JACKSON INFILL DRILL PROGRAM

EXPLORATION ENVIRONMENTAL MANAGEMENT PLAN

25 May 2022

PREPARED FOR AUSGOLD LIMITED

BY AUSGOLD EXPLORATION PTY LTD

Proponent contact details:

AUSGOLD EXPLORATION PTY LTD

Contact Person: Graham Conner – Exploration Manager
Email: gconner@ausgoldlimited.com
Phone: (08) 9220 9890
Address: Level 4, 251 St Georges Terrace, Perth, Western Australia, 6000

DOCUMENT CONTROL

Document Title	Jackson Bushland Exploration Management Plan – Katanning Drill Program		
Revision Number	1		11/04/2022
Author	W Candish, Project Geologist, Ausgold Exploration		11/04/2022
Checked	Paul McNeil– Director, Sextant Resource Services		25/05/2022
Authorisation	Graham Conner, Exploration Manager, Ausgold Limited		25/05/2022

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1 INTRODUCTION

Ausgold Exploration Pty Limited (Ausgold), own and operate the Katanning Gold Project (KGP), Woodanilling Project (WP) and the Lake Magenta Project (LMP), plan to undertake additional exploration activities for the KGP in order to fill strategic gaps in orebody knowledge and improve confidence for resource estimates across Ausgold's tenements.

The KGP is located approximately 250 km southeast of Perth and 35 km east north-east of Katanning, Western Australia (Figure 1) with a defined resource and significant exploration. The KGP encompasses the Jinkas and Dingo mine sites (formerly known as the Badgebup Gold Mine) with several exploration tenements on an approximate northwest/southeast orientation (Figure 1). Mining has previously been conducted on the Jinkas and Dingo pits, although both sites are currently in care and maintenance. Ausgold acquired the KGP in August 2011 (Ausgold, 2017), which is now part of the regional KGP area; (Figure 1).

The KGP occurs in part of the southern section of the Western Australian Wheatbelt which has been extensively cleared for agriculture. In 2015, the Eucalypt Woodlands of the Western Australian Wheatbelt Threatened Ecological Community (WTEC) – was listed under the Federal *Environmental Protection and Biodiversity Act* 1999 (EPBC Act). WTEC requires special consideration when exploration and mining activities are being planned. WTEC is listed as Critically Endangered under the EPBC Act.

Remnants of native vegetation in the region are also recognised as generally having conservation value because so much native vegetation has been removed from around them. Roadside verges and other remnants of vegetation may represent corridors that support remnant fauna populations.

Ausgold has planned exploration drilling adjacent to the Jackson deposit within and adjacent to a vegetated patch assessed as WTEC (the Jackson Bushland patch). The patch occurs on freehold land.

In response to a Programme of Work (PoW) application to the Department of Mines, Industry Regulation and Safety (DMIRS), requested further information to enable assessment and approval of exploration activities within areas of remnant vegetation, particularly areas within WTEC and within a (notional) 40 m buffer zone. Ausgold has been told by DMIRS that they will not assess a patch of vegetation that is WTEC without approval under the EPBC Act. The buffer zone is based on the conservation advice for the WTEC (link). The advice indicates that the buffer zone is not part of the TEC (i.e. is not of itself protected) and is advisory.

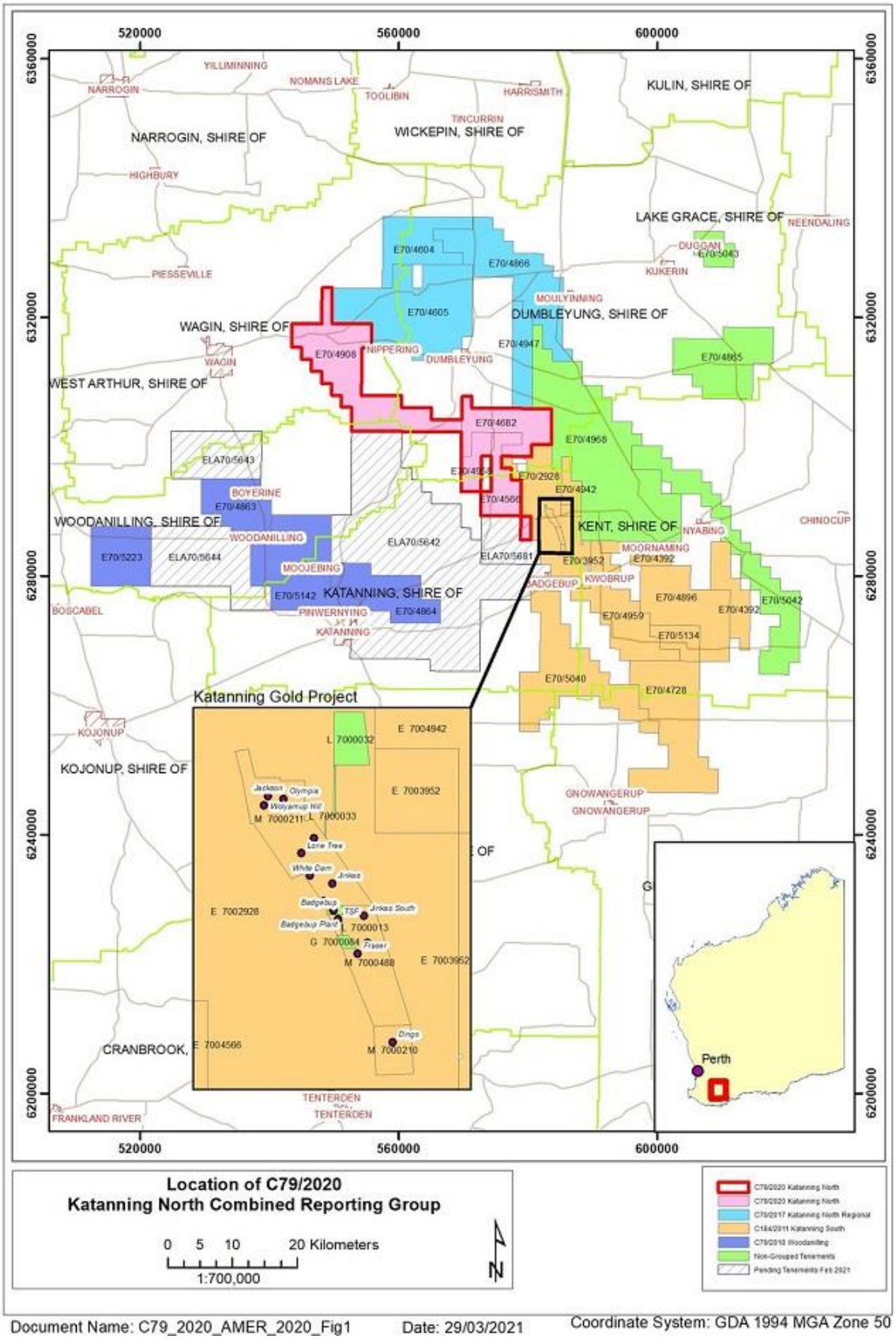

Figure 1: Location of the KGP

1.1 KATANNING GOLD PROJECT

Four potential pits (Jackson, Olympia, Datatine and Jinkas South) may be mined as part of the renewed mining at the KGP. All existing and potential mine pits lie within 4,165 km^2 of contiguous Mining Act tenure that includes both Mining Leases (M) and Exploration Licences (E).

Since acquiring the KGP, Ausgold has spent a substantial amount of effort developing an understanding of the geological stratigraphy controlling gold mineralisation based on historic drilling, geophysical surveys and geochemical sampling. This has resulted in a reinterpretation of how mineralisation occurs. Exploration drilling conducted since 2015 has been successful in validating the new geological interpretation, extending the existing resource estimates for Jinkas, Dingo and other prospects including White Dam, Jackson, Lone Tree and Fraser. In addition to a growing mineral resource inventory, Ausgold made a new gold discovery in 2015 at its Datatine prospect 7 km north of the Jinkas pit. More recently, Ausgold has discovered a high grade gold deposit at Jinkas South in an area previously not identified for exploration by past operators.

1.1.1 JACKSON DRILL PROGRAM

Ausgold proposes to undertake the next phase of the Jackson Drill Program (Jackson Infill Drill Program), to test the mineralisation extent in the Jackson Bushland patch to the immediate east of the Jackson deposit. Mineralisation is consistently dipping to the east and probability of conversion to mineable resources are high.

Despite the being on the same geological orientation as deposits understood since the nineteen-eighties and being immediately adjacent to the Jackson deposit, very limited exploration drilling has been conducted within the Jackson Bushland patch. Consistent mineralisation geometries indicates high potential for mineralisation in the patch. This represents a major knowledge gap in Ausgold's exploration database. The Jackson Infill Drill Area is delineated by a north-south access track to the east and agricultural paddocks to the north, west and south, within tenements M70/211 and E70/2928 as shown in Figure 2.

This Jackson Bushland Exploration Management Plan (JBEMP) has been prepared to be consistent with the Commonwealth's Environmental Management Plan Guidelines (DotEE, 2014). To ensure this JBEMP is suitable for submission in support of a PoW application, it also considers aspects of the Western Australian Government's Code of Practice: Mineral Exploration Drilling (Department of Mines and Petroleum; DMP, 2012) and the Mining Act Guidelines Basic Provisions (Department of Mines, Industry Regulation and Safety; DMIRS, 2018).

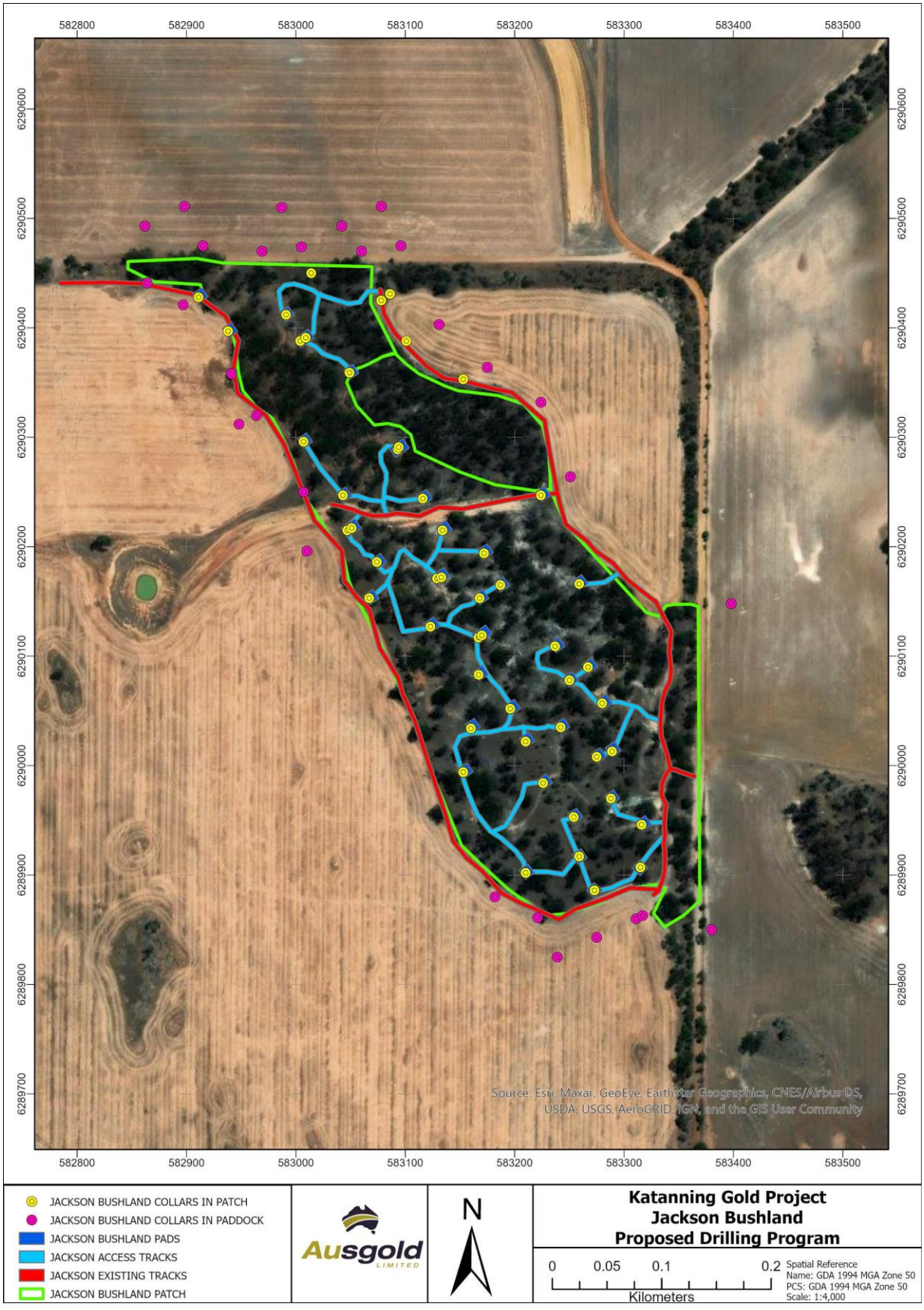

Figure 2: Jackson Bushland Patch with planned access tracks and collar locations.

Infill Drilling Location and Tenure

The Jackson Infill Drilling is located within freehold agricultural land at Badgebup, 35 km east northeast of Katanning in the Shire of Katanning. The nearest road intersection to the Jackson Bushland patch is Warren Road, on the southern end of the patch. The patch is immediately adjacent (east) to Ausgold's Jackson Deposit (Figure 2) and to the west of the Olympia deposit. The area is covered by the following tenements:

- M70/211 extends north from the Jinkas mine site up to the Jackson and Olympia deposits. All drilling is situated within M70/211
- E70/2928 surrounds M70/211 and covering a small portion of the patch (Figure 2).

The patch is wholly on freehold land and under a current exploration access agreement.

Existing Facilities

Ausgold's KGP site office is located at the Badgebup process plant immediately south of the Jinkas pit. Ausgold's site office has facilities for vehicles, maintenance, communications, refuelling and disposal of rubbish, avoiding the need to establish facilities for exploration activities.

1.2 PURPOSE

This JBEMP is specifically for the Jackson Infill Drill Program within the Jackson bushland WTEC and the buffer zones for the WTEC. The JBEMP supports an application for approval under section 24 of the *Mining Act 1978* (Mining Act) to undertake exploration on the patch within tenement M70/211.

1.3 SCOPE

This JBEMP presents the mandatory and discretionary management actions for the Jackson Infill Drill Program.

Ausgold has identified that parts of the Jackson Infill Drill Area are considered to be highly likely WTEC. This JBEMP has been designed to specifically consider impacts that are identified as key threats to the WTEC. The key threats are outlined in the Department of the Environment's (DoE) Approved Conservation Advice for the Eucalypt Woodlands of the Western Australian Wheatbelt (DoE, 2015). Key threats to the WTEC relevant to the Jackson Infill Drill Program and the proposed management actions are summarised in Table 1 below.

