of Aboriginal Heritage at Mt Forrest Prospect, Bulga Downs Project, Southeast of Sandstone. All sectors that make up the Bottle Creek Prospect were included in their entirety in the research upon which the assessment is based. That research comprised a desktop study followed by fieldwork to re-record known sites and inspect the Mt Forrest tenements. That fieldwork included a consultation with the relevant native title claimants. As a result of that research, the assessment states that based on these findings, and on the re-recording of registered sites, it is possible to state with confidence that there was little Aboriginal activity in the land constituting the Mt Forrest Prospect. Few archaeological sites are likely to occur in the tenements and fewer ethnographic sites would be expected."

There is no active Native Title claim over the Project area. The Darlot Claim (WC 2018/005) was filed in April 2018 but dismissed by the National Native Title Tribunal for the fifth time on 21 October 2020. Aurenne does not have a heritage agreement or pre-existing arrangement with any Aboriginal party that prescribes processes for compliance with the *Aboriginal Heritage Act 1972*. Therefore, the *Aboriginal Heritage Due Diligence Guidelines* (Department of Planning, Lands & Heritage and Premier and Cabinet 2013) were applied to the proposed Project areas and a consultant was

engaged to consult with local elders and engage with them to undertake surveys of the project areas.

Two recent Aboriginal heritage surveys have been undertaken for the Project by A J Rayner Consulting in 2019 and further survey in 2020. No places of cultural interests or ethnographic and archaeological sites of importance and significance to the Aboriginal people were identified during the survey; areas which may have higher perspectivity for artefacts or cultural significance include water sources, elevated ranges containing shelters, pronounced landforms features. These prospective places are not within the proposed Project disturbance areas and are limited locally.

Aurenne is aware of its obligations under the *Aboriginal Heritage Act 1972* and in regard to future potential Native Title clams and will continue to manage its responsibilities accordingly.

4.1.2 European Heritage

Gold was discovered in the area in 1895 resulting in a gold rush and by 1896 the town of Mt Ida boasted a population of 200. The Mount Ida location was the site of the state battery, on the south side of the Leonora-Mount Ida Road, and contained a few mines, the principal one being Forrest Belle. The state battery was erected at Mount Ida in 1898 and was replaced by another in 1912 (Mindat Org 2021).

No known World, Commonwealth or National heritage places will be impacted by the Project (DAWE 2021; Appendix C).

5. Biophysical Environment

5.1 Biogeography

The Project Area lies within the Eastern Murchison subregion of the Murchison bioregion of Western Australia, as defined by the Interim Biogeographical Regionalisation of Australia classification system (Thackway and Cresswell 1995). The subregion is characterised by its internal drainage, and extensive areas of elevated red desert sandplains with minimal dune development. Salt lake systems associated with the occluded Paleodrainage system. Broad plains of red-brown soils and breakaway complexes as well as red sandplains. Vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands with an arid climate, with mainly winter rainfall (200 mm).

The remnants of an ancient major drainage system exist throughout the region, evident through the presence of a series of saline playa lake systems. The region exhibits vast sandplains with vegetation dominated by mallee, acacia thicket and shrub heath. Valleys and ranges display diverse eucalypt woodlands, often hosting a range of endemic species. Salt lake systems are dominated by eucalypt woodlands and an understorey of dwarf samphire shrubland (Cowan 2001).

5.2 Climate

The Project is situated within the arid to semi-arid Goldfields region, experiencing hot, dry summers and cool, wet winters (Cowan 2001). Menzies weather station (012052) is the closest Bureau of Meteorology (BOM) station to the Project area but has not recorded data since April 2019. Therefore, Kalgoorlie weather station (012038) data were used for this summary.

The area experiences average maximum temperatures between 33.7 ˚C and 16.8˚C in January, and average minimum temperatures between 18.3˚C and 5.1˚C in July (Figure 5). The area experiences approximately 266 mm of rainfall per year, and an average of 39 days of rain per year. Rainfall is highest in February at 31 mm and lowest in September at 13 mm (2021). Mean rainfall and the average rainfall days within each month are shown in Figure 6. Periods of high rainfall in summer generally falls over few days, following cyclones in the north of the state or summer thunderstorms.

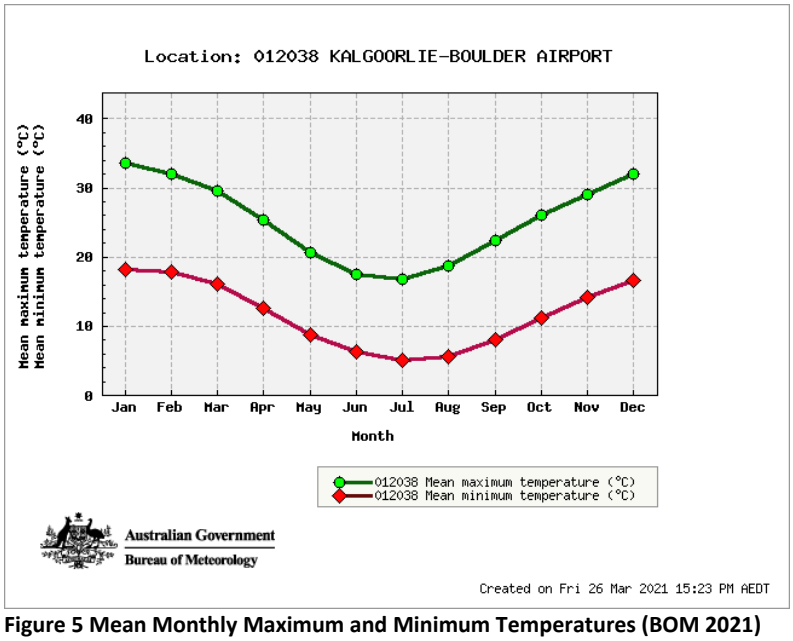


Figure 5 Mean Monthly Maximum and Minimum Temperatures (BOM 2021)

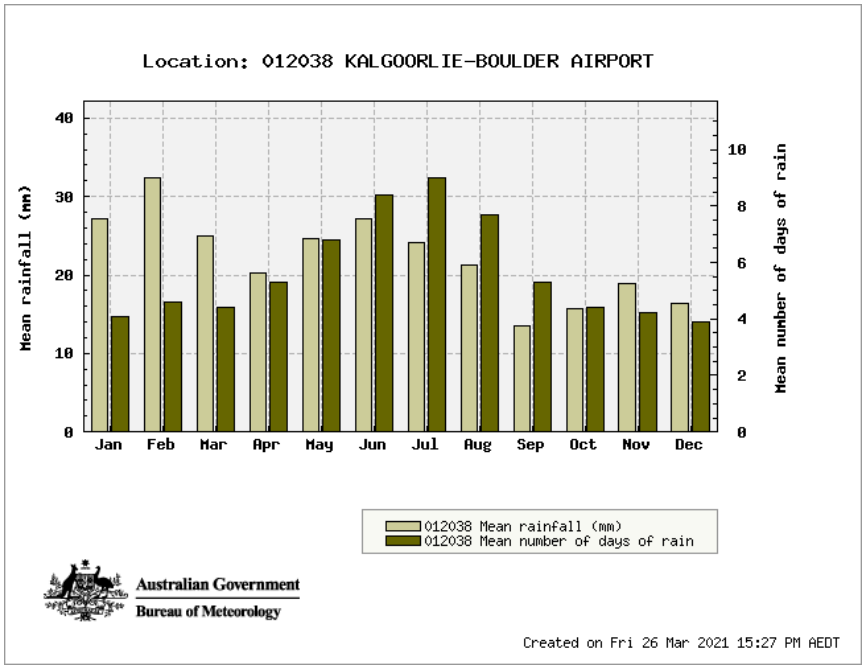


Figure 6 Mean Monthly Rainfall (1939-2021) (BOM 2021)

Annual evaporation rates of 2400 – 2800 mm/year (Figure 7) exceed rainfall, with surface water bodies remaining only for short periods of time after rainfall. Rain that may fall and pond on mine landforms usually evaporates quickly. Similarly, water within the pits is subject to high evaporation rates and the formation of pit lakes is usually the result of groundwater and surface water inflows rather than rainfall.

