

Ausgold Katanning Gold Project Flora and Vegetation Management and Monitoring Plan – Indirect Impacts

Prepared for:
Ausgold Exploration Pty Ltd

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Project/File:
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Revision Schedule

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1	28/09/25	Update to final plan	Katie Cox	Michelle Davies	Peter Tapsell	Kai Krueger
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Table of Contents

Executive Summary	iii
Acronyms / Abbreviations.....	v
Glossary.....	vi
1 Context, Scope and Rationale	1
1.1 Proposal Background.....	1
1.2 Land Use and Tenure	1
1.3 Key Environmental Factors.....	2
1.4 Purpose and Framework.....	4
1.5 Duration of the EMP	4
1.6 Regulatory Conditions.....	4
2 Legislation Policy and Guidance.....	4
3 Flora and Vegetation.....	5
3.1 Previous Surveys	5
3.2 Pre-European Vegetation	7
3.3 Vegetation Communities.....	7
3.3.1 Vegetation Condition.....	10
3.3.2 Threatened and Priority Ecological Communities	10
3.4 Flora	11
3.4.1 Threatened and Priority Flora	11
3.4.2 Introduced Flora	14
3.5 Management Approach.....	17
3.6 Key Assumptions and Uncertainties	17
3.7 Proposal Impacts	18
3.8 Application of the Mitigation Hierarchy.....	18
4 Management Provisions.....	19
4.1 Identification of Indicators and Rationale	20
4.2 Outcome-based Provisions.....	20
4.3 Objective-based Provisions	20
5 Monitoring.....	28
5.1 Annual Reporting	28
5.2 Exceedance Reporting.....	28
5.3 Incident Reporting	29
6 Roles and Responsibilities	29
7 Adaptive Management and Review	30
8 EMP Changes	31
9 Stakeholder Consultation.....	33
10 References	35



List of Tables

- Table 1: Summary of previous Flora and Vegetation Surveys conducted within the local region.
Table 2: Pre-European Vegetation systems as defined by Beard et al. (2013) within the Survey Area.
Table 3: Vegetation types found in the broader Survey Area, the Development Envelope area (DE), and the Indicative Footprint area (IF).
Table 4: Summary of vegetation condition ratings in the Development Envelope and Indicative Footprint areas.
Table 5: Significant Vegetation recorded in the Study Area – Summary of Key Threats, Proposal Impacts and Survey Findings.
Table 6: Introduced Flora Species Recorded in the Flora and Vegetation Survey Area (Mattiske 2025).
Table 7: Flora and Vegetation Outcome-based Provisions.
Table 8: Flora and Vegetation Objective-based Provisions.
Table 9: Roles and responsibilities for implementation of the FVMMP.
Table 10: Changes to FVMMP.

List of Figures

- Figure 1: The Proposal's Development Envelope and Study Area.
Figure 2: Vegetation Types mapped in the Flora and Vegetation Survey.
Figure 3: Threatened Ecological Community and Vegetation Condition Mapping.
Figure 4: Introduced Flora Species Recorded in the Flora and Vegetation Survey Area.

List of Appendices

Appendix A Vegetation Health Monitoring Program

- A.1 Background
- A.2 Objectives and Duration of Monitoring
- A.3 Overview and Monitoring
 - A.3.1 Reference Sites
 - A.3.2 Visual Health Assessment
 - A.3.2.1 Selection and Marking of Trees
 - A.3.3 Sampling Frequency
 - A.3.4 Measurements and Assessments
 - A.3.5 Remote Sensing
 - A.3.5.1 Methods and Sampling Frequency

Appendix B Indicative Weed Management Plan

- B.1 Background
- B.2 Objectives
- B.3 Legislation Requirements
- B.4 Weeds Recorded in the Proposal Area
- B.5 Weed Management
 - B.5.1 Weed Awareness and Weed Hygiene Training Procedure
 - B.5.2 Weed Control
 - B.5.3 Roles Responsibilities

Appendix B1 – Recommended Weed Control

Appendix B2 – Weed Hygiene Certificate Example



Executive Summary

Table ES-1 summarises the purpose of the Flora and Vegetation Monitoring and Management Plan (FVMMP) within the context of the Western Australia Environmental Protection Authority (EPA) objectives for the key environmental factor of Flora and Vegetation (EPA 2016a). The FVMMP also aligns with the Environmental Management Plan Instructions and Guidelines (Commonwealth of Australia 2014; EPA 2024). The FVMMP has been prepared for the Ausgold for the Katanning Gold Project. This Plan specifically addresses the Flora and Vegetation environmental factors associated with the Proposal.

Summary **Table ES-1** below presents the environmental outcomes and objectives for the environmental factor to be met through implementation of this FMMP, as well as the environmental criteria and management targets to measure achievement of the associated environmental outcomes and objectives.

Table ES-1: Summary and Purpose of the Flora and Vegetation Monitoring and Management Plan.

Item	Description
Proposal Title	Katanning Gold Project
Proponent Name	Ausgold Exploration Pty Ltd
Ministerial Statement number	N/A
Key Environmental Factor and Objectives	Flora and Vegetation: The Environmental Protection Authority (EPA) Objective for Flora and Vegetation is “to protect flora and vegetation so that biological diversity and ecological integrity are maintained (EPA 2016a). The proponent shall manage the operations of the Proposal to meet the following Outcome-based and Objective-based management provisions.
Purpose of FVMP	Development of a framework to ensure potential impacts on flora and vegetation from the Proposal are avoided to the maximum extent practicable by: - Identify the risks and potential impacts from the Proposal on significant vegetation within the Proposal Area. - Outline management provisions for significant vegetation, to avoid and minimise potential impacts to populations within the Proposal Area. - Propose corrective actions if triggers and thresholds are exceeded to avoid adverse proposal-related impacts to significant vegetation.
Outcome-based Management Provisions	Outcome 1: Avoid adverse indirect impacts to significant vegetation in the Mine Exclusion Zone due to project related dust deposition, soil pollution, and changes to hydrology. Outcome 2: Avoid the introduction of new weed species or the spread of existing weed species in the Mine Exclusion Zone as a result of the Proposal.
Objective-based Management Provisions	MO1: No clearing of vegetation shall occur outside of the approved, demarcated clearing areas during construction or operations.



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

Executive Summary

	MO2: No proliferation or introduction of new weed species rated as a high or very high management priority by DBCA in the Proposal Area as a result of the Proposal. MO3: No new occurrence of recorded weeds within the Development Envelope as a result of the construction and operation of the Proposal. MO4: Effective operation of the Proposal to minimise the risk of Proposal related fire. MO5: Minimise Proposal related decline to flora and vegetation due to dust and hydrocarbon or chemical leaks and altered hydrological regimes.
Condition Clauses	N/A
Key Components of the FVMMP	Key provisions are detailed in Section 3.4.2
Proposed Construction Date	Q3 CY2026
FVMMP required pre-construction?	Yes

Corporate endorsement

I hereby certify that to the best of my knowledge, the provisions within this Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan are true and correct.

Name:

Signed:

Designation: Environment Manager:

Date:



Acronyms / Abbreviations

Acronym / Abbreviation	Full Name
ACAR	Annual Compliance Assessment Report
AER	Annual Environmental Reports
BC Act	<i>Biodiversity Conservation Act 2016</i>
CEMP	Construction Environmental Management Plan
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EMP	Environmental Protection Authority
FVMMP	Flora and Vegetation Monitoring and Management Plan
DBCA	Department of Biodiversity, Conservation and Attractions
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DE	Development Envelope
DMPE	Department of Mines, Petroleum, and Exploration
DJTSI	Department of Jobs, Tourism, Science and Innovation (DJTSI)
DPLH	Department of Planning, Lands and Heritage
DWER	Department of Water and Environmental Regulation
EP Act	Environmental Protection Act 1986
EPA	Environmental Protection Authority
EPBC Act	<i>Environmental Protection and Biodiversity Conservation Act 1999</i>
ha	hectare
IF	Indicative Footprint
km	kilometre
LOM	Life of Mine
MCP	Mine Closure Plan
MNES	Matters of National Environmental Significance
Mtpa	million tonnes per annum
PEA	Plant Efficiency Analyser
TFMMP	Terrestrial Fauna Monitoring and Management Plan
TOs	Traditional Owners
TSF	Tailings Storage Facility
VHMP	Vegetation Health Monitoring Program
WA	Western Australian
WHC	Weed Hygiene Certificate
WMP	Weed Management Plan



Glossary

Term	Definition
Adaptive management	Adaptive management whereby monitoring and data collection are incorporated into the management plan with the express purpose to improve the understanding of the systems in a structured, systematic way. A goal of adaptive management is to reduce the uncertainty in the decision-making process over time (DCCEEW 2024).
Trigger criteria	• (DCCEEW 2024): A predefined threshold, typically a given mortality level, that when reached or exceeded triggers a management response. • (EPA 2024): defines Trigger Criteria – Measures set at a conservative level (trigger criteria), to forewarn the approach of threshold criteria and ensure trigger level response actions are implemented well in advance of an environmental outcome being compromised.
Threshold Criteria	(EPA 2024): Framed to represent the limit of acceptable impact beyond which there is likely to be a significant effect on the environment. This indicates there is risk that the environmental outcome will not be met.



1 Context, Scope and Rationale

1.1 Proposal Background

Ausgold Exploration Pty Ltd (Ausgold) proposes to develop and operate a gold mine in Katanning (the Proposal), approximately 36 kilometres (km) north-east of the town of Katanning (**Figure 1**). The mine has been held in care and maintenance since it ceased its last operation in 1997.

The Proposal involves Open Cut Pits that extend below water table, Run-of-Mine Pad, a Processing Plant, Tailings Storage Facility (TSF), as well as providing capacity for waste rock storage elsewhere through the creation of several waste rock landforms. Supporting infrastructure will also be constructed at the site, including a Mine Services Area, Balancing Water Storage Pond and Hybrid Power Plant and storage of topsoil in stockpiles. Mining will be by conventional open cut operation using dump trucks and excavators mining approximately 30 million tonnes per annum (Mtpa) total material. Ore will be processed using single stage crushing, grinding and conventional gold processing Carbon in Leach technology to produce gold bullion.

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

The following terms are applicable to this Flora and Vegetation Monitoring and Management Plan (FVMMP):

- **Study Area** - refers to the Matiske 2024 survey boundary (3,841 ha).
- **Proposal Area** - the area in which the Development Envelope is contained.
- **Development Envelope** (DE) - the boundary within which the elements of the Proposal are situated. The DE occur entirely within the Study Area and has an area of up to 2,233.82 ha.
- **Indicative Footprint** (IF) - the area that is proposed to be directly disturbed and developed by the Proposal (1,141.38 ha). The majority of the IF has been previously disturbed with no more than 61 ha of vegetation proposed to be cleared (50 ha of remnant native vegetation). The layout of the IF may change; however, the total disturbance will not exceed the maximum disturbance for the DE.

1.2 Land Use and Tenure

The current existing land use in the Proposal is farming/agricultural, with two State Reserves in close proximity: Wurgubup Rifle Range (Reserve 12423) and Woorgabup Nature Reserve (Reserve 24072), - hereafter collectively termed as the 'Wurgubup Reserves'. While mining tenements co-occur through certain intersections with the State Reserves, none of that is proposed to be used for mining or to be cleared. There is a legacy mining operation (managed in care & maintenance) which occurs on a number of the mining tenements; the last mining there was conducted in early 1997. To the west of the Proposal is the Coblinine Nature Reserve that is made up of multiple parcels of land and in the east is the Chinocup Nature Reserve that incorporates multiple salt lakes.