Table 1: Key threats to the WTEC

Key Threats	Potential impact of the Program	Applicable Sections of this Document
Clearance of native vegetation.	Yes	Sections 8.1, 8.2, 8.4 and 8.5
Loss of habitat for key native species.	Yes	Sections 8.2 and 8.3
Fragmentation into smaller, disconnected patches.	Yes	Section 8.2
Weed invasion.	Yes	Section 8.2
Impacts from pest animals.	No	N/A
Inappropriate application of chemicals, including inorganic fertilisers to create improved pastures; or pesticide/herbicide spray drift from agricultural lands adjacent to a patch.	No	N/A
Grazing pressure: including inappropriate grazing regimes by domestic stock and grazing of regrowth by native fauna.	Yes	Section 8.2.5
Increased salinity and waterlogging of the landscape largely due to modification of the landscape and hydrology through over clearing.	No	N/A
Soil acidification.	No	N/A
Altered fire regimes, notably altered fire frequency, but also changes to fire intensity and season, such as occurs during prescribed burning. It covers both wildfires and prescribed burning.	Yes	Sections 8.2 and 0
Potential impact of plant diseases such as Phytophthora sp. on species diversity and structure.	Yes	Sections 8.2 and 8.2
Potential impacts of climate change, including altered fire and flooding regimes, decline in tree health due to prolonged drought and heat stress, and poor regeneration and recruitment.	No	N/A

2 DESCRIPTION OF ACTIVITIES

The Jackson Infill Drill Program is designed to fill the key orebody knowledge gaps with the smallest disturbance footprint possible. To achieve this outcome, Ausgold has undertaken extensive planning. Considerations has been given to drill collar locations, timing of drilling, vegetation, fauna, access, equipment selection, water and waste management.

2.1 DRILL RIG

Drill rig selection will be important to the minimisation of the impacts of the Jackson Infill Drill Program. Ausgold proposes to use a small, manoeuvrable, low impact truck mounted drill rig similar to that which is depicted in Figure 3, supported by a minimal ground crew and minimal vehicle and rig movements.

A similar environmentally sensitive drilling program was completed by Ausgold at the Wurgabup Recreational Reserve in 2021. The program confirmed that:

- If aired drilling is used (reverse circulation) an Auxiliary and Booster vehicle is required.
- Ground water can be captured by a containment and disposal system, however locally present thick muds may be encountered during drilling that can be captured but not removed by a containment and disposal system. This will require a suction truck.
- Cored drilling can be completed using a light diamond rig. This will allow for water cleaning and recycling down hole, using a water circulation purification system and collection of solids waste. Using a light rig with short rods, drilling can be completed with negligible change to pad sizes and access impacts.

Figure 3: Low environmental impact drill rig

It is anticipated the drill rig will be short to ensure a small turning circle, enabling it to navigate through the understorey without impacting the WTEC. The rig will preferably be driven by tracks (or similar) rather than wheels so that the weight of the rig is distributed over a relatively large surface area, minimising impacts to ground cover and soil structure.

2.2 DRILL HOLE ACCESS

Ausgold has undergone extensive planning to ensure that impacts to the environment and the WTEC from the implementation of the Jackson Infill Drill Program are avoided and minimised. Ausgold is committed to implementing the Jackson Infill Drill Program without mechanical removal of any native vegetation. In order to demonstrate this commitment, Ausgold has mapped the possible access routes for each drill hole.

2.2.1 MAPPING METHODOLOGY

Clear access to the drill holes is critical to enabling Ausgold to implement the Program without impacting native vegetation and the WTEC. In order to map the access routes, Ausgold has undertaken line surveys for each drill hole.

Line surveys involve physically walking the 'path of least resistance' to each drill hole. A measuring stick that represents the width of the drill rig is held to ensure that the proposed drill rig will be able to navigate through the vegetation with no impact. The procedure that was used for the line surveys is as follows:

- A hand-held GPS was used as a guide, and a path that minimised disturbance to mature trees and understorey was surveyed.
- An individual holding a 3.5 m long pole (representative of the width of the drill rig) was used to determine if the drill rig could pass between native vegetation.
- The pole bearer maneuvered forward between vegetation; a photographer took georeferenced images as evidence of site access.
- If the intended path could not be navigated with the pole a new path was chosen.
- This was completed along the length of each proposed track; a sample photo is shown in Figure 4 below; a complete collection of photographs is presented in the Appendix 1.

As a result of this approach, no mechanised removal of vegetation will be required for access tracks. One single area of dirt 'fill' will be needed to reduce the gradient of the access slope for the drill rig for entry to holes JK106, JK110 and JK109 of area 0.005 ha. This can be accessed via a cleared agricultural track.

In instances where fallen branches or debris are across tracks, these will be moved by hand to the side of the track to facilitate access. Mapped access to each drill hole and their locations are shown in Figure 4.

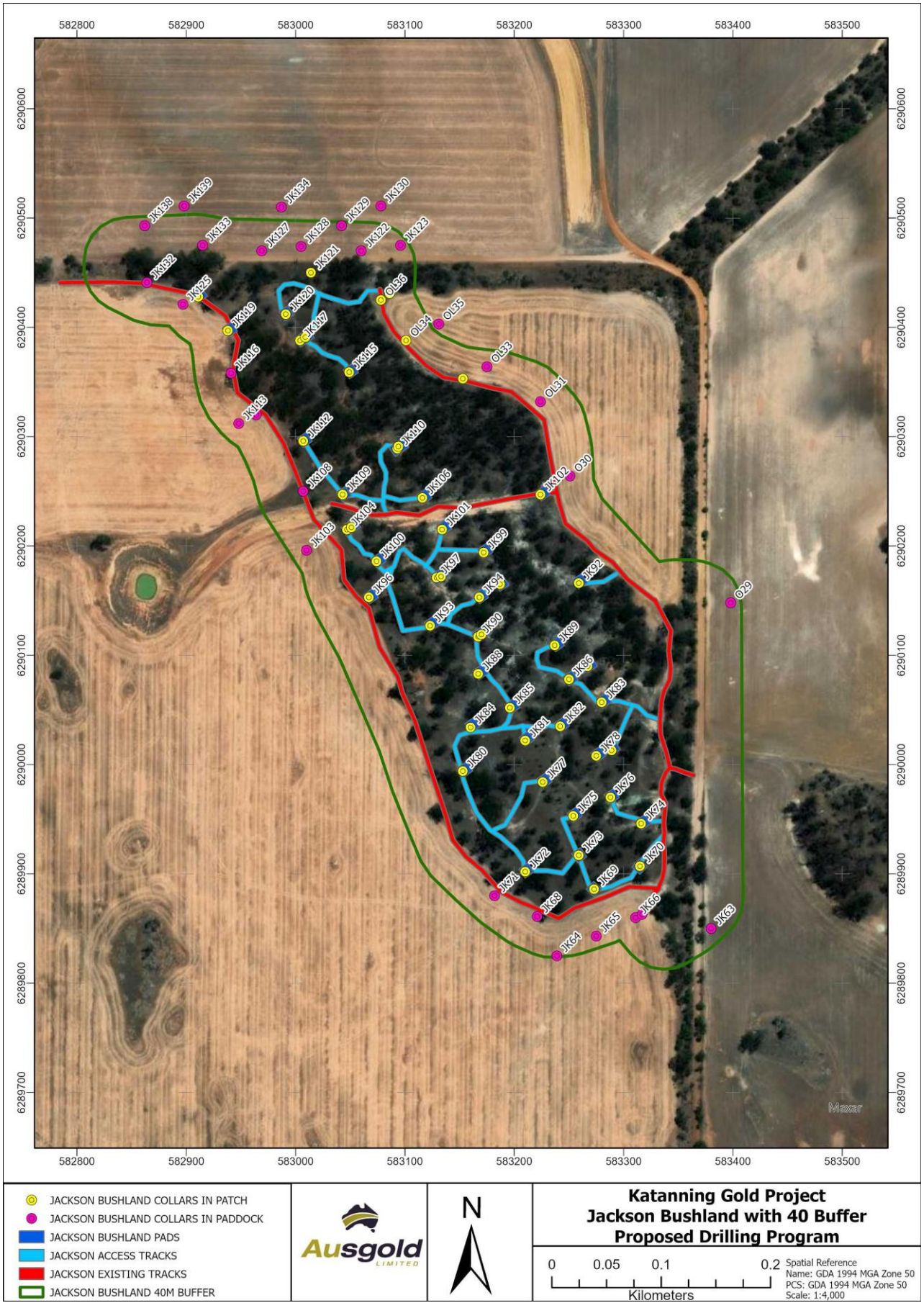

Figure 4: Proposed drill hole locations and mapped access

2.3 DRILLING METHODOLOGY

Conventional drilling methods will be used. The following drilling sequence will be considered common practice for all drill locations.

- Upon arrival at the drilling site, operators will determine the best orientation to ensure there is no impact on surrounding vegetation (including the canopy above), preference is to drill at 244° and sites can be changed to mitigate any changes since survey completed;
- Once at the drilling location, if necessary, a small area of vegetation will be removed by hand and placed adjacent to the drilling area for later spreading over the drill site;
- A small volume of topsoil will be removed from immediately around the planned hole location (enough to safely drill the hole) and stockpiled to be used later for rehabilitation;
- The drill rig will be stabilised and drilling armature will be erected in preparation for drilling;
- Water containers and hoses will be put in place;
- Final safety and equipment checks will be completed;
- Drilling commences with collars placed to a depth of approximately 6m;
- Drilling will continue to the required depth, between 84-198m;
- Analysis samples will be removed from the site;

Where reverse circulation drilling will be used.

- The drilled material undergoes cyclonic separation, to remove any groundwater;
- Groundwater is containerised for disposal a via a suction truck, either at completion of hole or intermittently during drilling if significant water occurs;
- Samples of the drilling solids are collected into bags at 1 m intervals, samples excess to current requirements are also bagged and temporarily stockpiled alongside the drill rig if space exists. If no space available, will be directly loaded onto a light vehicle and removed from the patch;

Where cored drilling will be used.

- Cored samples will be retrieved to a smaller rod bench;
- Samples will be cleaned and collected on a core bench for inspection and removal;
- Water will be circulated between two specialised water purification tanks, cleaner water will be circulated through hole and excess water will be removed from patch;
- Cored samples will be removed from range using drilling support vehicle;
- Solid waste will be removed from site.

Both drill types

- The drill rig is disassembled and leaves the site via the same route used for access;
- Topsoil and disturbed vegetation is then respread over the drilling location to rehabilitate the site;
- Once drilling is complete temporary caps will be used to close the hole below ground level; and
- Remove all excess samples that have been stored at drill sites;

- Once the holes that are no longer required, the casing will be removed and the holes closed with a permanent cap.

3 OBJECTIVES

The objective of this JBEMP is to enhance the environmental management awareness of Ausgold personnel and subcontractors to provide sound management controls and a framework to avoid impacts to the WTEC. This JBEMP details the methods and procedures to be applied in order for Ausgold to operate within the patch in accordance with Ausgold's Health, Safety, Environment and Communities (HSEC) Policy (Appendix 1: Photographic record of access examples

Appendix 2), as well as meeting State and Federal Government regulatory requirements. The specific objectives of this JBEMP are to:

- Outline key project approvals and regulatory requirements;
- Identify key environmental aspects and potential impacts associated with the Project;
- Identify and summarise actions to manage potential environmental impacts;
- Detail key monitoring, auditing, reporting and review processes to measure project environmental performance;
- Define the accountability for environmental management actions; and
- Ensure all relevant stakeholders are contacted as required.

4 APPLICABLE LEGISLATION

4.1 LEGISLATIVE AND REGULATORY FRAMEWORK

All employees and contractors must comply with all Commonwealth and State environmental legislation relevant to the Infill Drill Program. Key Commonwealth and State Legislation related to the Infill Drill Program is listed in Table 2.

Table 2: Key Commonwealth and State Legislation related to the Infill Drill Program

Legislation	Application
Commonwealth	
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	Protection of Matters of National Environmental Significance. Environmental protection in Commonwealth-managed lands or waters.
National Native Title Act 1993	Recognition and protection of Native Title.
State	
Aboriginal Heritage Act 1972	Management of Aboriginal Heritage.
Agriculture and Related Resources Protection Act 1976	Management, control and prevention of the introduction, spread and keeping of declared plants and animals.
Biodiversity Conservation Act 2016 (BC Act)	Provides for the conservation and protection of wildlife. Special provisions and schedules cover the protection of gazetted rare flora and fauna.
Biosecurity and Agriculture Management Act 2007	The control of declared organisms, including weeds.
Bush Fires Act 1954	For the prevention, control and extinguishment of bush fires.
Conservation and Land Management Act 1984	Protection and management of nature reserves, state forest, marine parks, etc.
Environmental Protection Act 1986 (WA) (EP Act) and associated Regulations	Prevention, control and abatement of pollution, conservation protection and enhancement of the environment.
Mines Safety and Inspection Act 1994	For the safety of mines and mining operations and the inspection and regulation of mines, mining operations and plant and substances supplied to or used at mines.
Mining Act 1978	Regulation and management of exploration and mining of minerals. Mining tenement conditions.
Rights in Water and Irrigation Act 1914 (WA) (RIWI Act)	Provision for the regulation, management, use and protection of water resources, to provide for irrigation schemes, and for related purposes. Groundwater abstraction and surface water management.
Soil and Land Conservation Act 1945	For the conservation of soil and land resources, and to the mitigation of the effects of erosion, salinity and flooding.

5 ENVIRONMENTAL MANAGEMENT ROLES AND RESPONSIBILITIES

This section defines the roles and responsibilities of personnel responsible for environmental management of the Infill Drill Program. Everyone - including contractors, sub-contractors, persons on secondment and visitors - is responsible for complying with environmental management requirements, and ensuring that any action or inaction on their part does not result in harm to the environment.

Ausgold is responsible for the environmental aspects of works at the Jackson Infill Drill Program. Organisational responsibility for achieving the JBEMP objectives rests ultimately with Ausgold's Jackson Infill Drill Program Management Team (Exploration Manager and Project Geologist). However, that responsibility is shared with, and hence must be communicated to, all employees, contractors and service providers. This JBEMP represents one of the key communication methods for conveying relevant environmental information, actions and requirements to employees and contractors. Contractors shall ensure environmental management responsibilities and designated levels of authority are well understood prior to commencing work on site.

All personnel are required to work in consultation with each other and to the full extent of their respective authorities to pro-actively identify, assess and to control possible environmental aspects and impacts associated with the Infill Drill Program.

