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# KATANNING GOLD PROJECT

## SITE BASED ENVIRONMENTAL MANAGEMENT PLAN

27 AUGUST 2025

PREPARED FOR AUSGOLD LIMITED  
BY PRESTON CONSULTING PTY LTD

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## DOCUMENT CONTROL

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**Appendix 1:** Environmental risk summary

**Appendix 2:** Descriptions of likelihood and consequence ratings used for the risk assessment

**Appendix 2:** Risk matrix



## EXECUTIVE SUMMARY

Ausgold Limited (Ausgold) plans to develop the Katanning Gold Project (Proposal), targeting significant gold mineralisation located 275 kilometres (km) south-east of Perth and approximately 40 km north-east of the town of Katanning in southwest Western Australia (WA). Granted tenements cover over 3,500 km<sup>2</sup> of the Katanning Greenstone Belt in the south-west corner of the Yilgarn Craton, which hosts some of Australia’s largest gold deposits.

Ausgold is progressing Proposal planning and is seeking to refer the Proposal to the EPA under Part IV of the *Environmental Protection Act 1986* (WA) in the second half of 2025. To support this referral, Ausgold has prepared a Site Based Environmental Management Plan (SBEMP; this document) to detail how potential construction and operations impacts from the Proposal will be managed. The SBEMP has been written in consideration of the EPA’s guidance for preparing Environmental Management Plans (EPA, 2024), which enables a simple cross-reference to the referral document.

Relevant environmental factors and site activities that are expected to require management have been determined using a risk assessment framework that aligns with the Department of Mines, Petroleum and Energy’s guidance for Mining Proposals and Mine Closure Plans (DMPE, 2023). This approach has been chosen to ensure EPBC Act requirements are addressed.

In addition to identifying key risk and objectives-based management, the SBEMP also identifies relevant policies and procedures that are being developed to support Ausgold’s Environmental Management System. In its current form, the SBEMP serves to demonstrate Ausgold’s planning and consideration of key potential impacts from the Proposal.

### ES 1: Executive summary

| Plan Element  | Proposal Detail  |
|---|--|
| Proposal name   | Katanning Gold Project   |
| Proponent name  | Ausgold Limited  |
| Ministerial Statement number                            | If Applicable  |
| Purpose of the EMP                                      | To demonstrate Ausgold’s approach to identifying environmental risks of the Proposal and provide management provisions to mitigate impacts as far as practicable.<br><br>This SBEMP has been prepared to support referral of the Proposal under Part IV of the <i>Environmental Protection Act 1986</i> and therefore has been developed in consideration of the Environmental Protection Authority’s guidance (EPA, 2024) and template (EPA, 2021) may be used to support other approvals.    |
| Key Environmental factor/s, outcome/s and/or objectives | The environmental factors and objectives of relevance to this SBEMP include:<br><b>Inland Waters</b> <ul style="list-style-type: none"> <li>To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected</li> </ul> <b>Terrestrial Environmental Quality</b> <ul style="list-style-type: none"> <li>To maintain the quality of land and soils so that environmental values are protected</li> </ul> <b>Social Surroundings</b> |



| Plan Element                              | Proposal Detail  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• <i>To protect social surroundings from significant harm</i></li> </ul> <p><b>Air Quality</b></p> <ul style="list-style-type: none"> <li>• <i>To maintain air quality and minimise emissions so that environmental values are protected</i></li> </ul> <p>Other environmental factors, specifically <b>Terrestrial Fauna</b> and <b>Flora and Vegetation</b> may also be considered as Key Environmental Factors for the Proposal. Ausgold has therefore prepared separate management plans relevant to those factors. To avoid duplication, potential impacts and management measures relating specifically to <b>Terrestrial Fauna</b> and <b>Flora and Vegetation</b> have not been provided in this SBEMP. These are covered under other covers by Stantec (2025a; 2025b).</p> |
| Condition clauses (if applicable)         | Not Applicable   |
| Key components in the EMP (if applicable) | <p>Key components of this SBEMP include management provisions for potential impacts to the abovementioned environmental factors. Management components are based on objectives-based management and include management targets, actions, monitoring and reporting (See Section 2).</p> <p>Management includes monitoring and corrective actions (Section 3) and is underpinned by defined roles and responsibilities (Section 4) as well as training (Section 5) and emergency management (Section 6).</p> <p>This SBEMP is also subject to Ausgold’s review and adaptive management framework (Section 7) meaning it will be periodically reviewed and modified to ensure the objectives defined in the SBEMP are being achieved.</p>   |
| Proposed construction date                | 2026   |
| EMP required pre-construction?            | Yes  |



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# 1 INTRODUCTION

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Ausgold Limited (Ausgold) plans to develop the Katanning Gold Project (Proposal), targeting significant gold mineralisation located 275 kilometres (km) south-east of Perth and approximately 40 km north-east of the town of Katanning in southwest Western Australia (WA) (Figure 1). Granted tenements cover over 3,500 km<sup>2</sup> of the Katanning Greenstone Belt in the south-west corner of the Yilgarn Craton, which hosts some of Australia's largest gold deposits.

The Proposal is located on part of a 17 km long mineralised trend with significant resource potential across three key zones, Northern Zone (Datatine), Central Zone (Jackson, Olympia, Jinkas and Jinkas South) and the Southern Zone (Rifle Range, Dingo and Lukin). The mineralised zones are illustrated in Figure 2, with mine plan of the current Proposal set to focus only on the Central and Southern zones (see Figure 3).

## 1.1 PURPOSE

Ausgold is progressing Proposal planning and is seeking to refer the Proposal to the Environmental Protection Authority (EPA) under Part IV of the *Environmental Protection Act 1986* (WA; EP Act) in the second half of 2025. To support the referral, Ausgold has developed this Site Based Environmental Management Plan (SBEMP) to detail how potential construction and operations impacts from the Proposal will be managed. The SBEMP has been written in consideration of the EPA's guidance for preparing Environmental Management Plans (EPA, 2024), which enables a simple cross-reference to the referral document.

The purpose of this SBEMP is to:

- Provide a framework for management of potential impacts to the environment during the construction and operation of the Proposal;
- Identify environmental factors that require specific management to ensure the impacts are acceptable;
- Identify a list of supporting documents and procedures required to effect management;
- Establish procedures for reviewing management efficacy and implementing corrective actions; and
- Provide a framework for review and continuous improvement.

Relevant environmental factors and site activities that are expected to require management have been determined using a risk assessment framework that aligns with the Department of Mines, Petroleum and Energy's guidance for Mining Proposals and Mine Closure Plans (DMPE, 2023). This approach has also been chosen to ensure EPBC Act requirements for EMPs are addressed.

In addition to identifying key risk and objectives-based management, the SBEMP also identifies relevant policies and procedures that are being developed to support Ausgold's Environmental Management System. In its current form, the SBEMP serves to demonstrate Ausgold's planning and consideration of all potential impacts from the Proposal.

This SBEMP is to ensure Ausgold's environmental obligations are met at all times and by all parties operating at the site during construction and operations. It provides an overview of controls that will be implemented for all identified impacts and sets out conditions under which the Proposal will proceed.



The management measures described in this SBEMP address potential impacts from the Proposal to the EPA's key environmental factors. Two key environmental factors; Flora and Vegetation and Terrestrial Fauna, are considered to be significant factors and as such separate Environmental Management Plans (EMPs) have been prepared for those factors (Stantec, 2025a & b) to support the approvals process under Part IV of the EP Act. This SBEMP defers to these documents where appropriate to avoid duplication.



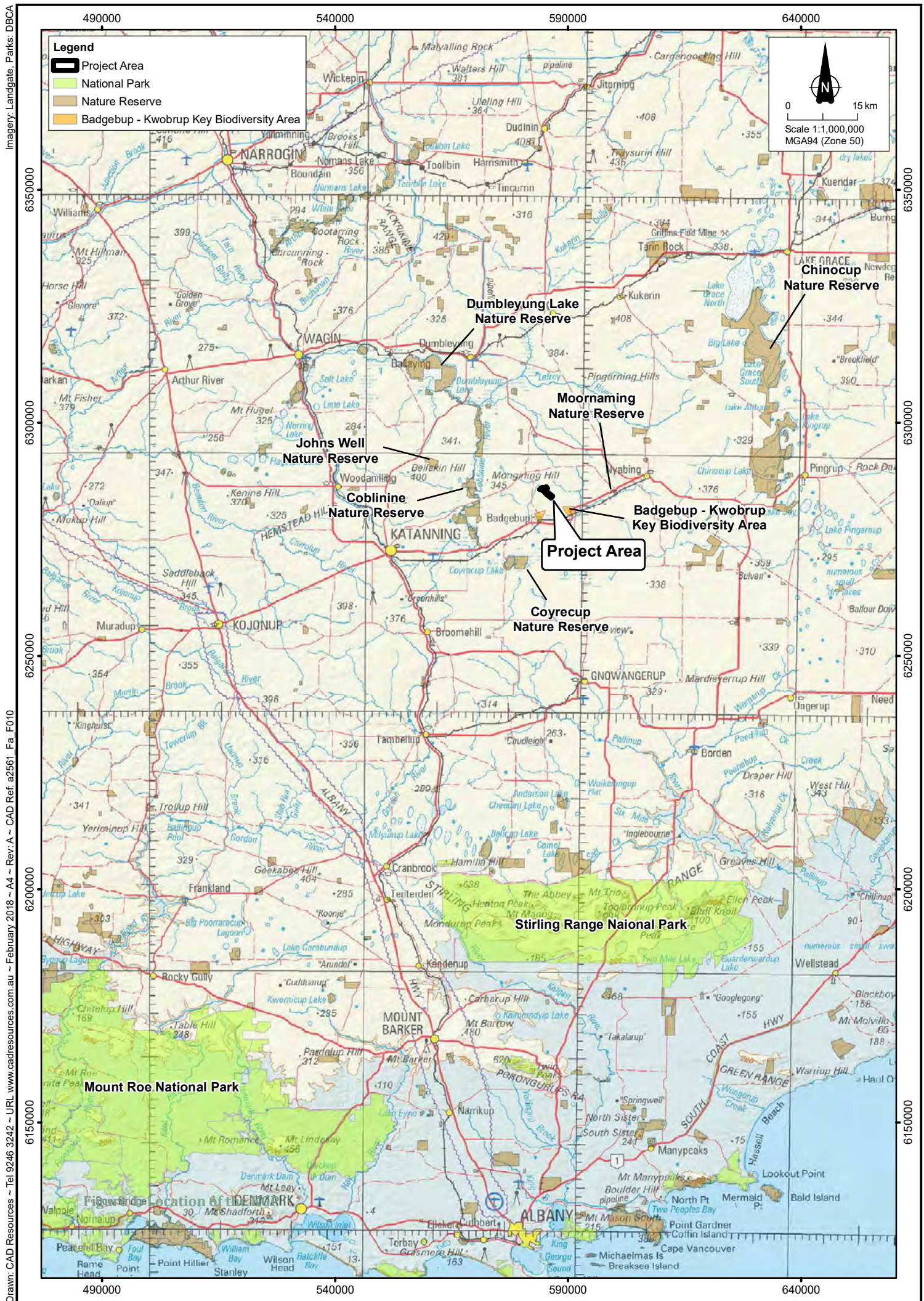


Figure 1: Regional Location of the Project



Figure 2: Mineralised targets

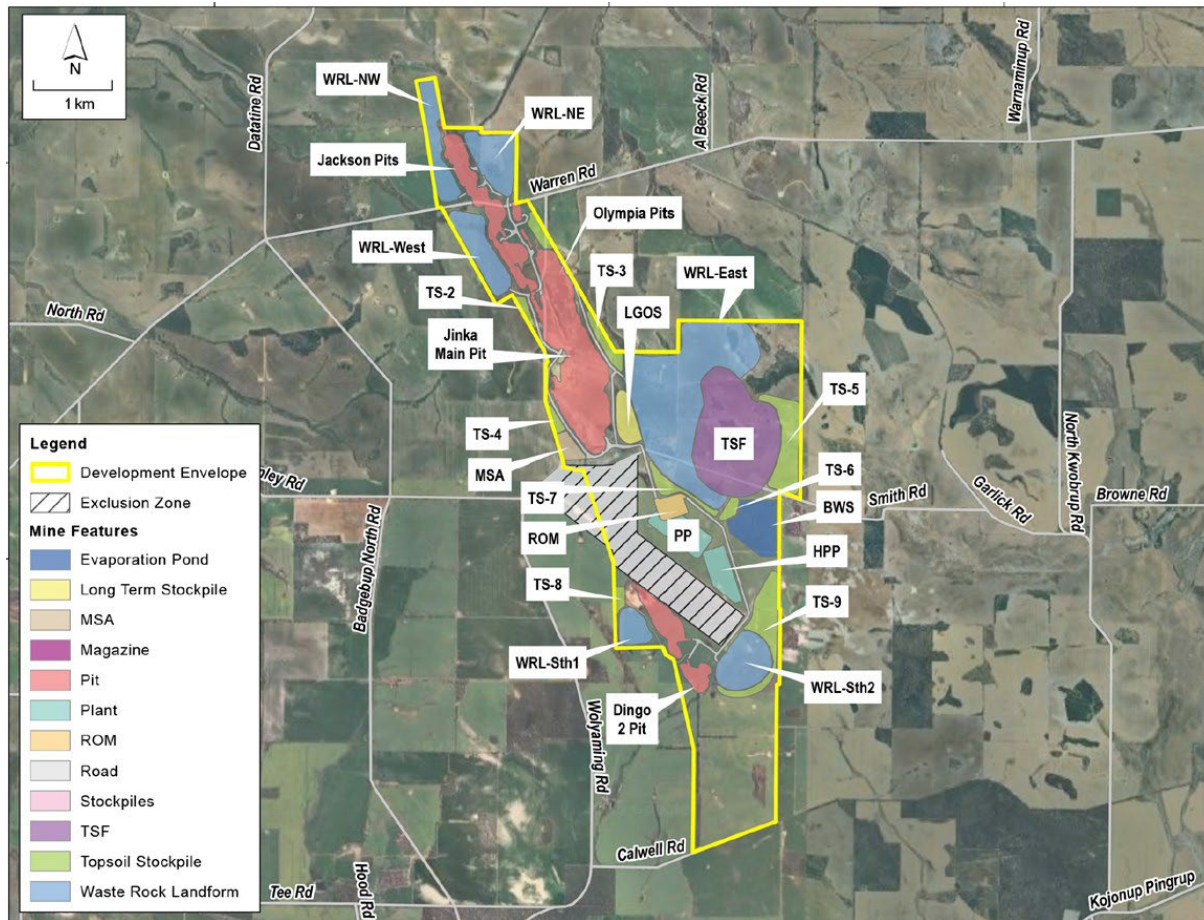


Figure 3: Proposal's mine plan general arrangement

## 1.2 PROPOSAL DESCRIPTION

The mineralised rock occurs over a 17 km long strike spanning three specific zones (Figure 2).

The following key points have been considered in the assumed Proposal design:

- Mining will occur in two zones, with pits in each of the following:
  - Central Zone - Jackson, Olympia, Jinkas and Jinkas South;
  - Southern Zone – Dingo;
- Mining will be above ground and in an open cut pit form,
- Excavators and dump trucks will be used to mine approximately 30 million tonnes per annum ;
- Mining will occur below the water table (to a depth of approximately 200 m below natural surface);
- The Proposal requires approval for clearing native vegetation within the mine footprint;
- Gold ore processing and tailings storage will occur on site; and
- Supporting infrastructure, including mine services area, balancing water storage pond and storage of topsoil in stockpiles, will be constructed at the Proposal site.

Ausgold is exploring options to integrate the Proposal into the local Katanning community by utilising existing and building new buildings within the town for administration and accommodation. This option is favourable as it will reduce the extent of development at the



Proposal and will promote integration of Ausgold personnel and contractors within the community, stimulating the local economy.

The Proposal is well connected to major highways via existing gazetted roads.

Power for the Proposal will be sourced from a dedicated on-site hybrid power plant (likely to be supplied by an independent power provider under contract). Green energy post-mining opportunities may be enhanced by retention of available infrastructure.