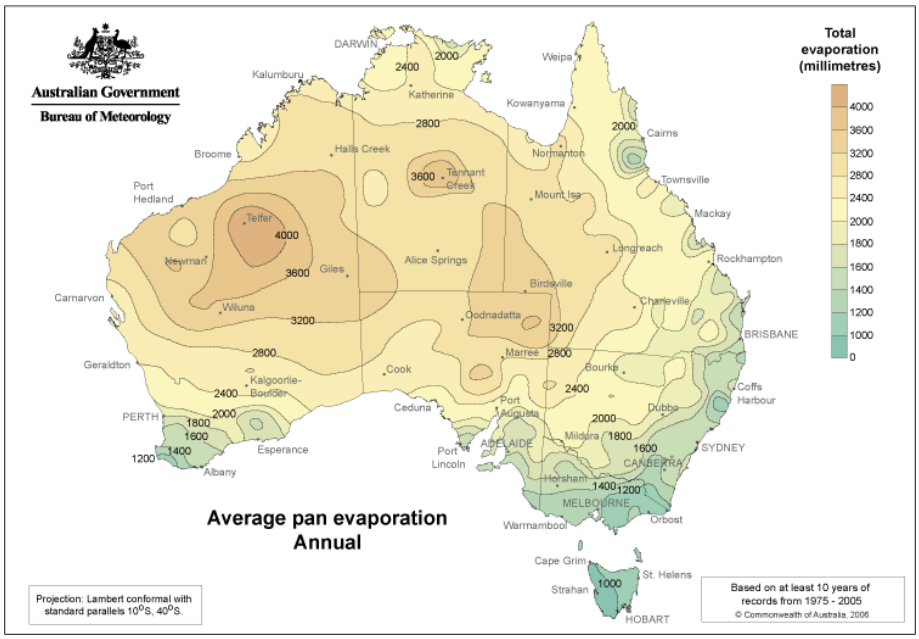


Figure 7 Annual Average Evaporation (BOM 2021)

An Annual Exceedance Probability (AEP) is defined as the chance that an extreme rainfall event will occur in any given year. Based on AEP calculations by the (BOM), there is a 1 in 100 (1%) chance that the Kalgoorlie area will receive 52 mm of rain for a 1-hour period, 159 mm for a 24-hour period and 206 mm for a 72-hour period based on AEP calculations (BOM 2016).

Across the average year, morning (09:00) humidity levels are highest in January with an average of 74%, dropping to an average of 43% in December. Afternoon humidity levels (15:00) are highest in June at an average of 48%, with the months of December and January experiencing the lowest afternoon humidity levels at 24% (BOM 2020). Average daily evaporation rates in the region range between 12.5 mm in January and 2.6 mm in June (BOM 2021).

Wind conditions are predominantly from the easterly, north-easterly, and south-easterly winds, between 10 and 30 km/hr. Average afternoon wind direction is variable, and is most predominant as westerlies, easterlies, and south-easterlies. Stronger winds (30-40 km/hr) are commonly associated with westerlies in the afternoons. Maximum wind gusts are generally seen in January, on average (BOM 2021).

5.3 Regional Geology

The Project lies almost entirely within the Kalgoorlie Terrane of the Yilgarn Craton, encompassing Archean mafic-ultramafic intrusive and volcanic rocks with minor interflow sediments that make up the Mt Ida-Ullarring Greenstone Belt (Legge et al 1990). The northern half of the belt forms a gently south plunging anticline (Kurrajong Anitcline) with the Copperfield Monzogranite at its core. The belt is bounded to the east by the Ballard/Zulieka shear and the Mt Ida Shear to the west. The Mt Ida Shear is a major structural break and forms the boundary between the Kalgoorlie Terrane and the Southern Cross Terrane to the west.

The Mt Ida Gold Project is located on the northern extremity of the Mt Ida-Ularring greenstone belt extending from Davyhurst to Mt Alexander. The Bottle Creek Emu Formation comprises carbonaceous black shale, graphitic chert and BIF and is an interflow sedimentary unit between mafic flows. Gold and silver mineralisation is found close to the contact of two sequences and coincides with a sheared, up to 20m thick, Emu Formation which on the eastern contact is a felsic porphyry unit. The western contact appears as weathered quartz-biotite schists and mafic volcanics.

At the surface, the sheared Emu Formation is a gossanous ironstone, oxidised and lateritised, to a depth of 100m below surface. Below the base of weathering and oxidation, a massive pyrite-pyrrhotite zone, up to 6m thick, occurs within the sheared black shale in a variable gangue of quartz, mica and schist.

The area is characterized by two landforms: alluvial flats along the drainage courses with shallow (1m red, earthy loam to sand over red-brown hardpan); and low rises between drainage lines with shallow red earths overlying red-brown hardpan; rises with a stony surface mantle.

5.4 Hydrogeology

The aquifers of the Project area are characterised by weathered and fractured bedrock with faulting and shearing which controls the occurrence and movement of groundwater. The Raeside Fractured Rock Aquifer extends across the northern third of the tenements whilst the south is occupied by the Rebecca Fractured Rock Aquifer with the Rebecca Paleochannel underlying the Bottle Creek drainage line.

5.5 Hydrology

5.5.1 Surface Water

A surface water assessment was undertaken for both the Bottle Creek and Tims Find project areas (Hydrologia 2020 and 2021). The proposed Project area lies in the broad catchment headwaters of Bottle Creek, which drains to Lake Ballard, some 20 km SSE. Lake Ballard is an internally drained,

intermittent salt lake in the wider Raeside-Ponton catchment and has substantial environmental values with nomination as a Nationally Important Wetland (RAMSAR listing).

Topography in the area of the site is characterised by low hills and rises with broad valleys and indistinct drainage lines. Existing drainage in the area has been modified by previous mining activities at the site. The Project area is located in the Salt Lake Basin surface water management area (DWER 2019), which is not in a proclaimed surface water management area.

Due to the distance to Lake Ballard, the Project activities and proposed clearing is unlikely to have a negative impact on the water quality or quantity, and therefore the environmental values of the Lake.

5.5.2 Ground Water

The Project lies within the Rebecca and Raeside subareas of the Goldfields which include fractured rock and paleochannel aquifers. The Project is within the Goldfields RIWI Act Groundwater Proclamation Area (DWER 2020) and it is illegal to take water from a watercourse or groundwater aquifer without a licence in a proclaimed area. A Groundwater Licence has been granted for 250,000 kL over the Project area with a supporting Licence to Construct Well permit to draw water for mining related activities and dust suppression purposes from the proposed bores. A copy of these Licences can be found in Appendix E.

In 2019, ALT Resources commissioned Groundwater Development Services (2019) to undertake a water supply scoping study which included a site visit to gather information about the current bores on site (Tims Find and Shepherds bore) and at the Bottle Creek Project, and further water scoping and assessments (drilling for prospective sources) is ongoing in 2021 (Pendragon Environmental (in prep.)).

Generally, the geology of the area comprises weathered and fractured mafic-ultramafic intrusive and volcanic rocks with minor interflow sediments. Groundwater across the region occurs in basins of weathering and shear/fracture systems, which vary in vertical and lateral extent, and which may be compartmentalised on a regional scale where there is little if any hydraulic connection between the different compartments. Consequently, ground water is likely to move or drain very slowly and may be considered stagnant (Pendragon Environmental (in prep.) and therefore localised drawdown for the early project activities is likely to be negligible in the catchment.

The Project location is considered low risk due to its distance from key significant hydrological (surface and groundwater) environmental receptors i.e. Lake Ballard and subterranean calcrete Priority Ecological Communities. In addition, the catchment is not a proclaimed (surface/groundwater) area and remains highly vegetated, which allows buffering to any localised impacts from clearing of ground disturbance.

5.6 Flora and Vegetation

Desktop reviews of state and Commonwealth databases (Department of Biodiversity, Conservation and Attractions (DBCA) Species and Communities Branch records for flora, fauna and priority and threatened ecological communities (TEC/PECs), Department of Agriculture, Water and the Environment's (DAWE) Protected Matters Search Tool, NatureMap, FloraBase, and the records of the WA Museum (WAM)) were undertaken to understand the biodiversity of the local and regional area (Appendix C). The results indicate that the Project area is not known as having outstanding

biodiversity values but habitats for priority species may occur and range for potential threatened fauna may be present. No species were listed as endemic to the area.