5.1.1 EXPLORATION MANAGER

The Exploration Manager is responsible for promoting environmental awareness across the team by providing sufficient and adequate resources (qualified personnel, technical, financial, etc.) for proper implementation and to ensure that all Jackson Infill Drill Program activities comply and are in line with the conditions as described in this JBEMP and with the contractual and statutory requirements.

5.1.2 EXPLORATION MANAGER/PROJECT GEOLOGIST

The Exploration Manager/Project Geologists are responsible to promote environmental awareness within their work packages by providing sufficient and adequate resources (qualified personnel, technical, financial, etc.) for proper implementation and to ensure that all Jackson Infill Drill Program activities comply and are in line with the controls as described in this JBEMP and with the contractual and statutory requirements.

The Exploration Manager/Project Geologists, shall continuously monitor the effectiveness of the implemented JBEMP and confirm that all Jackson Infill Drill Program employees fully and correctly understand the Project environmental requirements.

5.1.3 PROJECT GEOLOGIST

Supervisory personnel are responsible for the operational and environmental aspects of the work performed under their supervision. They shall provide guidance and direction in their day-to-day supervisory roles and lead by example. They are responsible for carrying out the following tasks:

- Responsible for implementation of work instructions/procedures;
- Carry out quality, safety and environmental checks and monitoring under their responsibility;
- Ensure that all persons under their control have received adequate information, training and briefing in their task or function and are aware of all precautions and restrictions that have to be observed;
- Organise, attend and regularly hold toolbox meetings that include environmental topics;
- Investigate and report environmental incidents within the workplace and propose measures to prevent similar incidents from occurring in the future; and
- Seek the advice of HSE advisors as required.

5.1.4 HEALTH, SAFETY & ENVIRONMENT ADVISORS

The Health, Safety and Environment (HSE) Advisors and relevant environmental resources are responsible for the preparation and updating of the JBEMP. During the execution of the works, the site team manages day to day issues associated with all aspects of environmental management within the scope of works.

Tasks for the HSE advisor include but are not limited to the following:

- Advice and assurance on the prevention of environmental impacts, including the application of environmental procedures as outlined in the JBEMP;
- Assist the project geologist to monitor environmental performance and key indicators and compile reports for Exploration Management/'Project Geologist review;
- Advise on, arrange and as needed present appropriate environmental training;
- Determine causes of environmental incidents and recommend preventative measures;
- Consult with relevant parties on environmental issues; and
- Review this JBEMP and associated procedures.

5.1.5 PROJECT PERSONNEL

All Jackson Infill Drill Program personnel are required to adhere to all environmental procedures and plans as specified in this JBEMP. All personnel have the following responsibilities and obligations:

- To comply with the instructions issued at the workplace by the employer at the workplace;
- 'Stop Work Authority' - whereby everyone has the right and responsibility to challenge or refuse to work in workplace conditions that are harmful to themselves, others or the environment;
- To perform all tasks in a way that does not impact the surrounding work environment beyond the approved activities and impacts;

- To immediately inform the employer of all work situations which they reasonably presume entails an immediate danger and/or could have a negative and harmful impact on the environment; and
- Attend and participate in all environmental training (i.e. Inductions, toolbox meetings, external training, safety drills, etc.).

6 ENVIRONMENTAL MANAGEMENT SYSTEM

6.1 IMPACT ASSESSMENT AND POTENTIAL ENVIRONMENTAL RISKS

The impact assessment adopted a systematic approach, aligned with standard risk assessment and management methodologies outlined in AS/NZS ISO 31000:2018: Risk management – Principles and Guidelines (AS/NZS ISO 31000). Using a risk management process in the context of environmental impact assessment in this case provides a framework to develop impact management measures (controls) and demonstrate that the identified impacts and risks are reduced to acceptable levels. The general risk assessment process, adapted from AS/NZS ISO 31000 is shown in Figure 5, and is summarised as follows:

- Establishing the context - General outline of the Infill Drill Program scope and key elements such as baseline environmental factors (surveys, desktop studies, publicly available information), personnel, and timing;
- Impact / Risk Identification – based on the experience and knowledge of Ausgold personnel and environmental professionals to determine how the Infill Drill Program will interact with the environment (environmental aspects and environmental impacts); and
- Impact Assessment / Risk Analysis - identify impact causes, likelihood, consequences (inherent impacts / risk), develop control measures, and ensure the (residual) impacts / risks are acceptable.

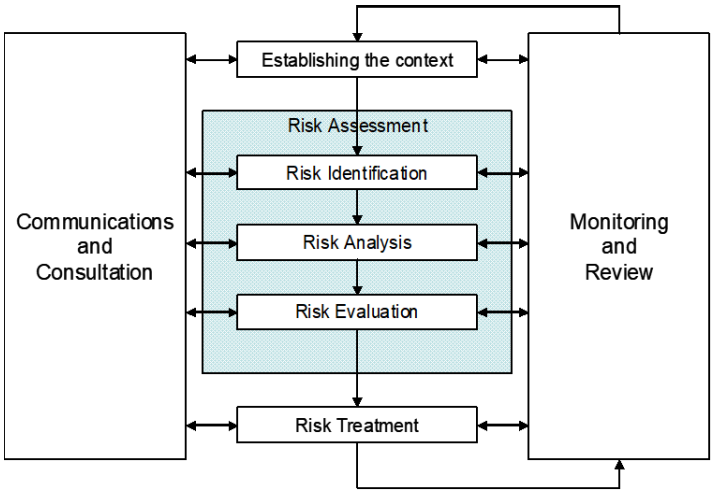

Figure 5: Risk Management Process (adapted from AS/NZS 31000)

The details of the risk assessment approach are provided in Tables 5 to 7 below.

Table 3: Consequence Table

Category	Consequence				
	1- Insignificant	2 - Minor	3 - Moderate	4 - Major	5 - Significant
People	No injuries or illness	First Aid treatment	Medical treatment required	Extensive injuries or illness	Death
Environment	Minor localised spill	On site release immediately contained	On site release with detrimental effects	Off-site release with detrimental effects	Toxic release off-site with massive detrimental effects
Production delay / loss	Low financial loss	Medium financial loss	High financial loss	Major financial loss	Huge financial loss
Damage	Less than $5k delay / loss	$5k to $500k delay / loss	$500k to $1m delay / loss	$1m to $5m delay / loss	More than $5m

Table 4: Likelihood Table

Likelihood	Description
A - Almost certain	More than once per month
B - Likely	Less than once per month, but more than once per year
C - Possible	Less than once per year, but more than once per five years
D - Unlikely	Less than once per five years
E - Rare	Unlikely to ever occur

Table 5: Risk Matrix

LIKELIHOOD	CONSEQUENCE				
	1 - Insignificant	2 - Minor	3 - Moderate	4 - Major	5 - Extreme
A- Almost Certain	Moderate	High	Critical	Catastrophic	Catastrophic
B- Likely	Low	Moderate	High	Critical	Catastrophic
C- Possible	Low	Moderate	High	High	Critical
D- Unlikely	Low	Low	Moderate	Moderate	High
E- Rare	Low	Low	Low	Low	Moderate

6.2 HIERARCHY OF CONTROLS

The hierarchy of controls that identify the most effective to the least effective control options was applied when developing environmental impact mitigation strategies (controls), as follows:

- Elimination – remove the hazard completely, if it is possible (Avoid);

- Substitution – replace the hazard with a lesser hazard. Assess what new risk the substitute may pose (Minimise);
- Engineering – change equipment, or plant to reduce the hazard (Mitigate);
- Isolation – separate the potential hazard (Mitigate); and
- Administrative – establish policies, procedures and education to minimise the risks (Mitigate).

When assessing control measures to eliminate risk, consideration was given to measures from the top of the hierarchy, working down the list to the least effective. The consideration of hierarchy of controls is an implicit step in the identification of suitable controls.

The Risk Register provides details of the outcomes of the Risk Assessment and is provided in Appendix 3.

6.3 REPORTING

The Ausgold EMS and this JBEMP requires both internal and external reporting. Internal reporting promotes effective implementation of the JBEMP and highlights areas of improvement. External reports may include reports on environmental incidents to relevant regulators, reports to stakeholders, reports to inform reviews of the JBEMP and reports to meet the reporting requirements of approval conditions.

Reporting can be specific to one work area or environmental issue or cover a broad range. Table 6 identifies the key reporting requirements for this JBEMP and is separated into external reporting.

Table 6: JBEMP Reporting Requirements

Reporting	Timing	Responsibility
Internal reporting		
Any incidents, near misses and non-compliances shall be internally reported as per Ausgold's Non-Conformance, Incident and Action Management Procedures	As soon as practicable being known.	All personnel
Inspections of the drilling sites shall be completed to check on implementation and shall be reported internally	Within the first two days of drilling, and prior to completion.	Project Geologist
Accurate records of disturbance and rehabilitation activities of pads, tracks and other area will be kept in daily log tracking registers and in the Ausgold ArcGIS database.	As per GDP conditions.	Project Geologist
Report any fauna sightings, injury or death to the Project Geologist and HSE Advisor	As soon as practicable.	All personnel
External Reporting		
Report to regulators as required by relevant approvals and tenement conditions	As per the requirements of each approval.	Project Geologist

Reporting	Timing	Responsibility
Internal reporting		
Report any significant environmental incidents to relevant regulators. As a general guide: • DMIRS – all significant environmental incidents on Mining Act tenure • DWER – all significant pollution, groundwater drilling and native vegetation clearing incidents • DBCA – all significant flora and fauna sightings, impacts or impacts on DBCA-managed lands	As soon as practicable, but must be within 7 days of incident. Within 24 hours if the incident has the potential to cause significant environmental harm.	Exploration Manager
Rehabilitation reports, including a schedule of rehabilitation activities for the next reporting period, will be provided to DMIRS.	At the end of each rehabilitation reporting period	Exploration Manager

7 ENVIRONMENTAL TRAINING

Ausgold is responsible for ensuring that all personnel (including contractors, subcontractors and visitors) involved with the Jackson Infill Drill Program are aware of the environmental risks and potential impacts of their activities on site. All personnel should receive environmental training relevant to their role within the Infill Drill Program to ensure they understand their responsibilities when on site to ensuring compliance with this JBEMP. The training should be tailored to the role of the individual in the Infill Drill Program.

7.1 PERSONNEL SELECTION, COMPETENCY AND TRAINING

All personnel to be engaged shall be competent to perform the required tasks. Environmental training and awareness of personnel, especially those carrying out specialised environmental management functions, shall be completed to a level to ensure understanding all environmental plans, procedures and reporting.

Ausgold is responsible for employing personnel with the relevant competencies for the individual tasks and for retaining copies of all documentation regarding environmental reporting. A competent person is defined as one whom, because of training, education and / or experience:

- Is capable of identifying existing or potential environmental impacts in the job being performed; and
- Is capable of identifying working conditions that have the potential to be harmful to the environment.

The relevant supervisor designates the competent persons, evaluates their performance and ensures that a competent person is available for the required activity.

7.2 INDUCTIONS

Ausgold is responsible for ensuring that all Personnel (including any Jackson Infill Drill Program visitors) are inducted such that they aware of the environmental hazards present. On-going instruction shall be provided as required via training packages, toolbox meetings and the like. All inductions shall be recorded.

Site inductions will contain an extensive section on Jackson Infill Drill Program environmental obligations and commitments. This includes, but is not limited to:

- Key environmental management aspects of this JBEMP;
- Ausgold HSE Policies;
- Information on management responsibilities for environmental receptors that may occur within or in proximity to the work areas;
- Incident response; and
- Reporting requirements.

7.3 PERSONNEL TRAINING

All personnel associated with the Jackson Infill Drill Program shall undergo basic environmental training as part of the initial safety and environmental induction to inform them of their responsibilities.

All employees (including contractors) shall receive awareness instruction in the following areas:

- Environmental policies;
- This JBEMP and any related documents;
- Site environmental objectives and targets;
- Understanding the regulatory requirements applying to the Jackson Infill Drill Program and their consequent responsibilities as a member of the Jackson Infill Drill Program team;
- Significant Jackson Infill Drill Program aspects, impacts and controls as detailed in this JBEMP;
- Potential consequences of departure from procedures;
- Emergency procedures and responses; and
- Identification of their legal obligations.

Personnel performing tasks that have the risk of causing significant environmental impacts shall receive additional induction and training in a modular format to further inform them of particular requirements, risks and controls or must be certified as having completed induction and training processes and/or as having gained appropriate experience, before undertaking such tasks.

7.4 INTRODUCED FAUNA MANAGEMENT

The guiding principles for this aspect are:

1. No introduced fauna are to be brought to the Jackson Infill Drill Area;
2. Vegetation clearing and rehabilitation is to occur such that open access areas are minimised to prevent fauna corridors; and
3. Food wastes are to be stored and disposed of such that they cannot be accessed by introduced fauna.

7.5 STAKEHOLDER ENGAGEMENT

The guiding principles for this aspect are:

1. Ausgold engages proactively with key stakeholders relevant to the Jackson Infill Drill Program particularly freehold landholders; and
2. There is a process for resolution and redress for community members and key stakeholders should complaints against the Jackson Infill Drill Program arise.

Ausgold is committed to the following stakeholder management measures:

1. Stakeholder mapping process completed;
2. Ongoing engagement with landowner regarding Land Access requirements and sensitivities;
3. Access agreement and stakeholder management through the Stakeholder engagement and communications plan;

4. Heritage Surveys conducted for all ground disturbing work. Agreement details what is permitted without survey;
5. Jackson Infill Drill Program Induction includes stakeholder / community relations and management;
6. Community and stakeholder engagement register/communication log;
7. Complaints mechanism (section 10.2) and recording; and
8. Significant / sensitive sites adjacent to ground disturbance areas to be delineated.

8 ENVIRONMENTAL MANAGEMENT

This section details how the potential impacts of the Jackson Infill Drill Program will be planned and managed by Ausgold. For each environmental factor, the following JBEMP sections will address:

- Related guidelines and applicable State and Federal Environmental legislation;
- Baseline environmental information (if appropriate);
- Relevant environmental aspects and potential impacts;
- Environmental management objectives and actions; and
- Monitoring.

8.1 PLANNING

8.1.1 GUIDELINES AND LEGISLATION

Guidelines

Planning has considered existing guidelines and standards:

- The Environmental Protection Authority's (EPA's) *Environmental Factor Guideline – Flora and Vegetation*;
- The EPA's *Technical Guidance - Flora and Vegetation Surveys for EIA*;
- The Department of Water and Environmental Regulation's (DWER) '*A guide to the exemptions and regulations for clearing native vegetation under part V of the Environmental Protection Act 1986'*;
- Department of Mines and Petroleum, 2012*, Mineral exploration drilling – code of practice:* Resources Safety, Department of Mines and Petroleum, Western Australia, 56 pp.