Process water will be sourced from several production bores that predominantly target the fractured rock aquifers. The main water demand is for process water, for which water quality is not critical for a carbon in leach (CIL) process. A portion of abstracted groundwater will be processed using an onsite Reverse Osmosis (RO) plant to produce potable water.

The Proposal aims to produce gold from ore mined from open pits using conventional load and haul mining equipment. Ore will be stored on a Run-of-mine (ROM) pad, before loading into a crushing and screening system. A CIL plant will be used to extract the gold.

Tailings will be pumped to a purpose-built integrated waste landform (IWL) that consists of waste rock and upstream constructed conventional tailings storage.

Overall, the Proposal will mine and process a reserve of 1.25 million contained ounces of gold and facilitate an annual average production rate of 3.6 Mtpa operation over a 10-year Life of Mine (LOM). Gold Doré will be transported to the Perth Mint and refined into high-purity gold.

## **1.3 RATIONALE AND APPROACH**

This SBEMP has been developed to provide information to support environmental approval processes under Part IV of the EP Act and the EPBC Act. Given the Proposal will be referred to the EPA and considered for assessment under the EP Act, priority was given to adopting the structure and terminology used by the EPA. The SBEMP has therefore been prepared in consideration of the EPA's *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (EPA, 2024). This SBEMP has been developed using an objectives-based approach that includes specific management actions and targets proposed to meet the SBEMP's objectives.

The SBEMP also considers the EPA's *Statement of environmental principles, factors, objectives and aims of EIA* (EPA, 2023a) in determining the environmental factors that may be impacted by the Proposal. The EPA's objectives for each factor are also considered in the context of setting management actions.

Ausgold has taken a holistic approach to environmental management and has considered both the existing environment, and the potential risks (intrinsic and extrinsic) related to construction and operation of the Proposal which have the potential to impact the environment.

To evaluate the risk of the site activities and identify those that require specific management, Ausgold has undertaken a site-wide risk assessment for construction and operation activities. A description of the approach for risk assessment is provided in Section 1.3.3 and a summary of the risks and their rating has been provided in Appendix 1. Key risks that were identified as requiring



specific management are discussed in the context of the relevant environmental factors in Section 2.

Key risks are grouped according to relevant key environmental factor.

### 1.3.1 RECEIVING ENVIRONMENT

#### Climate

Beard (1990) and Beecham (2001) describe the climate of the Avon Botanical District as having a warm dry Mediterranean climate, with precipitation of 300 - 650 millimetres (mm) and 7 - 8 dry months per year. The winter conditions represent the commencement of the growing season for local farmers.

Average climate conditions for the Proposal (Figure 4) have been projected from the Badgebup weather station (station number 10508), which is located 10km south of the Proposal. The mean annual rainfall in Badgebup is approximately 390mm, and rainfall typically peaks between May and September. Temperatures fluctuate between mean monthly maximum temperatures of 15 - 30°C and mean monthly minimum temperatures of 5 - 13°C.

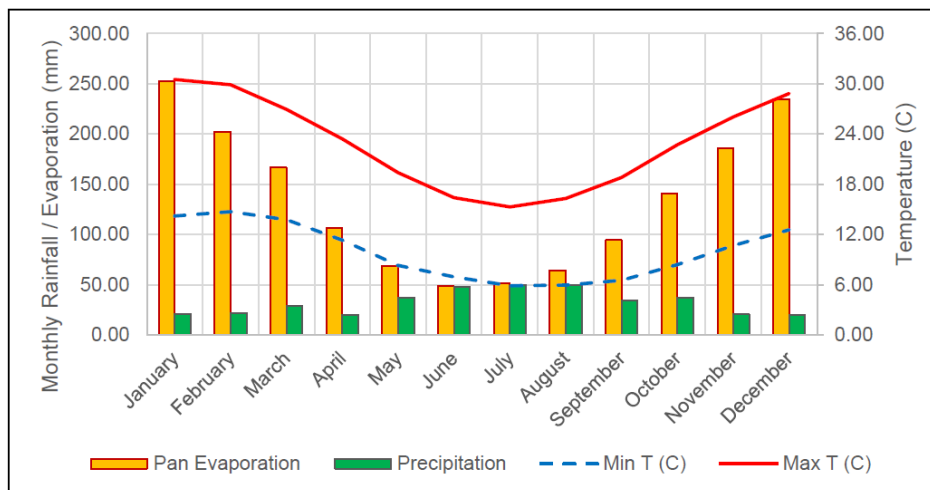


Figure 4: Average Climate Data for Badgebup Weather Station (between 2010-2024) (SRK Consulting, 2025)

WSP (2025) derived total rainfall intensity-frequency-duration estimated for the Proposal area. Table 2 summarises rainfall intensities (mm/hr) associated with storm events lasting up to 72 hours' duration and annual exceedance probability (AEP) up to 1 in 100 applied in the estimation of design flood discharges.

Table 2: Total rainfall depth (mm) for standard durations and annual exceedance probability (WSP, 2025)

| Event Duration (hours) | Annual Exceedance Probability (AEP) |              |              |               |
|------------------------|-------------------------------------|--------------|--------------|---------------|
|                        | 10% (1 in 10)                       | 5% (1 in 20) | 2% (1 in 50) | 1% (1 in 100) |
| 12                     | 55                                  | 66.8         | 85.2         | 102           |
| 24                     | 67.7                                | 83.1         | 108          | 131           |
| 48                     | 79.3                                | 97.7         | 128          | 156           |
| 72                     | 84.7                                | 104          | 136          | 166           |



### ***Land Use and Population***

The Proposal is located within the Great Southern Region which is lightly populated with dryland agriculture (cropping, sheep and cattle production) being the main land use. The towns of Katanning, Nyabing and Dumbleyung developed to service the agricultural industry. Each of these towns has its own Local Government area and shire council and hence can be influential and instructive on land use matters. Katanning is the largest regional centre with significant locally available services. With a local abattoir, a well-developed local services industry and nearby tourist attractions such as the Stirling Ranges, Katanning already has a diversified economy.

The population of the wider regional area (which also includes six neighbouring Shires of Broomehill-Tambellup, Dumbleyung, Kent, Kojonup, Wagin and Woodanilling) is currently 12,500. The Shire of Katanning has a town population of 3,700 people and is the most ethnically diverse regional centre in WA (<https://www.katanning.wa.gov.au/explore/about-us/facts-and-figures.aspx>).

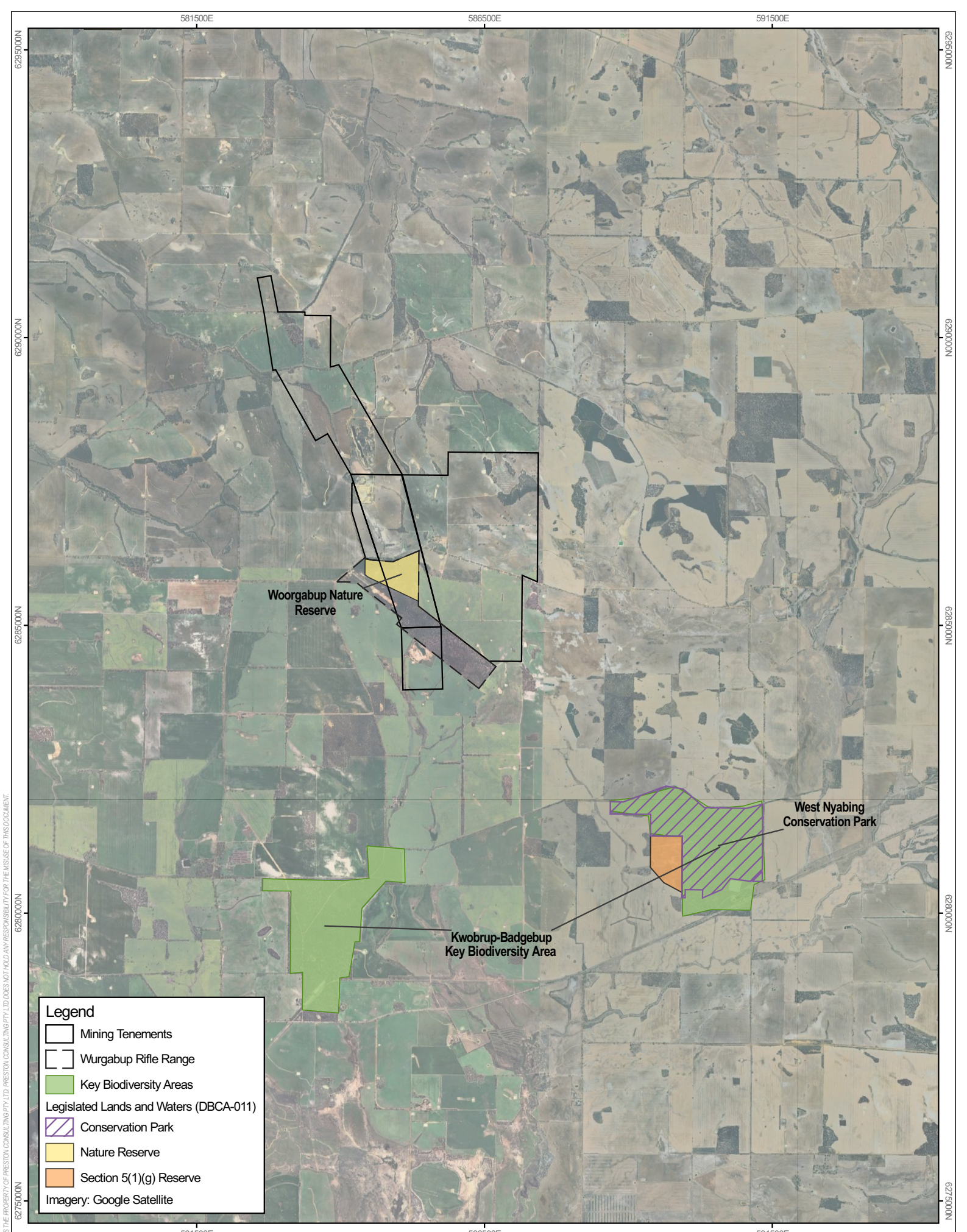
### ***Cleared Land***

The Proposal is situated in an extensive area of land cleared for dryland agriculture. Several large patches of native vegetation are located in close proximity to the Proposal footprint with the most significant being the Wurgubup Rifle Range Reserve (R 240742) and Woorgabup Nature Reserve (R 12423) which comprises 127 hectares (ha) of native vegetation (Figure 5). In fact, mining leases M70/210 and M70/488 co-occur with each of those two State reserves. Small stands of eucalypt vegetation types occur elsewhere within the arrangement of the mine footprint.







The region has long been affected by dryland salinity caused by clearing deep-rooted perennial native vegetation and replacing it with shallow-rooted annual agricultural species that allow more water to infiltrate to groundwater and greater evaporative draw from the land's surface. This additional groundwater recharge results in rising and higher water tables in the valley floors. When the groundwater is close to the surface the water evaporates and leaves behind the salts that concentrate in the upper soil profiles and collect in seasonal lakes. Salinity has limited the productivity of significant areas of the valley floors.

Local responses to some of the implications of extensive land clearing have included the development of local Land Conservation District Committees (LCDC) and led to revegetation initiatives that include conservation corridors, saltland plantings and planting of trees in catchments (including native species such as oil mallees, and non-native species).





**Legend**

-  Mining Tenements
-  Wurgabup Rifle Range
-  Key Biodiversity Areas
- Legislated Lands and Waters (DBCWA-011)
-  Conservation Park
-  Nature Reserve
-  Section 5(1)(g) Reserve
- Imagery: Google Satellite

0 1 2 km

GDA2020 / MGA zone 50  
1:80,000



Project: AUS\_0544\_003  
Date: 06/03/2025  
Size: A4  
Author: ASmithers (Preston Consulting Pty Ltd)



**Figure 5: Native vegetation near the Project**

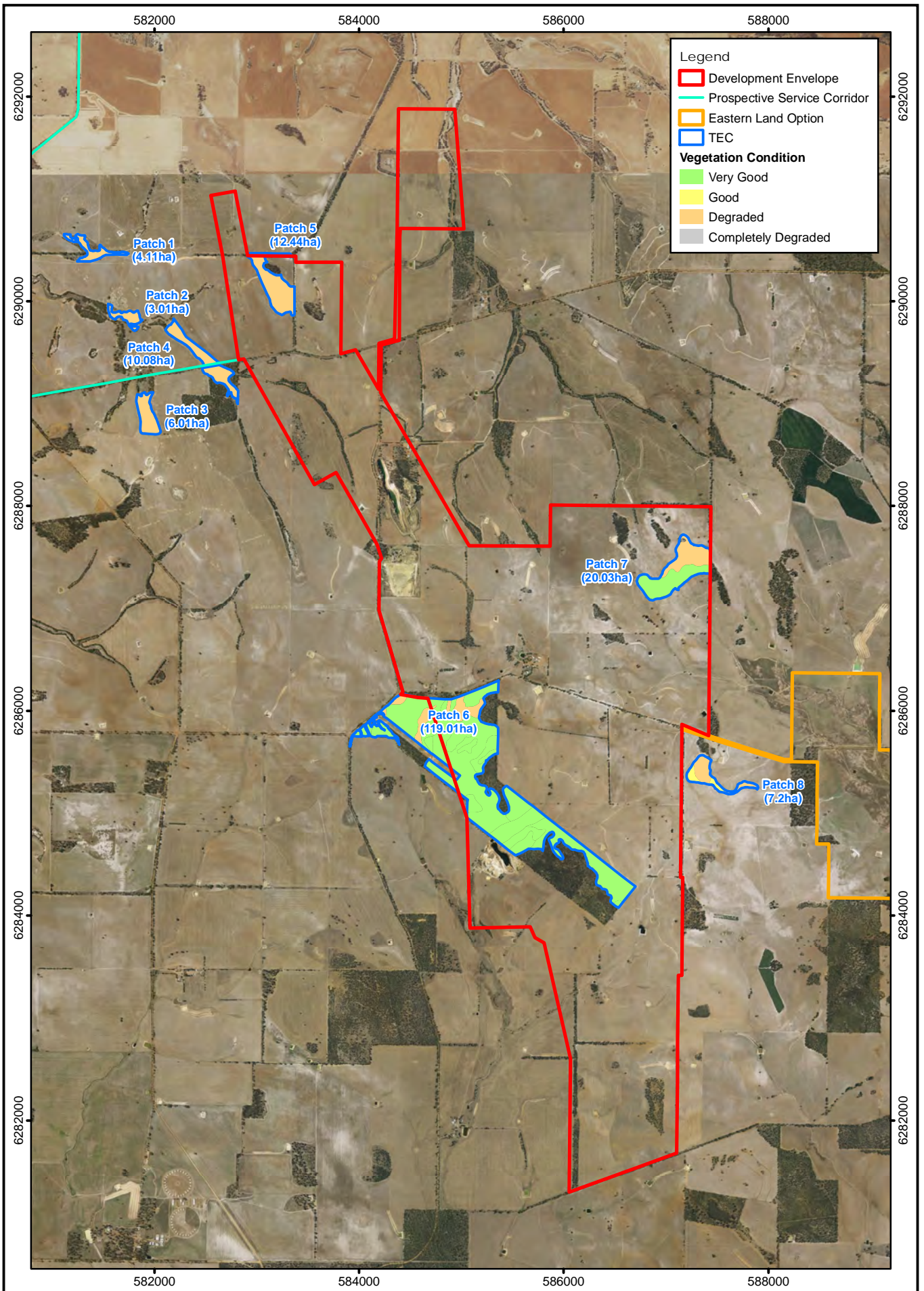
### ***Flora and Vegetation***

The Proposal lies within the Avon Botanical District in the South-West Province (Beard, 1990). Typical vegetation of the Avon Botanical District includes Eucalyptus woodlands comprising *Eucalyptus loxophleba*, *E. salmonophloia* and *E. wandoo* on loams, scrub-health on sandplains, Acacia-Casuarina thickets on ironstone and halophytes on saline soils (Beard, 1990).

The Proposal is located in the southern section of the WA Wheatbelt which has been almost entirely cleared for agriculture. Prior to clearing, the area formerly supported extensive eucalypt woodlands.