5.6.1 Vegetation types and Condition

A suite of flora, vegetation, fauna (including short range endemic (SRE) and subterranean fauna) surveys have been undertaken over the past three years to inform mine planning and approvals (Terrestrial Ecosystems, NVS (2019 a, b) and Phoenix & Bennelongia (2021). Table 4 summarises the surveys undertaken relevant to this stage of the Project and illustrated in Figure 8.

Table 4 Biosurveys within the application area

Year	Survey area & detail	Consultant	IBSA reference
2021	**Flora, vegetation, fauna** (including **SRE** and targeted conservation significant fauna) surveys across wider Project tenements (including camp, access tracks, ancillary infrastructure areas)	Phoenix Environmental Consultants	IBSA-2021-0332
	Subterranean fauna (including troglofauna and stygofauna) surveys across wider Project tenements and utilising regional bore suite	Bennelongia Environmental Consultants	IBSA-2021-0331
2019	Detailed **Flora and Vegetation** Survey of Tim's Find - Part 2	Native Vegetation Solutions (NVS)	IBSA-2020-0023
	Detailed **Flora and Vegetation** Survey of Tim's Find	Goldfields Landcare Services	
	Flora and Vegetation Survey of Bottle Creek	NVS	IBSA-2021-0130
	Level 1 **Vertebrate Fauna** Risk Assessment for Tim's Find	Terrestrial Ecosystems	IBSA-2020-0022
	Level 1 **Vertebrate Fauna** Risk Assessment for Bottle Creek		IBSA-2021-0175

As part of governmental regional survey for greenstone areas, the following report is relevant to the general Mt Ida area, although of differing geological features:

- Meisner, R & Owen, G, 2010, Flora and vegetation of banded iron formations of the Yilgarn Craton: Mt Ida Greenstone Belt and Mt Hope. In: *Conservation Science W. Aust*. 7 (3): 583–592.

Vegetation mapped for the Project area is typified by mulga woodland with emergent eucalypts (Figure 10).

5.6.2 Flora

NatureMap (2021) and the Protected Matters Search Tool (DAWE 2021)(Appendix C) show that 152 plant taxa are recorded from the local area with no threatened flora, one Priority 1 (*Drosera eremaea*), no Priority 2 taxa, two Priority 3 (*Calotis* sp. Perrinvale Station (R.J. Cranfield 7096), *Calytrix hislopii*), and two Priority 4 (*Hemigenia exilis, Lepidosperma lyonsii*).

The Project area is largely mulga-eucalypt plains with little relief or areas of extruding geological features. It has a simple flora due to the lack of habitat diversity.

5.6.3 Conservation Significant Flora, Ecological Communities, and Areas

Database search requested from the DBCA's Species & Communities Branch listed the Perinvale/Walling vegetation complexes (Banded Iron Formation (BIF)) priority ecological community (PEC), the edge of the buffer is 100 m from the closest tenement boundary (DBCA 2021, Appendix C). The BIF does not extend into the Project tenements however and the Project activities and

clearing are not likely to impact directly nor indirectly on the values of the BIF given the closest proposed clearing is over 1 km from edge of buffer.

The PMST results listed one Threatened flora species (*Rincinocarpos brevis*) as potentially occurring in the area. However, this species is restricted to elevated banded ironstone ranges (BIF) in the wider region and BIF is not found in the Project area.

The flora survey (Phoenix 2021) found a Priority One flora, *Jacksonia lanicarpa* (Figure 9). This species has a wide linear occurrence of over 800 km (Plate 1; FloraBase 2021) and the Project area is not a range extension nor an outlier of the population extent. It likely occurs in the local and regional area more extensively and will be targeted for survey over the coming years. Given the wide distribution and low numbers recorded any clearing is unlikely to significantly impact the conservation status of this species.

Plate 1: *Jacksonia lanicarpa* mapped distribution (Source: FloraBase 2021)

5.6.4 Introduced Flora

The PMST results listed to highly invasive weeds within the area (Wards weed **Carrichtera annua* and Buffel grass **Cenchrus ciliaris*). NatureMap (DBCA 2021) recorded one weed taxa (**Pentameris airoides* subsp. *airoides*) within the local area. However, given the highly degraded nature of the Project area and its continued use as an active pastoral lease, there is likely to be a wider suite of grassy, herbaceous, and perennial weeds present. These weeds may be preferentially grazed by the cattle and large herd of donkeys. 2021 survey (phoenix) recorded just two weed species, neither are declared nor WoNS.

250000

6775000

PERRINVALE RD

MITCHELL ROCKS

MOUNT IDA

COPPERFIELD

PHOENIX 2021

TERRESTRIAL ECOSYSTEMS 2019

NATIVE VEGETATION SOLUTIONS 2019

TERRESTRIAL ECOSYSTEMS 2019

MOUNT IDA RD

MENZIES NORTH WEST RD

BENNELONGIA 2021

YENDANG ROCK

STEWARDS RD

LAKE BALLARD

E 29/1033 | M 29/65 | M 29/422 | E 29/640 | E 29/510-I | E 29/1071 | E 29/973 | E 29/640 | E 29/1130 | E 29/993 | E 29/1073 | M 29/2 | M 29/163 | E 29/1072 | E 29/1128 | E 29/1131 | M 29/408-I | E 29/921-I | E 29/1129 | M 29/129 | E 29/790 | E 29/979 | M 29/94 | M 29/173 | E 29/771 | E 29/1127 | E 29/970 | E 29/1008 | E 29/1120 | E 29/1122 | M 29/151 | E 29/1021-I | E 29/640 | E 29/790 | M 29/421 | E 29/1097 | E 29/1007 | M 29/150 | L 29/164 | E 29/1014 | E 29/1016 | E 29/1112 | M 29/414-I | E 29/1044 | E 29/895 | E 29/893-I | E 29/964 | E 29/991 | M 29/181 | M 29/39 | E 29/969 | M 29/425 | E 29/969 | E 30/520 | E 29/1133 | E 29/1121

Legend

- Application Area
- Mt Ida Project Area
- Bottle Creek Project Area
- Tenement
- Road
- Preliminary Bores - Bennelongia
- Detailed Flora and Vegetation Survey Boundary - Native Vegetation Solutions, 2019
- Level 1 Vertebrate Fauna Risk Assessment Survey Boundary - Terrestrial Ecosystems, 2019
- Flora, Fauna, SRE Survey - Phoenix 2021
- Subterranean Fauna Survey - Bennelongia, 2021