Legislation

Clearing of native vegetation is regulated under the EP Act. In 2004, amendments to the EP Act introduced provisions for regulating the clearing of native vegetation. If a proponent intends to clear native vegetation, they need to apply for a permit from either DWER or DMIRS, unless a valid exemption applies. It is an offence to clear native vegetation without the authority of a permit or an exemption. Exempt clearing does not require a permit.

Under the Environmental Protection (Clearing of Native Vegetation) Regulations 2004, an exemption is provided by Item 25 of Regulation 5 which is "Clearing that is the result of carrying out prospecting or exploration under an authority granted under the Mining Act 1978." In this case, valid authority constitutes approval under of a Programme of Works by the Department of Mines, Industry Regulation and Safety.

Planning has also identified other legislation relevant to the Infill Drill Program including:

- BC Act and EPBC Act regulate impacts to Threatened Flora or Ecological Communities; and
- Weed management will be in accordance with the requirements of the *Agriculture and Related Resources Protection Act 1976* (WA).

8.1.2 Baseline Information

Planning has identified available baseline environmental information. Ausgold has completed flora and fauna surveys of the area. The outcomes of these surveys are summarised in the relevant sections of this JBEMP. The survey reports are provided in Appendix 4.

8.1.3 Potential Aspects and Impacts

Controls implemented in the planning process are often the most environmentally significant as they enable the activities to avoid and minimise impacts.

Planning is to consider aspects and impacts of all exploration activities. Planning shall integrate consideration of access, equipment, and timing of activities in relation to each relevant aspect and impact. These are documented in the relevant sections of this JBEMP.

8.1.4 Management Actions

Objectives and Management Actions are identified for each of the relevant aspects of the Infill Drill Program.

Table 7 Management Actions for Planning

Item	Action	Timing	Responsibility
1	Granted PoW Approvals are required prior to any ground disturbance activity occurring.	Prior to ground disturbance activities	Project Geologist
2	Access over freehold land is agreed, and all notifications are completed.	Prior to site access	Project Geologist
3	All proposed ground disturbance must undergo a planning phase to ensure all internal requirements and legislative requirements are complied with.	Prior to ground disturbance activities	Project Geologist
4	Conduct line surveys and map access tracks to drill hole locations.	Prior to site access	Project Geologist
5	Check drill holes and access tracks are within tenure and approvals.	Prior to site access	Project Geologist
6	Minimise disturbance by reusing existing tracks wherever practicable.	During site access	Project Geologist
7	Access planned via route inspection and GPS coordinates to minimise vegetation disturbance.	Prior to site access	Project Geologist
8	Drill rig and support crew will be guided by GPS to access each drill location. Spotters will walk ahead of the drill rig to ensure disturbance to vegetation does not occur.	During site access	Project Geologist
9	Contractors will be licenced, qualified and experienced. Contractor management process ensures only labour / contractors hired able to operate GPS systems, and contracts include requirements / commitment to do so.	Prior to site access	Project Geologist

8.1.5 MONITORING

Monitoring for 'Planning' will be undertaken as per the actions listed in Table 4.

Table 8 Monitoring Actions for Planning

Item	Monitoring Action	Timing	Responsibility
10	Compare mapped access tracks and disturbance areas (using ArcGIS mapping software or equivalent) against the disturbance approved by the applicable PoW and Ground Disturbance Permit (GDP).	Prior to site access and ground disturbing activities	Project Geologist
11	Ausgold personnel and contractors will compare actual ground disturbance against the approved mapping by the applicable PoW and GDP.	After completion of ground disturbing activities	Project Geologist
12	Assess ground disturbance and rehabilitation areas for compliance with regulatory commitments.	After completion of ground disturbance activities	Project Geologist
13	Annual audit on compliance with PoW and tenement conditions.	After completion of ground disturbance activities (Annually)	Exploration Manager
14	Rehabilitation photo monitoring to be reported in POW rehabilitation reports.	After completion of ground disturbance activities (Annually)	Project Geologist

8.2 FLORA AND VEGETATION

8.2.1 GUIDELINES AND LEGISLATION

Guidelines

The Environmental Protection Authority's (EPA's) *Environmental Factor Guideline – Flora and Vegetation* outlines how the factor 'Flora and Vegetation' is considered by the EPA in environmental impact assessment (EIA) processes. While the proposed exploration activities are not being assessed by the EPA, this guideline provides relevant information about:

- The factor and explains the EPA's associated objectives;
- EIA considerations;
- The environmental values of flora and vegetation, and their significance;
- Issues commonly encountered by the EPA during EIA of this factor; and
- Activities that can impact on flora and vegetation.

The EPA's *Technical Guidance - Flora and Vegetation Surveys for EIA* outlines how flora and vegetation surveys should be conducted to ensure adequate flora and vegetation data of an appropriate standard are obtained and used in EIA. This guidance should be applied when planning and undertaking flora and vegetation surveys for EIA of significant proposals under Part IV of the EP Act. While the proposed exploration activities are not considered to be a significant proposal, this guideline provides relevant advice on:

- Survey preparation and desktop study;
- Determining the type of survey required;

- Sampling techniques and survey design; and
- Data analysis and reporting.

The Department of Water and Environmental Regulation's (DWER) '*A guide to the exemptions and regulations for clearing native vegetation under part V of the Environmental Protection Act 1986'* provides a guide to the clearing permit exemptions that apply to the exploration activities (refer below). This guide explains what the exemptions are, the circumstances in which they apply and what is defined as intentionally planted vegetation.

Legislation

Clearing of native vegetation is regulated under the EP Act. In 2004, amendments to the EP Act introduced provisions for regulating the clearing of native vegetation. If a proponent intends to clear native vegetation, they need to apply for a permit from either DWER or DMIRS, or otherwise an exemption must apply. It is an offence to clear native vegetation without the authority of a permit or an exemption. Exempt clearing does not require a permit.

There are two types of exemptions. The first type is found in Schedule 6 of the EP Act. The second type is found in the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (exemptions under Regulations). The exemptions under Regulations do not apply in ESAs declared under section 51B of the EP Act. Exploration activities are exempt under Regulation 5, Item 25 of the Regulations, which states that the following clearing is exempt from requiring a permit:

> "Clearing that is the result of carrying out prospecting or exploration under an authority granted under the *Mining Act 1978.*"

In this case the authority granted under the Mining Act is a PoW.

Other legislation relevant to the Infill Drill Program includes:

- BC Act and EPBC Act regulate impacts to Threatened Flora or Ecological Communities; and
- Weed management will be in accordance with the requirements of the *Agriculture and Related Resources Protection Act 1976* (WA).

8.2.2 BASELINE INFORMATION

This JBEMP has been prepared to detail how Ausgold's exploration activities will be implemented for the Jackson Infill Drill Program.

The proposed exploration activities are limited to minimise temporary disturbance, mainly for access and drilling, and the gathering of baseline information needs to be proportionate with the level of impacts associated with the activities.

Relevant Surveys

Based on the above, the following baseline information sources have been used in this JBEMP:

- Database searches of EPBC Act listed species via the Protected Matters Search Tool;
- Database searches of BC Act listed species via NatureMap; and
- Desktop and Field Survey conducted by Mattiske Consulting Pty Ltd (2021- conducted in 2019).

The information contained within the following sections is sourced from the desktop and field Flora and Vegetation assessment Mattikse Consulting Pty Ltd 2021). The assessment was conducted on the survey area defined in Figure 6.

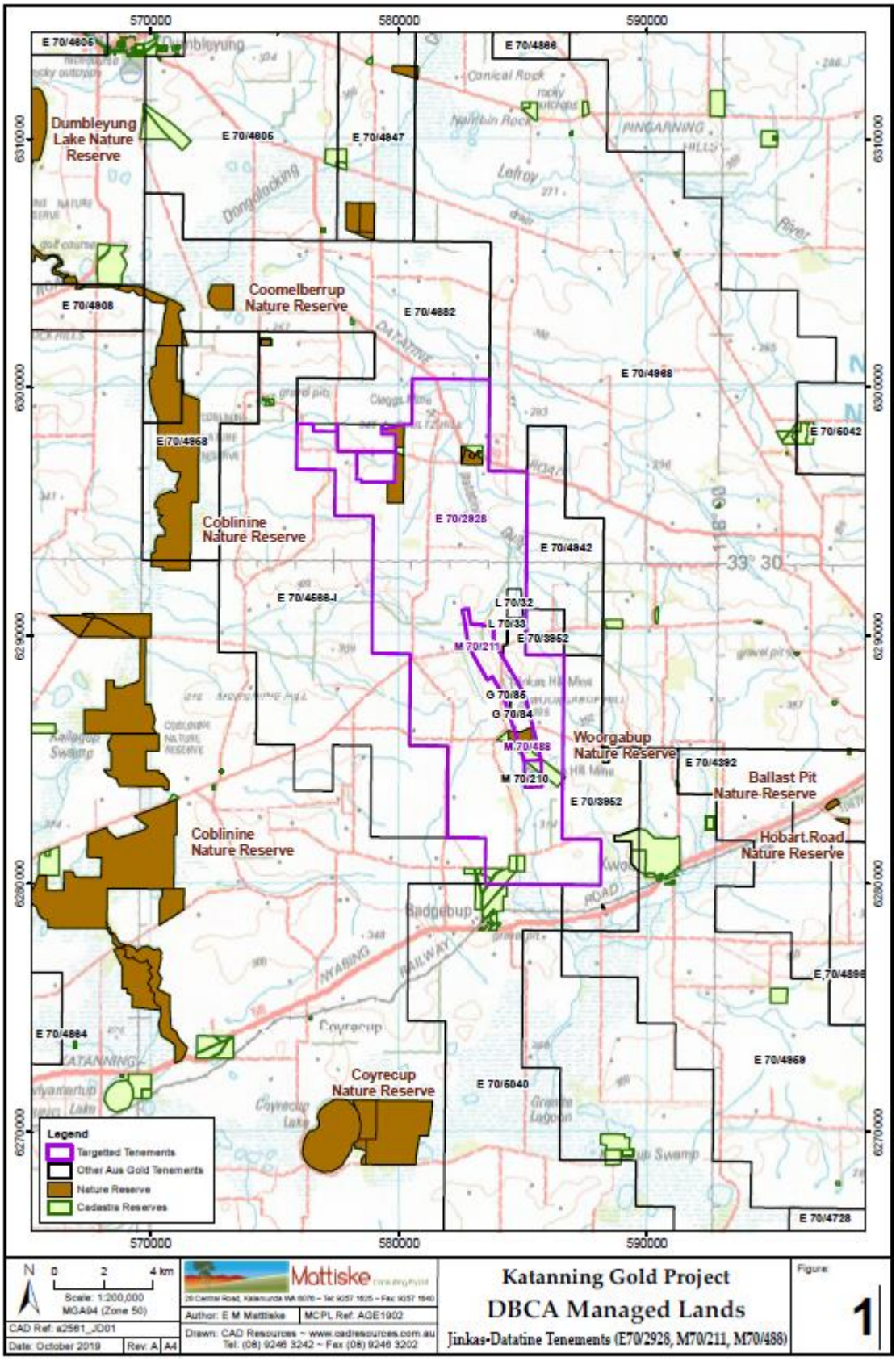

Figure 6: Mattiske Consulting Pty Ltd (2021) survey area including the Jackson Bushland Patch

Flora

Mattiske Consulting Pty Ltd conducted a Flora and Vegetation assessment of the survey area in August 2019,. The survey was conducted by two botanists, Dr Libby Mattiske and Emily Chatwin, with assistance from B Ellery assisting with plant identification. A total of 243 vascular plant taxa has potential to occur in the survey area. Of the 98 taxa recorded within the Jinkas-Datatine survey area, 38 were recorded in the Jackson Bushland patch.

Conservation Significant Flora

Seven Threatened flora species have potential to occur in the survey area(DBCA 2018a). A further ten priority flora species, as listed by the Western Australian Herbarium (DBCA 2018b) also have potential to occur in the survey area. These taxa are summarised in (Table 9).

Table 9: Threatened and Priority Flora with Potential to Occur in the Survey Area

Taxon	Conservation Significance		Habitat	Recorded During October 2021 Survey	Potential to Occur in Survey Area
	State	Federal			
Adenanthos pungens subsp. *effuses*	Threatened	Endangered	White silicious sand	No	Medium. Preferred soil may occur in area
Adenanthos pungens subsp. *pungens*	Threatened	Vulnerable	White grey or pink sand, rocky soils, gypsum. Sand dunes, hillsides.	No	Medium. Preferred soil likely to occur in area
Roycea pycnophylloides	Threatened	Endangered	Gritty sand, gypsum.	No	Medium. Preferred soil likely to occur in area
Darwinia wittwerorum	Threatened	Endangered	Clay loam, sandy clay. Roadsides and slopes	No	Low. Preferred soil likely to occur in area
Darwinia oxylepis	Threatened	Endangered	Stony, peaty sand. Rocky gullies	No	Low. Area contains no suitable habitat
Banksia oligantha	Threatened	Endangered	Yellow or yellow brown sand	No	Medium: Survey area contains suitable habitat.
Diuris purdiei	Threatened	Endangered	Grey-black sand	No	Low Survey area contains no suitable habitat
Acacia trinalis	Priority 1		Brown sand, clay loam, Slat lakes and flats, swampy areas	No	High. Preferred soil likely to occur in area and species has been recorded within 6 km of survey area
Banksia meganotia	Priority 3		Sand, Sandy loam or Clay loam over laterite	No	Medium. Preferred soil likely to occur in area
Calectasia obtusa	Priority 3		Sand, clay loam, gravel, laterite. Flats	No	Medium. Preferred soil likely to occur in area

Taxon	Conservation Significance		Habitat	Recorded During October 2021 Survey	Potential to Occur in Survey Area
	State	Federal			
Grevillea newbeyi	Priority 3		Clay loam, sandy gravelly soils	No	Medium. Preferred soil likely to occur in area
Verticordia brevifolia subsp. *brevifolia*	Priority 3		Gravelly loam and clay. Road verges	No	Medium. Preferred soil likely to occur in area
Verticordia huegelii var. *Tridens*	Priority 3		Sandy or gravelly loam. Winter wet areas, low hills	No	Medium. Preferred soil likely to occur in area
Acacia grisea	Priority 4		Lateric gravelly loamy soils. Undulating plains, slopes	No	High. Preferred soil likely to occur in area
Banksia parva	Priority 4		Grey sand, sandy loam, gravelly clay loam.	No	Medium. Preferred soil likely to occur in area
Bossiaea divaricata	Priority 4		Sandy lateritic soil.	No	High. Preferred soil likely to occur in area and species has been recorded with 15 km of the survey area.
Eucalyptus loxophleba x *wandoo*	Priority 4		Sandy clay or loam	No	High. Preferred soil likely to occur in area and species has been recorded with 2 km of the survey area.