Mattiske Consulting Pty Ltd (Mattiske) has been engaged by Ausgold on several occasions since 2017 to evaluate the botanical values of the Proposal area and surrounding environment. In the most recent survey report (Mattiske, 2025) the extent and condition of Threatened and Priority Ecological Communities was assessed. Some patches of native vegetation within the survey area are representative of the 'Eucalypt Woodlands of the Western Australian Wheatbelt Threatened Ecological Community' (EWTEC), which is listed as Critically Endangered under the EPBC Act (Department of the Environment and Energy, 2016) and as a Priority Ecological Community (PEC) under the *Biodiversity Conservation Act 2016* (WA; BC Act). The extent of known mapped EWTEC near the Proposal is provided in Figure 6.





|   |   |  |           |
|---|---|--|-----------|
| <br>Scale: 1:50,000<br>MGA94 (Zone 50)                    | <br>28 Central Road, Kalamunda WA 6076 ~ Tel: 9257 1625 ~ Fax: 9257 1640<br>Author: E M Mattiske    MCPL Ref: | <b>Katanning Gold Project</b><br><b>TEC</b><br><b>Showing Vegetation Condition</b> | Figure:   |
|   |   |  | <b>10</b> |
| CAD Ref: a2561_F029_07<br>Date: April 2025    Rev: A   A4 | Drawn: CAD Resources ~ www.cadresources.com.au<br>Tel: (08) 9246 3242 ~ Fax (08) 9246 3202                    |  |           |

Figure 6: EWTEC near the Proposal (Mattiske, 2025)

## ***Fauna***

Field surveys by Terrestrial Ecosystem (2025) identified many marsupial and bird species, and two reptile species listed with conservation significance with the potential to occur within 25 km of the Proposal. The mine development envelope contains some foraging habitat for Carnaby's Cockatoo, with patches of Banksia heath providing favoured food plants, evidence of foraging was noted in locations nearby the layout of the Proposal and generally within the Wurgubup Reserves (Figure 7). Typically, Wandoo woodlands in the region are also potential breeding habitat for Carnaby's Cockatoo, as well as other birds and arboreal animals. During the survey evidence of Carnaby's Cockatoo and Red-tailed Phascogale being present within the mine development envelope was recorded.

Terrestrial Ecosystems also mapped the extent of Carnaby's Cockatoo foraging habitat and breeding habitat within 12 km of the Proposal, which indicates 6,707 ha of 'good' and 'poor' quality habitat.

A desktop and field screening survey by Bennelongia Environmental Consultants (2025) indicated that the likelihood of suitable subterranean fauna habitat was unlikely for either troglofauna (which can inhabit moist fissures and small cavities within rock formations) or stygofauna (typically crustaceans which inhabit aquifer systems).



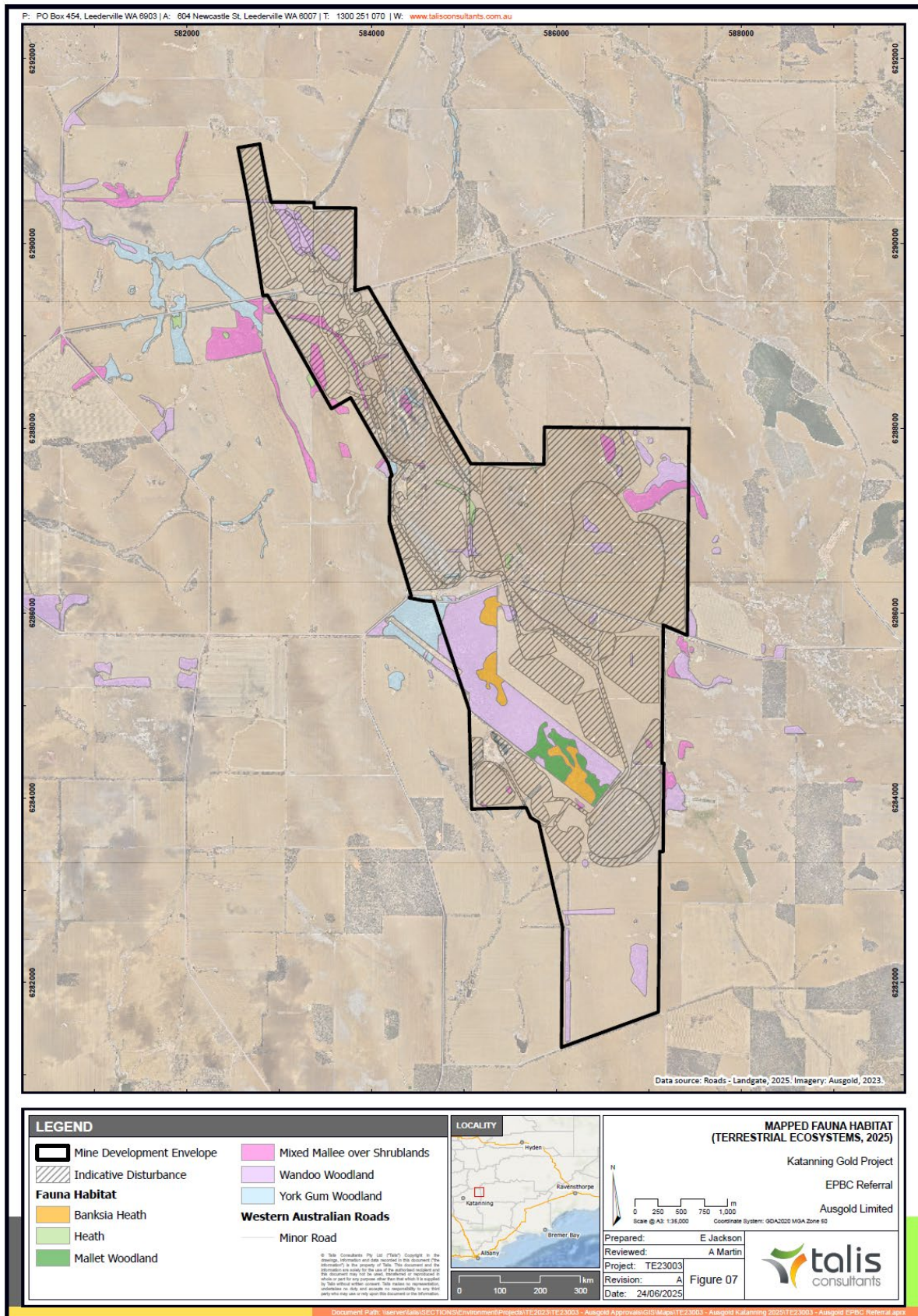


Figure 7: Mapped Fauna Habitat (Terrestrial Ecosystems, 2025)



## **Water**

### Surface Water

Hydrologic and hydraulic modelling conducted by WSP (2025) included baseline flood mapping. The Proposal is located at a topographical high point in the local catchment (approximately 400 – 433 m above relative level) with some low points to the northwest and southwest. Figure 8 shows the baseline flood depths around the site for a 1 in 100 AEP flood event. The existing site area is generally affected by runoff up to 0.5 m in depth. As the Proposal is located at the top of the topography, the only existing pond and drainage locations are flooded up to 1.0 m for the 1 in 100 AEP flood event (WSP, 2025).

The Proposal falls within the upper reaches of the Blackwood River drainage basin. The basin encompasses a network of rivers and streams that contribute to the Blackwood River, which flows southward towards the Ocean. The Blackwood River basin supplies regional water resources, influencing soil moisture and water availability for agriculture, supports local biodiversity, and affects land management practices in the area (SRK Consulting, 2024).

There are three identified wetlands in the vicinity of the Proposal, all located a substantial distance from any proposed mining activities:

- Coyrecup Lake – located approximately 15 km southwest;
- Dumbleyung Lake – Located approximately 25 km northwest; and
- Lake Grace System – located approximately 40 km east.

### Groundwater

A study on the hydrogeology of the Blackwood River catchment, conducted by De Silva et al., (2000), categorised the aquifers in the region into four distinct groups:

- Surficial (alluvial and colluvial deposits);
- Sedimentary (Tertiary sediments and sands);
- Weathered rock (saprolite); and
- Fractured bedrock.

Groundwater flow direction aligns with the topographic gradient and corresponds with the direction of surface water flow, moving from higher elevations to lower ones. Near the Central pit, at an elevation of 356 mRL, groundwater flows from the pit lake towards discharge zones in the creek areas to the south, north and west of the Proposal. The lowest recorded water level of 265 mRL was observed to the north of the Proposal.


Groundwater systems in the region are primarily recharged through direct infiltration from rainfall, with a secondary contribution from surface water bodies (Figure 9).

A simplified schematic conceptual hydrogeological cross section for the Proposal, oriented in the north-south direction, is illustrated in Figure 9 and Figure 10.

HydroBiology WA (2025) conducted an assessment of groundwater-dependent ecosystems (GDEs) within the Proposal and surrounds. Numerous potential aquatic and terrestrial GDEs are present within the Proposal tenements and nearby (Figure 11).



**wsp**  
**KGP-SWMP**  
 Baseline Scenario  
 Maximum Depth




**LEGEND**

Model Extent

Depth (m)

|             |             |
|-------------|-------------|
| <= 0.03     | White       |
| 0.03 - 0.10 | Light Blue  |
| 0.10 - 0.30 | Medium Blue |
| 0.30 - 0.50 | Dark Blue   |
| 0.50 - 1.00 | Yellow      |
| 1.00 - 1.50 | Orange      |
| 1.50 - 2.00 | Red         |
| 2.00 - 3.00 | Dark Red    |
| > 3.00      | Brown       |



EPSG:28350GDA94 / MGA zone 50  
 Universal Transverse Mercator (UTM)

Client: KGP  
 Project No: PS222221  
 Rev:0

Date:27-05-2025  
 Designed: LO  
 Prepared: JM  
 Reviewed: LA  
 Approved: LA

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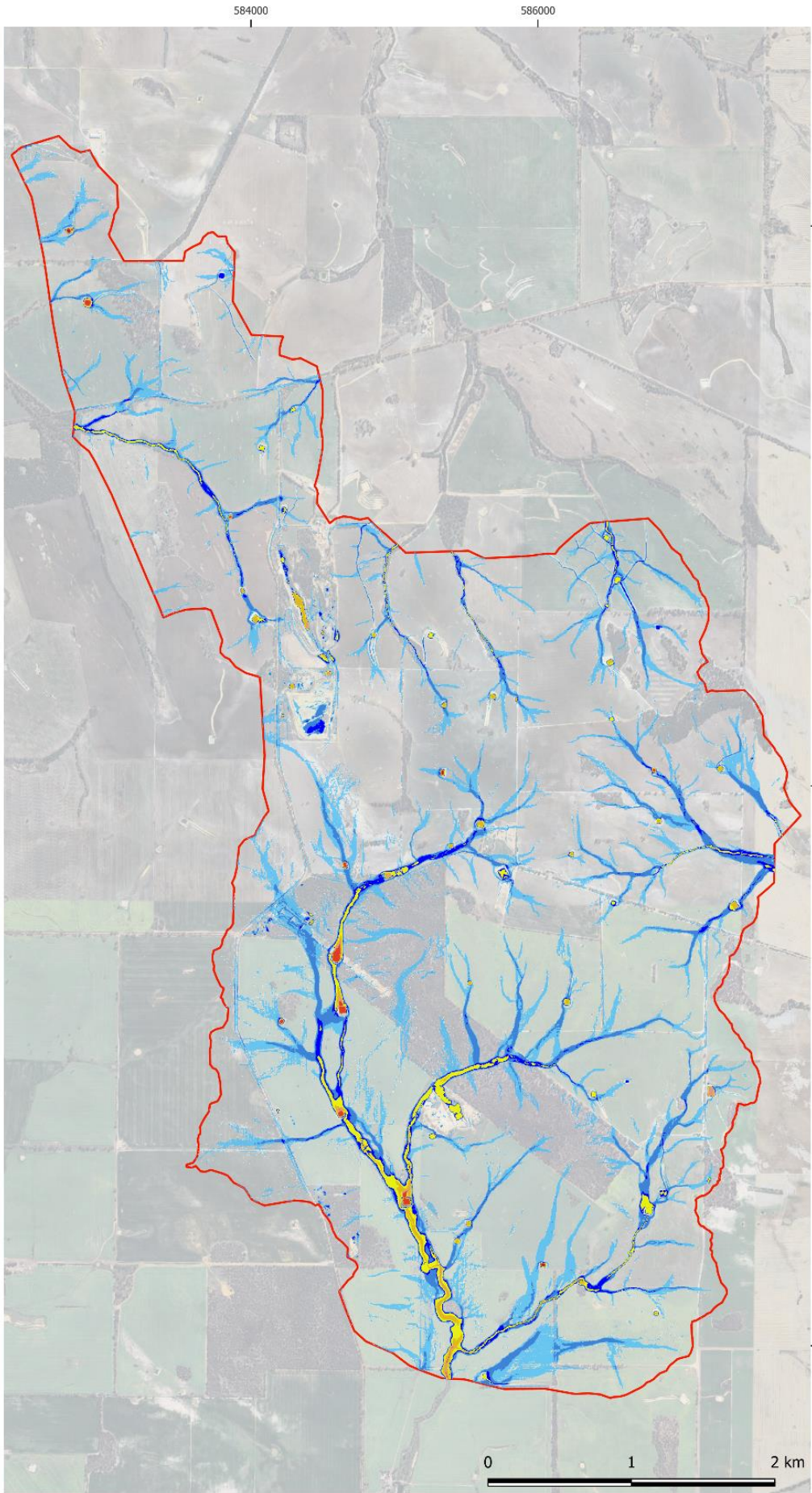
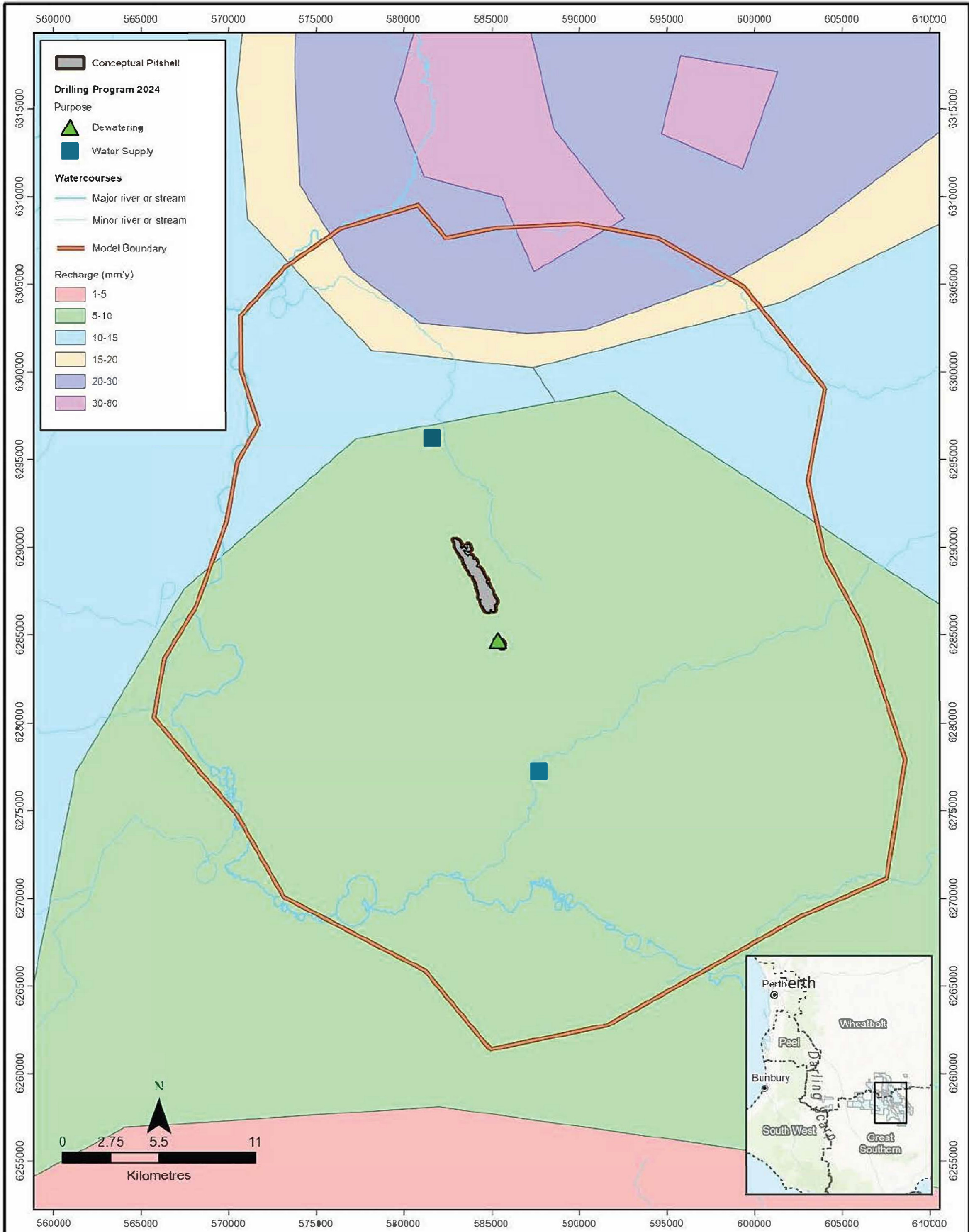