- TENEMENTS SOURCED DPIRD 2021
- IMAGERY SOURCED OPEN SOURCE

0 1.5 3 6
km

Scale: 1:140,000 @ A3

N

- NOTE THAT POSITION ERRORS CAN BE >5M IN SOME AREAS

LOCALITY

CREATED BY	JOB	DATE	REVISION
ENVIRONMAPS	SNVCP	9/08/2021	0

AURENNE ALT RESOUCES PTY LTD

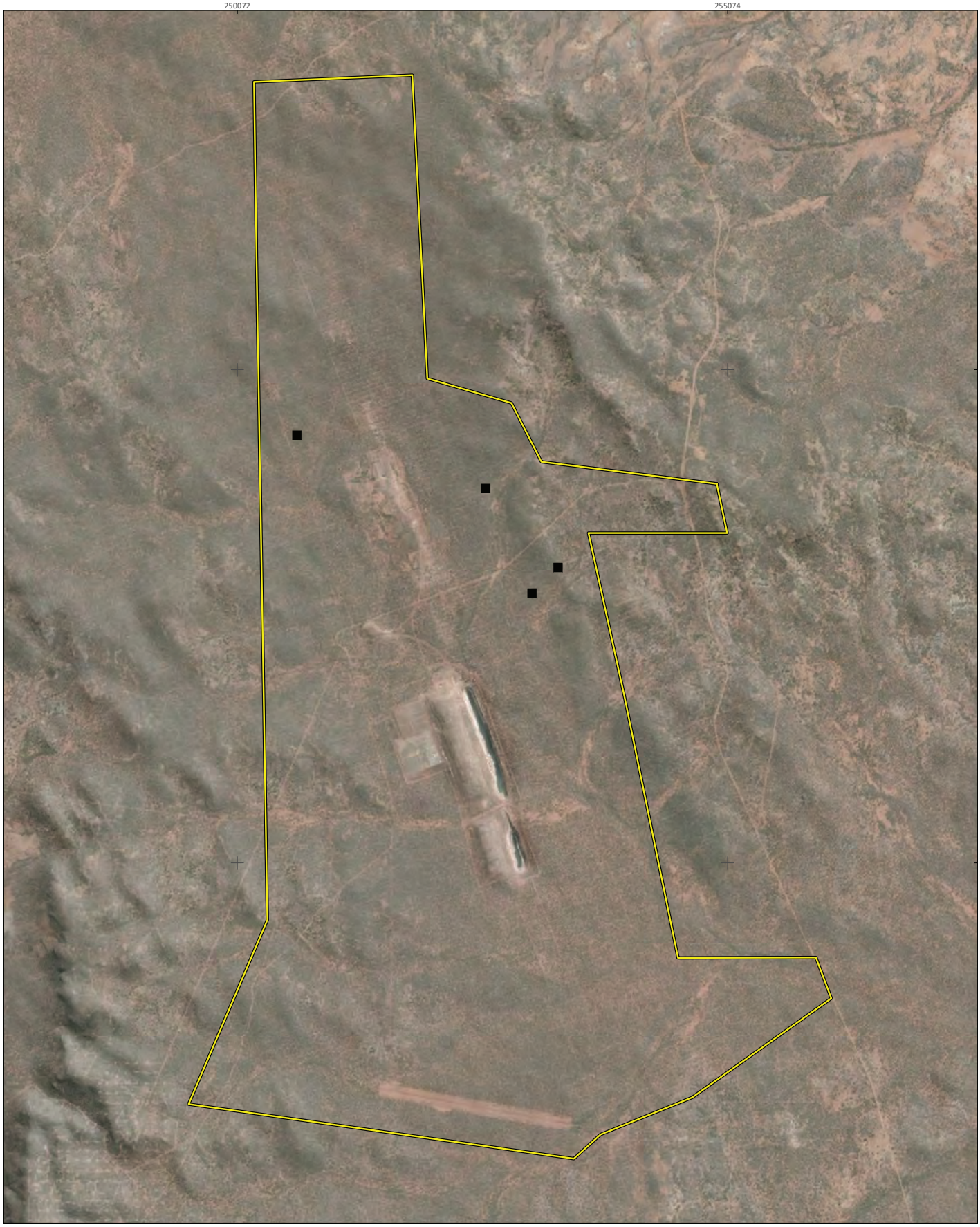
MT IDA GOLD PROJECT

Figure 8

BIOLOGICAL SURVEY AREAS

ENVIRONMAPS Environmental Mapping Solutions | t: 0406 590 006 | www.environmaps.com.au

C:\GIS\Jobs\Aurenne\Mt Ida Gold Project - 210526\Figures\Figures_SNVCP_2021\SNVCP_Biological Survey Areas_210809.mxd



Aurenne Group Holdings Ltd
Mt Ida Gold Project

Project No	1413/1414
Date	21/07/2021
Drawn by	IN
Map author	MH

0 0.5 1
Kilometers

1:50,200 (at A4) GDA 1994 MGA Zone 51

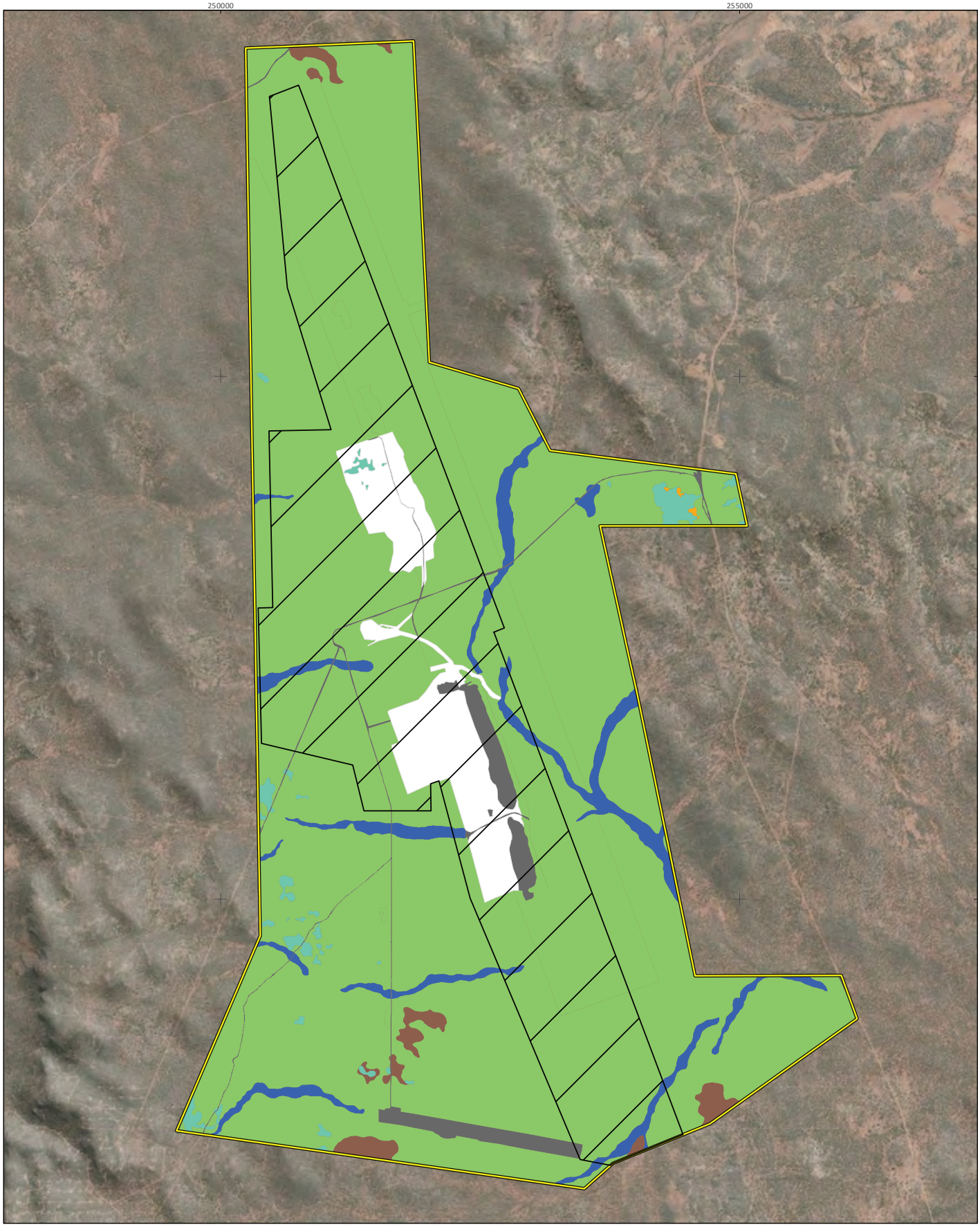
Study area

■ *Jacksonia lanicarpa*, P1 (DBCA list)

Figure 9

Significant flora records from the field survey

PHOENIX ENVIRONMENTAL SCIENCES



Aurenne Group Holdings Ltd
Mt Ida Gold Project

Project No	1413/1414
Date	21/07/2021
Drawn by	IN
Map author	MH

0 0.5 1
Kilometers

1:47,400 (at A4) GDA 1994 MGA Zone 51

Study area

NVS study area (Native Vegetation Solutions, 2019b)