No Threatened or Priority taxa were observed during the survey. Of the Threatened and Priority species in Table 9, the following four Priority taxa were highlighted by Mattiske Consulting Pty Ltd (2021) has having the highest likelihood of occurrence due to their known proximity to the survey area:

- *Acacia trinalis* (P1)
- *Acacia grisea* (P4)
- *Bossiaea divaricata* (P4)
- *Eucalyptus loxophleba* x *wandoo* (P4)

Introduced Flora

A total of 7 introduced (weed) species were recorded within the Jackson Bushland patch survey area. None of these introduced species are declared pest organisms pursuant to section 22 of the *Biosecurity and Agriculture Management Act 2007* (DPIRD, 2018a).

Three of the recorded introduced taxa are ranked by the DBCA's weed prioritisation process (DPAW 2013a) as having both High Ecological Impact and Rapid Invasiveness in the Wheatbelt region: *Aira caryophyllea, *Avena barbata and *Bromus diandrus (DPAW 2013a). All were predicted to occur in the desktop study.

Vegetation

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

Beard (1980) described the general vegetation type occurring in the area as *Eucalyptus* Woodlands of various species, specifically York gum (*E. loxophleba*), Salmon gum (*E. salmonophloia*), and Wandoo (*E. wandoo*), with small patches of Mallee. More detailed vegetation types that would likely occur in the survey area include:

- Beard (1980) code: e5,6,9Mi – Woodland: Woodland of *Eucalyptus wandoo*, *E. loxophleba* and *E. longicornis*.
- Beard (1980) code: e15,27Si – Mallee: Shrubland of *Eucalyptus eremophila* and *E. redunca*

In recent Pre-European vegetation mapping undertaken by Beard *et al*. (2013) the regional mapping indicated that the survey area falls within the Dumbleyung system (Code 1092.1; Table 10).

Table 10: Summary of Pre-European Systems as Defined by Beard et al (2013) through the DPIRD (2018b)

Vegetation System Code	Pre-European System	Description	Area within Survey Area (ha)	Total Mapped (ha)	% Representation in Survey Area
1092.1	Dumbleyung	Wheatbelt; York Gum, Salmon Gum etc. *Eucalyptus longicornis, E. salmonophloia*	176.14	77902.96	0.23%

<u>*Vegetation Associations*</u>

From the survey, two Eucalypt woodland associations were recorded in the survey area which are described below. The location of these associations are shown in Figure 7:

- W9: Mid mallee woodland of mixed Eucalyptus species with isolated clumps of *Eucalyptus* species trees over open grassland of *Austrostipa* species, **Ehrharta longiflora* and other mixed grass species with isolated clumps of low mixed forbs on slopes with occasional outcrops and grey-brown clay loam soils.
- W10: Mid woodland of *Eucalyptus wandoo* and occasional *E. salmonophloia* over open grassland of **Bromus diandrus, *Vulpia muralis* and mixed *Austrostipa* species with isolated clumps of low **Ursinia anthemoides* and *Lomandra* species forbs on lower and mid slopes with rare laterite outcrops on grey-caramel clay loam soils.

Species labelled with a * are introduced species.

All mature trees (greater than 30cm at breast height) were recorded and logged during an assessment to potential nesting sites for Carnaby's Black Cockatoo, see Figure 9. This assessment covered tree species and a record of all hollows as part of a broader Carnaby's Black Cockatoo nesting and foraging assessment. See Section 8.3.3.

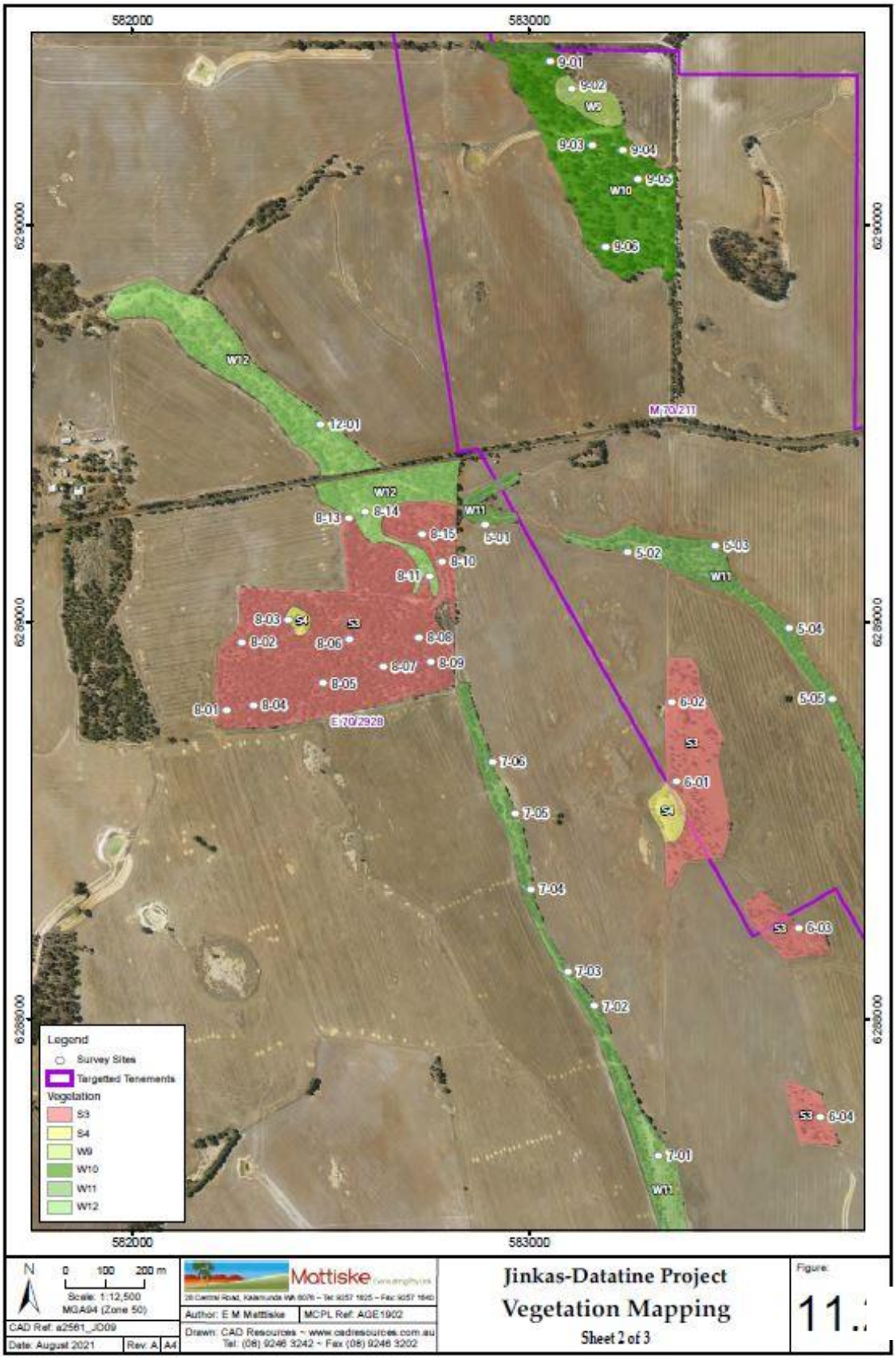

Figure 7: Vegetation Associations in local native vegetation patches. Jackson Bushland Patch in Top Right

Threatened and Priority Ecological Communities

This TEC is listed under the EPBC Act as critically endangered (DotEE, 2018).

The "Plant Assemblages of the Broomehill System" Threatened Ecological Community could potentially occur in or near the survey area and is listed as Presumed Totally Destroyed under the BC Act (DBCA, 2018c).

There are four Priority Ecological Communities (PECs) listed by the DBCA (2018d) that occur in the Avon Wheatbelt IBRA region and could potentially occur in/within the 20 km buffer of the survey area. These four PECs are:

- the "Red Morrel Woodland of the Wheatbelt" PEC (P1),
- the "Brown mallet *Eucalyptus astringens* communities in the western Wheatbelt on alluvial flats (previously 'Beaufort River Flats')" PEC (P1),
- the "Yate (*Eucalyptus occidentalis*) dominated alluvial claypans of the Jingalup Soil System" PEC (P2).
- "The Eucalypt Woodlands of the Western Australian Wheatbelt" (P3, DBCA 2018d) includes the three PECs listed above and all of these are all components of the WTEC (DBCA 2018d, DotEE, 2018).

Whilst the survey was not specifically seeking to assess these PECs, only the Eucalypt Woodlands of the Western Australian Wheatbelt was potentially present within the Jackson Bushland patch. As the survey effort in the area has been restricted in the past by agricultural clearing and lack of resources to investigate values on remnant areas the interpretation of the values as recorded rely on regional and national databases. The recent listing of the WTEC in December 2015 (DoEE, 2015) under the EPBC Act raises the conservation significance of the woodlands in the survey area. The data summarized from the national database does not exclude cleared agricultural areas and as such overstates the potential extent of the woodlands in the local context.

The woodlands are then considered on the basis of their condition (DotEE, 2015) which delineates the extent of exotic species in the understorey. A vegetation assessment by Mattiske Consulting Pty Ltd (2021) found the vegetation condition of the Jackson Busghland poatch to be Goodusing the Keighery (1994) ratings.

An estimate of the extent of Eucalypt woodlands in the Western Australian Wheatbelt that is protected is 4.96% and for the Avon Wheatbelt (AW2) IBRA region is 1.67%.

A section of the Jackson Bushland patch has been used for agricultural activities, including storage of carcases of dead livestock. There are also some signs of previous use of the area with vehicle tracks and apparently cleared areas. The area surrounding the Jackson Bushland patch is used for broadacre farming.

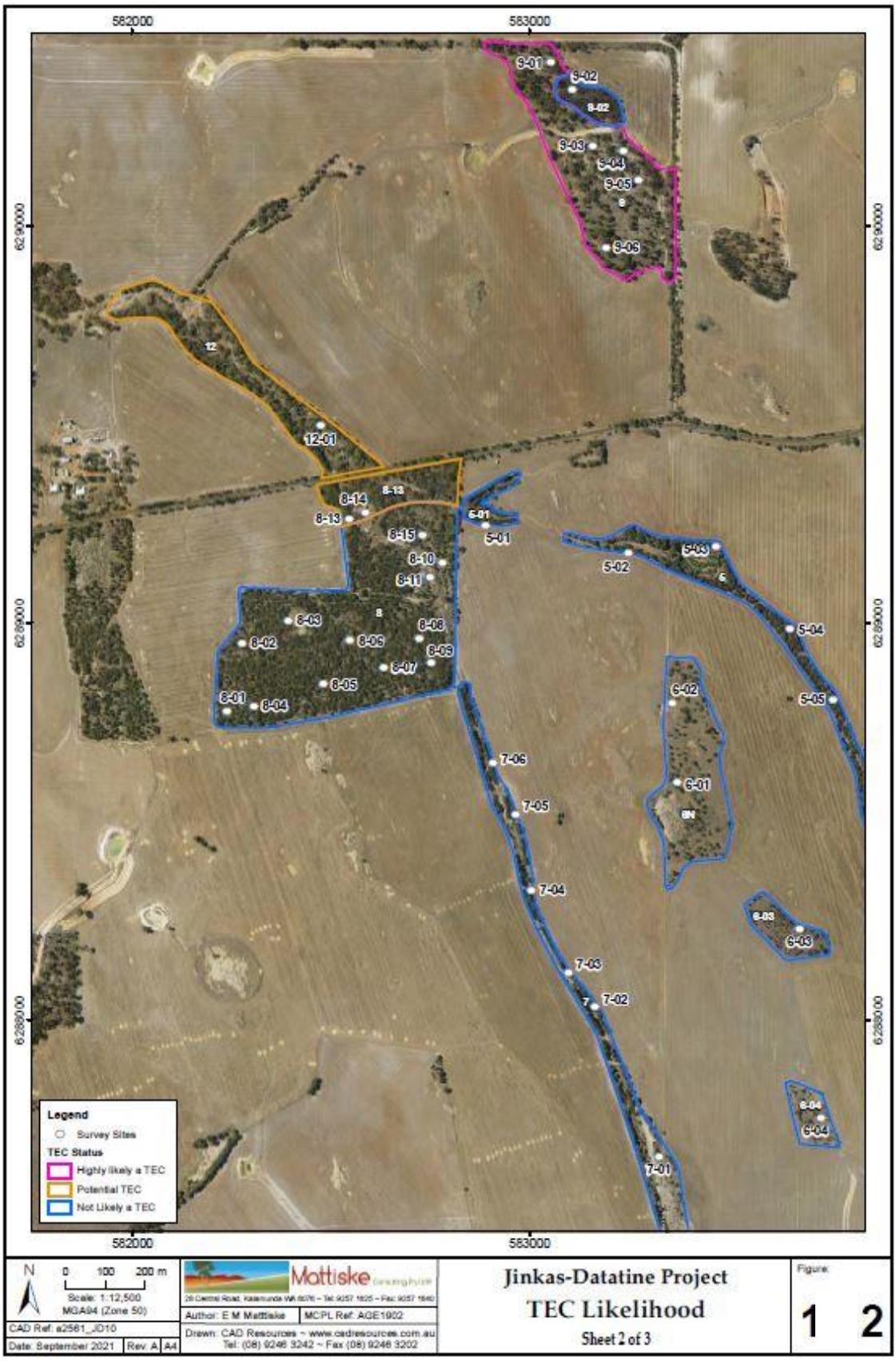

Figure 8: WTEC distribution of local patches

8.2.3 POTENTIAL ASPECTS AND IMPACTS

Aspects

- For ground disturbance such as direct clearing and earthmoving activities, the following details are relevant:
    - The mechanised clearing of vegetation for site access will not be required, except in the one location to improve site access;
    - Deadwood, including small branches and logs will be moved by hand to enable access to the drill hole locations;
    - A small scale drill rig mounted on track or truck designed to have minimal ground disturbance will be used for the Infill Drill Program;
- Operator competence (incl. factors relating to training, knowledge, experience);
- Contractor selection / performance management;
- Vehicle movement (generating dust emissions, risk of ignition and causing fire);
- Inadequate or not followed HSEC procedure;
- Increased human presence in the area; and
- Groundwater abstraction.

Potentially significant impacts (without mitigation)

- Track / ground clearing (resulting in the loss of native vegetation);
- Unauthorised / unapproved clearing;
- Clearing of the WTEC;
- Direct loss of Priority Flora individuals or populations;
- Transfer of existing weeds, or the introduction of new weed species;
- Exposure to saline groundwater;
- Soil erosion caused by groundwater spills.
- Indirect impacts to vegetation health through a range of mechanisms such as dust, spillages, flooding or erosion; and
- Increase in the risk of fire.