Figure 8: Baseline flood depths (WSP, 2025)



|                 |                                 |                                 |  |
|-----------------|---------------------------------|---------------------------------|--|
|                 |                                 | <b>Katanning recharge zones</b> |  |
| Figure No.: 5.3 | Project No.: AUG035             | Compiled by: cfock              |  |
| Revision: A     | Projection: GDA2020 MGA Zone 50 | Date: 9/01/2025                 |  |

Figure 9: Groundwater recharge areas (SRK Consulting, 2025)

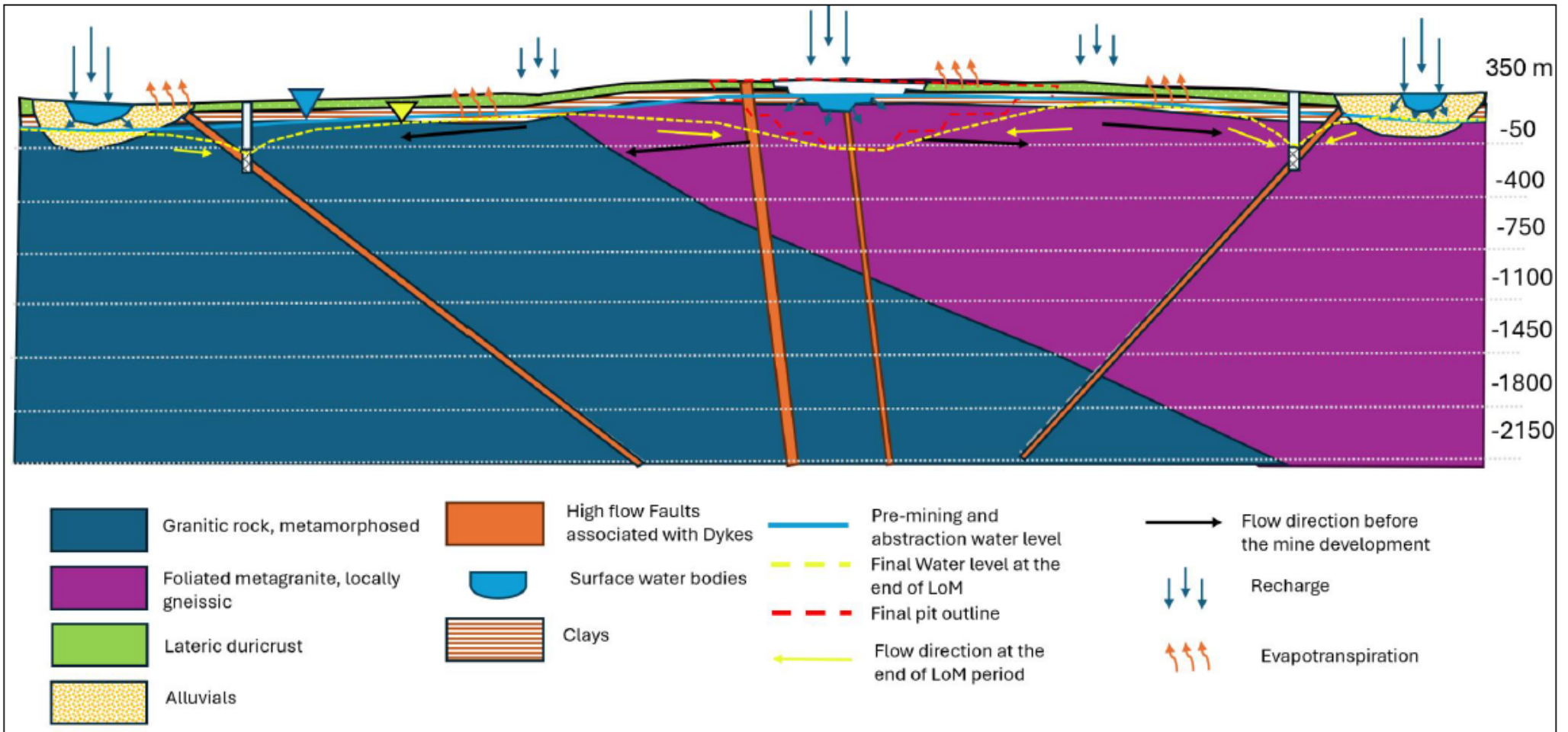
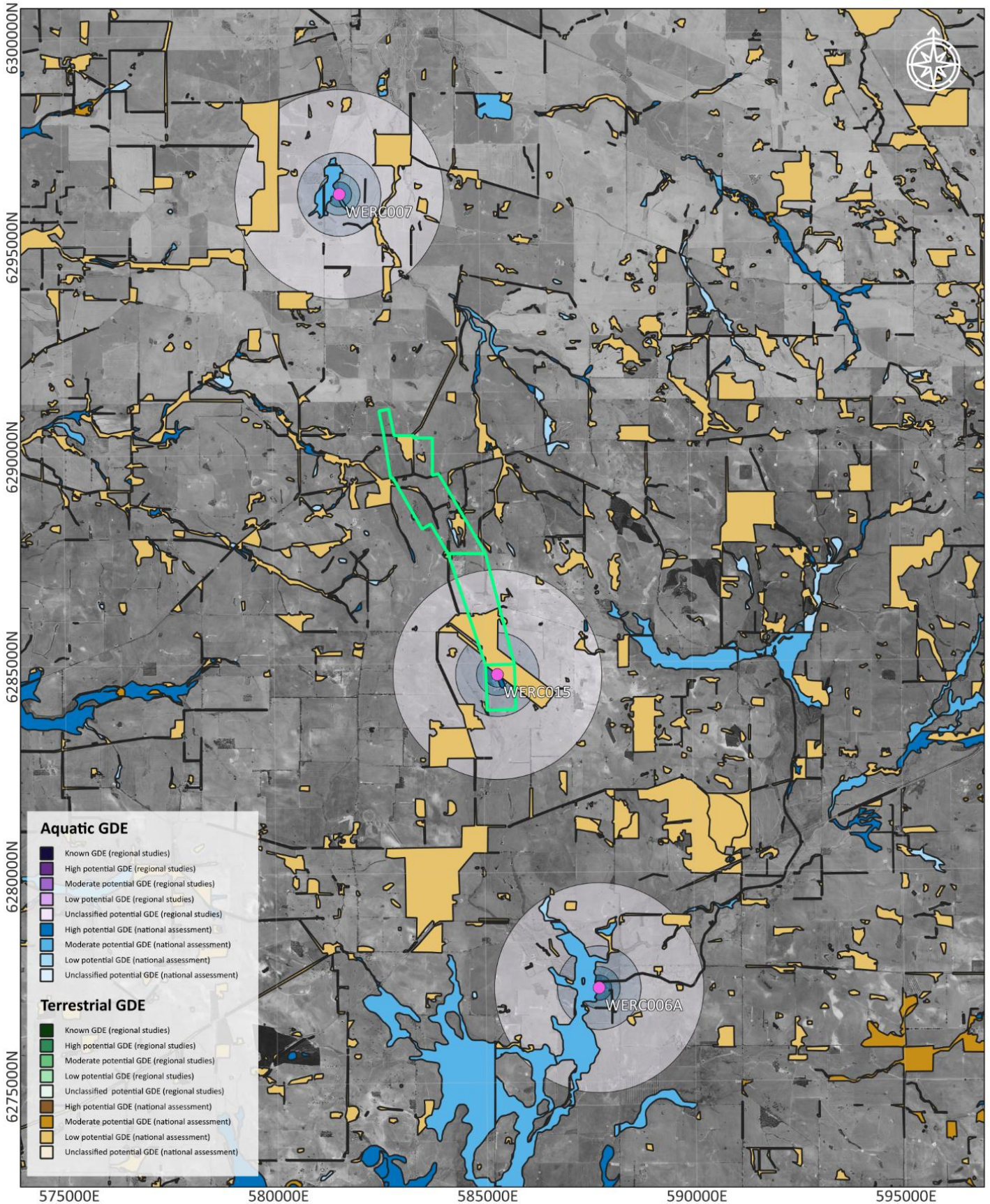


Figure 10: Groundwater conceptual model (SRK Consulting, 2024)



|  |   |  |  |
|--|---|--|--|
| <p><b>Legend</b></p> <ul style="list-style-type: none"> <li><span style="color: pink;">●</span> DFS Bores</li> <li><span style="border: 1px solid green; display: inline-block; width: 10px; height: 10px;"></span> Ausgold Tenements (MINEDEX)</li> </ul> | <p><b>Notes</b></p> <p>Title: GDE assignment by Groundwater Bore Drawdown Zone<br/>         Client: AusGold<br/>         Drawn: Hydrobiology GIS, 05/06/2025<br/>         Approved: James Keating, 05/06/2025<br/>         CRS: GDA2020 MGA Zone 50<br/>         Source: Bureau of Meteorology (BoM) 2023, Groundwater Dependent Ecosystems Atlas, Australian Government, accessed 05/06/2025.<br/>         BaseMap: Landgate Locate (2016)</p> |  | <p>0 2.5 5 km</p> <p>1:175,000</p> <p>Hydrobiology<br/>www.hydrobiology.com</p> <p>Ausgold LIMITED</p> |
|--|---|--|--|

Figure 11: Potential GDEs (Hydrobiology, 2025)

### 1.3.2 PROPOSAL ELEMENTS

To enable construction and operation of the Proposal, the following key infrastructure will be developed:

- Open pit mines;
- Crushing and screening plant;
- Gold ore processing plant;
- IWL;
- ROM pad;
- Laydown areas;
- Workshops and storage buildings;
- Hybrid power plant;
- Chemical storage area;
- Explosives magazine;
- RO plant; and
- Administration building (offices, ablutions and mess).

#### ***Integrated Waste Landform***

An IWL will be created in close proximity to the pits to enable cost-effective haulage and storage of waste rock and the disposal of tailings. The IWL will consist of the main mine waste rock dump and the tailings storage facility (TSF). This minimises the overall footprint, optimises use of waste host rock to construct the outer TSF embankments and further enhances post-mining landform outcomes. In some cases, backfill of completed mine pits may be feasible – these opportunities can sometimes be identified early in the mine life.

The proposed IWL is located adjacent to the pit. The volume of waste removed from the pit will be optimised and the layout may change. The locations for waste rock placement also take into consideration the following:

- The boundaries of *Mining Act 1978* tenure;
- Requirements to supply waste rock for construction of the IWL embankments and potential for capping at closure;
- Avoidance of the largest remnant of native bushland; and
- 25% swell factor that arises from blasting and transporting the waste rock.

The waste rock dump portion of the IWL is proposed to be built with 18° batter and 8 m wide berms to give an overall slope of 16° with 20 m high lifts. Materials and thicknesses for external surfaces will be developed further as planning proceeds.

The production plan was generated around the mining inventory which targeted 3.6 million tonnes per annum (Mtpa) of ore processing and a mining rate maximum of 33 Mtpa total mined material (TMM). These targets can be achieved for a mine plan of 10 years.

The mine plan general arrangement is provided in Figure 3.

#### ***Pits***

Pit designs have resulted in a near-continuous pit over a 4.5 km strike length with only a few unmineralised areas at surface between the Olympia and Jinkas deposits. Designs have been



completed to include pit staging to allow access to early higher grades around the main Jinkas deposit, then cutbacks to access the deeper ores later in the mine life. The pit design also allows for multiple mining areas, which is favourable for managing ore blending and timing of development activities.

### 1.3.3 RISK ASSESSMENT

In addition to approval under the EP Act and EPBC Act, Ausgold will seek approval for development of the Proposal under the *Mining Act 1974* (WA) (Mining Act). Approval under the Mining Act is determined on assessment of a Mining Development and Closure Plan. Integral to this is a comprehensive risk assessment that identifies and evaluates the potential risk of activities proposed at the Proposal.

DMPE's risk assessment framework (documented in DEMIRS, 2023a) has been used to guide identification of the relevant activities and impacts that require management. This approach ensures continuity with the Mining Act requirements while providing a robust evaluation of key risks. Measures that will be used to treat risks (using a risk reduction hierarchy) are identified in the risk assessment and inform the management actions presented in Section 2. It is demonstrated that residual risks are 'As Low as Reasonably Practicable' (ALARP) and consistent with DMPE's environmental objectives (DMPE, 2025).

A summary of the environmental risks and their rating is provided as Appendix 1.

The Environmental Risk Register uses a systematic approach, aligned with standard risk assessment and management methodologies outlined in:

- AS/NZS ISO 31000:2009: Risk management - Principles and Guidelines (Standard); and
- Guidelines for Mining Proposals in WA (DEMIRS, 2023a).

Descriptions of likelihood and consequence ratings used to assess the level of risk associated with each factor are provided in Appendix 2. The risk matrix used to categorise each factor and the level of certainty for baseline data is also provided in Appendix 3.

Risks that were identified as presenting a 'Medium' or greater inherent risk rating have been identified as requiring further management under this SBEMP. To ensure consistency with the EPA's Statement of environmental principles, factors, objectives and aims of Environmental Impact Assessment (EPA, 2023a), risks have been categorised by the environmental factors they are likely to impact. Ausgold recognises that some risks may impact multiple environmental factors and has made note of this where relevant. Management actions for each risk are provided in the components tables (Table 3 - Table 6).

### 1.3.4 FACTORS REQUIRING MANAGEMENT IN THIS SBEMP

Flora and Vegetation and Terrestrial Fauna are considered key environmental factors for the Proposal and specific EMPs have been prepared for these factors (Stantec, 2025a & b). These factors therefore are not considered under this SBEMP and have not been included here.



## ***Inland Waters***

The EPA defines inland waters as: *The occurrence, distribution, connectivity, movement, and quantity (hydrological regimes) of inland water including its chemical, physical, biological and aesthetic characteristics (quality)* (EPA, 2018).

Inland Waters encompass both groundwater, such as superficial and confined aquifers, and surface water including waterways, wetlands and estuaries. A waterway refers to any river, creek, stream or brook, along with its floodplain and associated estuary or inlet. This also includes systems that flow continuously, seasonally or intermittently, or sections that have been artificially altered (EPA, 2018).

The EPA's objective for this factor is: *To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected* (EPA, 2018).

The Proposal has the potential to modify or alter the surface and groundwater surrounding the Proposal through the following activities:

- Dewatering of groundwater for mining and water supply;
- Obstruction of surface water flows;
- Contamination from contact waters draining:
  - Vehicle and machinery operations;
  - IWL;
  - Pits; and
  - Roads and infrastructure.

The key risks identified for this environmental factor include:

- Ponding and surcharge of surface water flows within and from active mining areas;
- Failure of stormwater management infrastructure;
- Changes in local hydrogeological and hydrological regimes; and
- Contamination of surface and groundwater.

The abstraction of groundwater via dewatering or abstraction bores is managed under a Groundwater Operating Strategy under the RIWI Act. Impacts to groundwater levels and volumes therefore do not require management under this SBEMP and have not been included. Contamination impacts to groundwater are relevant to this SBEMP and have been included.

## ***Terrestrial Environmental Quality***

The EPA defines terrestrial environmental quality as: *The chemical, physical, biological and aesthetic characteristics of soil* (EPA, 2016). The EPA's objective for this factor is: *To maintain the quality of land and soils so that environmental values are protected* (EPA, 2016).