Vegetation type

- AcAeEm
- AcArlAt/AcPbb
- AdDl
- EsAdEs
- Ph
- Rehabilitating
- Cleared

Figure 8A

Vegetation types recorded in the field survey

PHOENIX ENVIRONMENTAL SCIENCES

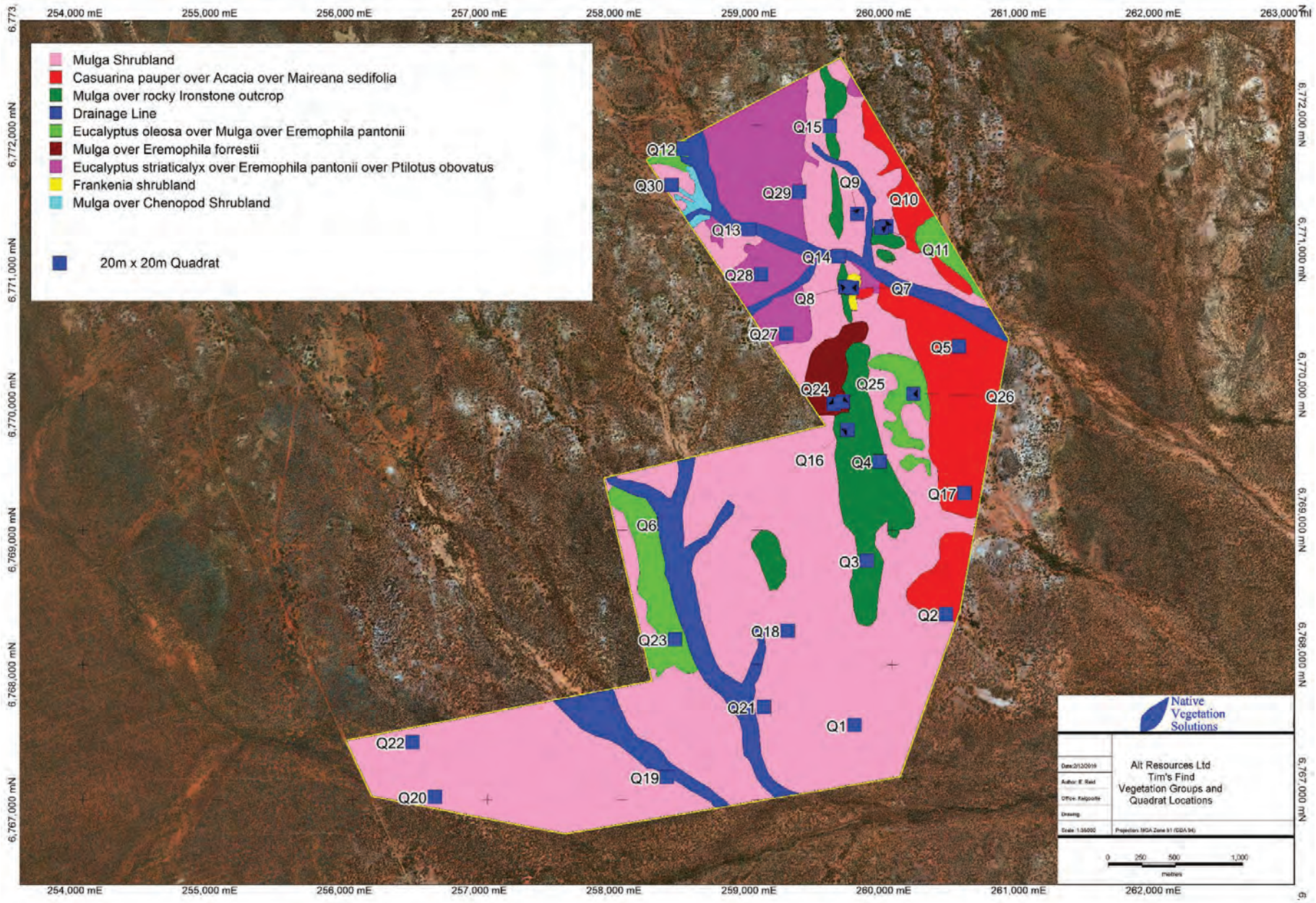

Mulga Shrubland
Casuarina pauper over Acacia over Maireana sedifolia
Mulga over rocky Ironstone outcrop
Drainage Line
Eucalyptus oleosa over Mulga over Eremophila pantonii
Mulga over Eremophila forrestii
Eucalyptus striaticalyx over Eremophila pantonii over Ptilotus obovatus
Frankenia shrubland
Mulga over Chenopod Shrubland
20m x 20m Quadrat
Q1
Q2
Q3
Q4
Q5
Q6
Q7
Q8
Q9
Q10
Q11
Q12
Q13
Q14
Q15
Q16
Q17
Q18
Q19
Q20
Q21
Q22
Q23
Q24
Q25
Q26
Q27
Q28
Q29
Q30
254,000 mE
255,000 mE
256,000 mE
257,000 mE
258,000 mE
259,000 mE
260,000 mE
261,000 mE
262,000 mE
263,000 mE
6,772,000 mN
6,771,000 mN
6,770,000 mN
6,769,000 mN
6,768,000 mN
6,767,000 mN
Native Vegetation Solutions
Alt Resources Ltd
Tim's Find
Vegetation Groups and Quadrat Locations
0
250
500
1,000
meters

Figure 8B

5.7 Fauna and Fauna Habitats

Three fauna surveys have been undertaken for the Project:

- Phoenix (2021) undertook a targeted and Level 1 surveys across all areas of the Project not previously surveyed, including Short Range Endemics (SREs)
- Terrestrial Ecosystems (2019 a & b) undertook Level 1 surveys and habitat mapping over Tims Find/Shepherds Bush (2019 a) and Bottle Creek (2019 b) project areas (Figure 8).

5.7.1 Fauna Habitats and Condition

The habitats of the Project area (Figure 9) are in good to very good condition but are not diverse as they are typically associated with mulga-eucalypt woodlands. Previous disturbance from mining, exploration and feral animal/pastoral grazing has been occurring over a long term.

5.7.2 Conservation Significant Fauna

State and Federal species databases list a number of conservation significant fauna known from the local area, though little records directly relating to Bottle Creek. The recent surveys (Bennelongia 2021; Phoenix 2021; Terrestrial Ecosystems 2019a&b) have provided more detailed local records, summarised following and shown in Figure 9.

5.7.2.1 Mallee Fowl

The Project area is noted for the presence of Mallee Fowl though no active mounds have been recorded. Recent surveys (Phoenix 2021) have shown very old and old mounds (Figure 11) and due to the potential utilisation for foraging and potentially breeding, mound survey will be ongoing for the life of the Project. Mallee Fowl are likely utilise the area for foraging and potentially breeding, although habitats are widespread locally and regionally, and denser vegetation such as tammar thickets are not found within the Project area.

5.7.2.2 Short Range Endemics

SRE survey was undertaken in 2021 (Phoenix) to understand the baseline biodiversity values of the Project area. Previous desktop information had inferred that the region was not prospective for SREs but the 2021 results showed that a lack of sampling effort both locally and regionally mean that the region is under-sampled and a reasonably diverse assemblage of invertebrates is found. New species of millipede, centipede and spider was collected but due to the homogeneity of habitats in the Project area and the wider region, no species is likely to be restricted to the Project area (Phoenix 2021).

5.7.2.3 Subterranean Fauna

Similarly, desktop information reviewed proposed that the Project area was unlikely to contain prospective habitat for subterranean fauna due to the fractured rock and hypersaline subterranean environment. The results of the 2021 baseline survey (Bennelongia) indicate that this is correct and that conservation significant species and high biodiversity subterranean communities are found regionally in paleodrainage channels or subterranean calcretes, which do not occur within the Project area.