8.2.4 MANAGEMENT OBJECTIVES

The objectives for flora and vegetation are:

- To comply with all granted approval conditions;
- No death or significant decline in the health of native vegetation beyond the extent of the approved PoW as a result of PoW activities (No mechanised native vegetation clearing is proposed, apart from one area of earthworks for site access 0.012 ha);
- Maintain representation, diversity, viability and ecological function at the species, population and community level;
- To minimise impacts to the WTEC;
- To minimise ground disturbance, as far as practicable;
- To prevent unauthorised clearing of land and minimise adverse impacts;
- Timely rehabilitation of ground disturbance; and
- Ensure clearing and rehabilitation data is collected and reported in accordance with internal and external requirements.

8.2.5 MANAGEMENT ACTIONS

Management actions have been developed to reduce the potential for impacts on flora and vegetation (Table 11). Table 11 also details at what stage of the development the actions shall be implemented and the person(s) responsible for ensuring compliance with the management actions.

Table 11: Management Actions for Flora and Vegetation

Item	Action	Timing	Responsibility
1	Backhoe or loader only to be used at one access track 'fill' area to assist rig access. No backhoe or loader used elsewhere for access or drilling.	During the Infill Drilling Program	Project Geologist
2	All clearing (including proposed access) will be managed under a Ground Disturbance Permit (GDP) tracker system.	During the Infill Drilling Program	Project Geologist
3	Access routes marked with flagging tape and/or pegs.	Prior to ground disturbing activities	Project Geologist
4	Workforce education to reinforce access only via approved routes.	Prior to site access	Project Geologist
5	Ground truthing of access routes to avoid impacts on the flora and vegetation.	Prior to ground disturbing activities	Project Geologist
6	Conduct line surveys and map access tracks to drill hole locations.	Prior to site access	Project Geologist
7	Access routes and drill collar locations amended to avoid any priority flora noted in ground truthing survey.	Prior to ground disturbing activities	Project Geologist
8	No trees stems to be removed for access or drilling.	During the Infill Drilling Program	Project Geologist
9	Drill hole clearing to be limited to hand pruning for safe access to hole collar (4m2).	During the Infill Drilling Program	Project Geologist
10	PoW approval conditions to be included in Ground Disturbance Permit (GDP) system.	During the Infill Drilling Program	Project Geologist
11	All clearing (including proposed access) will be managed under a GDP.	During the Infill Drilling Program	Project Geologist
12	Deviation from approved access will be reported to DMIRS as an environmental Incident. Granted PoW approvals are required prior to any ground disturbance activity occurring.	During the Infill Drilling Program	Project Geologist/Exploration Manager
13	All proposed ground disturbance must undergo a planning phase to ensure all internal requirements and legislative requirements are complied with.	Prior to ground disturbing activities	Project Geologist/Exploration Manager
14	Minimise disturbance by reusing existing tracks wherever practicable.	Prior to ground disturbing activities	Project Geologist
15	Access planned via route inspection and GPS coordinates to minimise vegetation disturbance.	Prior to site access	Project Geologist

Item	Action	Timing	Responsibility
16	Drill rig and support crew will be guided by GPS to access each drill location. Spotters will walk ahead of the drill rig to ensure disturbance to vegetation does not occur.	During site access	Project Geologist
17	Contractors will be licenced, qualified and experienced.	Prior to site access	Project Geologist/Exploration Manager
18	Contractor management process ensures only labour / contractors hired able to operate GPS systems, and contracts include requirements / commitment to do so.	Prior to site access	Project Geologist
19	All vehicles must be inspected as clean at commencement of the programme or when returning to site from being offsite (e.g. Perth). If vehicles contain soil or vegetation, they will be washed down at the KGP site office which will enable vehicles to travel back to the patch only driving along the mine's access road, Wolyaming Rd and Warren Rd.	During the Infill Drill Program	Project Geologist
20	If fences require cutting for access, in consultation with the landholder, temporary fencing will be implemented to prevent stock entering the patch. Permanent repair of fencing will be conducted at the end of the programme.	During the Infill Drill Program	Project Geologist
21	Comply with Vehicle Movement Bans issued for the Shire of Katanning. If a Vehicle Movement Ban is issued, drilling will cease and personnel will leave the area.	During the Infill Drilling Program	Project Geologist
22	A mobile fire unit and fire extinguishers will be on hand to suppress any small fire that ignites, in line with the Katanning Shire Fire Break Notice. Water will be on hand to suppress any larger ignition.	During the Infill Drilling Program	Project Geologist
23	No smoking whilst in the patch.	During the Infill Drilling Program	Project Geologist
24	Should a fire occur during exploration, it will be reported to DMIRS as an incident.	During the Infill Drilling Program	Project Geologist

8.2.6 MONITORING

Flora and vegetation monitoring will be undertaken as per the actions listed in Table 12.

Table 12: Monitoring Actions for Flora and Vegetation

Item	Monitoring Action	Timing	Responsibility
1	Drone photographic monitoring post-rehabilitation and after 1 year.	After rehabilitation	Project Geologist
2	Internal GDP close-out inspections.	After the completion of ground disturbing activities (annually)	Project Geologist
3	Annual consolidation and assessment of clearing data.	After the completion of ground disturbing activities (annually)	Project Geologist
4	AER to report any vegetation disturbance incidents and follow ups.	After the completion of ground disturbing activities (annually)	Project Geologist

8.3 TERRESTRIAL FAUNA

8.3.1 GUIDELINES AND LEGISLATION

Guidelines

The EPA's *Environmental Factor Guideline – Terrestrial Fauna* outlines how the factor 'Terrestrial Fauna' is considered by the EPA in EIA processes. While the proposed exploration activities are not being assessed by the EPA, this guideline provides relevant information about:

- The factor and explains the EPA's associated objective;
- EIA considerations;
- The environmental values of terrestrial fauna, and their significance;
- Issues commonly encountered by the EPA during EIA of this factor; and
- Activities that can impact on terrestrial fauna.

The EPA's *Technical Guidance – Technical Fauna Surveys* provides direction and information on general standards and protocols for terrestrial fauna surveys for EIA.

Legislation

As described in Section 7.1.1, mining exploration activities are exempt under Regulation 5, Item 25 of the Regulations, provided the clearing is conducted in accordance with a PoW issued under the Mining Act. Other legislation includes:

- BC Act and EPBC Act regulate impacts to Threatened Fauna or their habitats are found and impacts are likely to be significant.

8.3.2 BASELINE INFORMATION

This JBEMP has been prepared to detail how the Infill Drill Program will be implemented across the Infill Drill Area.

As detailed in Section 2, the proposed exploration activities are limited to narrow temporary disturbance for access and drilling, and the gathering of baseline information needs to be proportionate with the level of impacts associated with the activities.

Relevant Surveys

Based on the above, the following baseline information sources have been used in this JBEMP:

- Database searches of EPBC Act listed species via the Protected Matters Search Tool;
- Database searches of BC Act listed species via NatureMap;
- A search of the WA Museum Specimen Database;
- A search of the Birds Australia Atlas Database; and
- A Black-Cockatoo tree assessment and camera trapping for the Jackson project area (Terrestrial Ecosystems, 2021)
- Level 1 Vertebrate Fauna Survey and Carnaby's Black-Cockatoo habitat survey (Western Wildlife, 2017).

The majority of the information contained within the following sections is sourced from the Level 1 Vertebrate Fauna Survey and Carnaby's Black-Cockatoo habitat survey conducted by Western Wildlife (2017), who's baseline studies cover the Jackson Bushland Patch, and the Black-Cockatoo tree assessment and camera trapping for the Jackson project area (Terrestrial Ecosystems, 2021) who's work directly quantifies values within Jackson Bushland patch.

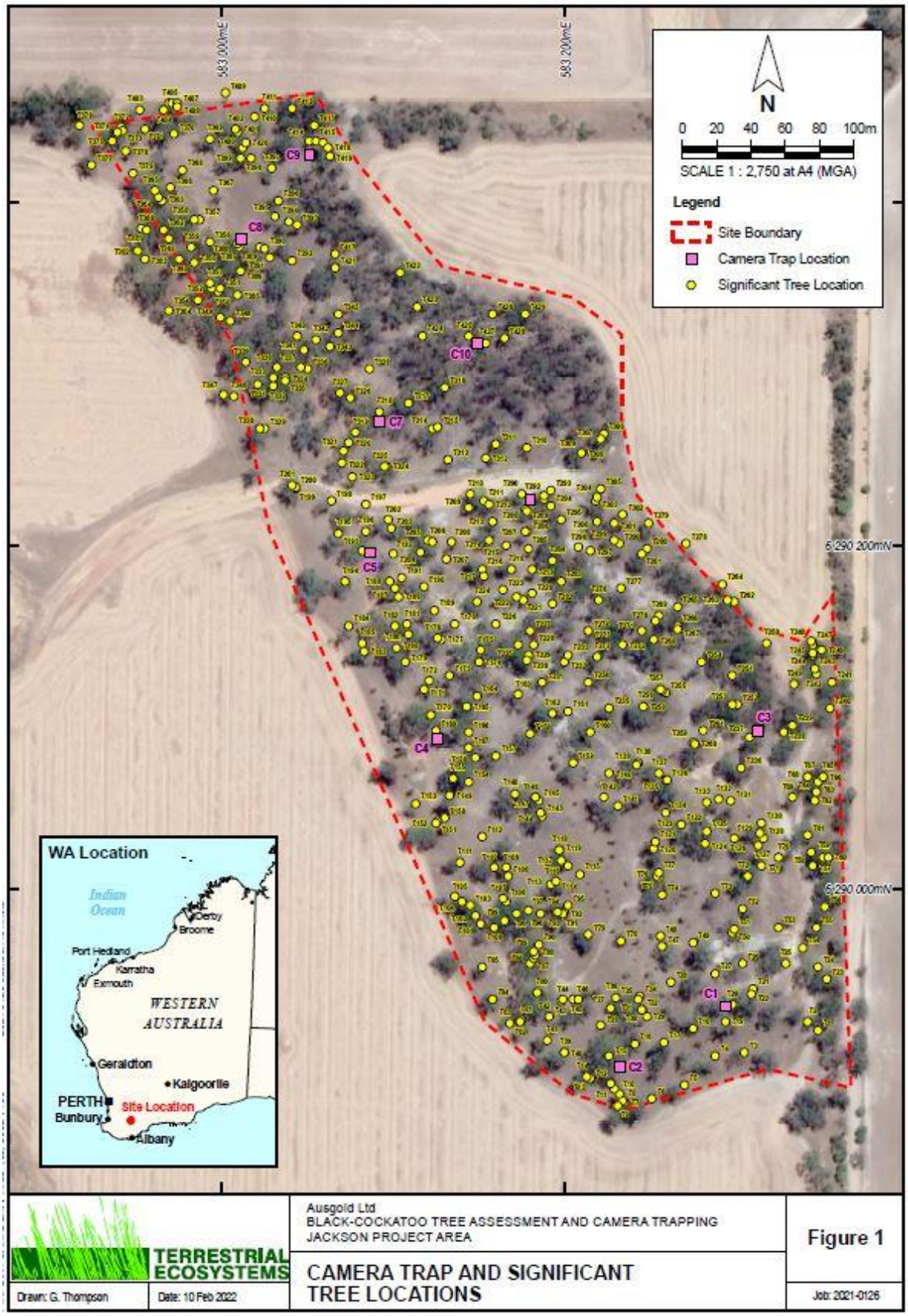

Figure 9: Tree hollow location, fauna study and motion camera trap location survey area (Terrestrial Ecosystems, 2021)

Conservation Significant Fauna

Conservation significant fauna are defined as those species listed as Threatened under the EPBC Act or BC Act, or listed as a Priority species by DBCA.

Table 13 lists the conservation significant fauna that have been recorded by field surveys in the region or are described as having the potential of occurring within the Infill Drill Area.

Table 13: Comparison of Conservation Significant Fauna that may occur at the Wurgabup Rifle Range and JBEMP Area

Species	Conservation Listing	Likelihood of Occurrence at the Wurgabup Rifle Range (from Western Wildlife 2017) and Jackson Bushland (Interpretation from Habitat and Results of Terrestrial Ecosystems 2021)
Birds		
Carnaby's Black-Cockatoo *(Calyptorhynchus latirostris)*	Endangered (EPBC Act & BC Act)	Rifle Range Recorded Jackson Bushland Moderate not recorded during September 2021 survey but 82 potential hollows recorded
Malleefowl *(Leipoa ocellata)*	Vulnerable (EPBC Act & BC Act)	Rifle Range Very Low Jackson Bushland Absent
Fork-tailed Swift *(Apus pacificus)*	Migratory (EPBC Act & BC Act)	Rifle Range Low Jackson Bushland Low
Peregrine Falcon *(Falco peregrinus)*	Other specially protected species (BC Act)	Rifle Range Moderate Jackson Bushland Low
Inland Western Rosella (Platycercus icterotis xanthogenys)	Priority 4 (DBCA)	Rifle Range Moderate Jackson Bushland Moderate (Hollows present)
Mammals		
Red-tailed Phascogale *(Phascogale calura)*	Vulnerable (EPBC Act), Conservation Dependant (BC Act)	Rifle Range High Jackson Bushland Low
Chuditch *(Dasyurus geoffroii)*	Vulnerable (EPBC Act & BC Act)	Rifle Range Low Jackson Bushland Absent
Western Brush Wallaby (Macropus Irma)	Priority 4 (DBCA)	Rifle Range Very Low Jackson Bushland Absent

Carnaby's Black Cockatoo

Carnaby's Black Cockatoo nests in large eucalypt hollows, usually in smooth-barked species such as Salmon Gum or Wandoo, though they may nest in any suitably sized hollow (DSEWPaC 2012, DPAW 2013b). For breeding to be successful, birds rely on the presence of foraging habitat within 12 km of the breeding site (DPAW 2013b). During the non-breeding season, birds generally move west or south towards the coast, foraging in proteaceous shrublands and woodlands. Key threats for this species include loss of breeding habitat, loss of feeding habitat in close proximity to breeding habitat, loss of non-breeding season foraging habitat and night-roost sites, clearing for

mining and extraction activities and illegal shooting (DPAW 2013b). Carnaby's Black-Cockatoo is known to breed in the vicinity of the survey area, with breeding records at nearby Badgebup-Kwobrup Key Biodiversity Area (Birdlife International 2018) and a record at the Rifle Range (Western Wildlife 2017). Considering this, Ausgold has completed dedicated surveys for Carnaby's Black-Cockatoos and suitable breeding hollows in the Jackson Bushland patch. Potential breeding habitat for Carnaby's Black-Cockatoo is present in the Jackson Bushland patch with suitably-sized Wandoo trees and some Salmon Gum and Red Morrel trees, and those with hollows have been recorded and mapped (Figure 9. However, Carnaby's Black-Cockatoo was not recorded during the Terrestrial Ecosystems survey conducted during nesting season (September 2021). Terrestrial Ecosystems qualified ornithologists spent multiple days within the Jackson Bushland patch mapping hollows and setting motion capture camerasFigure 9. The Jackson Bushland patch does not contain Banksia heath habitat, as foraging habitat, but may provide roosting habitat for Carnaby's Black-Cockatoo.