The Proposal is located on WA Mining Act tenure held by Ausgold Exploration Pty Ltd (Ausgold) and includes tenements M70/211, M70/1426, M70/1427, M70/488 and M70/210 (**Figure 1**). The vast majority of the area for the Proposal is located on freehold land with the remainder located on road reserves held



by Shire of Katanning. The land is not subject to Native Title. The Jinker/Jinka Hill Registered Site 5353 (Camp/historical/traditional structure/modified tree) overlays the Development Envelope however has a Section 18 in place.

Two areas of avoidance (Exclusion Zones) have been included as part of the design and layout of the Proposal. Wurgubup Reserves (89 ha coincident with Ausgold mining tenure) and a 20ha parcel of significant intact vegetation on Ausgold's freehold land (M70/1426) has been entirely avoided, with a buffer zone from all infrastructure to ensure the presence and function of remnant vegetation (**Figure 1**). Ausgold has engaged in consultation with the local landholders and intends to acquire all properties that will be subject to development resulting from the Proposal.

1.3 Key Environmental Factors

The EPA objective for Flora and Vegetation is '*to protect flora and vegetation so that biological diversity and ecological integrity are maintained*' (EPA 2016b).

Comprehensive flora and vegetation surveying identified no significant flora species as occurring within the Study Area. However, the Federally listed Threatened Ecological Community (TEC), the "*Eucalypt woodlands of the Western Australian Wheatbelt*" occur within the Proposal Area (Mattske 2025).

State Priority Ecological Communities (PECs) are often subsets of the nationally listed TECs. Mattske (2025) identified four PECs that could potentially occur in/within the 20 km buffer of the survey area, (including one that is a subset of the "Eucalypt Woodland of Western Australian Wheatbelt" TEC). These are:

- The "Red Morrel (*Eucalyptus longicornis*) 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" (PEC (P3), (DBCA 2025a).

The Eucalypt Woodlands of the Western Australian Wheatbelt (PEC) (P3) encompasses the three PECs listed above and is also listed as a Critically Endangered Threatened Ecological Community under the EPBC Act 1999 listed critically endangered "Eucalypt Woodlands of the Western Australian Wheatbelt" TEC (DBCA 2025a).

The EPA's mitigation hierarchy (avoid, minimise, and rehabilitate), was applied where possible to reduce impacts to the flora and vegetation from the Proposal. This FVMMP includes vegetation monitoring, presented in **Appendix A**, which comprise part of the mitigation measures to avoid impacts. These monitoring programs will be used to evaluate the effectiveness of the management provisions outlined in the FVMMP and will inform adaptive management where required over the life of the Proposal (10 years).



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

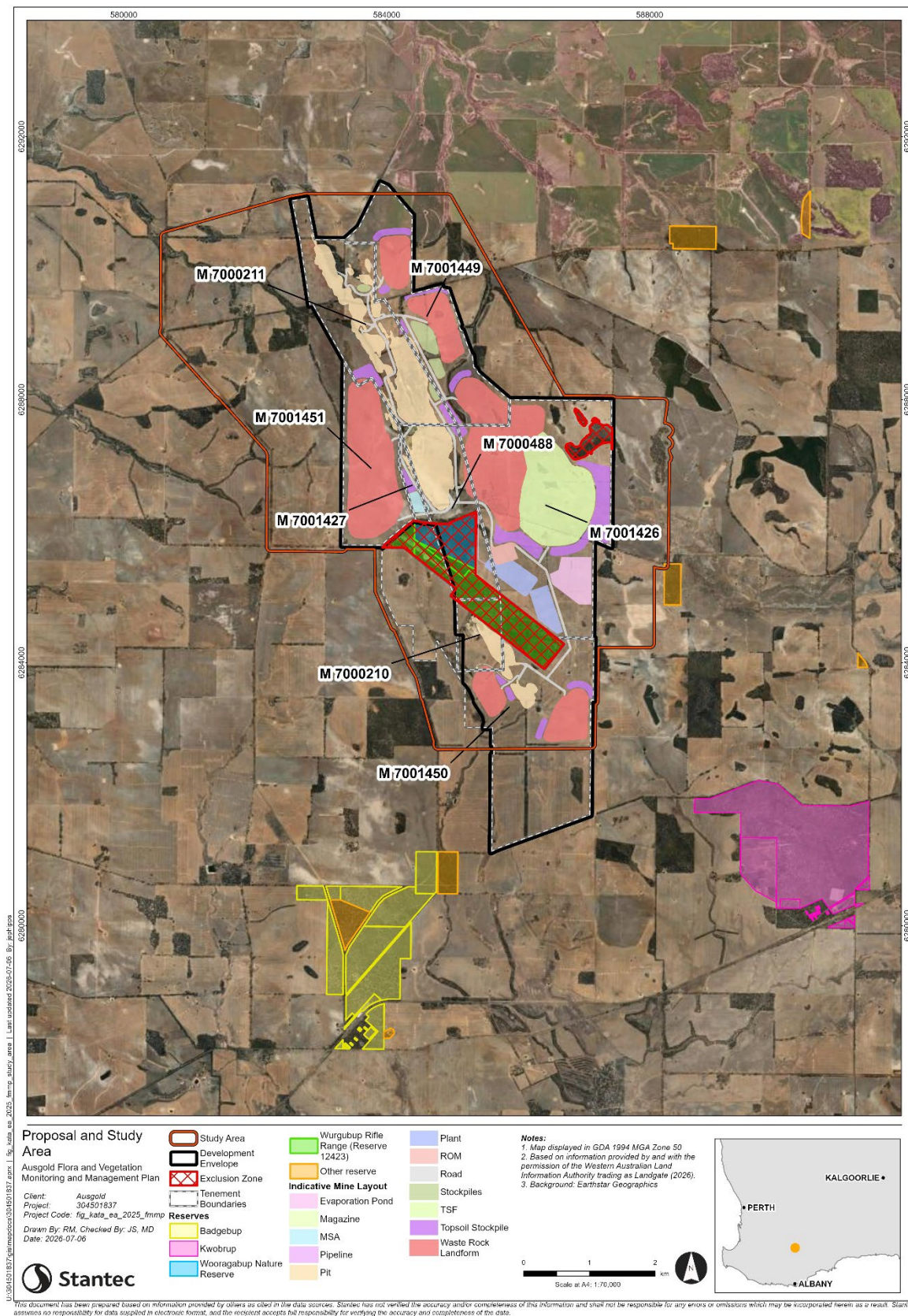


Figure 1: The Proposal's Development Envelope and Study Area.



1.4 Purpose and Framework

The purpose of the FVMMP is for:

- The Proposal to operate in a manner that minimises the indirect impacts to the Exclusion Zone adjacent to the Proposal (**Figure 1**).

This will be addressed by ensuring potential impacts to vegetation from the Proposal are avoided to the maximum extent practicable by:

- Identifying the risks and potential impacts from the Proposal on vegetation.
- Outlining management provisions for vegetation, to avoid and minimise potential impacts to significant vegetation.
- Preparing and implementing monitoring programs for vegetation and tree health within the Development Envelope and regional reference locations.
- Proposing corrective and response actions if triggers and thresholds are exceeded to avoid impact to vegetation.

1.5 Duration of the EMP

The FVMMP will be implemented for the duration of the Proposal (10 years).

1.6 Regulatory Conditions

The Proposal is currently being assessed by the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW). The Proposed Action will also be referred under Part IV of the State *Environmental Protection Act 1986* (EP Act) to the WA Environmental Protection Authority (EPA).

2 Legislation Policy and Guidance

This FVMMP has been written in accordance with Western Australian (WA) and Commonwealth policies and guidance, including:

- Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016; (EPA 2021a).
- Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans; (EPA 2024).
- Environmental Impact Assessment (Divisions 1 and 2) Procedures Manual (EPA 2021b).
- Environmental Management Plan Guidelines (Commonwealth of Australia 2014).
- Outcomes-based conditions policy (DoE 2016a).
- Outcomes-based conditions guidance (DoE 2016b).
- Environmental Factor Guideline – Flora and Vegetation (EPA 2016a).
- *Biosecurity and Agriculture Management Act 2007* (WA).
- *Biodiversity Conservation Act 2016* (WA).
- *Rights in Water and Irrigation Act 1914* (WA).
- *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth).



The following management plans and strategies are also relevant to the FVMMP, specific to the Proposal and include:

- Terrestrial Fauna Monitoring and Management Plan (TFMMP).

State and Commonwealth plans and management prescriptions that are relevant to flora and vegetation include:

- Matters of National Environmental Significance. Significant impact guidelines 1.1 - Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth of Australia 2013).
- Threat abatement plan for disease in natural ecosystems caused by *Phytophthora cinnamomi* (DEE 2018).
- Eucalypt Woodlands of the Western Australian Wheatbelt: a nationally protected ecological community (DEE 2016).

3 Flora and Vegetation

3.1 Previous Surveys

Mattiske Consulting Pty Ltd was commissioned initially in September 2017 by Ausgold to undertake a detailed flora and vegetation assessment of the Proposal area and surrounding area. Since then, a series of flora and vegetation studies have been undertaken on the Ausgold exploration leases and nearby land holdings by Mattiske (October 2018, March 2019, November 2020, October 2024) and by Botanica (March and September 2023). The botanical values within the Proposed Action Development Envelope have been surveyed in multiple seasons and years and the survey effort exceeds expectations of the EPA guidance statement (**Table 1**).



Table 1: Summary of previous Flora and Vegetation Surveys conducted within the local region.

Studies and Surveys	Area	Scope and Timing	Survey/Study Effort	Consistency with Guidance and Limitation
Mattiske Consulting (2018)	Katanning Gold Project	- October 2018. 80 plots (20m x 20m).	3 days – 2 personnel	Survey undertaken in accordance with methods outlined in <i>Technical Guidance – Flora and vegetation surveys for environmental impact assessment</i> (EPA 2016c).
Mattiske Consulting (2019)	Eucalypt Woodlands of the Western Australian Wheatbelt	- March 2019. 94 sites.	3 days – 2 personnel	Survey undertaken in accordance with methods outlined in <i>Technical Guidance – Flora and vegetation surveys for environmental impact assessment</i> (EPA 2016c).
Mattiske Consulting (2020)	Jinkas-Datatine Survey Area	- November 2020. - Drill sites.	2 days – 2 personnel	Survey undertaken in accordance with methods outlined in <i>Technical Guidance – Flora and vegetation surveys for environmental impact assessment</i> (EPA 2016c).
Botanica Consulting (2023)	Jinkas Project	- October 2022. 21 plots (20m x 20m.)	2 days – 2 personnel	Survey undertaken in accordance with methods outlined in <i>Technical Guidance – Flora and vegetation surveys for environmental impact assessment</i> (EPA 2016c).
Botanica Consulting (2024)	Katanning Gold Project	- September 2023. 54 plots (20m x 20m).	4 days – 2 personnel	Survey undertaken in accordance with methods outlined in <i>Technical Guidance – Flora and vegetation surveys for environmental impact assessment</i> (EPA 2016c).
Mattiske Consulting (2025)	Katanning Gold survey area	- October 2024. 54 plots (20m x 20m, although some plot sizes adjusted due to linear corridor areas).	3 days – 2 personnel	Survey undertaken in accordance with methods outlined in <i>Technical Guidance – Flora and vegetation surveys for environmental impact assessment</i> (EPA 2016c).