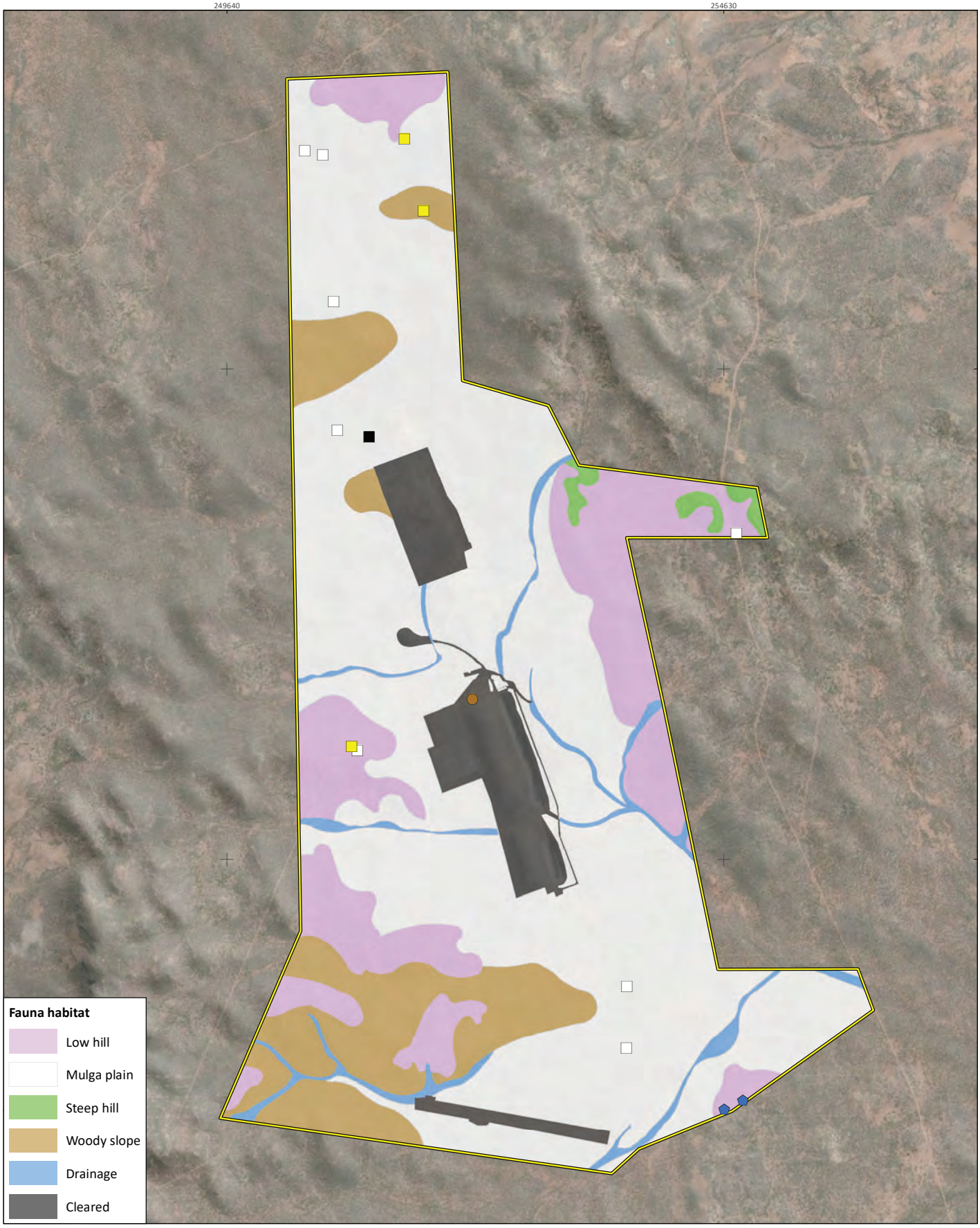
5.7.2.4 Arid Bronze Azure Butterfly

While some suitable habitat (smooth barked eucalypts on sandy soils) (Williams et al 2018; 2020) was identified during field surveys (Phoenix 2021), no nests of the ant *Camponotus* sp. nr. *terebrans*, which acts as a host for the Arid Bronze Azure Butterfly (*Ogyris subterrestris* subsp. *petrina*; CR EPBC

& BC Acts), were identified in the study area. Dr John Scanlon, who is experienced in surveys both for the butterfly and host and, undertook this field survey component.

5.7.3 Introduced Fauna

The PMST listed 10 feral animals recorded from the local area: camels, donkeys, dogs, cats, goats, horses, rabbits and foxes. All are likely to occur at varying densities, noting that the Project area is an active pastoral lease running a herd of cattle with a large resident herd of feral donkeys.



Aurenne Group Holdings Ltd
Mt Ida Gold Project

Project No	1413/1414
Date	21/07/2021
Drawn by	IN
Map author	PS

0 1 2
Kilometers

1:49,400 (at A4) GDA 1994 MGA Zone 51

Study area

Species, status

- *Bettongia lesueur graii*, EX (EPBC, BC Acts)
- *Leipoa ocellata*, VU (EPBC, BC Acts)
- *Leipoa ocellata*, VU (EPBC, BC Acts), Mound - Inactive (sub-class 2)
- *Leipoa ocellata*, VU (EPBC, BC Acts), Mound - Long unused
- *Sminthopsis longicaudata*, P4 (DBCA list)

Figure 11

Fauna habitats and significant fauna records from the field survey

PHOENIX ENVIRONMENTAL SCIENCES

5.8 Biodiversity Summary

In general, the Project area is wholly within pastoral leases that have been actively grazed by feral and managed stock for over 100 years. There are no records of Threatened flora nor Threatened/ Priority Ecological Communities and the fauna habitats are not restricted or of higher value to the local or regional area. The historical prospecting, mining, and exploration has degraded habitats and brought many access tracks which have increased feral predators within the area.

The occurrence of Priority flora is infrequent and generally not in proposed disturbance areas; habitat for Mallee Fowl is present but no active mounds have been located. Aurenne will plan for, manage, and mitigate for any proposed clearing that may impact areas of higher conservation values. Survey for Mallee Fowl mounds will be undertaken within 12 months of proposed clearing to ensure no new mounds are developed.

5.9 Environmental Threats and Other Factors

The following section details the currently known threats associated either directly or indirectly to the proposed clearing associated with the Project.

5.9.1 Weeds

The Project area is within the Perrinvale and Riverina pastoral leases, which are actively managed for cattle and contains a high feral donkey population. Both these introduced animals/herds can contribute to land degraded and weed spread. As most areas are highly grazed, weeds (and any soft herbaceous plants) are preferentially grazed, and high weed loads are not evident within the Project area.

Aurenne will manage weeds through vehicle and plant hygiene/clean on entry procedures and by weed surveillance (and chemical control if required) following significant rainfall events. Weed management procedures are being developed within the site EMP. Weed control measures will be negotiated with the pastoral lease manager to ensure no negative impacts to the pastoralism activities.

5.9.2 Fire

Wildfires can result naturally from lightning strike, or anthropogenically from deliberately or accidentally lit from vehicles and equipment. The Project does not allow campfires and maintains equipment and fire extinguishers to contain accidental ignition. Wildfires from storms may be controlled by the pastoralist but may be left to run out naturally. Project infrastructure and camp includes fire management through clear earth fire breaks around facilities consistent with *the Bush Fire Act 1954* and Shire of Menzies fire protection requirements.

5.9.3 Feral Animals

Feral animals have been recorded and anecdotally noted within the Project tenements, which co-occur within an active pastoral lease. A herd of cattle have access to all tenement areas and there is a large resident population of donkeys. Feral cats, foxes, and dogs are likely present but as they are more cryptic in their habits they are less frequently seen.

The Project will manage watering points and waste disposal so that no net increase in feral animals results from operations. Staff and contractors will be advised that the feeding or encouragement of feral animals is not permitted.

5.9.4 Dust

Historic clearing for gold mining, exploration, and active grazing coupled with long periods without rainfall means that the local area, and region, is usually dry and therefore has higher potential for dust generation.

Dust generated by clearing activities will be controlled using water carts. Water carts are utilised to spray (saline) water onto the surface of haulage roads to supress dust as required. During periods of high winds, clearing activities, topsoil handling will be restricted if dust cannot be adequately controlled. No area will be cleared unless it is planned for a purpose that will be undertaken within 6-8 weeks.

6. Environmental Management

Aurenne Mining is a recently developed mining entity and is in the process of developing a full Environmental Management System (EMS) to align with ISO14001, which will be a set of processes and practices that enable the organisation to reduce its environmental impacts and increase its operating efficiency.