The objective recognises the fundamental link between soil quality and the protection of ecological and social values that good soil quality supports. Therefore, the focus of this factor and its associated objective is how changes to soil quality impacts environmental values.

The Proposal has the potential to impact Terrestrial Environmental Quality through the following activities:

- IWL;
- Pits;



- WRLs including operating Class II landfill;
- Processing plant;
- Workshops;
- Magazine/explosive storage
- Roads and infrastructure; and
- Hybrid power plant

The key risks identified for this environmental factor include:

- Contamination of soils with waste, acidic, metalliferous or chemical materials;
- Damage to soils and vegetation via various pathways such as seepage or spills;
- Chemical fires or explosions; and
- Compromised slope or landform stability.

### ***Social Surroundings***

Social surroundings refer to the human aspects of the environment that may be changed by a proposed project. This includes cultural heritage and the general amenity of an area, such as human exposures to noise or dust.

The EPA's objective for this factor is: *To protect social surroundings from significant harm* (EPA, 2023b).

The Proposal has the potential to impact social surroundings through the following activities:

- Mining of pits;
- Dumping of waste rock on WRLs; and
- Processing plant areas and site vehicle movements.

The key risks identified for this environmental factor include:

- Blasting, mining or processing noise; and
- Light, dust and ambient emissions.

### ***Air Quality***

The EPA defines air quality as: *The chemical, physical, biological and aesthetic characteristics of air*, where 'air' refers to all the air above the ground up to and including the stratosphere.

The EPA's objective for this factor is: *To maintain air quality and minimise emissions so that environmental values are protected* (EPA, 2020).

The Proposal has the potential to impact air quality through the following activities:

- Clearing and mining operations, and IWL; and
- Power station.

The key risks identified for this environmental factor include:

- - Fugitive and point source air emissions.



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## 2 MANAGEMENT COMPONENTS

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This section outlines the proposed management for each risk that was identified as presenting a 'medium' or greater inherent risk rating. Management targets for the risks discussed above have been developed to measure the success of the management actions and the degree to which the management actions are effectively implemented. These actions will be subject to management review.

The objectives-based management actions, along with monitoring, timing and reporting requirements are outlined in Table 3 - Table 6. These tables are designed to ensure that all potential environmental impacts are systematically addressed, and that clear, auditable commitments are in place throughout the life of the Proposal. All requirements will be undertaken during the construction and operations phases of the Proposal.



**Table 3: Objectives Based Management Actions - Inland Waters**

| <b>EPA Factor: Inland Waters</b>  |   |  |   |  |   |
|---|---|--|---|--|---|
| <b>Objectives:</b> <ul style="list-style-type: none"> <li>To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected;</li> <li>To maximise the efficient use of water; and</li> <li>To minimise adverse effects to groundwater through extraction.</li> </ul> |   |  |   |  |   |
| <b>Key Impacts and Risks:</b> Contamination to surface water and groundwater, alteration of surface water flows   |   |  |   |  |   |
| <b>Hazard / Unwanted Event</b>  | <b>Management Targets</b>   | <b>Management Actions</b>  | <b>Monitoring</b>   | <b>Timing / frequency of actions</b>   | <b>Reporting</b>  |
| Hydrocarbon spills from vehicles and machinery resulting in contamination of surface water and / or groundwater.  | All hydrocarbon spills are contained and remediated immediately or as soon as practical.  | All site personnel are informed how to identify, contain and report spills.<br>Implement the site Hydrocarbon and Chemical Spill Reporting Procedure                           | A spill register is maintained with corrective actions and close out inspections identified and allocated   | Awareness training is completed as part of the Site Induction and refreshed as per the Personnel Competency Procedure. | Hydrocarbon spills are registered within the site Spill Register. Spills greater than 20L are reported as an incident and investigated utilising Ausgold's incident reporting system. |
|   | Vehicles and machinery are maintained in accordance with manufacturers specifications.  | Vehicle and machinery to be inspected and maintained as per the Site Maintenance Schedule.<br>Include checks for vehicle and machinery maintenance in the Pre-Start Checklist. | Vehicle and machinery maintenance to be checked against the Site Maintenance Schedule.<br>Maintenance log checked during pre-start.   | Pre-starts are conducted daily as required by the Pre-Start Checklist.   | Exceedance of Site Maintenance Schedule timing to be reported.  |
|   | Vehicles and machinery are equipped with spill kits.<br>Spill kits are present at workshop and fuel storage / refuelling areas. | Procurement of vehicles and machinery to include installation of spill kits.<br>Include checks for spill kits (presence and completeness) in the Pre-Start Checklist.          | Presence of spill kits and their completeness is checked as per the Site Maintenance and/or Environmental Area Inspection Schedule and Forms.<br>Spill kits replenished after each use. | Pre-starts are conducted daily as required by the Pre-Start Checklist.   | Exceedance of Site Maintenance Schedule timing to be reported.<br>Deficiencies identified through routine area inspection are allocated actions                                       |
| Failure to comply with Groundwater  | Compliance with conditions set out in   | Implement the Groundwater Operating Strategy.  |   |  | As per the requirements of the Groundwater  |

| Hazard / Unwanted Event   | Management Targets   | Management Actions   | Monitoring  | Timing / frequency of actions  | Reporting   |
|---|--|--|---|--|---|
| Licence conditions leading to decreased quality and quantity of groundwater.<br><i>Abstraction of groundwater will be managed under the RIWI Act.</i> | the Groundwater Licence.   |  | As per the requirements of the Groundwater Operating Strategy.  | As per the requirements of the Groundwater Operating Strategy.   | Licence and Groundwater Operating Strategy.   |
|   |  |  |   |  | Non-compliances to be reported to DWER in accordance with Groundwater Licence.                                |
| Site infrastructure results in flooding or ponding of surface water.  | No blockage of surface water flows resulting in flooding or ponding. | Install, inspect and maintain surface water diversions and water management infrastructure including bunds and culverts to maintain natural surface water regimes.<br><br>Utilisation of an Environmental Area Inspection Schedule and Forms | Visual inspection to be undertaken after first rain events and after subsequent significant rain events.<br><br>Routine inspections of drainage facilities. | Diversions and water management infrastructure to be inspected every 6 months and repaired as necessary. | Record any incidents in the Environmental Observations and Incident Register and inform the relevant parties. |

| Hazard / Unwanted Event   | Management Targets  | Management Actions  | Monitoring  | Timing / frequency of actions   | Reporting  |
|---|---|---|---|---|--|
| <p>Seepage from the IWL leading to pollution of surface water and/or groundwater.</p> <p><i>Seepage from the IWL is regulated under the Part V of the EP Act.</i></p> | <p>No unplanned seepage from the IWL.</p> <p>No adverse impacts to downstream surface water or groundwater quality due to seepage from the IWL.</p>   | <p>Implement the Tailings Operating Manual.</p> <p>Ensure IWL is constructed and maintained in accordance with approved design specifications.</p> <p>All site personnel are trained in identifying, containing and reporting seepage incidents.</p> <p>Select personnel are trained in remediation of seepage incidents and available on site during operations.</p> <p>Installation of infrastructure such as seepage interception trenches to limit impact of any seepage that may occur.</p> <p>Installation and usage of engineered liners and toe drains as required to capture seepage and reduce percolation.</p> <p>Testing of tailings and waste rock for acidic and metalliferous drainage potential to inform waste deposition strategies within the IWL.</p> <p>Construction of seepage collection trenches and ponds downstream to the IWL if necessary to intercept any potential unplanned seepage.</p> | <p>Site personnel Training</p> <p>Records are to be reviewed annually.</p> <p>Conduct visual inspections around IWL to detect any visible leaks and to ensure IWL integrity is maintained.</p> <p>Monitor groundwater and surface water quality around the IWL perimeter and at various locations downstream.</p> <p><i>Monitoring locations to be determined in consultation with ground/surface water specialist.</i></p> | <p>Structural survey of the IWL to be conducted periodically.</p> <p>Monitoring of groundwater and surface water quality at various locations according to the Surface and Groundwater Monitoring Schedule.</p> | <p>Any unplanned seepage is deemed an incident and is to be reported in the Environmental Observations and Incident Register.</p> <p>Annual Environmental Report.</p> <p>Compliance Assessment Report.</p> |
| <p>Stormwater management infrastructure inadequate resulting in unintentional discharges and sedimentation / contamination of downstream receptors.</p>               | <p>Sediment-laden stormwater from roads and disturbed areas directed to stormwater management infrastructure (drains, swales and sediment traps).</p> | <p>Roads, drains and culverts are designed to at least a 1 in 10-year ARI rainfall event.</p> <p>Designs must consider topography and catchment size</p> <p>Technical hydrological studies have been undertaken and recommend a variety of ARI containment structures across the KGP and are influenced by LOM, risk, containment siting and potential contaminant exposure.</p> <p>Rock armouring, sediment traps and erosion mats are installed in steep or high-risk areas.</p>  | <p>Regular inspection for flow obstruction, erosion or sediment build-up of drain, culverts and roads.</p>  | <p>Sediment removal from drains, culverts and roads as needed.</p> <p>Inspections of roads, culverts and drains after rainfall events.</p>  | <p>Annual Environmental report.</p> <p>Any uncontained stormwater runoff is deemed an incident and is to be reported in the Environmental Observations and Incident Register.</p>                          |

| Hazard / Unwanted Event  | Management Targets  | Management Actions  | Monitoring   | Timing / frequency of actions   | Reporting  |
|--|---|---|--|---|--|
|  |   | <p>Regular maintenance and removal of sediment build up from drains, culverts, bunds and road surfaces.</p> <p>Restriction of heavy vehicle movement during wet weather periods to prevent water channel formation.</p>   |  |   |  |
|  | Potentially contaminated stormwater from process areas is contained in bunds and recycled /treated /removed appropriately | <p>Bunded areas are designed to contain at least a 1 in 10-year ARI rainfall event and maintain a 300 mm freeboard.</p> <p>Technical hydrological studies have been undertaken and recommend a variety of ARI containment structures across the KGP and are influenced by LOM, risk, containment siting and potential contaminant exposure.</p> | <p>Regular inspection of stormwater management infrastructure and bunds.</p> <p>Inspection after rainfall events to ensure stormwater is contained</p> | <p>Regular scheduled inspections.</p> <p>Inspection of bunded areas at least 24 hrs prior to a predicted 1 in 10-year (or larger) ARI event.</p>  | Annual Environmental Report.                                       |
| <p>Groundwater mounding under IWL impacting local hydrological regimes (water quality or availability).</p> <p><i>Management of IWL will be regulated under the Mining Act and Part V of the EP Act.</i></p> | Maintain tailings and waste deposition rates to below critical thresholds.  | <p>Implement the Tailings Operating Manual.</p> <p>Installation of dewatering bores or sumps around pit or IWL as required.</p> <p>The use of modelling to determine suitable tailings and waste deposition rates.</p>  | Regular monitoring of deposition rates and groundwater level at the IWL, pit and at various downstream locations.                                      | <p>Daily monitoring of deposition rates.</p> <p>Groundwater level monitoring at IWL according to Groundwater Monitoring Schedule.</p> <p>Groundwater level monitoring at downstream locations according to Groundwater Monitoring Schedule.</p> | <p>Annual Environmental Report.</p> <p>Hydrogeological Reports</p> |

Table 4: Objectives Based Management Actions - Terrestrial Environmental Quality

| EPA Factor: Terrestrial Environmental Quality  |   |  |   |   |  |
|--|---|--|---|---|--|
| <b>Objectives:</b> <ul style="list-style-type: none"> <li>Prevent contamination of soils, surface and groundwater due to mining activities;</li> <li>Protect landforms and surrounding environments from erosion and sedimentation; and</li> <li>Safe management of all waste disposal.</li> </ul> |   |  |   |   |  |
| <b>Key Impacts and Risks:</b> Soil contamination, surface and groundwater contamination, loss or damage to vegetation.   |   |  |   |   |  |
| Hazard/Unwanted event  | Management Targets  | Management Actions   | Monitoring  | Timing/frequency of actions   | Reporting  |
| Unstable landforms resulting in erosion and contamination of receiving environment (i.e., with waste materials and / or sediment).<br><br><i>Management of built infrastructure will be regulated under the Mining Act 1978 and Part V of the EP Act.</i>  | All final landforms are geotechnically stable and constructed in accordance with approved designs.  | Design and construct IWL in compliance with <i>Mining Act 1978</i> requirements.<br><br>Undertake geotechnical and geochemical characterisation of waste materials prior to placement of waste materials.<br><br>Implement erosion and sedimentation control measures.<br><br>Apply suitable growth media to final landforms, following stripping and stockpiling protocols.<br><br>Environmental Area Inspections are scheduled to identify, and report abnormal conditions | As-constructed inspection and sign off.<br><br>Geotechnical inspection of landforms.<br><br>Visual inspections.     | Geotechnical inspection of landforms to be conducted periodically during construction and as a minimum to satisfy regulatory requirements ongoing<br><br>Visual inspections conducted according to the Environmental Area Inspection Schedule<br><br>Awareness training is completed as part of the Site Induction and refreshed as per the Personnel Competency Procedure. | Record any incidents in the Environmental Observations and Incident Register and inform the relevant parties.<br><br>Annual Environmental Report.<br><br>Compliance Assessment Report.<br><br>Geotechnical and Rehabilitation Monitoring Reports |
| Contamination of the receiving environment with fibrous or PAF materials.<br><br><i>Management of waste materials regulated under the Mining Act 1978.</i>   | All PAF and fibrous materials are identified, managed and stored appropriately to prevent contamination.<br><br>No uncontrolled release of fibrous or PAF materials to the environment. | Compliance with the <i>Mining Act 1978</i> and <i>Contaminated Sites Act 2003</i> .<br><br>Conduct geochemical and mineralogical assessments to identify PAF or fibrous materials.<br><br>All site personnel are trained in identifying, containing and reporting any contamination  | Monitoring of containment infrastructure integrity (if relevant).<br><br>Downstream groundwater quality monitoring. | Awareness training is completed as part of the Site Induction and refreshed as per the Personnel Competency Procedure.<br><br>Expert personnel with direct responsibility are allocated specific duties   | Record any incidents in the Environmental Observations and Incident Register and inform the relevant parties.<br><br>Annual Environmental Report.  |

| Hazard/Unwanted event  | Management Targets   | Management Actions   | Monitoring   | Timing/frequency of actions  | Reporting  |
|--|--|--|--|--|--|
|  |  | incidents relating to PAF and fibrous materials.   |  | Integrity and groundwater monitoring conducted according to Area Inspection Schedule and Water Monitoring Schedule.    |  |
| Overspray of saline water used in dust suppression resulting salinisation of soils outside disturbance areas.  | All saline water applications are controlled and contained within operational areas.<br>Maintenance of soil salinity levels are within natural range of surrounding environment. | Spray nozzles are calibrated to minimise drift of spray.<br>Limiting of saline water spraying activities during periods of high wind.<br>Limit dust suppression to required areas.<br>Relevant site personnel are trained in correct spraying techniques, wind awareness and water source management.  | Visual inspection of vegetation health.<br>Baseline and ongoing soil salinity testing.<br>Spray equipment checks prior to use.   | Environmental Area Inspection Schedule Soil salinity testing conducted if inspection indicates abnormal condition.     | Record any overspray incidents in the Environmental Observations and Incident Register and inform the relevant parties.<br>Annual Environmental Report.  |
| Hydrocarbon or hazardous chemical spill from mining or processing activities leading to contamination.<br><i>Storage of hydrocarbons and chemicals may be regulated under the DG Act and Part V of the EP Act (depending on quantities).</i> | All hydrocarbon or hazardous chemical spills are contained and remediated immediately or as soon as practical.   | All site personnel are informed how to identify, contain and report spills.<br>Implement the site Hydrocarbon and Chemical Spill Reporting Procedure   | A spill register is maintained with corrective actions and close out inspections identified and allocated  | Awareness training is completed as part of the Site Induction and refreshed as per the Personnel Competency Procedure. | Hydrocarbon spills are to registered within the site Spill Register. Spills greater than 20L are additionally reported as an incident and investigated utilising Ausgold's incident reporting system.  |
|  | All hydrocarbons and hazardous chemical are stored, handled and disposed of appropriately and in compliance with the DG Act and Part V EP Act requirements.                      | Compliance with Part V EP Act requirements including conditions contained within a Prescribed Premises Licence<br>Compliance with DG Act conditions<br>Compliance with Contaminated Sites Act<br>Compliance with Controlled Waste Regulations<br>All site personnel are informed of the correct handling, storage and disposal techniques detailed under | Visual inspections for spills or staining.<br>Visual inspections of chemical and hazardous chemical storage areas.<br>Environmental Area Inspections are scheduled to identify, and report abnormal conditions | Inspections of storage areas, waste and transfer facilities according to the Environmental Area Inspections Schedule   | Record any waste movements within the Site Waste Register. Controlled Wastes to be reported and recorded within the Controlled Wastes Register within the Site Waste Register and record keeping to comply with Controlled Waste Regulations<br>Annual Environmental Report.<br>National Pollutant Inventory and NGERs |