3.2 Pre-European Vegetation

Pre-European vegetation mapping was originally undertaken by Beard (1975) at various scales across WA and has since been updated to be consistent with the National Vegetation Information System (NVIS) descriptions at a scale of 1:250,000 (Beard *et al.* 2013). One vegetation association has been mapped within the Flora and Vegetation Survey Area as shown in **Table 2**.

Vegetation associations retaining less than 30% of their pre-European extent generally experience accelerated species loss at an ecosystem level and are regarded as being 'vulnerable', while vegetation types retaining less than 10% of their original extent are regarded as being 'endangered' (Environmental Protection Authority 2020). Native vegetation has been significantly reduced in the Shire of Katanning through clearing for agricultural purposes. The vast majority of the Development Envelope is cleared (>88%) and the remaining vegetation is largely degraded (Mattiske 2025).

Table 2: Pre-European Vegetation systems as defined by Beard *et al.* (2013) within the Survey Area.

Vegetation system	Scale	Pre-European Extent (ha)	Current Extent (ha)	Pre-European Extent Remaining (%)	Conservation Status	Extent in Survey Area (ha)
Dumbleyung: Wheatbelt; York gum, salmon gum etc. (1092.1)	Statewide	77,951.67	8,231.54	10.56	Endangered	1587.10
	Shire of Katanning	43,460.09	4448.4	10.24	Endangered	

3.3 Vegetation Communities

A total of 13 Eucalypt woodland communities (W1 to W13), four mixed Proteaceous – Myrtaceae heath communities/lithic complexes and low woodlands on impeded soils and outcrops (S1 to S4) and one Chenopod shrubland (C1) were recorded in the Survey Area (**Table 3** and **Figure 2**). However, most of the survey area and the area within the DE have been cleared for agricultural activities (1398.82 ha).

Overlap of the Eucalypt woodlands with *Eucalyptus wandoo*, *Eucalyptus longicornis* and *Eucalyptus loxophleba* overlapping was noted in localised areas. Additionally, a range of mallee species appears to be associated with the *Eucalyptus wandoo*, Melaleuca shrubs and Banksia heaths. The C1 - Chenopod shrublands and W13 - Woodlands occur outside the Development Envelope in restricted, already-developed areas (Mattiske 2025).

Multiple ephemeral creeks that run mostly in a north-westly direction are present within the Survey Area. Many of these creeks have remnant native vegetation along both banks. Previously disturbed areas within the Survey Area include a mining pit in care and maintenance as well as multiple farming houses and sheds (Terrestrial Ecosystems 2025).



Table 3: Vegetation types found in the broader Survey Area, the Development Envelope area (DE), and the Indicative Footprint area (IF).

Vegetation Type		Description	Extent within Survey Area (ha)	Extent within DE (ha)	Extent within IF (ha)
Chenopod Shrublands on saline flats	C1	Chenopod Shrubland of <i>Tecticornia halocnemoides</i> and <i>Tecticornia pergranulata</i> over mixed annual grasses on clay loams.	126.41	N/A	N/A
Lithic Complex, Heaths and Low Woodlands on impeded soil and outcrops	S1	Open to Closed Heath of <i>Banksia sphaerocarpa</i> var. <i>caesia</i> , <i>Banksia armata</i> var. <i>ignicida</i> , <i>Babingtonia camphorosmae</i> mid shrubland over <i>Petrophile seminuda</i> , <i>Hibbertia gracilipes</i> low shrubland with occasional <i>Eucalyptus phaenophylla</i> mallee over <i>Lepidosperma</i> sp. <i>Bandalup</i> Scabrid isolated sedges on clay loams with some outcropping on slopes and ridges.	23.67	23.674	3.089
	S2	Low Woodland of <i>Eucalyptus phaenophylla</i> , <i>Eucalyptus kondininensis</i> , <i>Eucalyptus wandoo</i> and <i>Allocasuarina huegeliana</i> over open heath of <i>Gastrolobium spinosum</i> , <i>Gastrolobium trilobum</i> , <i>Melaleuca atroviridis</i> , <i>Xanthorrhoea drummondii</i> , <i>Banksia armata</i> var. <i>ignicida</i> mid open shrubland over <i>Neurachne alopecuroidea</i> low isolated tussock grasses on clay loams with some outcropping on slopes and ridges.	6.96	6.960	N/A
	S3	Open Low Woodland of <i>Eucalyptus loxophleba</i> , <i>Acacia acuminata</i> with isolated trees over <i>Neurachne alopecuroidea</i> , <i>Austrostipa elegantissima</i> , <i>Austrostipa variabilis</i> and mixed low herbs with sandy loam with localized granite boulders	32.49	9.910	3.239
	S4	Lithic Complex on outcrops of granite with only localized herbs, grasses and occasional shrubs on slightly deeper sandy soils.	2.59	0.636	N/A
Woodlands on clays and sandy loams on slopes and ridges	W1	Open Woodland of <i>Eucalyptus longicornis</i> , <i>Eucalyptus wandoo</i> , <i>Eucalyptus salmonophloia</i> over <i>Acacia acuminata</i> over mixed grasses and herbs including <i>Rytidosperma setaceum</i> , <i>Neurachne alopecuroidea</i> and <i>Austrostipa</i> species on clay loams on slopes.	8.37	8.207	N/A
	W2	Open Woodland of <i>Eucalyptus loxophleba</i> , <i>Allocasuarina huegeliana</i> over <i>Acacia acuminata</i> tall sparse shrubland over mixed grasses and herbs and mixed paddock species on slopes.	25.54	2.493	0.837
	W3	Open Woodland of <i>Eucalyptus wandoo</i> , <i>Allocasuarina huegeliana</i> , <i>Acacia acuminata</i> over <i>Hakea lissocarpha</i> , <i>Xanthorrhoea drummondii</i> over <i>Lepidosperma preissianus</i> subsp. <i>volubilis</i> , <i>Neurachne alopecuroidea</i> on sandy loams on slopes.	39.22	27.881	N/A
	W4	Woodland of <i>Eucalyptus wandoo</i> , <i>Eucalyptus longicornis</i> , <i>Allocasuarina huegeliana</i> , <i>Acacia acuminata</i> over <i>Dodonaea humifusa</i> , <i>Hakea lissocarpha</i> , <i>Gastrolobium trilobum</i> over mixed herbs and grasses on clay loams on slopes.	8.78	6.735	N/A
	W5	Open Woodland of <i>Eucalyptus wandoo</i> , <i>Allocasuarina huegeliana</i> over <i>Acacia acuminata</i> , <i>Banksia sessilis</i> , with occasional <i>Eucalyptus loxophleba</i> over <i>Gastrolobium trilobum</i> , <i>Rhagodia preissii</i> subsp. <i>preissii</i> over mixed herbs and grasses on clay loams on slopes.	13.35	12.650	N/A
	W6	Woodland of <i>Eucalyptus longicornis</i> , <i>Eucalyptus astringens</i> , <i>Eucalyptus loxophleba</i> , <i>Allocasuarina huegeliana</i> over <i>Acacia acuminata</i> over mixed herbs and grasses on clay loams on ridges and slopes.	8.17	3.111	1.074
	W7	Open Woodland of <i>Eucalyptus wandoo</i> , <i>Eucalyptus longicornis</i> and occasional <i>Eucalyptus hebetifolia</i> and <i>Eucalyptus phaenophylla</i> over <i>Acacia acuminata</i> over <i>Gastrolobium trilobum</i> , <i>Acacia erinacea</i> , <i>Acacia lasiocarpa</i> var. <i>sedifolia</i> , <i>Melaleuca atroviridis</i> , <i>Xanthorrhoea drummondii</i> over mixed herbs and grasses on slopes.	80.72	58.596	6.015
	W8	Mixed Open Woodland of <i>Eucalyptus longicornis</i> , <i>Eucalyptus kondininensis</i> , <i>Eucalyptus astringens</i> , <i>Eucalyptus phaenophylla</i> , <i>Eucalyptus wandoo</i> over <i>Gastrolobium trilobum</i> , <i>Melaleuca atroviridis</i> , <i>Melaleuca scalena</i> over mixed shrubs, herbs and grasses on clay loams on slopes.	74.52	45.767	2.884
	W9	Open Woodland of <i>Eucalyptus salmonophloia</i> , <i>Eucalyptus longicornis</i> , <i>Eucalyptus wandoo</i> over low mixed <i>Eucalyptus mallee</i> species over <i>Daviesia articulata</i> over mixed low herbs and grasses on clay loams on slopes (W9)	54.91	1.262	0.247
	W10	Open Woodland of <i>Eucalyptus wandoo</i> , <i>Eucalyptus salmonophloia</i> , <i>Eucalyptus kondinensis</i> and other low mallees over <i>Acacia acuminata</i> , <i>Acacia erinacea</i> , <i>Acacia saligna</i> , <i>Maireana brevifolia</i> over low mixed herbs and grasses on clay loams on slopes.	31.31	18.157	9.437
	W11	Woodland of <i>Eucalyptus sargentii</i> subsp. <i>sargentii</i> , <i>Eucalyptus spathulata</i> , <i>Casuarina obesa</i> , <i>Callitris roei</i> over <i>Melaleuca scalena</i> , <i>Atriplex</i> species and <i>Tecticornia</i> spp. on lower slopes.	13.88	8.452	3.927
	W12	Open Woodland of <i>Eucalyptus loxophleba</i> , <i>Allocasuarina huegeliana</i> with occasional <i>Eucalyptus wandoo</i> over <i>Acacia acuminata</i> over <i>Maireana brevifolia</i> over mixed herbs and grasses on sandy loams on slopes.	55.88	0.813	N/A
	W13	Open Woodland of <i>Eucalyptus wandoo</i> , <i>Eucalyptus longicornis</i> over low herbs and grasses on lower slopes on clay loams of flow lines (W13)	22.60	N/A	N/A