ALT Resources (now Aurenne ALT Resources) had previously developed an EMS to manage those activities that may have an impact on the environment. The EMS utilises a risk management process and approach to enable ALT to identify, prioritise and manage environmental risks. These risks may be applicable to exploration, mining, and mineral processing activities and includes the following components:

- Environmental Policy (Appendix F)
- Planning:
    - o Environmental Aspects and Impacts
    - o Legal and Other Requirements
    - o Objectives, Targets and Programs
- Implementation and Operation:
    - o Roles and Responsibilities
    - o Training
    - o Communication
    - o Documentation
- Checking:
    - o Monitoring and Measurement
    - o Evaluation and Compliance
    - o Nonconformity, Corrective and Preventative Actions
    - o Audits
- Management Review.

An Environmental Management Plan (EMP) relevant to the Mt Ida Gold Project is in development and its purpose is to be the overarching document that describes the purpose and application of the plans and procedures forming the EMS. The EMP applies to all elements of operation, maintenance, and closure of each MIG site. Whilst all contractors and consultants are encouraged to establish and maintain their own EMS, compliance with the minimum standards articulated in MIG's EMS are required.

The document outlines the management of environmental, community and compliance risks and applies to all existing and future activities. Specifically, the document applies to the following activities:

- Exploration, mining, and mineral processing activities
- Procurement, transport, warehousing, use and disposal of goods
- Onsite commissioning and maintenance of equipment and services
- Decommissioning, rehabilitation, remediation, and closure of assets
- Community liaison and stakeholder engagement
- Communication of environmental management requirements to employees, contractors, service providers, suppliers, and key stakeholders.

Aurenne is committed to the ongoing improvement of environmental performance. The EMP aligns with the structure of ISO14001 and demonstrates the intent to fulfil these requirements. The EMP

encompasses the following management plans and/or procedures, most of which are still under development given Aurenne's recent acquisition of the Project:

- Bushfire Management
- Dust Management
- Environmentally Hazardous Substances and Dangerous Goods Management
- Fauna Management Plan, incorporating Malleefowl Mound Marking Procedure and Malleefowl Reporting Procedure
- Flora & Vegetation Management
- Surface Water Management
- Groundwater Operation Strategy (GWOS)
- Heritage Management
- Noise Management
- Tailings Management
- Waste Management Plan (including Used Tyre Storage and Disposal Procedure)
- Weed & Feral Animal Management, incorporating Humane Euthanasia Procedure
- Clearing Vegetation and Ground Disturbance Procedure
- Encapsulation of Fibrous Material
- Dewatering
- Monitoring
- NPI and NGERS
- Potable Water, Surface and Groundwater Monitoring Procedure (including Water Meter Procedure)
- Spills and Bioremediation
- Stakeholder Engagement Procedure (including Community Safety and Complaints Procedures).

6.1 Training/inductions/awareness

All staff and contractors will be inducted to site, which includes an environmental awareness component to ensure compliance with regulations, policies and corrective action procedures. Additional information may be communicated during pre-starts or toolbox talks.

The Registered Manager will be responsible for ensuring all activities associated with the early work program are undertaken in full compliance with statutory regulations and are consistent with the Aurenne Mining's Policy.

Environmental management responsibilities for all employees and contractors are clearly articulated during site induction.

6.2 Impact Assessment

Table 5 contains a list of environmental features and the potential direct or indirect impact as a result of project clearing.

Table 5 Proposed clearing impact assessment

Environmental value	Potential impact
Conservation significant flora	One Priority 1 flora found within the clearing area; *Jacksonia lanicarpa* Given the local and regional distribution (~800 km) and the few records within the site, no significant impacts are anticipated Ongoing flora survey will improve knowledge in regard to the species distribution and numbers. Few individuals will be impacted by the proposed clearing over a 10-year period No significant impact to the conservation status on this species will result from the proposed clearing
Conservation significant ecological communities	None recorded within proposed clearing area; not within the buffer of a TEC or PEC
Conservation significant fauna/fauna habitat	The proposed clearing, over a 10-year period will result in the clearing of habitat for mallee fowl; however similar or better habitat is extensive in the local and regional area Pre-clearing survey for Mallee Fowl mounds (within 12 months of clearing) will ensure no active mounds are impacted
Hydrological features	No wetlands within or adjacent to proposed clearing area. Lake Ballard is ~20 km away The proposed clearing area contains minor tributaries that feed into Bottle Creek. In all instance the clearing of riparian vegetation will be avoided or minimised Limited impacts to ephemeral drainage lines are unavoidable due to mine development; however clearing will be minimized and mitigated so no erosion or degradation of habitat occurs
Heritage	No Native Title exists over the Project area and there are no recorded Aboriginal heritage sites Consultation and surveys will continue as required during Project development

7. Assessment Against the Ten Clearing Principles

An assessment of the application area based on current desktop and biological survey information, has found the proposed incremental clearing over the next 10 years for the Project, is at variance to Principle F; but is not likely to be at variance to any of the remaining clearing principles.

PRINCIPLE A Native vegetation should not be cleared if it comprises a high level of biological diversity

The proposed SNVCP application area is up to 1,000 ha (over a 10 year period) within a suite of tenements that are largely remnant native vegetation with disturbance/clearing for tracks, previous mining disturbances, and grid lines for exploration. The application area sits within two pastoral leases that are currently, and historically, used for grazing (sheep, cattle, donkeys). Surveys over multiple seasons and years has shown that the Project area does not contain exceptional or restricted biodiversity values. It has limited introduced (weed) species. No Threatened flora occur (Phoenix 2021). One Priority 1 flora (*Jacksonia lanicarpa*) has been recorded in low numbers but is found across a wide geographical range (~800 km) outside of the Project area (FloraBase 2021).

Mallee Fowl (Threatened (VU)) foraging and potential breeding habitat is within the applied area. The Priority 4 Long-tailed Dunnart was recorded provisionally in the study area (Phoenix 2021) as breeding habitat for Long-tailed Dunnart exists but better breeding habitat is present in the hills immediately outside the study area to the west. It is unclear whether breeding populations of the Dunnart exist within the study area or whether the study area is used solely for foraging and dispersal (Phoenix 2021).

Sampling of invertebrate groups containing SRE taxa found two new trapdoor spider species, one centipede and one millipede but these species were associated with habitats which are common both immediately outside the study area and within the surrounding region. Ten taxa were identified as potential SRE. None of these taxa are likely to be restricted to the study area. Northern Shield Backed Trapdoor Spider (*Idiosoma clypeatum*; P3) was not recorded during the survey and neither was the ant *Camponotus* sp. nr. *terebrans*, which is the host ant for the Threatened Bronze Azure Butterfly (Phoenix 2021).

The application area does not contain unique geological features and is not representative of an area with high biodiversity values. It is within a context of high remaining vegetation extents with large tracts of mulga woodlands that are extensive in the local and regional area. There are no TECs or PECs mapped for the application area. Given the above, the proposed clearing is not likely to be at variance to the Principle.

PRINCIPLE B Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia

NatureMap records (DBCA 2021) (Appendix C) shows two terrestrial conservation significant fauna recorded in or within 10 km of the proposed SNVCP area; Mallee Fowl and Long-tailed Dunnart. The remainder are marine mammals or avifauna due to the proximity to the coast but not likely to be impacted by any clearing within the SNVCP area. Potential habitat for the Threatened Bronze Azure Butterfly was searched via the host ant *Camponotus* sp. nr. *terebrans*, by an ecologist (Dr John Scanlon) experienced in surveys for both species with no records found.

The limited, incremental nature of clearing associated with the strategic application area means that none of these species will have critical habitat significantly reduced or the area of foraging and

dispersal significantly altered or impacted by the proposed clearing. The incremental clearing will not result in significant habitat fragmentation or the removal of linkages as the immediate area.

Aurenne will ensure targeted survey is undertaken for areas not previously surveyed to complete gaps in information for conservation listed terrestrial and invertebrate fauna. Any area to be cleared will have Mallee Fowl nest/mounds surveys to ensure no active mounds have been constructed in the intervening period between survey and clearing. All survey information and data will be provided to DBCA Species and Communities Branch to assist with species conservation.

Based on the area of clearing requirements over the next 5-10 years, the proposed clearing is not likely to be at variance to this Principle.