| Hazard/Unwanted event  | Management Targets   | Management Actions   | Monitoring   | Timing/frequency of actions   | Reporting   |
|--|--|--|--|---|---|
|  |  | <p>the relevant Acts, Regulations and Guidelines.</p> <p>Engineering design of all facilities at the KGP meet the Acts detailed above and the appropriate Australian Standards</p>   | <p>Materials movements in and out of the site are recorded in registers</p>  |   |   |
| <p>Incorrect disposal of site waste including tailings and hazardous materials leading to contamination.</p> <p><i>Management of waste materials regulated under the Mining Act 1978 and Part V of the EP Act.</i></p> | <p>Tailings and geochemically characterised and approved materials are placed in the IWL in accordance with the Tailings Operating Manual.</p> <p>Site waste to be contained and disposed of in the site landfill or taken offsite for disposal at an appropriately licenced facility.</p> | <p>All waste materials are to be classified before placement into the IWL.</p> <p>Disposal of hydrocarbons, chemical containers, contaminated soils, tyres and batteries into the IWL are prohibited.</p> <p>IWL to be constructed per approved designs with controlled drainage mechanism.</p> <p>Engineering design of waste facilities at the KGP meet the Acts detailed above and the appropriate Australian Standards</p> <p>All site personnel are informed of correct waste disposal strategies.</p> <p>Waste contractors appointed with appropriate skills and licencing to handle defined materials</p> | <p>Visual inspection of IWL for unauthorised waste according to the Environmental Area Inspections Schedule</p> <p>Site waste disposal / export volumes maintained in Waste Registers.</p> | <p>Surface and groundwater sampling to be conducted according to the Ground and Surface Water Monitoring Schedule.</p> <p>Inspection of Waste Facilities be coordinated through the Environmental Area Inspections Schedule</p> | <p>Record any incorrect disposal incidents in the Environmental Observations and Incident Register and inform the relevant parties.</p> <p>Internal Operations Report</p> <p>Site Waste Registers</p> <p>Annual Environmental Report.</p> |

Table 5: Objectives Based Management Actions – Air Quality

| EPA Factor: Air Quality  |   |   |   |   |   |
|--|---|---|---|---|---|
| Objectives:  |   |   |   |   |   |
| <ul style="list-style-type: none"> <li>To maintain air quality and minimise emissions so that environmental values are protected.</li> <li>Minimise air and noise emissions</li> <li>Minimise dust emissions</li> </ul>                                    |   |   |   |   |   |
| Key Impacts and Risks: Increased dust and point source emissions resulting in reduced air quality  |   |   |   |   |   |
| Hazard/Unwanted event  | Management Targets  | Management Actions  | Monitoring  | Timing/frequency of actions   | Reporting   |
| <p>Operation of power station and mining fleet leads to elevated air pollutants (NOx and SOx) in the local airshed above acceptable levels.</p> <p><i>Emissions and discharges from the power station may be regulated under Part V of the EP Act.</i></p> | <p>NOx and SOx emissions are below acceptable levels</p>  | <p>Compliance with Part V of the EP Act.</p> <p>Procurement to consider low emissions technologies.</p> <p>Emissions reduction mechanisms installed on equipment as appropriate.</p> <p>Equipment to be operated only as required.</p> <p>Emissions Modelling</p>   | <p>As required under Part V of the EP Act.</p> <p>National Pollutant Inventory</p> <p>Emission Factors</p>  | <p>As required under Part V of the EP Act.</p>  | <p>Air quality monitoring will be reported internally and to DWER if required under Part V of the EP Act.</p> <p>Abnormal results above acceptable limits entered as an environmental incident and documented in the Environmental Observations and Incident Register.</p>  |
| <p>Mining activities (blasting, haulage and processing) lead to elevated ambient dust.</p>   | <p>Ambient particulate levels are below acceptable limits</p> <p>Dust deposition is consistent with baseline levels outside the development envelope.</p> <p>No/minimal observed dust</p> | <p>Blast scheduling to consider atmospheric conditions.</p> <p>Blast and/or Air Quality Management Plan</p> <p>Limit vehicle and machinery speeds to reduce dust.</p> <p>Processing infrastructure to be fitted with and use dust suppression mechanisms.</p> <p>Water carts to apply dust suppression as required.</p> | <p>Dust monitoring to be undertaken at locations near the Proposal.</p> <p>Location and extent of dust monitoring to be determined subject to consultation with a specialist and or direction under Part V EP Act.</p> <p>Dust suppression equipment to be inspected through the Environmental Area Inspections Schedule.</p> | <p>Monitoring undertaken in accordance with regulatory requirements and/or an Air Quality Monitoring Schedule/Plan.</p> <p>Dust deposition monitoring to be determined subject to consultation with a specialist.</p> <p>Dust suppression equipment</p> | <p>Dust complaints received will be recorded and addressed as per Ausgold's Complaints Handling Procedure and registered in the Environmental Observations and Incident Register.</p> <p>Dust monitoring will be reported internally and to DWER if required under Part V of the EP Act.</p> <p>Abnormal results above acceptable levels entered as an environmental incident and documented in the Environmental Observations and Incident Register.</p> |

| Hazard/Unwanted event   | Management Targets  | Management Actions  | Monitoring  | Timing/frequency of actions  | Reporting |
|---|---|---|---|--|-----------|
|   | or complaints from staff, contractors or the public.  |   |   | inspected as a component of the Environmental Area Inspection Schedule.  |           |
| Cleared areas (stockpiles, roads, IWL and ROM) result in elevated fugitive dust levels. | Dust levels are consistent with baseline levels.<br><br>No/minimal observed dust or complaints from staff, contractors or the public. | Clearing activities not conducted during periods of atmospheric risk.<br><br>Management of fugitive dust emissions be included as an aspect within an Air Quality Management Plan or direct equivalent<br><br>Rehabilitation of cleared areas as soon as possible to minimise dust generation.<br><br>Stockpiles to be fitted with and use dust suppression mechanisms.<br><br>Water carts to apply dust suppression as required. | Dust monitoring to be undertaken at locations near the Proposal.<br><br>Location and extent of air quality monitoring to be determined subject to modelling and consultation with a specialist and or direction under Part V EP Act.<br><br>Dust suppression equipment to be inspected through the Environmental Area Inspections Schedule. | Monitoring undertaken in accordance with regulatory requirements and/or an Air Quality Monitoring Schedule/Plan. |           |

Table 6: Objectives Based Management Actions – Social Surroundings

| EPA Factor: Social Surroundings   |   |  |  |   |  |
|---|---|--|--|---|--|
| Objectives:   |   |  |  |   |  |
| <ul style="list-style-type: none"> <li>Minimise noise, dust and vibration impact to sensitive receptors.</li> </ul>   |   |  |  |   |  |
| Key Impacts and Risks: Disturbance of Aboriginal Heritage Sites, excessive noise, light and dust pollution from mining activities.  |   |  |  |   |  |
| Hazard/Unwanted event   | Management Targets  | Management Actions   | Monitoring   | Timing/frequency of actions   | Reporting  |
| <p>Mine activities result in disturbance of Aboriginal Heritage Sites</p> <p><i>Impacts will be regulated under the Aboriginal Heritage Act 1972.</i></p>   | <p>No unauthorised disturbance of Aboriginal Heritage Sites.</p>  | <p>Seek approvals under the <i>Aboriginal Heritage Act 1972</i> if disturbance of Aboriginal heritage site(s) is required.</p> <p>Implement Ausgold’s Ground Disturbance Permit (GDP) system/Management Plan for mine development that ensures Aboriginal Heritage aspects are controlled</p> <p>Cultural awareness is included within Site and Area Inductions and risk management processes within the workplace.</p> <p>Physical and electronic demarcation of Aboriginal Heritage sites as required.</p> | <p>Ground disturbance and clearing activity is recorded within a Ground Disturbance Register with associated spatial files</p> <p>GDP system includes requirement to physically inspect the sites disturbed pre and post disturbance and other controls including survey, pegging and flagging</p> | <p>As specified within the GDP system/ Management Plan</p> <p>Dependent upon assessment of internally lodged GDP Applications</p> | <p>Reporting required under the <i>Aboriginal Heritage Act 1972</i>.</p> <p>Annual Environmental Report.</p> <p>Record any unapproved clearing/disturbance in Environmental Observations and Incident Register.</p>  |
| <p>Excessive noise from mining activities (blasting, processing, haulage and waste facilities)</p> <p><i>Noise emissions will be regulated under the Environmental Protection (Noise) Regulations 1997.</i></p> | <p>Ensure noise levels do not exceed Noise Regulation limits.</p> | <p>Pre Mining Noise Modelling based on LOM mining case</p> <p>Noise Management Plan</p> <p>The noise management plan is to consider noise aspects and their controls including abatement, reduction, monitoring, reporting and audit.</p>  | <p>Noise and vibration monitoring as required and specified within a Noise Monitoring Procedure or its equivalent.</p>   | <p>As stated within the Noise Monitoring Procedure/Management Plan</p>  | <p>Noise monitoring results to be reported as required to meet requirements prescribed under Part V of the EP Act.</p> <p>Record any exceedances with Noise Regulation limits or Part V EP Act conditions in Environmental Observations and Incident Register.</p> |

| Hazard/Unwanted event   | Management Targets  | Management Actions  | Monitoring  | Timing/frequency of actions   | Reporting  |
|---|---|---|---|---|--|
|   |   |   |   |   | Noise complaints received will be recorded and addressed as per Ausgold's Complaints Handling Procedure and registered in the Environmental Observations and Incident Register.  |
| Excessive light pollution, from mining activities.                                      | Alignment with best practice lighting guidance.   | Lighting Management Plan and /or Fauna Management Plan<br><br>The lighting management plan is to consider lighting aspects and their controls including abatement, reduction, monitoring, reporting and audit.  | As stated within the Lighting Management Plan or its equivalent | As stated within the Lighting Management Plan   | Reporting against conditions or recommendations prescribed by State and/or Federal Agencies  |
| Mining activities (blasting, haulage and processing) leading to elevated ambient dust.  | <i>Impacts from dust emissions are managed as part of the Air Quality environmental factor - Refer to Table 5.</i>                  |   |   |   |  |
| Cleared areas (stockpiles, roads, IWL and ROM) result in elevated fugitive dust levels. |   |   |   |   |  |
| Excess traffic additional to the agriculture transport network during peak periods.     | Minimal disruption to local agricultural traffic<br><br>Maintenance of positive stakeholder relationships with the local community. | During construction, scheduling of heavy vehicle and machinery movements outside of peak agricultural periods where possible.<br><br>Stakeholder engagement In relation to significant traffic movements, interactions, works and changes to local and regional routes.<br><br>Notifications through media and other forums<br><br>Direct communications and engagement with Shires and community and through the KGP Community Reference Group | Traffic movement surveys<br><br>Traffic incidents / complaints  | Quarterly KGP Community Reference Group Meetings<br><br>Periodic public forums and advertisements<br><br>Three Shires Working Group Quarterly | Traffic survey data to key stakeholders<br><br>Complaints received will be recorded and addressed as per Ausgold's Complaints Handling Procedure and registered in the Environmental Observations and Incident Register. |

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## 3 MONITORING AND CORRECTIVE ACTIONS

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### 3.1 AUDIT AND INSPECTION

Periodic audit of the effectiveness of the SBEMP shall be conducted to ensure legal and other obligations into which Ausgold enters. This includes assessment of compliance with regulatory requirements, contract requirements and stakeholder requirements to facilitate continuous improvement. Environmental audits will be planned and scheduled to align with other project audits, and detail the type of audit, duration, auditors (including the Lead Auditor), and dates.

The findings from internal audits on the implementation and effectiveness of the SBEMP are to be provided to key project personnel including the Construction Manager and Environmental Manager.

Whenever practicable, personnel associated with an audit should address the identified deficiencies immediately during the inspection. In all other cases an Action is to be added into the Event Management or Corrective Action Register. A nominated person will be made responsible for ensuring the action is managed in accordance with the set date for completion. The Environmental Advisor will monitor and report on the progress of rectification of any outstanding corrective actions.

#### 3.1.1 CONTRACTOR AUDITS AND INSPECTIONS

Contractors may be required to participate in audits of their documentation, system processes, contractual obligations and may include inspections of work areas, as communicated to the Contractor through the tender and contract award process.

### 3.2 ENVIRONMENTAL NON-COMPLIANCES

All non-compliances, including those raised by project audits, are to be registered and controlled in accordance with Ausgold's Incident Reporting and Investigation procedure.

Possible non-compliances include regulatory non-compliance, non-compliance with the management measures outlined in this SBEMP, and mitigation strategies/ management measures outlined in the SBEMP sub-plans. Possible non-compliances are to be registered and controlled using the Environmental Observations and Incident Register.

Where detected, any non-compliance or environmental impact exceeding specified limits are to be investigated by the Environmental Advisor to determine the extent of possible non-compliance. The non-compliance is to be corrected as soon as possible with necessary action taken to prevent recurrence.

All non-compliances should be reported to Ausgold and will clearly identify the corrective/preventative actions to be taken and the close-out date.

### 3.3 ENVIRONMENTAL COMPLAINTS

Third-party environmental complaints are to be managed in accordance with the Ausgold Communication and Consultation processes.



### 3.4 ENVIRONMENTAL NON-CONFORMANCE

Contractors found to be in non-conformance of the requirements and commitments made within the SBEMP are to be notified and managed in accordance with relevant legislation and the contract under which they have been engaged.

Any breach of obligations under relevant environmental legislation will be investigated in line with Ausgold's Incident Reporting and Investigation procedure and reported to the relevant regulatory authority.

The purpose of the Incident Reporting and Investigation procedure is to ensure all environmental incidents, near misses and non-compliances are promptly reported, investigated thoroughly, managed appropriately to mitigate risks and used to drive continuous improvement. For the purpose of this SBEMP an environmental breach refers to:

- The exceedance of licence or permit conditions;
- Contamination of land, surface water or groundwater; and
- Failure to implement management actions that have been committed to in this document or any other relevant EMPs.

If any site personnel or contractors become aware of an environmental non-conformance they must report it to their relevant manager. The relevant manager will:

- Report the non-conformance to Ausgold's compliance team to determine relevant reporting obligations.
- Implement contingency measures;
- Investigate the cause of the non-conformance;
- Investigate the environmental impacts;
- Advise of any rectification measures to be implemented; and
- Advise a timeframe in which contingency, rectification and other measures have and/or will be implemented.

Implementation of contingency and rectification measures will be managed by nominated Ausgold personnel or contractors.



## 4 ROLES AND RESPONSIBILITIES

All key Project team members shall ensure that the environmental requirements of the Proposal are complied with. The responsibilities of the key team members and other key personnel are summarised in Table 7.