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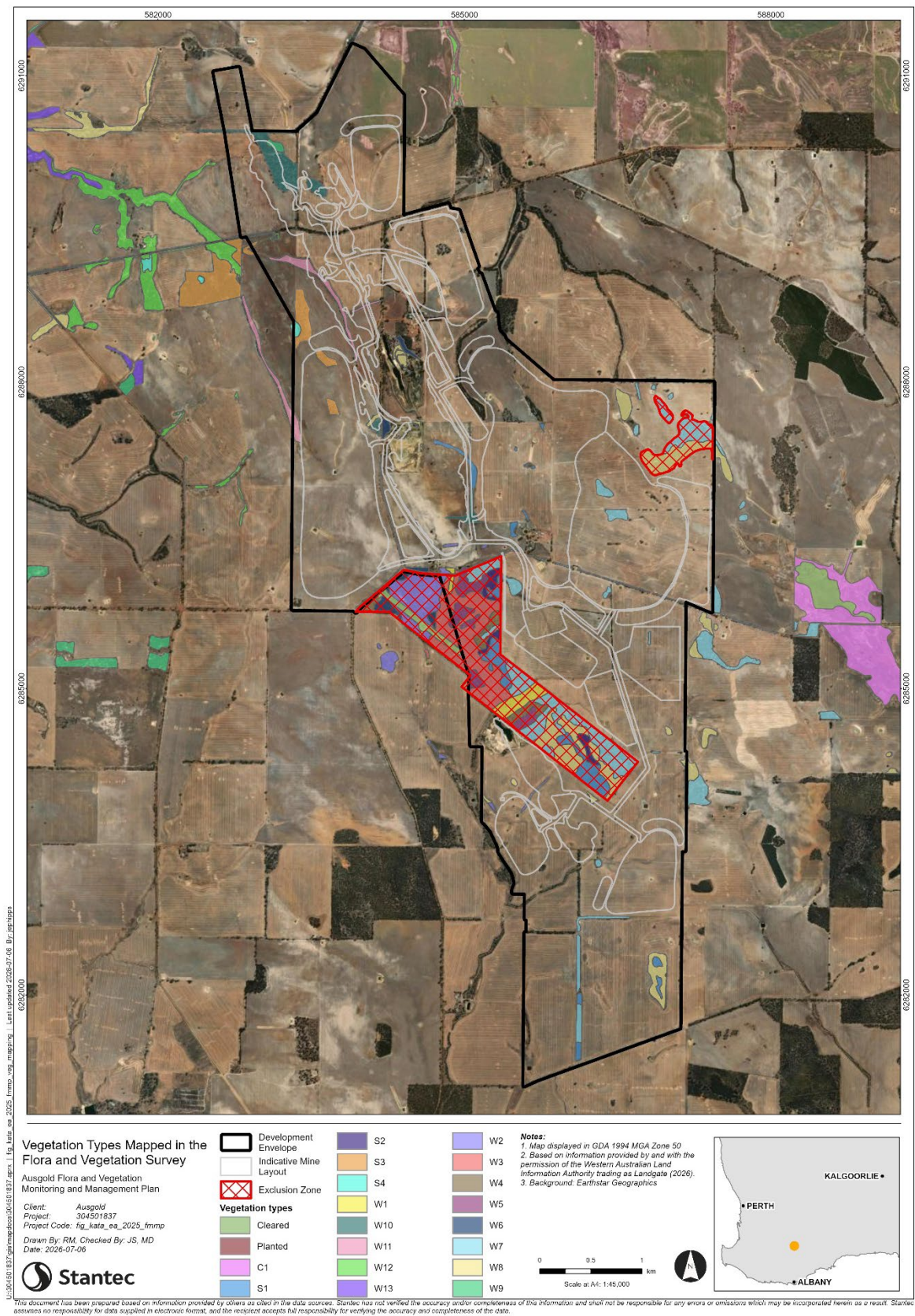


Figure 2: Vegetation Types mapped in the Flora and Vegetation Survey.



3.3.1 Vegetation Condition

The vegetation condition ratings based on Keighery *et al.* (1994) vary from Completely Degraded (particularly near the rifle range and associated tracks, as well as several borrow pits) to Very Good (**Figure 3**). Despite the proximity of agricultural operations, some localised areas of heath, shrublands and Eucalypt woodlands on the slopes and ridges remain relatively undisturbed and in very good condition. Vegetation condition ratings within the Development Envelope and Indicative Footprint areas are summarized in **Table 4**.

Table 4: Summary of vegetation condition ratings in the Development Envelope and Indicative Footprint areas.

Vegetation condition rating	Area within Development Envelope (ha)	% of Development Envelope area	Area within Indicative Footprint (ha)	% of Indicative Footprint area
Very Good	147.800	6.616	0.036	<0.01
Good	9.490	0.425	<0.01	<0.01
Degraded	63.010	2.821	26.664	2.336084389
Completely Degraded	14.980	0.671	4.050	0.354826438

3.3.2 Threatened and Priority Ecological Communities

Due to past restrictions on survey effort in the area due to agricultural clearing and lack of resources to assess remnant areas, the current interpretation of the values associated with Threatened and Priority Ecological Communities (TECs / PECs) rely on regional and national databases. The recent listing of the “*Eucalypt Woodlands of the Western Australian Wheatbelt*” (henceforth referred to as the Eucalypt woodlands TEC) as a TEC (Critically Endangered) in December 2015 (DoE 2015) under the Commonwealth’s *Environment Protection and Biodiversity Conservation Act* (EPBC Act) raises the conservation significance of the woodlands on the Katanning Gold survey area.

According to the Department of Biodiversity, Conservation and Attractions (DBCA) data, approximately half of the Proposal Area consists of the Eucalypt woodlands TEC. However, the current mapping does not exclude cleared agricultural areas, and as such, overstate the extent of the Eucalypt woodlands TEC in the Proposal Area.

Based on recent surveys, there are three patches within the DE that contain the Eucalypt woodlands TEC (**Figure 3** and **Table 5**). The allocation of these areas was based on the patch size, vegetation types, and vegetation condition. The consideration of vegetation condition (DoE 2015) revealed areas of Eucalypt woodlands TEC within the Development Envelope classified as Degraded. The majority of the degraded areas (where the understorey tends to be dominated by introduced species such as grasses and patches of Cape Weed) occur mainly in the woodlands of York Gum and Jam (*Eucalyptus loxophleba* - *Acacia acuminata*). It could be argued that the degraded areas should be excluded from consisting of Eucalypt woodlands TEC, as the understorey in these areas have been impacted by previous grazing activities (Mattiske 2025).

The protected extent of the Eucalypt woodlands TEC in the Western Australian Wheatbelt is estimated at 4.96%, with its protected extent within the Avon Wheatbelt (AW2) IBRA region estimated at 1.67%.



Ausgold proposes to directly clear a total of 69 ha of native vegetation, with 8.48 ha representative of the Eucalypt woodlands TEC in Degraded condition. With another 2.55 ha is subject to chronic indirect pressures over the course of mining. Ausgold is not intending to develop or clear any of the other Eucalypt woodlands TEC parcels within the DE which are in Very Good condition and furthermore intends to vest the two portions of the Eucalypt woodlands TEC within the DE into Mine Exclusion Zones.

3.4 Flora

A total of 302 vascular plant taxa which are representative of 151 genera, and 58 families were recorded within the Survey Area. Data was collected from foot traverses and detailed plots. Most taxa recorded were representative of the Myrtaceae (65 taxa), Asteraceae (27 taxa), Fabaceae (26 taxa), Poaceae (25 taxa) and Proteaceae (22 taxa) families. Many of the taxa recorded were widespread both locally and more broadly within the associated biogeographical subregion, although some taxa recorded were representative of the southern Wheatbelt and nearby southern coastal and mallee communities.

Mattiske (2025) used a species accumulation curve to evaluate the adequacy of sampling in the main survey area. Based on this analysis, approximately 72.6% of the flora species potentially present within the Proposal Area were recorded.

3.4.1 Threatened and Priority Flora

No threatened flora species pursuant to subsection (2) of section 23F of the *Biodiversity Conservation Act 2016* and as listed by the (DBCA 2025b) or pursuant to section 179 of the EPBC Act or listed by the (DCCEEW 2025) were recorded within the Katanning Gold survey area. One Priority species, *Acacia trinalis* (P1), has been previously recorded on the northern infrastructure area on the road verges. However, it has not been recorded in more recent assessments of these road verges. It is a bushy shrub or tree known from 20 records at the State Herbarium known to inhabit salt lakes, flats or swampy areas, mainly occurring north-east of Perth in the Wheatbelt with several outliers near Datatine and Dumbleyung to the north of the Development Envelope. Swampy areas within the Development Envelope are restricted to small waterways and the northern tip of the Indicative Footprint (Mattiske 2025).



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

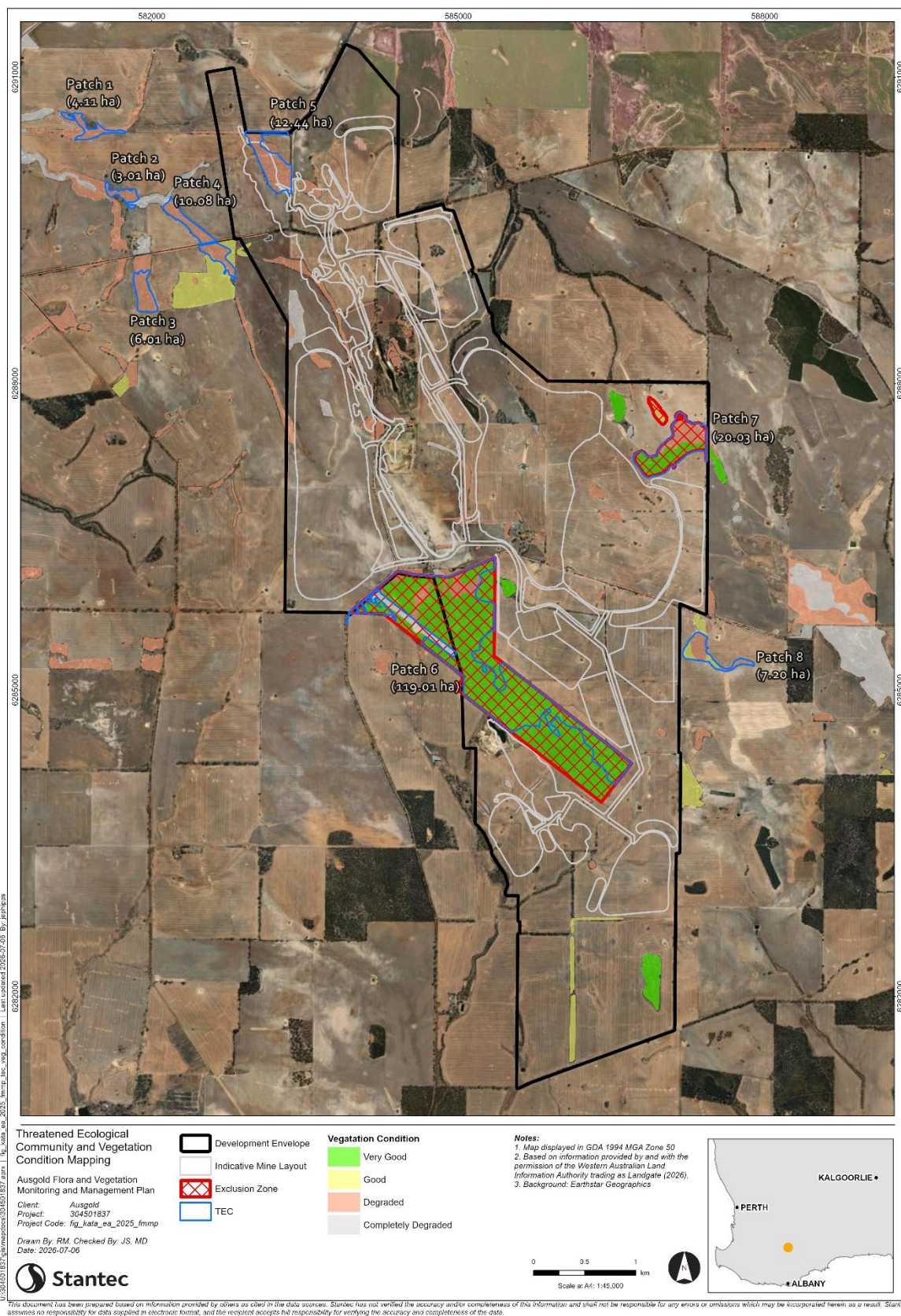


Figure 3: Threatened Ecological Community and Vegetation Condition Mapping.



Table 5: Significant Vegetation recorded in the Study Area – Summary of Key Threats, Proposal Impacts and Survey Findings.