Red-tailed Phascogale

The Red-tailed Phascogale has limited potential to exist within the Jackson Bushland patch. It favours Wandoo or York Gum woodlands with Rock Sheoak (Woinarski et al. 2014). Long-unburnt habitats are important for this species, with frequent, intense fires being a key threat. Photographs in the Terrestrial Ecosystems survey report show most of the patch floor is open with little forest debris and other sources of refuge or habitat. Other key threats include loss and fragmentation of habitat and predation by feral cats (Woinarski et al. 2014). The majority of the range of this species overlaps the southern Wheatbelt, and as such the population is fragmented, often occurring in isolated reserves (Maxwell et al. 1996).

There are many records of this species on DBCA's Threatened and Priority Fauna Database, including a number of more recent records made in the last two decades. Camera trapping conducted by 10 camera traps over 40 days failed to record any Red-tailed Phascogales (Terrestrial Ecosystems, 2021).

8.3.3 Error! Reference source not found.Potential Aspects and Impacts

Aspects

- Ground disturbance and increased vehicular traffic (light vehicles and drill rigs);
- Operation of heavy equipment; and
- General waste disposal.

Potentially significant impacts (without mitigation)

- Direct and indirect loss of terrestrial fauna individuals and habitat;
- Direct and indirect disturbance of potential conservation significant fauna habitat;
- Decline in habitat quality as a resul[illegible]irect impacts (such as dust emissions or spills);
- Potential entrapment of terrestrial fauna in areas of ground disturbance (drill holes);
- Alterations in terrestrial fauna behaviour as a result of light spill, noise, human activity and food wastes;
- Possibility of terrestrial fauna injury or death as a result of vehicle strike due to increased vehicular traffic;

- Increase in introduced fauna because of additional food sources, resulting in additional predation and competition for resources; and
- Increased fire risks.

8.3.4 MANAGEMENT OBJECTIVES

The objective for terrestrial fauna is to protect terrestrial fauna so that biological diversity and ecological integrity are maintained.

8.3.5 MANAGEMENT ACTIONS

Management actions have been developed to reduce the potential for impacts on terrestrial environmental quality (Table 14). Flora and vegetation impact management actions that are also applicable to terrestrial fauna impact management have not been included, to avoid repetition.

Table 14: Management Actions for Terrestrial Fauna

Item	Action	Timing	Responsibility
1	Workforce education to include conservation significant fauna and encourage reporting of sightings and incidents.	Prior to site access	Project Geologist
2	Drive on approved access routes only.	During the Infill Drilling Program	Project Personnel
3	External incident report for any impact to significant fauna.	During the Infill Drilling Program	Project Geologist
4	No tree stems to be removed for access or drilling.	During the Infill Drilling Program	Project Personnel
5	Drill hole clearing to be limited to hand pruning for safe access to hole collar (~4m^2).	During the Infill Drilling Program	Project Personnel
6	Minimise disturbance by reusing existing tracks wherever practicable.	During site access	Project Personnel
7	Access planned via route inspection and GPS coordinates to minimise vegetation disturbance.	Prior to site access	Project Geologist
8	Drill rig and support crew will be guided by GPS to access each drill location. Spotters will walk ahead of the drill rig to ensure disturbance to vegetation does not occur.	During site access	Project Personnel
9	No drilling if Black Cockatoos are observed.	During drilling	Project Geologist
10	No drilling within 5 m of any mature Eucalypts of DBH>30 cm.	During drilling	Project Geologist
11	Induction training to include fauna awareness, including no pets, no feeding of fauna and need for sightings and incidents to be reported.	During the Infill Drilling Program	Project Geologist
12	Rigs to utilise dust suppression whilst operating.	During drilling and site access	Project Geologist

8.3.6 MONITORING

The flora and vegetation monitoring programs described in Section 0 will also be applicable to fauna. Additional specific fauna monitoring to be undertaken is listed in Table 15. General inspections and audits will occur as described in Section 11.

Table 15: Monitoring Actions for Fauna

Item	Monitoring Action	Timing	Responsibility
1	Incident reports (internal and external) and sighting reports of conservation significant fauna.	During the Infill Drilling Program	Project Geologist
2	Report on Jackson Infill Drilling Programme in the AER	During the Infill Drilling Program	Exploration Manager

8.4 SOILS

8.4.1 GUIDELINES AND LEGISLATION

- Mining Act 1978;
- Environmental Protection (Unauthorised Discharges) Regulations 2004;
- *Soil and Land Conservation Act 1945*; and
- General provisions of the EP Act.

8.4.2 BASELINE INFORMATION

Soils

The general area is dominated by three land systems, the Datatine system, East Katanning system and Coblinine system.

A diagrammatic representation of the regional setting is illustrated in Figure 10 showing the Datatine and East Katanning systems relative to each other and their linkage to the Coblinine system which occurs in low lying areas of valley floors.

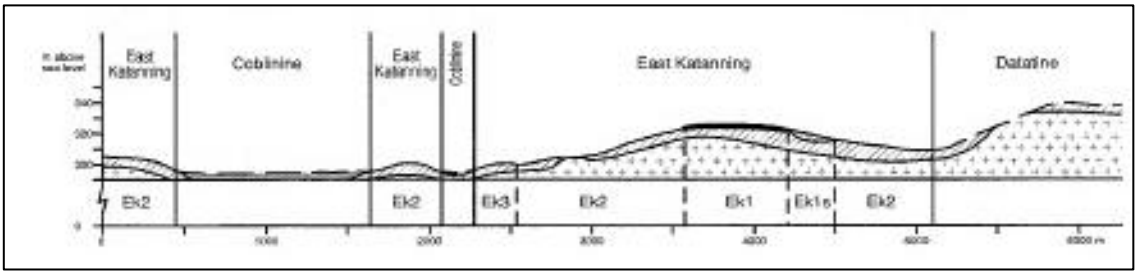

Figure 10: Typical Regional Setting of the Datatine, East Katanning and Coblinine Systems Consistent with the Setting at the KGP (Percy, Wilson and Griffin 2000)

The patch is situated within the Datatine System (259DT; Figure 11). The Datatine System is associated with rises and low hills of mafic gneiss and granite with dolerite and gabbro dykes common. The soils include red loamy calcareous earths and alkaline red duplex soils as well as grey deep sandy duplex soils. This system includes broad valley flats with dominantly red loamy soils and are summarised in Table 16 (Percy et al, 2003).

Table 16: Summary of the East Katanning Land System

Land System Code	Land System	Description	Area within Survey Area (ha)	Total Mapped (ha)	% Representation
259 Dt	Datatine 2 Subsystem	Lower to upper slopes and crests. Red calcareous loamy earths, alkaline red and grey shallow loamy duplex soils and grey sandy duplex soils, frequently with alkaline subsoils formed on weathered gneiss, dolerite and granite.	13.776	117,942.38	0.0117%

Groundwater

Regional

Regional groundwater investigations (Brockman, 2001) have shown five aquifer types at a regional scale:

- Intermediate scale semi-confined/confined aquifers in weathered basement rocks.
- Intermediate scale surficial, semi-confined/unconfined aquifers in alluvial deposits.
- Local unconfined (perched) aquifers in deep sand sheets and duplex soils.
- Local semi-confined/confined aquifers in weathered basement rocks.
- Fractured rock aquifers.

Intermediate scale weathered basement aquifers occur at the base of the lateritic zone typically 0.5 m to 5.0 m thick and are semi-confined or unconfined. Lateral groundwater flow velocities in weathered basement aquifers are slow (generally 0.01 m/year to 2.0 m/year) because of low hydraulic gradients that are often below 1%.

Local unconfined and semi-confined to confined aquifers are most common and are associated with undulating to hilly terrain with permanent or temporary flows. Water is typically transported downhill slopes through unconfined aquifers that are relatively thin (<20m) and close to the surface. Duplex soils often act as a temporary aquifer when rainfall recharge exceeds the horizontal conductivity of the sand layer which is typically around 1.8 m/day (Cox 1988). Local semi-confined to confined aquifers in weathered basement rocks exist in the same conditions as the intermediate scale but have geological structures and conditions that cause discharge to occur close to the recharge point. These geological conditions include bedrock outcrops, break of slope and dolerite dykes. Fractured rock aquifers occur at both the local and intermediate scales and refer to structures such as dykes, faults and shear zones that have created zones of fracturing within unweathered bedrock.

Regional groundwater recharge is low because of the low rainfall. However, recharge on cleared land has increased from less than 0.2 mm/year before clearing, to the current 10 to 50 mm/year (George and Bennett, 1998). Recharge occurs throughout the landscape, with major contributions coming via gravelly and sandy soils on the broad hillcrests and divides. Valley floors are also major areas of recharge.

Although sedimentary rocks are largely absent, Quaternary and Cainozoic alluvial and lacustrine deposits are common on the valley floors. These consist of highly variable layers of sand, silt and clay. Paleochannels may occupy the valley floors where current drainage depressions still follow the old river courses and have been in-filled by alluvial and lacustrine deposits. These valley floors have very low gradients, typically in the range of 1:500 to 1:1,500 or less (Bettenay and Mulcahy 1972). This is typical of the zone of ancient drainage, resulting in sluggish drainage. The closest example of this is the Coblinine paleodrainage 15 km to the west of the Jackson Bushland Patch.

Comparison of sporadic regional data from the AgBores and ComBores databases by Brockman (2001) found groundwater is generally saline (>10,000 uS/cm) but can be as little as 2,500 uS/cm in the upper landscape and >20,000 uS/cm in valley floors.

Local

A series of holes drilled to investigate groundwater levels across the KGP as part of the original geotechnical study (approximately 2 km southeast of the Jackson Bushland patch). Drill holes intersected water between 15 and 35 m below ground level. The pH of groundwater ranged from 7.4 to 7.7 and TDS between 8,600 and 15,130 mg/L (which has been converted to between 13,400 and 23,600 uS/cm)**Error! Reference source not found.**.

Ausgold conducts water quality monitoring around the Katanning Gold Project, including down hole sampling during drilling. The closest available field sample is from a drillhole 110m to the northeast of the bushland which encountered water at 42m and 6200 ppm TDS (from a hand unit). The closest sample with laboratory analysis was in a drillhole 1000m south of the patch where water was encountered at 42m with salinity of 8,780 ppm TDS, 13,700uS/cm and pH 7.7.

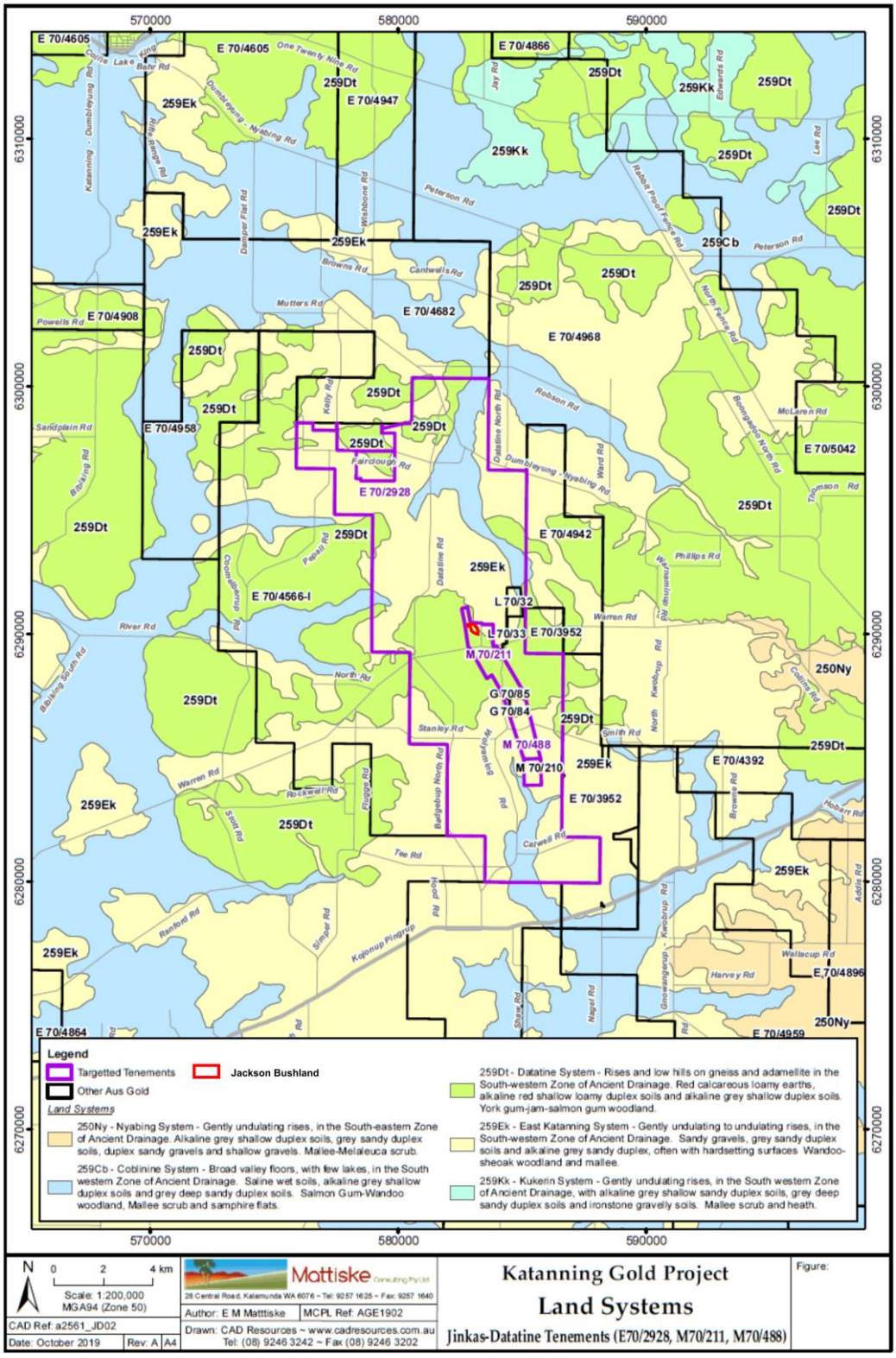

Figure 11: Land Systems Around the KGP and Jackson Bushland

8.4.3 Potential Aspects and Impacts

Aspects

- Ground disturbance;
- Generation and disposal of waste including:
    - Borehole drill mud, cuttings and water;
    - General domestic waste (e.g. paper, cardboards, some plastics and food scraps);
    - Industrial wastes (e.g. pallets, packaging);
    - Hazardous wastes (e.g. hydrocarbons and contaminated material);
    - Hydrocarbon or chemical spills;
- Refuelling and maintenance of vehicle and equipment; and
- Management of hazardous materials.