PRINCIPLE C Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora

No flora listed under the Federal EPBC Act, nor gazetted as Threatened under the State *Biodiversity Conservation Act 2016* is known from, nor recorded in the application area. Flora surveys over multiple occasions and seasons have not recorded any Threatened flora. The habitats and landforms of the area are not supporting habitat for Threatened flora. Therefore, the proposed clearing will not directly nor indirectly impact on threatened flora and is not likely to be at variance to this Principle.

PRINCIPLE D Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

The applied area is not within an ESA mapped for the potential occurrence or buffer of a TEC (DWER 2021; DBCA 2021). The vegetation within the applied area neither comprises nor is necessary for the maintenance of a TEC. Given the above, future clearing is not likely to significantly impact on any TEC, or its buffer and therefore the proposed clearing is not at variance to this Principle.

PRINCIPLE E Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared

The SNVCP area is in the Goldfields region and the pre-European vegetation types are primarily acacia-eucalypt woodlands, which are confirmed through field surveys (NVS a and b 2019; Phoenix 2021). The habitats and vegetation within the application area are locally and regionally extensive and not significant as a remnant.

The application area is not within an extensively cleared LGA (Shire of Menzies) nor will the proposed SNVCP area (and the proposed clearing area within) contribute to a significantly decreased representation of local or regional vegetation types. The proposed clearing is not likely to reduce the local or regional representation of any vegetation unit or complex and therefore the proposed small area of clearing over a 10-year timeframe is not likely to be at variance to this Principle.

PRINCIPLE F Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland

The proposed SNVCP area lies in the headwaters of Bottle Creek, which drains to Lake Ballard. Lake Ballard is an internally drained, intermittent salt lake in the wider Raeside-Ponton catchment and has substantial environmental values and has been nominated Nationally Important Wetland (RAMSAR listing). Lake Ballard is ~20 km SE of the SNVCP area and almost 100% remnant vegetation remains as a buffer to this Lake system.

Topography in the area of the site is characterised by low hills and rises with broad valleys and indistinct drainage lines. It is located in the Salt Lake Basin surface water management area (DWER 2019), which is not in a proclaimed surface water management area. Existing surface drainage in the area has been modified by previous mining activities at the site and further surface water management is proposed to ensure both pit integrity and safety, and to maintain ecological hydrology regimes.

Due to the distance to Lake Ballard, the Project activities and proposed clearing is unlikely to have a negative impact on the water quality or quantity, and therefore the environmental values of the Lake. However, indistinct and intermediate ephemeral drainage lines will be cleared as part of development of the mine, access and associated infrastructure, although clearing within any riparian zone will be avoided and minimised where possible. The proposed clearing will include some riparian (but not wetland) area and is therefore at variance to this Principle.

PRINCIPLE G Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation

Land degradation may include impacts such as erosion, changes to pH, water logging, salinisation or spread of weeds. The proposed clearing will be staged, clearing areas minimised and managed in accordance with infrastructure and site planning, which includes surface water management measures to ensure no off-site surface water impacts. Temporarily cleared areas will be progressively revegetated and management measures for dust suppression are standard operational activities. The relatively small area of proposed clearing, over a large area of land holdings, with management of topsoil, dust and clearing controls means that no appreciable land degradation would result. No registered contaminated sites (DWER, 2021; Appendix D) are register in the local area and Aurenne has spill management procedures and kits for hydrocarbon (or other) spills.

Further, all topsoil will be stockpiled and reused for rehabilitation as part of the (to be approved) Mining Proposal/Mine Closure Plan. Clearing and topsoil to be managed in accordance with Aurenne's Topsoil Stripping and Handling Procedure (in prep.). Topsoil is a scarce commodity within the proposed disturbance footprint and will be treated and managed as a valuable asset; it will be managed to ensure salt, wind, and surface water erosion does not significantly diminish the resource.

Clearing will not occur more than two months ahead of planned ground disturbance/use; any temporarily cleared areas will be rehabilitated within two months of end of use. Therefore, the proposed clearing is not likely to be at variance to this Principle.

PRINCIPLE H Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area

The application area is not within nor adjacent to any conservation area. It is wholly within an active pastoral lease for commercial cattle/donkeys. Due to the distance to any conservation areas and important wetlands (Lake Ballard), it is not likely that any direct nor indirect clearing impacts will be received and therefore the proposed clearing is not at variance to this Principle.

PRINCIPLE I Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water

The staged clearing over ten years will be managed so that no erosional activities or impacts to wetland or riparian zones within the larger catchment, result from the proposed clearing. The limited area of clearing and utilisation over a 10-year period means that groundwater will not be impacted nor will significant increases to surface or groundwater salinity levels result; the groundwater is noted as hypersaline.

The Project lies within the Rebecca and Raeside subareas of the Goldfields which include fractured rock and paleochannel aquifers. The Project is within the Goldfields RIWI Act Groundwater Proclamation Area and it is illegal to take water from a watercourse or groundwater aquifer without a licence in a proclaimed area. A Groundwater Licence has been granted for 250,000kL over the Project area with a supporting Licence to Construct Well application to draw water for mining related activities and dust suppression purposes from the proposed bores. Generally, the geology of the area comprises weathered and fractured mafic-ultramafic intrusive and volcanic rocks with minor interflow sediments. Groundwater across the region occurs in basins of weathering and shear/fracture systems, which vary in vertical and lateral extent, and which may be compartmentalised on a regional scale where there is little if any hydraulic connection between the different compartments. Consequently, ground water is likely to move or drain very slowly and may be considered stagnant (Pendragon Environmental (2021) and therefore localised drawdown for the early project activities is likely to be negligible in the catchment.

Surface water is a rare occurrence on porous loamy soils, which may only result after a significant rainfall event, usually immediately following summer thunderstorm activity and does not persist for extended periods. The staged and managed clearing is not likely to result in any deterioration of surface or groundwater quality and therefore is not likely to be at variance to this Principle.

PRINCIPLE J Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding

Surface water runoff and localised flooding occurs following intense rainfall events, usually as a result of summer thunderstorm following cyclonic events off the northwest coast of WA or less frequently during peak winter storms. The incidence or intensity of flooding is not likely to be significantly influenced by the proposed limited area, staged, and managed vegetation clearing. It is highly improbable that surface runoff generated from the cleared area could create sufficient concentrated water volumes to cause even a localised flood event. Any area required for clearing will not be left open unnecessarily and any temporary clearing will be revegetated. Therefore, the proposed clearing is not likely to be at variance to this Principle.

7.1 Planning and other matters

Aurenne will apply for any additional approvals that may be required for development applications by the Shire of Menzies, or other relevant regulatory instruments (such as prescribed premises licences, water licences and Mining Act approvals). The proposed clearing is wholly within tenements held by Aurenne Mining as a registered business which holds Aurenne Alt Resources and MGK Resources.

Aurenne will continue to liaise with stakeholders during the development and operation of the Project and are aware of its obligations under the Aboriginal Heritage Act. An extract of the Project Stakeholder Register is provided in Appendix G.

7.2 Conclusion

Aurenne will seek to avoid and minimise clearing within the application area such that proposed clearing is not likely to be at variance to any of the clearing principles. It is recognised that some of the Project area contains ephemeral drainage lines which may contain larger trees and be considered riparian vegetation; and therefore, clearing should be avoided or minimised to the fullest practicable extent.

Any clearing will be managed to ensure no direct or indirect significant residual impacts to biodiversity or resultant land degradation occurs. Commitments to ensure no negative residual impacts to biodiversity or soil and land conservation are outlined in Section 8.

8. Proposed NVCP Commitments

To ensure appropriate clearing controls and management, Aurenne commits to the following:

- Strict adherence to Aurenne's Clearing Vegetation Procedure (E-PRO-001)
- Proposed clearing area to be demarcated to ensure no over-clearing
- Environmental Superintendent to review Aurenne's Internal Vegetation Clearing Request – FORM to ensure the clearing area contains no significant environmental values that will be impacted (mallee fowl mounds in current or recent use, Priority 1-3 flora, large trees, hollow bearing trees, or other significant habitat feature)
- Apply mitigation hierarchy; avoid, minimise, mitigate and manage clearing
- Spatial and data records of clearing area
- Ensure dust control measures are in place
- Ensure appropriate storage of topsoil and vegetative material
- Rehabilitate areas of temporary clearing as soon as possible.

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