Flora or Vegetation Aspect	Description	Key Threats	Potential Proposal Related Impacts	Key Findings
Eucalypt Woodlands of the Western Australian Wheatbelt	Woodlands dominated by a complex mosaic of eucalypt species with a tree or mallet form over an understorey that is highly variable in structure and composition. Woodlands dominated by mallee forms or vegetation with a very sparse eucalypt tree canopy are not part of the ecological community. This ecological community was formerly the most common type of vegetation across the wheatbelt landscape of south-western Western Australia (WA), i.e. inland between the Darling Range and western edge of the goldfields (before extensive clearing for agriculture).	• Clearance of native vegetation • Fragmentation into smaller, disconnected patches • Weed invasion • Chemical inputs from adjacent agricultural lands (fertiliser, pesticides, herbicides) • Grazing pressure • Increased salinity and waterlogging due to landscape modification through over clearing • Soil acidification • Altered fire frequency and intensity • Impact of plant diseases (<i>Phytophthora</i> sp.) • Impact of climate change (altered fire and flooding regimes, prolonged drought and heat stress, poor regeneration and recruitment)	• Altered hydrological regime • Dust suppression • Weed invasion • Altered fire frequency and intensity • Impact of plant diseases (<i>Phytophthora</i> sp.)	• Only three patches of potential TEC (patch 5, 7 and 6) were recorded within the Survey Area (Figure 3-2). • The allocation of these areas was based on vegetation type, size and condition. • Only one patch (12.44 ha in size and in a degraded condition) will be directly impacted by the Proposal, the other two may be subjected to indirect impacts.



3.4.2 Introduced Flora

A total of 37 introduced (weed) species have been recorded within the Survey Area (**Table 6**). In addition to those listed in **Table 6**, there were four planted tree species within the Survey Area (**Pinus* sp., **Schinus molle*, *Eucalyptus camaldulensis* and *Eucalyptus cladocalyx*) which are not native to this area (Mattiske 2025).

One of these introduced species (**Asparagus asparagoides* – Bridle Creeper) is a declared pest pursuant to Section 22 of the BAM Act 2007 (DPIRD 2025) and also a Weed of National Significance (WONS) (Weeds Australia 2025). This species will require removal and monitoring in case it spreads into additional areas.

A range of weeds are listed as having a “High” or “Moderate” impact rating and “Rapid” invasiveness by the Department of Parks and Wildlife (2013) (**Table 6**). Level of invasiveness reflects the degree of disturbances near infrastructure and agricultural areas within the Survey Area.

Table 6: Introduced Flora Species Recorded in the Flora and Vegetation Survey Area (Mattiske 2025).

Species	Common Name	WONS	Declared Weeds (WAOL)	Ecological Impact	Invasiveness
<i>Aira caryophyllea</i>	Silver hairgrass		Permitted – S11	High	Rapid
<i>Arctotheca calendula</i>	Capeweed		Permitted – S11	High	Rapid
<i>Asparagus asparagoides</i>	Bridal creeper	WONS	Declared – S22(2)	High	Moderate
<i>Avellinia festucoides</i>	N/A		Permitted – S11	Unknown	Unknown
<i>Avena barbata</i>	Slender wild oat		Permitted – S11	High	Rapid
<i>Avena</i> sp.	Wild oats		Permitted – S11	High	Rapid
<i>Briza maxima</i>	Greater quaking-grass		Permitted – S11	High	Rapid
<i>Bromus diandrus</i>	Ripgut brome		Permitted – S11	High	Rapid
<i>Carduus pycnocephalus</i>	Italian thistle		Permitted – S11	Moderate	Rapid
<i>Disa bracteata</i>	South African weed orchid		Permitted – S11	Moderate	Rapid
<i>Ehrharta longiflora</i>	Long flowered veldtgrass		Permitted – S11	Unknown	Moderate
<i>Erodium botrys</i>	Longbeak stork's bill		Permitted – S11	Low	Moderate
<i>Frankenia pulverulenta</i>	Pink samphire		-	Unknown	Unknown
<i>Hordeum hystrix</i>	Australian barley		Permitted – S11	Unknown	Rapid
<i>Hordeum marinum</i>	Sea barley		Permitted – S11	Unknown	Rapid



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

Species	Common Name	WONS	Declared Weeds (WAOL)	Ecological Impact	Invasiveness
<i>Hypochaeris glabra</i>	Smooth catsear		Permitted – S11	Unknown	Rapid
<i>Hypochaeris radicata</i>	Common catsear		Permitted – S11	Unknown	Rapid
<i>Lepidium africanum</i>	African peppergrass		Permitted – S11	Unknown	Unknown
<i>Lolium perenne</i>	Perennial ryegrass		Permitted – S11	Unknown	Moderate
<i>Lolium sp.</i>	Ryegrasses		Permitted – S11	Unknown	Moderate
<i>Lysimachia arvensis</i>	Scarlet pimpernel		Permitted – S11	Unknown	Rapid
<i>Medicago polymorpha</i>	Bur medic		Permitted – S11	Unknown	Unknown
<i>Medicago sp.</i>	Medics		Permitted – S11	Unknown	Unknown
<i>Mesembryanthemum nodiflorum</i>	Common ice plant		Permitted – S11	High	Rapid
<i>Oenothera stricta</i>	Narrow-leaved evening primrose		Permitted – S11	Low	Rapid
<i>Orobanche minor</i>	Lesser broomrape		Permitted – S11	Moderate	Rapid
<i>Oxalis corniculata</i>	Creeping wood sorrel		Permitted – S11	Unknown	Unknown
<i>Petrorhagia dubia</i>	Doubtful rockrose		Permitted – S11	Unknown	Rapid
<i>Puccinellia ciliata</i>	Saltwater grass		Permitted – S11	High	Unknown
<i>Raphanus raphanistrum</i>	Wild radish		Permitted – S11	Unknown	Rapid
<i>Romulea rosea</i>	Pink fairy		Permitted – S11	High	Rapid
<i>Sonchus oleraceus</i>	Sow thistle		Permitted – S11	Unknown	Rapid
<i>Trifolium angustifolium</i>	Narrow-leaved clover		Permitted – S11	Unknown	Unknown
<i>Triticum aestivum</i>	Bread wheat		Permitted – S11	Unknown	Unknown
<i>Ursinia anthemoides</i>	Yellow daisy		Permitted – S11	Unknown	Rapid
<i>Vulpia muralis</i>	Wall fescue		Permitted – S11	Unknown	Rapid
<i>Vulpia myuros</i>	Rat's tail fescue		Permitted – S11	Unknown	Rapid



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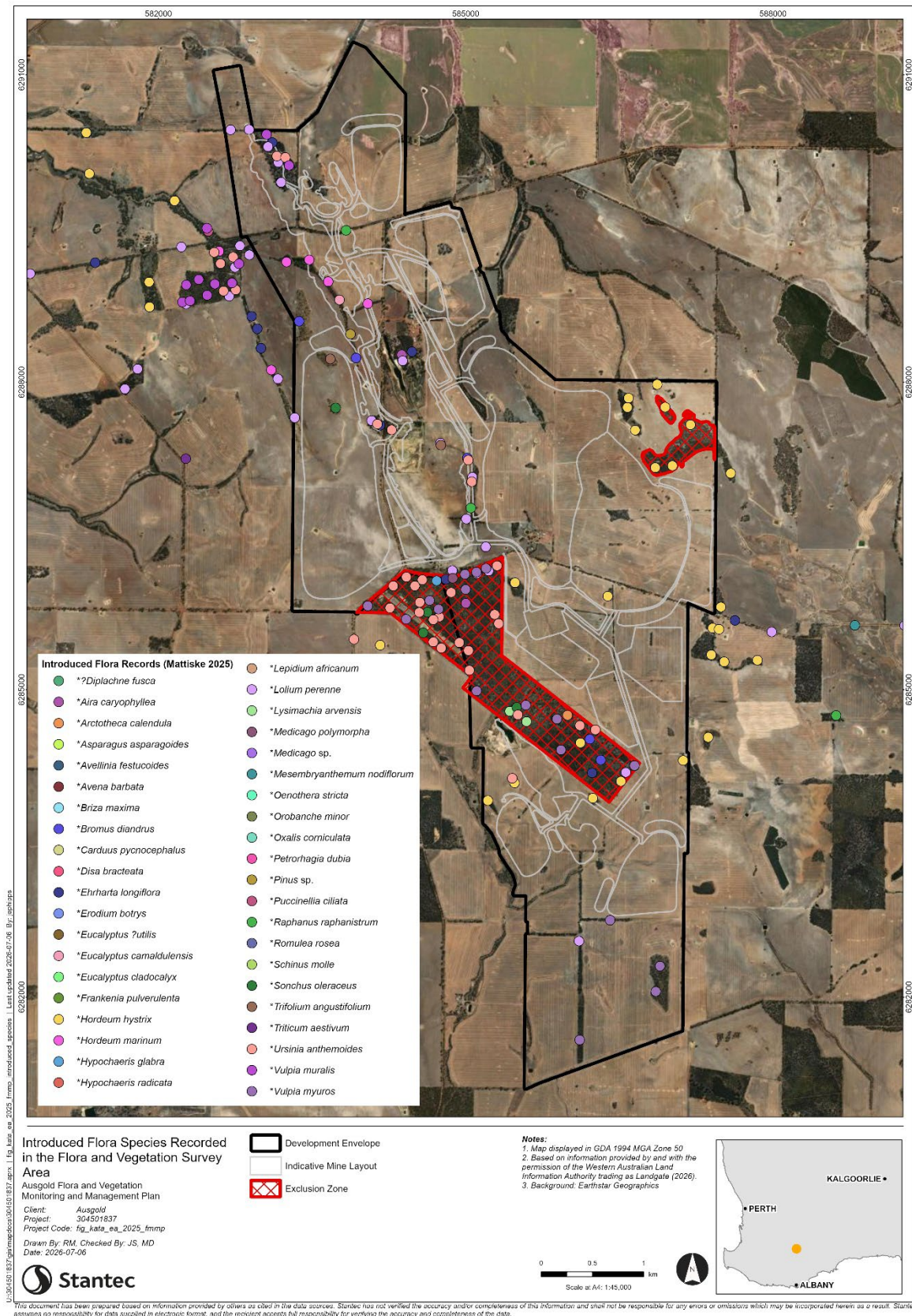


Figure 4: Introduced Flora Species Recorded in the Flora and Vegetation Survey Area.



3.5 Management Approach

This section outlines the management approach of the FVMMP. The approach comprises outcome-based and objective-based management provisions, with appropriate indicators developed for environmental objectives and criteria, which are robust and measurable, where possible.

Outcome-based management provisions are applied where a sufficient level of information exists to measurable criteria (EPA 2024), defined to assess performance against the environmental outcome. These include:

- **Trigger Criteria** - Measures set at a conservative level (trigger criteria), to forewarn the approach of threshold criteria and ensure trigger level response actions are implemented well in advance of an environmental outcome being compromised.
- **Threshold Criteria** - Framed to represent the limit of acceptable impact beyond which there is likely to be a significant effect on the environment. This indicates there is risk that the environmental outcome will not be met.

The approach meets the requirements of the (DCCEEW 2024) interim guidance which defines a **trigger** level as “A predefined **threshold**, typically a given mortality level, that when reached or exceeded triggers a management response”.