Potentially significant impacts (without mitigation)

- Localised contamination of soil, groundwater or surface water and subsequent impacts on surrounding ecosystems; and
- Disturbance and erosion of soil profiles and landforms.

8.4.4 Management Objectives

The objective for soils are:

- To maintain the quality of land and soils so that the environment values, both ecological and social, are protected;
- Rehabilitation progress is not to be constrained by impacts to land and soils resulting from PoW activities; and
- To manage hydrocarbons and chemicals in accordance with relevant legislation to ensure no environmental harm occurs from their transport storage use or disposal.

8.4.5 Management Actions

Where groundwater is expected to be encountered during drilling, a system (containerised) allowing for full containment of water removes all risk of salinity impacting on the native vegetation. A containment system similar to that which is shown in Figure 12 below (the grey and blue containers next to the rig) will be used.

The use of containers to capture groundwater is designed to minimise the disturbance footprint of the exploration activities and minimise potential impacts to the environment caused by saline groundwater. Whilst appearing to be risk-free, there is still a risk that the amount of water encountered exceeds the containment capacity resulting in uncontrolled release into upper soil layers, or waste material will be too thick to from tubs.

Drilling fluids are biodegradable, and spillage will be minimised with spill trays below drill areas.

Figure 12: Groundwater containment system

Management actions have been developed to reduce the potential for impacts on soils during the Jackson Infill Drill Program (Table 17). Table 17 also details at what stage of the development the actions shall be implemented and the responsible person(s) for ensuring operational compliance with the management actions. Management of general domestic waste, industrial waste and hazardous waste is provided in Section **Error! Reference source not found.** and therefore to avoid repetition have not been included in this section.

Table 17: Management Actions for Soils

Item	Action	Timing	Responsibility
1	All water encountered during drilling to be containerised and carted for disposal outside of the Jackson Bushland or returned to hole	During drilling	Project Geologist
2	Holes have plastic collars through topsoil/subsoil horizons to prevent saline water spreading through soil.	During drilling	Project Geologist
3	Any saline water spilt to have equivalent amount of freshwater added to reduce salinity and flush into deeper soil layers.	During drilling	Project Geologist
4	Any saline water spills to be reported as Environmental Incidents.	During drilling	Project Geologist
5	Hydrocarbon spill trays and spill kits to be carried and utilised during drilling.	During drilling	Project Geologist

Item	Action	Timing	Responsibility
6	All hydraulic hoses and fuel lines to be checked prior to start up.	During the Infill Drilling Program	Project Geologist
7	All hydrocarbon spills to be reported as environmental incidents.	During the Infill Drilling Program	Project Geologist
8	Any hydrocarbon contaminated soil to be removed and disposed of at Shire landfill facility.	During the Infill Drilling Program	Project Personnel

8.4.6 MONITORING

Monitoring will be undertaken as per the actions listed in Table 18. Inspections and audits will occur as described in Section 11.

Table 18: Monitoring Actions for Soils

Item	Monitoring Action	Timing	Responsibility
1	Drone and ground based photographic monitoring post-rehabilitation and after 1 year (report in AER)	After rehabilitation	Project Geologist
2	Incident reports (internal and external; report in AER)	During the Infill Drilling Program	Project Geologist/Exploration Manager

8.5 REHABILITATION

8.5.1 GUIDELINES AND LEGISLATION

Guidelines

EPA Guidance Statement No. 6 specifically addresses the rehabilitation of terrestrial ecosystems (EPA, 2006), including development assessed under the Mining Act. The primary purpose of this Guidance Statement is to ensure the return of biodiversity in rehabilitated areas by increasing the quality, uniformity, and efficiency of standards and processes for rehabilitation of native vegetation in WA and to allow more effective monitoring and auditing of outcomes (EPA, 2006).

Legislation

The legislation listed in sections 8.2 is applicable to rehabilitation of the Infill Drill Program. The key legislation for rehabilitation of the activities presented in the EMP is the Mining Act.

8.5.2 BASELINE INFORMATION

PoWs are usually conditioned with a requirement for rehabilitation within six months of completion of the disturbance / excavation. Rehabilitation timeframes for key Infill Drill Program activities are summarised in Table 19.

Table 19: Timeframes for Rehabilitation Tasks

Timeframe	Task
Immediate	Temporary capping of drill holes post drilling.

Timeframe	Task
	Within 4 weeks: All sample bags will be removed post drilling and disposed of in an appropriate manner.
Within 6 months of holes being drilled	Cutting and plugging of all drill collars at least 400 mm below ground level (unless required for other investigations).
	Re-spreading of stockpiled topsoil and vegetation.
6 months prior to the PoW expiring	All disturbances conducted under a PoW are to be rehabilitated 6 months prior to the PoW expiring.
Annually	Submit Rehabilitation Reports for each PoW to DMIRS. Reports include: • Spreadsheets of disturbed areas, rehabilitated areas, and areas remaining open • Maps of disturbed areas, rehabilitated areas, and areas remaining open • Incidents • Assessment of compliance with tenement conditions • Updated rehabilitation schedule • Photographic evidence of rehabilitation.

The alignment of earthworks timeframes and efficiencies, associated with rehabilitation, aim to achieve:

1. Better environmental outcomes due to larger, consolidated rehabilitation programs across multiple PoW areas;
2. Reduced mobilisation to disturbed areas and lower risk of spreading weeds;
3. Efficient and concise annual reporting due to the alignment of PoW rehabilitation timeframes; and
4. More efficient and representative rehabilitation monitoring practices articulated in PoW Rehabilitation Reports.

8.5.3 Potential Aspects and Impacts

Aspects

- Rehabilitation of disturbed land; and
- Removal of equipment.

Potentially significant impacts (without mitigation)

- Uncapped holes;
- Bags/rubbish left; and
- Unsuitable/incomplete reinstatement of vegetation or fauna habitat.

8.5.4 Management Objectives

The objectives for rehabilitation are to:

- Ensure disturbed areas, at the completion of activities are safe, stable and capable of being managed consistent with the surrounding environment; and
- Ensure compliance with statutory obligations.

8.5.5 MANAGEMENT ACTIONS

Management actions have been developed to reduce the potential for detrimental environmental impacts during rehabilitation (Table 20). Table 20 also lists the responsible person(s) for ensuring operational compliance with the management actions. Rehabilitation actions listed in Sections 8.2 have not been included, to avoid repetition.

Table 20 : Management Actions for Rehabilitation

Item	Action	Timing	Responsibility
1	No trees stem to be removed for access or drilling.	During the Infill Drilling Program	Project Geologist
2	Drill hole clearing to be limited to hand pruning for safe access to hole collar (4m^2).	During the Infill Drilling Program	Project Geologist
3	Minimise disturbance by reusing existing tracks wherever practicable.	During site access	Project Geologist
4	Site access planned via route inspection and GPS coordinates to Minimise vegetation disturbance.	Prior to site access	Project Geologist
5	Drill rig and support crew will be guided by GPS to access each Drill location. Spotters will walk ahead of the Drill rig to ensure disturbance to vegetation does not occur.	During site access	Project Geologist
6	All holes to be provided with temporary caps upon completion of drilling (same day).	During the Infill Drilling Program	Site Supervisor
7	All holes to be permanently capped within 6 months of completion of drilling.	After drilling is complete	Site Supervisor
8	Hand cleared areas and vehicle tracks to be hand raked to replace organic matter.	After drilling is complete	Project Geologist
9	Induction training to include fauna awareness, including impacts of uncapped holes on fauna.	During the Infill Drilling Program	Project Geologist
10	Induction training to include information on hole rehabilitation methods and standards.	During the Infill Drilling Program	Project Geologist

8.5.6 MONITORING

Monitoring of rehabilitation will be undertaken as per the actions listed in Table 21.

Table 21: Monitoring Actions for Rehabilitation

Item	Action	Timing	Responsibility
1	Drone photographic monitoring post-rehabilitation and after 1 year (Report in AER)	After rehabilitation	Project Geologist/Managing Director

9 EMERGENCY CONTACTS

Table 22 provides contact details for notification to relevant personnel / departments. This table may be updated without requiring resubmission or reassessment of this JBEMP by DMIRS.

Table 22: Relevant Contact Information

Item	Name and Role	Contact Details
Exploration management responsibility	Graham Conner Exploration Manager	gconner@ausgoldlimited.com
Access to the Jackson Infill Drill Program	Will Candish, Project Geologist	wcandish@ausgoldlimited.com
KGP Regional Contact		
Emergency (Medical)	Katanning Hospital	(08) 9821 6222 Clive St, Katanning WA 6317
Emergency (bushfire)	Emergency services	000
Water-related issues	Katanning Shire	
Rehabilitation reporting / incident reports, weed reporting	DMIRs Mines Safety	Incident Reporting Report incidents as soon as practicable to Mines Safety Phone: 1800 SAFE MINE (1800 7233 64
	Rehabilitation reporting	DMIRS- AER
	Weeds and feral species	DBCA Narrogin branch narrogin@dbca.wa.gov.au

10 INCIDENTS AND COMPLAINTS

10.1 INCIDENTS

Environmental incidents are defined as an unplanned event which causes or could have caused environmental harm or damage, or any breaches or non-adherences to management actions described in this JBEMP and any environmental management procedures applied to the Infill Drill Program.

The incident management process is summarised as:

- Incident Response;
  - Making the area safe;
  - Preventing any further environmental harm;
  - Containing any environmental damage that may have occurred;
  - Cleaning up;
- Notification;
- Investigation and Analysis;
- Preventative / Corrective Action; and
- Reporting.

When Ausgold receives a non-compliance or any correspondence the process is as follows:

- Correspondence is received by Ausgold and is circulated to the relevant stakeholders; usually the relevant Exploration Manager or General Manager and the personnel required to take action;
- An action is populated with the details and the required due date for response and is captured in Ausgold's internal reporting system;
- The required actions are inspected by the responsible manager;
- The action is closed to keep a record;
- Any changes affecting tenement or approval conditions are noted; and
- Any follow-up actions are scheduled and allocated to the responsible person.

10.2 COMPLAINTS

Ausgold's complaint, disputes and grievances mechanism aims to ensure that all affected stakeholders have an identified process for resolution should complaints against Ausgold arise. Complaints, disputes and grievances need to be resolved quickly and fairly to minimise the potential for longer-term issues.

A complaint, dispute or grievance will be seen as a 'communities' incident or near miss and as such will be appropriately investigated, and lessons learned recorded and shared and corrective actions generated and closed.

Complaints and grievances can be made by:

- Verbal interaction;
- Telephone;

- Information received from other members of Ausgold;
- Email; or
- Letter.

Any complaints will be recorded as an incident and communicated to relevant parties with a proposed resolution. A communication log will be used to keep records of community interactions / grievances. An on-site Ausgold representative and / or HSEC rep will be made aware of all complaints and grievances and will:

- Ensure understanding and acknowledge receipt of the complaint or grievance (within 24 hours);
- Ensure the complaint or grievance is recorded as an incident or near miss (within five days);
- Provide a timeframe for response (not resolution) within seven days;
- Escalate the incident where necessary;
- Work to resolve the complaint or grievance;
- Present findings / outcomes and any proposed solutions; and
- Record communications, actions and agreed outcomes in Ausgold's internal reporting system.

11 AUDIT AND REVIEW

11.1 INSPECTIONS

Routine and random inspections may be completed by a member of the exploration team or HSE Advisor. The results of these inspections will be recorded and provided to the Site Supervisor and Exploration Manager.

Inspections may include the following:

- Compliance with environmental approvals and the JBEMP;
- Understanding and awareness of Ausgold's Environmental Policy;
- Spill containment (drip trays etc.);
- Inspection of vehicle refuelling procedures and fuel tank refilling operations and compliance with procedural documents;
- Assessment of dust controls;
- Assessment of sediment and runoff controls; and
- Assessment of wastewater management.

These environmental inspections will be properly documented and recorded in the relevant registers. Necessary corrective and/or preventative actions will be discussed during site meetings and responsible persons will be assigned.

11.2 AUDITS

An audit of the Jackson Bushland Infill Drill Program will be completed to inform the AER. The audit will address:

- JBEMP compliance;
- Relevant records and registers;
- Tenement conditions; and
- Rehabilitation requirements.

Ausgold will provide the auditor with all documentation, access and assistance necessary for completion of the audit and promptly close out any corrective actions resulting from the audit.

12 GLOSSARY

Term	Meaning
Ausgold	Ausgold Exploration Pty Limited
DBCA	Department of Biodiversity, Conservation and Attractions
DBH	Diameter at Breast Height (measurement of the size of tree trunks)
DMIRS	Department of Mines, Industry Regulation and Safety
DoE	Department of the Environment
DotEE	Department of the Environment and Energy
DPRID	Department of Primary Industries and Regional Development
DWER	Department of Water and Environmental Regulation
E	Exploration License
EC	Electrical conductivity
JBEMP	Jackson Bushland Exploration Management Plan
EIA	Environmental impact assessment
EP Act	*Environmental Protection Act 1986* (WA)
EPA	Environmental Protection Authority (WA)
EPBC Act	*Environmental Protection and Biodiversity Conservation Act 1999* (Cth)
GDP	Ground disturbance permit
GPS	Global Positioning System
HSE	Health, Safety and Environment
HSEC	Health, Safety, Environment and Communities
IBRA	Interim Biogeographic Regionalisation of Australia
Infill Drill Area	Area of exploration activities proposed by Ausgold, defined in Figure 4
Infill Drill Program	Katanning Gold Project Drilling Program
KGP	Katanning Gold Project
M	Miscellaneous Licence
Mattiske	Mattiske Consulting Pty Ltd
Mining Act	*Mining Act 1978* (WA)
NVCP	Native Vegetation Clearing Permit
PEC	Priority Ecological Community
PoW	Programme of Work
RHVP	Red Hill Vanadium Project
Rifle Range	Rifle Range Reserve (R12423)
TEC	Threatened Ecological Community

Term	Meaning
TSF	Tailings Storage Facility
WA	Western Australia
BC Act	*Biodiversity Conservation Act 2016*
WONS	Weeds of National Significance
WTEC	Eucalypt Woodlands of the Western Australian Wheatbelt TEC

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Appendix 1: Photographic record of access examples

Appendix 2: Ausgold Health, Safety, Environment and Communities Policy

Appendix 3: Risk Register

Appendix 4: Baseline Flora and Fauna Reports

Appendix 5: Memo - Exploration Impacts on Vegetation – KGP

Appendix 6: AUSGOLD KATANNING JACKSON BUSHLAND Black Cockatoo Winter Management Plan

Appendix 7: Jackson Bushland Impact Data