**Table 7 : Roles and responsibilities**

| Role                  | Responsibility  |
|-----------------------|---|
| Construction Manager  | <ul style="list-style-type: none"> <li>Leads works proceeding with all necessary environmental approvals, permits in place and in compliance with all applicable legal requirements.</li> <li>Promotes site personnel receive environmental inductions and training.</li> <li>Oversees that all site personnel and contractors are aware of their responsibilities.</li> <li>Oversees that personnel assigned to perform tasks that may impact the environment are competent to do so or are under the direct control of a competent person.</li> </ul>   |
| Environment Manager   | <ul style="list-style-type: none"> <li>Develops a program for implementation and governance of the SBEMP.</li> <li>Responsible for all reporting to statutory bodies around environmental incidents and compliance.</li> <li>Review audit reports and monitor completion of required corrective actions.</li> <li>Works to keep current all environmental obligations.</li> <li>Oversees the development and implementation of environmental management systems (EMS) and governance programs to ensure the operation maintains compliance with applicable environmental and social obligations (internal and external).</li> <li>Works with relevant government agencies and consultants to deliver necessary project approvals as required.</li> <li>Oversees the implementation of organisational policies, standards, plans and procedures.</li> <li>Oversees the environmental monitoring program to meet the environmental obligations.</li> <li>Establishes training and awareness programs for employees, contractors and visitors to site in relation to environmental management and performance.</li> <li>Oversees the governance programme to monitor compliance and performance of department managers, supervisors, employees, and contractors against the SBEMP.</li> <li>Oversees the establishment of environmental monitoring objectives to meet the requirements of environmental obligations and stakeholder expectations.</li> </ul> |
| Supervisor            | <ul style="list-style-type: none"> <li>Manages and changes the schedule of works or work methodology, in particular changes under an approved GDP, and that these are communicated to the Environmental Advisor in a timely manner.</li> <li>Report all environmental events to the Environmental Advisor or Project Manager.</li> <li>Lead and actively manage environmental incidents and non-compliances.</li> <li>Action an appropriate response in accordance with environmental procedures in the event of an environmental incident.</li> <li>Assist the Environmental Advisor in promoting environmental awareness.</li> </ul>  |
| Environmental Advisor | <ul style="list-style-type: none"> <li>Assist in determining SBEMP implementation and compliance with approval conditions.</li> <li>Enables the Contractor to understand their environmental requirements relevant to their contract.</li> <li>Implement all necessary environmental controls and ensure they are maintained for the duration of the Proposal.</li> <li>Provide regular environmental progress reports to the Project Manager and Environment Manager.</li> <li>On a periodic basis, monitor environmental compliance and supervise high-risk environmental activities when appropriate.</li> <li>Can be contacted when required or if unavailable has delegated authority.</li> </ul>  |



| Role   | Responsibility  |
|--|---|
|  | <ul style="list-style-type: none"> <li>• Participate in project meetings if requested.</li> <li>• Provide environmental training, awareness and guidance for all personnel onsite.</li> <li>• Complete and maintain all necessary environmental documentation for the Proposal, if appropriate.</li> <li>• Support the package engineers with Environmental Incidents and non-compliances.</li> <li>• Report all environmental incidents in a timely manner and assist in investigations as required. Facilitate corrective action as appropriate. Ensure complaints and near misses are documented and managed appropriately.</li> <li>• Accounts to resolve any outstanding environmental issues prior to project completion.</li> </ul>  |
| Contractors<br>Employees and<br>Subcontractors | <ul style="list-style-type: none"> <li>• Adhere to the directives of this SBEMP and the Ausgold's EMS and other Project EMPs and procedures.</li> <li>• Act in an environmentally responsible manner.</li> <li>• Report incidents to their supervisors as soon as practicable.</li> <li>• Satisfactorily perform all environmental works as specified by contractual arrangement or recognised authority.</li> <li>• Participate in subsequent investigations and implementation of preventive and corrective action(s) as required.</li> <li>• Attend all required environmental awareness, induction and training sessions.</li> <li>• Recognise the authority of the on-site environmental representative, particularly in the event of an actual or perceived environmental non-conformance, or when remedial action is indicated.</li> </ul> |



## 5 TRAINING AND COMPETENCY

To ensure the Project team understand their responsibilities and expectations in relation to environmental management, training and awareness will occur continuously throughout the course of the Proposal (refer to Table 8).

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.

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 Ausgold. 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 should include details on who has been trained, what the training course covered, what competencies or qualifications were achieved or obtained, the identification of the provider and training duration.

The training and awareness requirements for this SBEMP have been broken down into the following categories:

- Induction training;
- Task-specific training with competency assessment; and
- Awareness training.

**Table 8: Environmental training requirements**

| Category  | Recipients                                | Frequency  | Items                              |
|---|---|--|------------------------------------|
| Induction training                                | All people on site                        | Start of work, return from extended leave or site access   | Site specific induction            |
| Task-specific training with competency assessment | Site personnel / Contractors, as required | As required for activity with potential environmental risks or because of high risk task, specific incidents(s) trends | Selected modules                   |
| Awareness   | Site personnel / Contractors, as required | Periodic and according to risk identification  | Toolbox meetings / posters / memos |

### 5.1 INDUCTION TRAINING

All Project personnel and visitors seeking to attend site will be subject to Ausgold’s Project and Site Induction. The induction will include the following in relation to environmental awareness:

- Overview of the Environment Management System (EMS), including associated EMPs, policies and procedures;
- Ausgold’s legal and other obligations; and
- Proposal-specific environmental impacts and controls.

An Induction and Training Register will be used to record and monitor induction attendance by all personnel.



## 5.2 TASK SPECIFIC ENVIRONMENTAL TRAINING WITH COMPETENCY ASSESSMENT

Task-specific environmental training (e.g., for spill response, fauna handling or spotting, GDP and site clearing permit/procedure) for some group or individual site personnel will be conducted. Training may be in response to an environmental occurrence or incident(s) or as determined by leadership.

All training will be documented, and participants may be assessed in relation to their competency.

## 5.3 ENVIRONMENTAL AWARENESS TRAINING

An environmental awareness program will be implemented during the Proposal to assist in maintaining effective environmental management. Environmental awareness training may consist of regular toolbox meetings, posters and memos/alerts. This program will be designed to periodically reiterate the environmental objectives and specific environmental controls for the Proposal. Topics may include:

- New controls or work instructions;
- Reinforcement of induction content;
- Results of inspections and audits; and
- Awareness of environmental events or incidents.

## 5.4 ENVIRONMENTAL QUALIFICATIONS

All personnel directly involved in environmental management shall be appropriately qualified to undertake the tasks of the position to which they are appointed. Records of training and competency will be kept in the Induction and Training Register.

## 5.5 COMMUNICATION

Effective communication within Ausgold and with key stakeholders is critical to ensure that the requirements of this SBEMP are identified and implemented, and the principles of continuous improvement applied.

Typical methods of communication on site include written, oral and visual and include:

- Pre-start meetings;
- Toolbox talks;
- Inductions;
- Site notices;
- Environment alerts;
- Environmental Weekly and Monthly reports to management;
- Scheduled Audits;
- Emails, meetings, signs, bunds, bunting and fences; and
- Environmental Incident reports and banners.

Pre-start and toolbox meetings are internal communications that include discussion of the work and issues arising for each shift and the handover requirements. It also provides the opportunity



for delivering key environmental messages, audit and inspection results and communicating environmental risks for the scheduled activities. The content of pre-start meetings is to be recorded and made available if required.

The Environment Advisors are to ensure that relevant documentation is filed electronically, and hard copies made available to personnel. The Environment Advisors also ensure that key messages are delivered to the workforce (employees and contractors) starting with site inductions, site-specific environmental training, implementing environmental management systems, completing inspections and audits, monitoring and reporting. They also generally play a role in liaising with local community and addressing environmental management and rehabilitation requirements and associated communications.

### **5.5.1 EXTERNAL COMMUNICATION**

Direct communication with the media and general public is only to be completed by authorised personnel.

All formal communications to external parties shall be directed through Ausgold in accordance with the Proposal communications requirements.

Any requests from the media or general public are referred to Ausgold Management.

All direct communication with statutory authorities is to be approved by Ausgold management. Ausgold recognises the rights of entry and inspection of regulatory officials.



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## 6 EMERGENCY MANAGEMENT

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The site-specific Emergency Response Manual and the Ausgold Incident Reporting and Management Procedure will require environmental emergencies to be considered and developed. The Emergency Response Manual and Incident and Reporting Management Procedure outlines emergency contacts responsible for managing environmental emergencies, and procedures for managing environmental emergencies.

Where significant environmental harm has occurred, or is pending, due consideration must be given to the utilisation of professional emergency response management services and reporting to regulatory agencies in the required timeframes.

If a major environmental incident with these consequences occurs on or adjacent to the Proposal, an Evacuation Emergency Response Plan may need to be applied to ensure the safety of personnel.

Essential emergency information will be communicated to all personnel via the site-specific induction. A full list of emergency contacts, including the emergency warden and first aider(s) will be posted at the site notice boards and provided during the induction process.

Emergency response training needs shall be assessed during the Proposal risk register workshop and provided to nominated wardens who have been assigned specific responsibilities in relation to the coordination of emergency responses as soon as practicably possible.



## 7 ADAPTIVE MANAGEMENT

This SBEMP includes an adaptive management framework that includes systematic review of the performance of the SBEMP by assessing the results against the objectives of this plan. A feedback mechanism ensures learnings gained through implementation are incorporated into future revisions of the SBEMP. The framework is based on the adaptive management principles detailed in the EPA’s guidance for Environmental Management Plans (EPA, 2024). Stages of adaptive management are summarised in Table 9 and illustrated in Figure 12.

**Table 9: Adaptive Management Stages**

| Stage                | Element   |
|----------------------|---|
| 1. Assess and define | Review baseline environmental characteristics and define management objectives.<br>Update as new information comes to light.  |
| 2. Design EMP        | Establish clear monitoring, management and mitigation measures to achieve the objectives.<br>Identify key assumptions and uncertainties.<br>Establish clear targets and completion criteria.  |
| 3. Implement         | Identify, select and implement management actions.  |
| 4. Monitor           | Monitor environmental response.   |
| 5. Evaluate          | Evaluate effectiveness of the applied management and mitigation against the baseline.<br>Consider community perspectives.   |
| 6. Adjust            | Amend management plan components based on learnings from: <ul style="list-style-type: none"> <li>• Evaluation of monitoring data or methodology (inclusive of data gathered from the implementation of other management plans)</li> <li>• Review of assumptions and uncertainties</li> <li>• Re-evaluation of risk assessment</li> <li>• Increased understanding of the ecological system</li> <li>• External changes during the life of the Proposal (e.g., technical advances or innovation)</li> <li>• Communicate with key stakeholders.</li> </ul> |

The adaptive management framework is to be applied in a holistic manner, adaptive management and review of any given management plan will consider data and outcomes from the implementation of other relevant / linked plans.

Specific ongoing review commitments of the SBEMP will be implemented and shall assess the appropriateness of the SBEMP to the Proposal activities based on audit information and determine if any changes to the SBEMP are required as a result of scope, contextual, legislative or organisational changes.



**Environmental Management Plan  
Adaptive Management Framework**

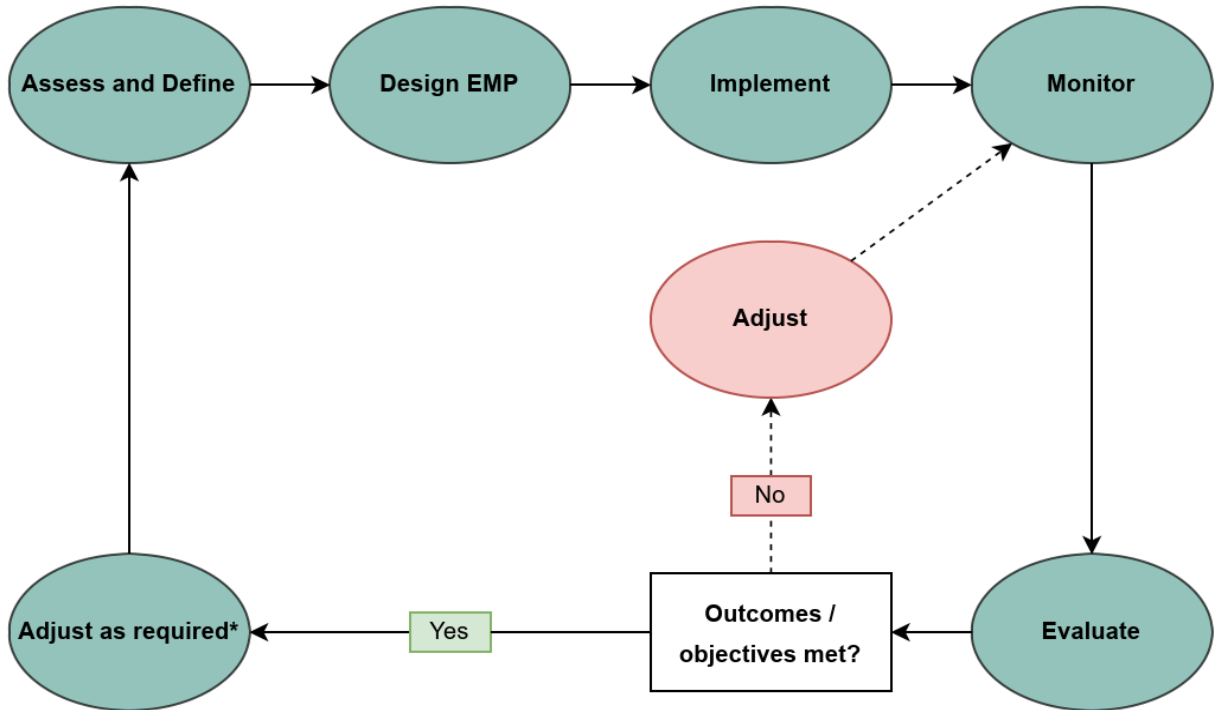


Figure 12: Adaptive Management Framework



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## 8 STAKEHOLDER ENGAGEMENT

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Consultation with relevant stakeholders is critical to ensure that the Proposal is underwritten by sustainable agreements to meet community and stakeholder expectations (also known as the needs of interested parties). Consultation with the wider community also allows Ausgold to address and monitor any community concerns or requests for information in an open, transparent and timely manner.

Ausgold has formed relationships with community members and some key stakeholders through the completion of exploration and planning activities for the Project. This includes the establishment of a Community Reference Group that brings together selected stakeholders to enable a cross section of views and input to be made available to Ausgold.

Ausgold has identified that a Stakeholder Engagement Plan shall identify key external stakeholders and consideration of how they may be impacted by the Proposal. The form of engagement is to be appropriate as are the key messages which apply and what influence they may have over Project implementation.

Ausgold retains a Stakeholder Consultation Register which maintains records of all interactions with stakeholders. The Register summarises key issues raised by stakeholders during the process and describes how Ausgold has responded to those issues. A summarised version of the Register has been provided in the referral document, detailing the stakeholder consultation undertaken for the Proposal regarding environmental impacts and management.

The Stakeholder Consultation Register is updated regularly. Stakeholder engagement documented in this SBEMP will be updated as the document undergoes revision. The SBEMP includes provisions for communications that are part of managing the Proposal in an environmentally and socially responsible manner.