Objective-based management provisions are applied where a level of uncertainty exists or where performance cannot be measured against trigger or threshold criteria. In this case, management targets are established to measure the success of management actions in achieving the environmental objective. Complementary provisions (including both outcome and objective-based) have also been applied to address values where a high level of management is required. These have been determined based on the outcome of the risk assessments for Matters of National Environmental Significance (MNES) confirmed within the Proposal area and/or where a degree of uncertainty and complexity exists.

3.6 Key Assumptions and Uncertainties

Ausgold is committed to supporting the conservation of flora and vegetation within the vicinity of the Proposal. Survey work for the Proposal has contributed substantially to the occurrence and ecology of flora and vegetation in the region. However, it is acknowledged that there are remaining knowledge gaps, which may better inform management by implementation of this FVMMP.

The key assumptions and uncertainties that apply to flora and vegetation are summarised as follows:

- It is assumed that targeted surveys for significant flora have adequately characterised the populations potentially impacted and are of suitable standard to implement proposed management targets.
- The extent to which environmental and climatic factors outside of the Proponent's control will impact on the health and extent of populations of significant flora.
- Variation in soil condition over the Disturbance Envelope and within the revegetation zones.
- It is assumed that impacts to significant vegetation will be minimised by utilising areas of existing disturbance, minimising clearing, and implementing progressive rehabilitation throughout the life of the Proposal.



3.7 Proposal Impacts

Considering the key assumptions and uncertainties, the potential impacts of the Proposal on flora and vegetation within the Wurgabup Rifle Range Reserve and Woorgabup Nature Reserve include the following:

- Potential direct impacts:
 - Unauthorised clearing outside the approved Indicative Footprint.
- Potential indirect impacts:
 - Introduction and / or spread of introduced flora species.
 - Degradation of vegetation as a result of altered hydrological regimes.
 - Degradation of vegetation through dust deposition.

3.8 Application of the Mitigation Hierarchy

The EPA mitigation hierarchy has been applied to avoid and minimise potential Proposal-related impacts to flora and vegetation within the Proposal Area, through the development of appropriate objectives and targets for management provisions (**Section 4**). This approach has been informed by best practice and experience on similar infrastructure projects in Western Australia. Mitigation measures focus on flora and vegetation, where relevant, aligning with the management provisions in this Plan.

The Proposal will **avoid** impacts to flora and vegetation via the following:

- Mining activities over the Wurgabup Rifle Range Reserve and Woorgabup Nature Reserve has been entirely avoided, with a buffer zone from all infrastructure to maintain the presence and function of remnant vegetation (much of this integrated reserve is mapped as 'Very Good' condition Eucalypt Woodlands of the Wheatbelt (TEC).
- Proposed clearing has been minimised as far as practicable to reduce the extent of disturbance required elsewhere on mining tenements. The siting of very large infrastructure (particularly the Main Waste rock Landform and TSF) will avoid intact areas of native flora and vegetation, including a 20 ha bushland parcel on Ausgold's freehold land on M70/1426 (mapped as Eucalypt Woodlands of the Wheatbelt TEC).
- Land Clearing Procedures will be implemented to ensure all clearing works are compliant with regulatory requirements and are within the approved boundary.

The Proposal will **minimise** impacts to terrestrial fauna via the following:

- Minimisation of significant land clearing through location of infrastructure on as much cleared farmland where practicable. The clearing of an intact stand of significant trees is minimised to an area coincident with Eucalypt woodland atop a mine pit (Jackson). The overall clearing, based on mapping Eucalypt canopy, was reduced to less than 50 ha.
- Implement this FVMMP.
- Clearing to be undertaken in stages as required for operational purposes and in accordance with site ground disturbance permitting procedures.
- During clearing operations, an authorised fauna expert will be present to relocate fauna if necessary.
- Measures introduced to minimise the spread of weeds, including vehicle hygiene procedures and restriction of access where required.
- Dust management procedures.



- Measures will be developed and implemented to offset any significant residual impacts on MNES arising from the Proposed Action.
- Clearing awareness training is undertaken by all personnel involved in clearing activities.
- Vegetation clearing shall be kept to the minimum amount required, as far as practicable.
- Preparing and Implementing a Weed Management Plan (WMP) prior to construction and operation, to manage weed loads and to control access and movement of vehicles and construction personnel to control the introduction and spread of weeds into the Development Envelope, weed free areas, and between work areas (**Appendix B**).
- Vehicles and equipment shall be restricted to designated roads and tracks.
- Fire management plan including:
 - Firefighting training shall be delivered to all personnel as part of the induction process.
 - Hot Work permits shall be prepared and implemented.
 - All vehicles and machinery will be fitted with fire extinguishers and/or in-plant fixed water suppression.
 - Fire extinguishers will be located within the landfill facility
 - Firebreaks will be incorporated into mine layout planning in accordance with the local government firebreak notice under s. 33 of the *Bush Fires Act 1954*.
 - Smoking will only be permitted in designated areas, which shall be appropriately signed and contain self-arresting cigarette butt disposal containers.
- An Emergency Response Plan shall be prepared and implemented.
- The Emergency Response Team will ensure that sufficient operational fire suppression equipment is located as per the Emergency Response Plan.

The Proposal will **monitor** impacts to flora and vegetation via the following:

- The Vegetation Health Monitoring Program (**Appendix A**) will be implemented to evaluate the performance of mitigation and management measures to achieve environmental objectives and outcomes outlined within the FVMMP (**Table 7** and **Table 8**)
- Evaluate the success of the mitigation measures within the FVMMP and implement appropriate corrective response actions, through the adaptive management process, as required (**Section 7**).

The Proposal will rehabilitate impacts to significant flora via the following:

- Implement an appropriate rehabilitation plan and seek amendment, if required, in accordance with any relevant conditions applied by regulators, an approved Mine Closure Plan.
- Seasonal weed control programs shall be implemented, including herbicide spraying or physical removal, as required.
- Weeds which are physically removed will be disposed of at landfill.
- Waste Rock Landform to be progressively rehabilitated over the LOM to optimise public amenity and encourage early re-establishment of vegetation.

4 Management Provisions

The subsequent sections identify the management provisions that will be implemented by Ausgold to achieve the environmental objectives, criteria, targets, and outcomes. The outcome-based and objective-



based management provisions will be reviewed and updated as required using an adaptive management approach (**Section 7**).

4.1 Identification of Indicators and Rationale

The development of environmental objectives and criteria for outcome-based provisions within the FVMMP are based on available data and information and have been aligned with the purpose of the FVMMP. Outcome-based provisions utilise monitoring and reporting to assess the measurable environmental criteria. The triggers and thresholds in some instances are considered preliminary and will be revised as further data becomes available from the Monitoring Program (**Appendix A** and **Appendix B**). In addition, typically where data or information is considered limited, objective-based provisions have been applied, with management targets to address knowledge gaps, with corresponding monitoring and reporting requirements.

After monitoring, where threshold criteria (outcome-based) or management targets (objective-based) are shown to not be met or exceeded due to the Proposal, the respective response and corrective actions that have been proposed will be implemented. Monitoring will inform adaptive management (**Section 7**) and revisions to environmental criteria, responses, or corrective actions will be made as required. Conservative trigger and threshold criteria have been developed to allow for the early identification of any potential impacts, and the implementation of appropriate management responses to avoid a potential adverse impacts to the Mine Exclusion Zones (**Figure 1**).

4.2 Outcome-based Provisions

The FVMMP focuses on outcome-based provisions, which are performance-based and can be audited. The management provisions developed are measurable, and the success of management actions can be monitored and reported. Outcome-based provisions specify triggers and thresholds (environmental criteria) for direct impacts that are quantifiable and specifically relate to Proposal-related impacts that may affect vegetation (**Table 7**). Two outcome-based provisions have been developed for the FVMMP, with associated triggers and thresholds. Where required, suitable response and corrective actions are also recommended for the environmental criteria. The following outcome-based management provisions (referred to as Outcome 1 etc.) for vegetation (**Table 7**) have been established as follows:

- **Outcome 1:** Avoid adverse indirect impacts to significant vegetation in the Mine Exclusion Zones due to Proposal related dust deposition, soil contamination, and changes to hydrology.
- **Outcome 2:** Avoid the introduction of new weed species or the spread of existing weed species in the Mine Exclusion Zones as a result of the Proposal.

4.3 Objective-based Provisions

Objective-based provisions relate to environmental management actions that are not specifically measurable. They set out management actions according to management targets, particularly for indirect impacts that are not quantifiable. For vegetation, as ongoing monitoring is undertaken, these management targets will be reviewed, and quantifiable outcome-based provision(s) will be established accordingly, where possible. Five objective-based management provisions have been outlined in **Table 8**, to prevent adverse Proposal-related impacts to vegetation populations within proximity to the Proposal with appropriate management actions and monitoring actions.

The following objective-based management provisions (referred to as Management Objective; MO 1, MO 2 etc.) for vegetation (**Table 8**) each with specific and measurable management targets, have been established as follows:



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

- **MO1:** No clearing of vegetation shall occur outside of the approved, demarcated clearing areas during construction or operations.
- **MO2:** No proliferation or introduction of new weed species rated as high or very high management priority by DBCA in the Proposal Area as a result of the Proposal
- **MO3:** No new occurrence of recorded weed species within the Development Envelope as a result of construction and operation of the Proposal.
- **MO4:** Effective operation of the Proposal to minimise the risk of Proposal related fire.
- **MO5:** Minimise Proposal related decline to vegetation due to dust, hydrocarbon or chemical leaks and altered hydrological regimes.



Table 7: Flora and Vegetation Outcome-based Provisions.

EPA Factor and Objective	Flora and Vegetation: ' To protect flora and vegetation so that biological diversity and ecological integrity are maintained ' (EPA 2016a). Reflected in this management table as specific outcomes (Outcome 1, Outcome 2 etc.).						
FVMMP Purpose	Implement the Proposal in a manner that ensures there is no significant adverse Proposal-related direct or indirect impacts to vegetation associated with the Proposal.						
Key Impacts and Risks	Potential loss or degradation of significant vegetation from the Proposal area, as a result of implementation of the Proposal.						
Indicators	Decline in the health of vegetation important for supporting significant fauna species. Increase in the proliferation of existing weeds or introduction of new weed species.						
Outcome - based Management Provisions	Trigger and Threshold Criteria		Trigger and Threshold Response Actions		Monitoring	Timing/ Frequency of Monitoring	Reporting
	Trigger Criteria	Threshold Criteria	Trigger Level Actions	Threshold Criteria and Corrective Actions			
Outcome 1: Avoid adverse indirect impacts to significant vegetation in the adjacent Wurgubup Reserves due to Proposal related dust deposition, soil pollution, and changes to hydrology as a result of the Proposal.	Unauthorised total loss of native vegetation in the Wurgabup Rifle Range Reserve and Woorgabup Nature Reserve of more than 0.1 ha due to elevated dust deposition, changes to hydrology or soil contamination (attributed to the Proposal).	Unauthorised loss of native vegetation in the Wurgabup Rifle Range Reserve and Woorgabup Nature Reserve of more than 0.2 ha due to elevated dust deposition, changes to hydrology or soil contamination. (attributed to the Proposal).	- Report internally as an incident in accordance with internal procedures. - Initiate investigation to identify the cause of impact (changes to hydrological regime, dust deposition and soil contamination). - Engage independent environmental consultant if necessary. - Review management strategies and increase frequency of monitoring in affected areas which may include: - Increase use of water carts or dust suppressants. - Inspect and adjust drainage and surface water management infrastructure to restore natural flow paths. - Conduct soil sampling in affected area for contaminants. - Audit and review of training and staff inductions (increase staff training and awareness to include information on buffers, legislative requirements, and appropriate procedures. - Report as a non-compliance to Department of Water and Environmental Regulation (DWER) within 7 days of identification. - Installation of signage where appropriate.	- Temporarily halt operations in areas directly linked to the impact until control measures are verified as effective. - Report as a non-compliance to DWER within 7 days of identification. - Commission an independent third-party audit of the cause, scale and effectiveness of implemented controls. - Investigation report to be submitted to DWER with remediation actions proposed within 28 days of incident report. - Review FVMMP to revise mitigation and monitoring strategies and revise Trigger/Threshold levels if necessary.	1. Monitoring in accordance with the Vegetation Health Monitoring Program (Appendix A)	1. Biannual to Quarterly	- Annual Environmental Reporting. - Annual Compliance Assessment Report (ACAR). - Survey data. - Monitoring Program reporting as appropriate. - Incident reports.
Outcome 2: Avoid the introduction of new weed species or the spread of existing weed species in the Wurgubup Reserves as a result of the Proposal.	Detection of new weed species rated high or very high management priority (by DBCA) at a potential impact site where it was not detected during baseline weed mapping of the Proposal Area and a significant increase in cover or abundance over successive monitoring events.	- Detection of a Declared Pest Plant or Weed of National Significance which was not detected during baseline weed surveys for in the Wurgubup Reserves. - A significant increase in cover or abundance of an existing Declared Pest Plant or Weed of National Significance over successive monitoring events.	- Report as incident internally. - Investigate cause of occurrence and manage in accordance with the Indicative Weed Management Plan (Appendix B). - Review management strategies in the Indicative Weed Management Plan (Appendix B) and implement changes to prevent future weed occurrences, where possible. - If exceedance is attributed to Proposal-related activities, undertake a review of procedures to determine if	- Report any non-compliance to DWER within 7 days of identification. - Undertake investigation to determine source of the exceedance. - If Proposal-related, undertake review to determine if impact can be minimised, develop actions to prevent recurrence and communicate findings to relevant personnel.	1. Biannual monitoring of the presence and abundance of weeds compared to baseline presence and abundance to determine the effectiveness of control programs.	1. Bi-annually	- Monitoring reports. - Annual Environmental Reporting. - Annual Compliance Assessment Report (ACAR). - Survey data. - Monitoring Program



	New weed species rated high or very high management priority (by DBCA) (not detected during baseline weed surveys for the Proposal Area) becomes established¹	impact can be minimised, develop corrective actions with consideration of the following: - Consider revising Weed Monitoring Sampling Frequency and educate staff on weed identification and weed hygiene practices. - Implement weed control as required. - Undertake weed control in accordance with the identified weed control techniques (Appendix B).	- If continued increase in exceedance is recorded over three consecutive events, additional targeted weed control should be considered. - Revise Weed Monitoring Sampling Frequency accordingly and monitor the success of corrective actions. - Undertake weed control in accordance with the identified weed control techniques (Appendix B).	reporting as appropriate. Incident reports
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¹ Where ‘established’ means ‘A weed species which has grown to maturity and reproduced. Weeds are producing a viable second generation of individual plants signifying persistence at a given location despite treatment.



Table 8: Flora and Vegetation Objective-based Provisions.

EPA Factor and Objective		Flora and Vegetation: ' To protect flora and vegetation so that biological diversity and ecological integrity are maintained ' (EPA 2016a).			
FVMMP Purpose		To avoid adverse Proposal-related impacts to flora and vegetation, including significant flora and vegetation.			
Key Impacts and Risks		Potential loss or degradation of vegetation from the Wurgubup Reserves, as a result of the indirect impacts from implementation of the Proposal.			
Indicators		Potential risk to long term viability of native flora and vegetation situated in the Wurgubup Reserves, due to direct impacts from dust and changes to hydrological and fire regimes.			
Management Target	Management Actions	Monitoring	Timing/ Frequency of Monitoring	Responsibility	Reporting
MO1: No clearing of vegetation shall occur outside of the approved, demarcated clearing area(s) during construction or operation					
1. Authorised limit of vegetation clearing as per Schedule 1 of Ministerial Statement (TBA) not to be exceeded.	- Areas to be cleared shall be clearly demarcated and machinery operators made aware of the operational boundary, following confirmation with the relevant manager. - Clearing awareness training is to be undertaken by all personnel involved in clearing activities. - Proposed clearing has been minimised as far as practicable to reduce the extent of disturbance required. - In unpegged areas, the use of GPS guided machinery shall be used, provided the appropriate Land Access Permit and Land Clearing Procedure processes have been followed. - Delineate clearing boundary areas by qualified surveyors in the field and confirmed cleared areas via survey after clearing. Coordinates for clearing extents will be provided to the Construction Contractor. - Vehicles and equipment shall be restricted to designated roads, track and cleared areas. - Native vegetation clearing activities will be supervised by fauna expert.	- Visual inspections for evidence of: - adherence to boundary demarcation compliance. - unauthorised access or clearing (e.g., observations of vehicles or machinery, vehicle tracks, damage to fencing or vegetation). - Monitoring of clearing register for compliance to approvals: - pre-clearance and post-clearance photographs of cleared vegetation. - measurement (by surveyor) of clearing locations and extents within four weeks of any clearing event. - quarterly land disturbance reconciliation (hectares and spatial footprint). - Provision of geo-referenced drone images to verify clearing boundary. - Analysis of clearing undertaken via aerial imagery survey to assess whether any unauthorised clearing has occurred. - Internal incident reporting and investigation process.	- During construction (pre-clearing, clearing and post-clearing activities). - Annual aerial imagery analysis to monitor clearing extent. - Post clearing. - As triggered.	- Project Manager. - Construction Manager. - Operations Manager. - Environmental Superintendent.	Regular reporting: - Monitoring reports-clearing register and Internal clearing permits. - Submit an annual compliance assessment report as part of the Annual Environment Report to the DWER by (date to be determined) each year. - Internal incident reporting and investigation process. Exceedance Reporting: - Management action has not been implemented (report in accordance with Section 5). - Management target has not been achieved (report in accordance with Section 5).
MO2: No proliferation or introduction of new weed species rated as high or very high management priority by DBCA in the Proposal Area as a result of the Proposal.					
MO3: No new occurrence of recorded weed species within the Development Envelope as a result of construction and operation of the Proposal.					
- No introduction of new weed species rated as a high or very high management priority by DBCA in the Proposal Area as a result of the Proposal. - Weed management programs should be designed in accordance with relevant EPBC Act weed threat abatement plans.	Avoid: - A Land Clearing Procedure will be implemented to ensure all clearing works are compliant with regulatory requirements and are within approved boundary. Minimise: - A Weed Management Plan shall be prepared and implemented as part of the FVMMP, prior to construction and operation, to control access and movement of vehicles and construction personnel to prevent the introduction and spread of weeds into the Development Envelope, weed free areas, and between work areas. - Vehicles and equipment to be cleaned, inspected and issued with a Weed Hygiene Certificate (WHC) prior to entry to site or moving between areas on-site.	- Biannual monitoring of the presence and abundance of weeds (in accordance with the FVMMP) compared to baseline presence and abundance to determine the effectiveness of control programs. - Inspection of cleared and rehabilitated areas to detect presence of new weed species and/or new occurrences of existing weed species to determine success of management actions. - Inspection of vehicles and equipment used for construction activities at entry and exit points. - Post-construction inspection of cleared areas to detect presence of new weed species and/or new occurrences of existing weed species.	Bi-annually or Annually (as a minimum). Monitoring to be undertaken seasonally, ideally following winter rains before flowering/seedset.	- Project Manager. - Construction Manager. - Operations Manager. - Environmental Superintendent.	- Compliance against these Management Targets will be included within a CAR, submitted as part of the AER for the Proposal. - Complete an incident report if new weed species and/or new occurrences of existing weed species are recorded.



3. Weed management procedures informed by best practice management of the weed species identified during weed baseline surveys. 4. No new occurrences of existing weeds within the Development Envelope as a result of construction and operation of the Proposal.	- Vehicles and equipment shall be restricted to designated roads and tracks. - Weed awareness and weed hygiene training shall be delivered to all personnel as part of the induction process, in accordance with the training procedure (Section B.7.7), including the environmental implications of the introduction and spread of weeds, identification of weed species, and the process for reporting observations. - Regular inspection and maintenance of vehicles and equipment shall be undertaken. - Restrict movement of topsoil at known weed locations. - Ensure timely response for the management of any declared weed occurrences or other weed infestations occurs. Rehabilitate: - Seasonal weed control programs shall be implemented, as required. - Progressive rehabilitation of disturbed areas will be undertaken throughout the LOM, as far as practicable. Contingency Actions (if Management Targets not met): - Investigate cause or source of infestation. - Inspect surrounding area to assess extent of infestation. - Review weed hygiene measures for efficacy. - Review training and implementation of weed hygiene measures. - Implement control measures (e.g. spraying, removal) at seasonally appropriate time. - Monitor success of control actions. - Review frequency and suitability of weed monitoring and control measures. - Revise areas of restrict access in accordance with occurrence of new weed species and/or new occurrences of existing weed species.				
MO4: Effective operation of the Proposal to minimise the risk of Proposal related fire.					
1. Provision and maintenance of firefighting equipment in accordance with the relevant fire safety standards. 2. Firefighting emergency response plan and procedures are in place.	- Off-road driving shall be prohibited unless authorised by management. - Hot work not be conducted in fire-sensitive zones on days declared a Total Fire Ban or during elevated Fire Danger Ratings. - Fire management and firefighting training shall be delivered to all personnel as part of the induction process. - Firebreaks will be incorporated into mine layout planning in accordance with the local government firebreak notice under s.33 of the <i>Bush Fires Act 1954</i>. - Smoking will only be permitted in designated areas, which shall be appropriately signed and contain self-arresting cigarette butt disposal containers. - An Emergency Response Plan shall be prepared and implemented. - An Emergency Response Team shall be formed, and members will be trained in Certificate III - Mine Emergency Response and Rescue.	1. Inspection and maintenance of fire breaks in accordance with the local government firebreak notice under s. 33 of the <i>Bush Fires Act 1954</i>. 2. Regular inspection of vehicles and fire response equipment shall be undertaken.	1. As required in accordance with the local government firebreak notice under s. 33 of the <i>Bush Fires Act 1954</i>. 2. Quarterly.	- Project Manager. - Construction Manager. - Operations manager. - Environmental Superintendent.	Regular reporting: - Internal incident reporting, emergency response and investigation process in the event of a fire, in accordance with internal incident reporting procedure. - Submit an annual compliance assessment report as part of the Annual Environment Report to the DWER by (date to be determined) each year.