## 9 GLOSSARY

| Term     | Definition   |
|----------|--|
| AEP      | Annual Exceedance Probability  |
| ALARP    | As Low as Reasonably Practical   |
| ARI      | Average Recurrence Interval  |
| Ausgold  | Ausgold Limited  |
| CIL      | Carbon in Leach  |
| EPA      | Environmental Protection Authority   |
| EBPC Act | <i>Environment Protection and Biodiversity Conservation Act 1999 (Cth)</i>             |
| EMP      | Environmental Management Plan  |
| EP Act   | <i>Environment Protection Act 1986 (WA)</i>  |
| EMS      | Environmental Management System  |
| EWTEC    | Eucalypt Woodlands of the Western Australian Wheatbelt Threatened Ecological Community |
| GDE      | Groundwater Dependent Ecosystem  |
| GDP      | Ground Disturbance Permit  |
| ha       | Hectare  |
| IWL      | Integrated Waste Landform  |
| km       | Kilometres   |
| LCDC     | Land Conservation District Committee   |
| LOM      | Life of Mine   |
| mm       | Millimetres  |
| mRL      | Metres above Sea Level   |
| Mtpa     | Million Tonnes Per Annum   |
| PEC      | Priority Ecological Community  |
| PMP      | Probable Maximum Precipitation   |
| Proposal | Katanning Gold Project   |
| RIWI Act | <i>Rights in Water and Irrigation Act 1914 (WA)</i>                                    |
| RO       | Reverse Osmosis  |
| ROM      | Run of Mine  |



| Term  | Definition                               |
|-------|--|
| SBEMP | Site Based Environmental Management Plan |
| TSF   | Tailings Storage Facility                |
| TMM   | Total Mined Material                     |
| WA    | Western Australia                        |
| WWTP  | Wastewater Treatment Plant               |



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## APPENDICES

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**Appendix 1:** Environmental risk summary

**Appendix 2:** Descriptions of likelihood and consequence ratings

**Appendix 3:** Risk matrix



## APPENDIX 1: RISK ASSESSMENT TABLE

| Hazard/Unwanted Event  | Potential Cause(s)/Risk Pathway   | Potential Impact   | Inherent Risk Rating |
|--|---|--|----------------------|
| Activities result in altered / increased fire regimes.   | <ul style="list-style-type: none"> <li>• Ignition from vehicle exhausts;</li> <li>• Hot work;</li> <li>• Lightning; and</li> <li>• Fire break absence.</li> </ul>                                       | <ul style="list-style-type: none"> <li>• Health and safety hazard;</li> <li>• Loss of vegetation;</li> <li>• Schedule impact; and</li> </ul> Equipment damage.   | Low                  |
| Discharge from bore field.   | Equipment failure or damage causing saline water discharge. <ul style="list-style-type: none"> <li>•</li> </ul>   | <ul style="list-style-type: none"> <li>• Loss/damage to adjacent vegetation and farmland.</li> </ul>   | Low                  |
| Impact to surface water ponds/soaks/drainage channels, causing impact to the hydraulic connection between shallow and deep aquifers. | <ul style="list-style-type: none"> <li>• Excess abstraction of groundwater;</li> <li>• Contamination; and</li> <li>• Construction and earthworks.</li> <li>•</li> </ul>                                 | <ul style="list-style-type: none"> <li>• Contamination of surface water and groundwater;</li> <li>• Decline in health of native vegetation in the surrounding environment;</li> <li>• Impact to water users; and</li> <li>• Altered hydrological regimes.</li> </ul> | Low                  |
| Greenhouse gas emissions are released above thresholds and contribute to accelerated climate change                                  | <ul style="list-style-type: none"> <li>• Mine activities including combustion of fuels, blasting and power generation produce greenhouse gas emissions that are released into the atmosphere</li> </ul> | <ul style="list-style-type: none"> <li>• Greenhouse gas emissions from the proposal accelerate climate change</li> </ul>   | Low                  |
| Mine activities result in disturbance of Aboriginal Heritage Sites   | <ul style="list-style-type: none"> <li>• Incomplete or ineffective heritage surveys; and</li> <li>• Poor communication with the community.</li> </ul>   | Unauthorised disturbance of Aboriginal Heritage sites/areas.   | Medium               |
| Excess traffic additional to the agriculture transport network during peak periods.  | Failure to identify road utilisation by agricultural operations during harvesting periods, transport plant and equipment to   | Additional traffic resulting in delays or road closures to the extent farmers or the general public are impacted.  | Medium               |



| Hazard/Unwanted Event  | Potential Cause(s)/Risk Pathway   | Potential Impact   | Inherent Risk Rating |
|--|---|--|----------------------|
|  | site during construction and commissioning resulting in road closure or traffic delays  |  |                      |
| Failure to comply with Groundwater Licence conditions leading to decreased quality and quantity of groundwater.                    | <ul style="list-style-type: none"> <li>Inadequate monitoring;</li> <li>Equipment failure; and</li> <li>Abstraction rates exceed limits.</li> </ul>  | Decreased quality and quantity of local inland waters.   | Medium               |
| Excessive noise from mining activities (blasting, processing, haulage and waste facilities).                                       | <ul style="list-style-type: none"> <li>Blasting program changes;</li> <li>Weather;</li> <li>Proximity to residents;</li> <li>Noise from crushing circuits; and</li> <li>Alarms.</li> </ul>                                  | <ul style="list-style-type: none"> <li>Blasting vibration and noise impacts the local fauna leading to the decline of species' use of the local area; and</li> <li>Disturbance of stakeholders and community members.</li> </ul>   | Medium               |
| Light pollution, dust and ambient emissions from mining activities.  | <ul style="list-style-type: none"> <li>Location of lighting towers near roads and residents;</li> <li>Dust from open pit;</li> <li>Lack of dust suppression; and</li> <li>Stockpiling of erosive material types.</li> </ul> | <ul style="list-style-type: none"> <li>Light pollution, dust and ambient emissions impacts to native fauna; and</li> <li>Elevated dust levels resulting in reduced air quality.</li> <li>Dust deposition on flora and vegetation decreases overall environmental quality.</li> </ul> | Medium               |
| Unstable landforms resulting in erosion and contamination of receiving environment (i.e., with waste materials and / or sediment). | Erosive and dispersive materials incorrectly placed onto the final outer slopes of the waste landform.  | <ul style="list-style-type: none"> <li>Inability to establish vegetation; and</li> <li>Increased dust generation potential.</li> </ul>   | Medium               |
| Receiving environment contaminated with fibrous or PAF materials.  | Fibrous or PAF materials identified during mining and not appropriately managed.  | Fibrous material or PAF contaminates inland waters, land and soils, and/or terrestrial environment resulting in decreased vegetation and habitat quality, water quality and revegetation success.  | Medium               |



| Hazard/Unwanted Event   | Potential Cause(s)/Risk Pathway   | Potential Impact  | Inherent Risk Rating |
|---|---|---|----------------------|
| Overspray of saline water used in dust suppression resulting salinisation of soils outside disturbance areas.               | Salination of local environment impacts the health of native vegetation.  | <ul style="list-style-type: none"> <li>• Vegetation loss; and</li> <li>• Failure to meet closure objectives.</li> </ul>   | Medium               |
| Flooding or ponding of surface water flow within active mining areas due to site infrastructure.                            | <ul style="list-style-type: none"> <li>• Surface hydrology intercepted by mining feature;</li> <li>• Diversion channels or bunding; and</li> <li>• Inadequate and poor understanding of surface hydrology.</li> </ul>                 | <ul style="list-style-type: none"> <li>• Insufficient flow to the downstream receiving environment;</li> <li>• Sediment flow impacting surrounding ecosystem and neighbouring farmlands; and</li> <li>• Flooding or ponding within mining footprint.</li> </ul> | Medium               |
| Excessive dust generated by TSF.  | <ul style="list-style-type: none"> <li>• Excessive wind; and</li> <li>• Lack of dust suppression applied to dry tailings.</li> </ul>  | <ul style="list-style-type: none"> <li>• Dust deposition on native vegetation; and</li> <li>• Impacts to soil quality.</li> </ul>   | Medium               |
| Compromised slope stability with erosive materials dispersing from landform.  | <ul style="list-style-type: none"> <li>• Erosive materials deposited on outer slopes or embankments;</li> <li>• Poor water management of landform; and</li> <li>• Angle of slopes is too steep for stability of materials.</li> </ul> | <ul style="list-style-type: none"> <li>• Poor vegetation cover;</li> <li>• Soil and environmental degradation due to unstable landforms; and</li> <li>• Contamination of soils and water.</li> </ul>  | Medium               |
| Excessive dust and ambient emissions.   | <ul style="list-style-type: none"> <li>• Dust generated by traffic on unsealed roads; and</li> <li>• Lack of dust suppression applied.</li> </ul>   | Loss/damage to adjacent vegetation and farmland.  | Medium               |
| Storm-water run-off not contained within drains.  | Inadequate design or construction of roads and drains.  | Loss/damage to adjacent vegetation and farmland.  | Medium               |
| Wastes not contained within landfill, and incorrect disposal of site waste and hazardous materials disposed of in landfill. | <ul style="list-style-type: none"> <li>• Inadequate design/maintenance of landfill to contain waste; and</li> </ul>   | Contamination of surface water or groundwater and soils, impacting the local environmental quality.   | Medium               |



| Hazard/Unwanted Event   | Potential Cause(s)/Risk Pathway   | Potential Impact   | Inherent Risk Rating |
|---|---|--|----------------------|
|   | <ul style="list-style-type: none"> <li>Inadvertent deposition of hazardous materials.</li> </ul>  |  |                      |
| <p>Operation of hybrid power station and mining fleet leads to elevated air pollutants and excessive emissions.</p>                                     | <ul style="list-style-type: none"> <li>Ineffective management/maintenance of equipment; and</li> <li>Equipment damage.</li> </ul>   | <p>Elevated levels of air pollutants leading to impacts to native fauna and flora and an overall reduction in environmental quality.</p>   | <p>Medium</p>        |
| <p>Elevated groundwater under IWL or pit.</p>   | <p>Groundwater mounding beneath IWL impacting local hydrological regimes and potentially decreasing water quality or availability to local users.</p>   | <ul style="list-style-type: none"> <li>Contamination of surface water and groundwater;</li> <li>Decline in health of native vegetation in the surrounding environment; and</li> <li>Impact to water users.</li> </ul>  | <p>Medium</p>        |
| <p>Increased salinity of surface water and shallow groundwater.</p>   | <ul style="list-style-type: none"> <li>Seepage of saline water; and</li> <li>Equipment failure.</li> </ul>  | <ul style="list-style-type: none"> <li>Decline in health of native vegetation in the surrounding environment; and</li> <li>Loss/damage to soils.</li> </ul>  | <p>Medium</p>        |
| <p>Stormwater management infrastructure inadequate resulting in unintentional discharges and sedimentation / contamination of downstream receptors.</p> | <p>Poor placement of mined materials.</p>   | <ul style="list-style-type: none"> <li>Unstable surfaces suitable for rehabilitation; and</li> <li>Sedimentation in downstream water courses.</li> </ul>   | <p>Medium</p>        |
| <p>Hydrocarbon spills from vehicles and machinery resulting in contamination of surface water and / or groundwater.</p>                                 | <ul style="list-style-type: none"> <li>Equipment failure;</li> <li>Valve left open;</li> <li>Overfilling storage tanks;</li> <li>Storage vessel damaged during transit;</li> <li>Hydrocarbons not stored within bunding;</li> <li>Container lids not sealed;</li> <li>Discharge during maintenance and refuelling activities;</li> <li>Ineffective contaminated site investigations;</li> <li>Ineffective cleanup of spills; and</li> </ul> | <ul style="list-style-type: none"> <li>Contamination of soils and vegetation, impacting the terrestrial environment;</li> <li>Potential pollution of surface water and drainage lines, with secondary impacts to rehabilitation areas; and</li> <li>Contamination of topsoils and subsoil stockpiles affecting vegetation and revegetation efforts.</li> </ul> | <p>High</p>          |



| Hazard/Unwanted Event  | Potential Cause(s)/Risk Pathway   | Potential Impact  | Inherent Risk Rating |
|--|---|---|----------------------|
|  | Lack of monitoring and measurement programs during operation to record accumulative impacts.  |   |                      |
| Chemical fire/explosion.   | <ul style="list-style-type: none"> <li>• Incompatible storage of chemicals;</li> <li>• Failure to control ignition sources;</li> <li>• Incorrect storage of chemicals; and</li> <li>Equipment failure.</li> </ul> | <ul style="list-style-type: none"> <li>• Ambient emissions; and</li> <li>Loss/damage to vegetation soils.</li> </ul>                        | High                 |
| Seepage from the IWL leading to pollution of surface water and/or groundwater. | <ul style="list-style-type: none"> <li>• Ineffective water management on IWL surface; and</li> <li>Ineffective liner or test-work failed to predict potential for leaching.</li> </ul>                            | <ul style="list-style-type: none"> <li>• Loss/damage to vegetation and soils; and</li> <li>Pollution to surface and groundwater.</li> </ul> | High                 |



## APPENDIX 2: DESCRIPTIONS OF LIKELIHOOD AND CONSEQUENCE RATINGS

### Likelihood Ratings (DMPE, 2023)

| Likelihood Ratings |                        |   |
|--------------------|------------------------|---|
| Description        | Frequency              | Criteria  |
| Rare               | Once in 20 years       | Event will occur in exceptional circumstances during the project / period under review. |
|                    |                        | Very few or known occurrences.  |
| Unlikely           | Once in 10 years       | Event is not likely to occur during the Project / period under review.                  |
|                    |                        | Some occurrences occur.   |
| Possible           | Once in 5 years        | Event may occur in some instances during the Project / period under review              |
|                    |                        | Occasional incidents known.   |
| Likely             | Once per year          | Event likely to occur during the Project / period under review.                         |
|                    |                        | Regular incidents known.  |
| Almost Certain     | Twice or more per year | Event will occur during the Project / period under review.                              |
|                    |                        | High number of known incidents.   |

### Consequence Ratings (DMPE, 2023)

| Factor                 | Insignificant   | Minor  | Moderate   | Major  | Severe  |
|------------------------|---|--|--|--|---|
| <b>Biodiversity</b>    | Alteration or disturbance to an isolated area with no effect on habitat or ecosystem.<br>Loss of an individual plant / animal of conservation significance. | Alteration or disturbance to <10% of a habitat or ecosystem resulting in a recoverable impact within 2 years.<br>Loss of multiple plants / animals of conservation significance. | Alteration of disturbance to 10- 40% of a habitat or ecosystem resulting in a recoverable impact within 2- 5 years.<br>Loss of <50% known local population of plant / animal of conservation significance. | Alteration or disturbance to 40- 70% of a habitat or ecosystem resulting in a recoverable impact within 5- 15 years.<br>Loss of >50% known local population of plant / animal species with possible loss of entire population. | Alteration or disturbance to >70% of a habitat or ecosystem resulting in a recoverable impact >15 years.<br>Local loss of conservation significant or listed species.<br>Extinction of a species. |
| <b>Water Resources</b> | Negligible change to hydrological processes, water availability or water quality.   | Short-term modification of hydrological processes, water availability and quality within project tenure, but no change in beneficial use.  | Medium-term modification of hydrological processes, water availability and water quality within project tenure, but no change in   | Long-term modification of hydrological processes, water availability and water quality within project tenure, but no change in   | Long-term or permanent modification of hydrological processes, water availability or water quality outside project tenure, with impacts to a water-   |



| Factor                                 | Insignificant  | Minor   | Moderate  | Major   | Severe  |
|--|--|---|---|---|---|
|  |  |   | beneficial use.<br>Short-term modification of hydrological processes, water availability and water quality outside project tenure, but no change in beneficial use.   | beneficial use.<br>Medium-term modification of hydrological processes, water availability and water quality outside project tenure, with change in beneficial use     | dependent environmental value and/or change in beneficial use.  |
| <b>Land and Soils</b>                  | Clean-up by site personnel, rectified immediately. Confined to immediate area around source. | Clean-up by site personnel, remediation within 1 year.<br>Confined to operational area.   | Clean-up by site personnel, remediation within 1-3 years.<br>Minor impact outside DE or minor impact to soil stockpiles.  | Clean-up requiring external specialist, remediation within 3-10 years.<br>Impact has migrated outside the DE or contamination of soil stockpiles.                     | Clean-up requiring external specialist. Remediation >10 years, or permanent residual impact.<br>Impact outside the tenement boundary.                   |
| <b>Rehabilitation and Mine Closure</b> | Site is safe, stable a non-polluting. Post mining land use is not adversely affected.        | Site is safe, all major landforms are stable, and any stability or pollution issues are contained and require no residual management. Post mining land use is not adversely affected. | Site is safe, and any stability or pollution issues require minor, ongoing maintenance by end land-user. Post mining land use cannot proceed without some management. | Site cannot be considered safe, stable or non-polluting without long-term management or intervention. Post mining land use cannot proceed without ongoing management. | Site is unsafe, unstable and/or causing pollution or contamination that will cause an ongoing residual affect. Post mining land use cannot be achieved. |



## APPENDIX 3: RISK MATRIX

### Risk Matrix (DMPE, 2023)

| LIKELIHOOD     | CONSEQUENCE   |        |          |         |         |
|----------------|---------------|--------|----------|---------|---------|
|                | Insignificant | Minor  | Moderate | Major   | Severe  |
| Almost Certain | Medium        | High   | High     | Extreme | Extreme |
| Likely         | Medium        | Medium | High     | High    | Extreme |
| Possible       | Low           | Medium | Medium   | High    | High    |
| Unlikely       | Low           | Low    | Medium   | Medium  | High    |
| Rare           | Low           | Low    | Low      | Medium  | Medium  |