	- The Emergency Response Team will ensure that sufficient operational fire suppression equipment is located as per the Emergency Response Plan. - A Traffic Management Plan shall be prepared and implemented. - A Hot Work Management Plan shall be prepared and implemented, incorporating a Hot Work Permit system for high ignition risk work activities. - Regular inspection and maintenance of vehicles and equipment shall be undertaken. - All vehicles and machinery will be fitted with fire extinguishers and/or in-plant fixed water suppression, and water carts should be fitted with firefighting equipment. - Fire extinguishers will be located within the landfill facility. - All fuel stored on site is to be contained within a secure bund or other facility. - If hot works adjacent to vegetation cannot be avoided, the area immediately surrounding 'hot work' is to be dampened with water. - Implement an appropriate rehabilitation plan (surface treatments; seed selection, collection, storage and management) in accordance with the approved MCP, following fire.				Exceedance reporting: - Management action has not been implemented (report in accordance with Section 5). - The management target has not been achieved (report in accordance with Section 5).
MO5: Minimise Proposal related decline to flora and vegetation due to dust and hydrocarbon or chemical leaks and altered hydrological regimes.					
- Hazardous Substances Management Plan and Procedure implemented. - Spill response training for all personnel and contractors. - Fuel response equipment will be located at all high traffic areas around the mine and at chemical/hydrocarbon storage/transfer areas. - Dust management plan in place. - Dust suppression measures in place. - Implement speed limits on unsealed tracks.	Wastewater: - Develop a Controlled Waste Management Procedure. - Maintain high standard of housekeeping around processing plant and associated infrastructure. - Adhere to wastewater best practice health and environmental legislation and guidelines for irrigation of treated wastewater. Increased Soil Salinity: - Pipelines to be installed in earthen bunded culverts to prevent spills from discharging into the surrounding environment. Dust Deposition: - Develop and implement Dust Management Plan including the use of water carts along haul roads. Hydrocarbon and Chemical Spills: - Fuel and chemical storage or transfer must take place within designated bunded areas; any required in-pit refueling or top-ups must utilise compliant mobile service trucks with integrated spill kits and containment controls. - Ensure spill response equipment available. - Spill response training for all personnel and contractors. - Maintain high standard of housekeeping around construction activities. - Develop an Emergency Spill Response Plan and ensure all personnel and contractors are trained in the correct response. - Develop an Incident Reporting Procedure and ensure all personnel are aware of the procedure.	- Daily wind conditions will be taken into consideration when clearing activities are proposed. - Regular pipeline inspections and maintenance. - Internal incident reporting and investigation process. - Monitor SWL and water quality in monitoring bore network as specified by the Part V Premises Licence.	- Daily. - As required. - As triggered. - Monthly SWL and quarterly comprehensive water analysis.	- Project Manager. - Construction Manager. - Operations Manager. - Environmental Superintendent.	Regular Reporting: - Annual Compliance Assessment Report (ACAR). - Internal incident reporting and investigation process.



	• Bioremediation facility for the treatment of contaminated fill, soils, or sediment. • Develop an Incident Reporting Procedure.				
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5 Monitoring

Ausgold will undertake monitoring to assess the implementation of the Management Actions (**Table 4-1**, **Table 4-2**) required to meet the purpose and objectives of this FVMMP (**Section 1.4**). Inspection frequency will be based on the inherent risks for different activities and/or work area. In addition, vegetation and weed monitoring programs have been developed and are presented in **Appendix A** and **Appendix B**.

The Monitoring Program has been developed to achieve the following objectives:

- Monitor the success of mitigation and management and detect potential impacts to significant vegetation and tree health.
- Evaluate potential impacts against trigger, threshold, and target criteria (management provisions).
- Report exceedances against environmental criteria and implement corrective actions where required.
- Assess the effectiveness of the environmental criteria to inform adaptive management and revision where required.

Where environmental threshold criteria are exceeded, potential corrective actions have been identified for significant flora and vegetation (**Section 4**).

5.1 Annual Reporting

Agencies may condition this plan into instruments of approval. Typically, an Annual Compliance Assessment Report (ACAR) will be prepared for submission to:

- DWER/EPA depending on issue of Ministerial Statement
- DCCEEW annually for MNES related values.

The format and contents of these reports will align with the conditions and requirements stipulated by the individual authorities and demonstrate compliance.

5.2 Exceedance Reporting

In the event that a threshold within this plan is exceeded, the DWER, EPA, DMPE and DBCA will be notified, as required within 7 days of identification of the exceedance in accordance with **Section 4** (**Table 4-1**).

For matters regulated under the EP Act:

- The Proponent will report a non-compliance to DWER within 7 days of identification.
- The Proponent will provide an investigation report to be submitted to DWER with remediation actions proposed within 28 days of incident report.

For matters relating to MNES:

- Proponent will report to DCCEEW in the event that monitoring, tests, surveys or investigations indicate exceedance of threshold criteria, the exceedance will be reported in writing to the DCCEEW within seven (7) business days of the exceedance being identified.
- The Proponent will provide a report to the CEO within twenty-one (21) days and to the DCCEEW within twenty-one (21) business days of the exceedance being reported.



5.3 Incident Reporting

All environmental incidents, regardless of the scale and nature of the incident, will be reported in accordance with the internal incident reporting procedure to the Environment Manager as soon as practicable. The following procedure will be adhered to:

- All environmental near misses and incidents will be recorded within an incident management system. Incidents will be recorded internally by the person/s who cause or identify the event, within 24 hours of the incident occurring.
- The area supervisor or Superintendent will determine the need for corrective actions and level of investigation required dependent on severity of the incident. Investigations will be conducted in accordance with investigation procedures and recorded within the incident reporting system within two weeks of the incident occurring, or as instructed by the Environment Manager
- Where applicable, environmental incidents will be reported to the relevant regulatory authorities by the Environment Manager.
- In the event of a non-compliance, the cause of the non-compliance will be investigated and reported as an incident. Corrective actions will be developed and recorded, and outcomes monitored, as required. Non-compliance and incident reports will be closed out by the Environment Manager.

6 Roles and Responsibilities

The key personnel involved in implementation of the FVMMP and their roles and responsibilities are listed in **Table 6-1**.

Table 9: Roles and responsibilities for implementation of the FVMMP.

Role	Responsibility
Ausgold General Manager or delegate	• Ausgold have the overall responsibility for implementation of the FVMMP. • Audit and compliance. • Engagement with key stakeholders.
Manager Environment (may delegate all or part responsibility to an appropriately qualified person)	• Obtain relevant approvals from regulatory agencies for disturbance as required. • Undertake monitoring as detailed in Section 5 of this Plan. • Monitor and report incidents. • Maintain clearing register to ensure compliance with approvals. • Undertake internal audits and inspections of clearing areas and compliance with FVMMP. • Implement and maintain the FVMMP, review its effectiveness and review the implementation as required. • Undertake training and inductions of personnel in accordance with the FVMMP. • Liaise with stakeholders and technical experts for advice and resolution of management aspects/objectives as required. • Engagement with Traditional Owners. • Report as required to regulating authorities.



All personnel (including contractors)	• Complete induction prior to commencement of work on site. • Toolbox • Training • Comply with requirements in FVMMP. • Report any incidents through the incident management system within 24 hours.
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7 Adaptive Management and Review

The FVMMP has been designed to be adaptive and should be updated over the life of the Proposal. It is expected that additional information from the monitoring program will be used to revise environmental criteria and response actions in the FVMMP, as required. Changes that may prompt the revision of the FVMMP include:

- Addressing items identified during incident investigations.
- Audits or inspections.
- Additional information or data becomes available.

Suitable adaptive management actions may include:

- Adjusting the activity causing the impact,
- Implementing a mitigation measure (Contingency measures detailed in **Table 4-1** and **Table 4-2**).

The FVMMP will be reviewed and revised every three years throughout the life of the Proposal, or as deemed necessary. Any revisions by Ausgold will be undertaken in consultation with DWER/EPA, DBCA, and/or DCCEEW. The review process will include:

- **Periodic review and evaluation of monitoring data or methodology** – to determine whether monitoring results indicate that management provisions and environmental objectives are suitable, and management targets can be achieved.
- **Increased understanding of this factor and habitat requirements of biota** – as additional information is received, which may be used to better inform environmental criteria, management or response actions.
- **Proposal changes** (such as design and processing, or technical advances and innovation) – consider the relevance and effectiveness of management provisions will be considered following any significant changes to the Proposal.



8 EMP Changes

This FVMMP (v1) is the original version submitted to the EPA and DCCEEW for review prior to assessment. All changes to the FVMMP post-assessment must be provided separately to compliance reports and submitted to DWER and DCCEEW (for matters relating to MNES) for approval with changes summarised in **Table 8-1**.



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

Table 10: Changes to FVMMP.

Complexity of Changes					Minor Revisions ☐	Moderate Revisions ☐	Major Revisions ☐		
Number of Key Environmental Factors					One ☐	Two – Three ☐	> Three ☐		
Date Revision submitted to EPA: DD/MM/YYYY									
Proponent's Operational Requirement Timeframe for approval of revision for Timeframe:					< One Month ☐	< Six Months ☐	> Six Months ☐	None ☐	Reason
Item No.	EMP Section No.	EMP Page No.	Summary of Change	Reason for Change					



9 Stakeholder Consultation

Ausgold's stakeholder engagement process aims to provide a measurable and positive impact to social, economic and environmental aspects. Ausgold continues to recognise the nature, types and risks of impacts and benefits of its business and is increasingly confident it possesses the capabilities to provide strong social performance based on guidance of community and government guidance. As the project develops, training and support will be provided to the workforce to develop an understanding and awareness of Ausgold's stakeholder engagement framework.

In 2024, Ausgold developed a comprehensive Stakeholder Engagement Management Plan for the Proposal. Plan elements, mechanisms and processes listed below support strategic and effective engagement to yield insights and exchange information relevant to different stakeholder groups.

The purpose of the Plan is to:

- Provide relevant background information on the Proposal including local context.
- Summarise past engagement.
- Identify and analyse social risks and provide mitigation strategies for each.
- Identify and analyse key stakeholders.
- Outline key messages for communications and engagement.
- Provide a draft engagement implementation plan, which includes the format of each activity.

Several key stakeholder groups have been identified for the Katanning Gold Proposal. Whilst engagement continues, some of the key stakeholders with respect to the Proposal include:

- State Government agencies, including the EPA, DWER, DMPE, Department of Planning, Lands and Heritage (DPLH), and the Department of Primary Industries and Regional Development (DPIRD).
- The Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW).
- Local Government agencies including the Shire of Katanning, Kent and Dumbleyung.
- Traditional Owners and Heritage representative groups, including the Wagyl Kaip Southern Noongar Aboriginal Corporation, Badgebup Aboriginal Corporation and the Southwest Aboriginal Land and Sea Council.
- Environmental groups including the Conservation Council of WA, Katanning Landcare Group and Wheatbelt Natural Resource Management
- Wurgubup Rifle Club
- Community representatives including members of the Rotary Club and Katanning Regional Business Association.
- Landowners with properties that will be subjected to direct and indirect impacts from the Proposal and will be purchased by Ausgold.

Ausgold has set up a Katanning Gold Project Community Reference Group to identify effects and help develop initiatives that support biodiversity, land management and community resilience and prosperity. The Reference Group is enabling an exchange of information between Ausgold and members from community, business, and government on:



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

- Municipal and community infrastructure, services and assets.
- Regional economic development.
- Land, vegetation and water.
- Environmental and community impact management (including offsets).

Ausgold maintains a Stakeholder Engagement Register that includes specific consultation with stakeholders and a detailed response to issues is provided. Stakeholder engagement will continue through the construction and operation of the Proposal and reported through revisions of Environmental Management Plans. Stakeholder consultation will continue to be monitored and reported following revision of the FVMMP as the document is finalised and implemented.



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Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

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Appendices



Appendix A Vegetation Health Monitoring Program

A.1 Background

The Development Envelope (**Figure A 1**) contains and is surrounded by patches of remnant vegetation classified as “*Eucalypt Woodlands of the Western Australian Wheatbelt*”; a Threatened Ecological Community (TEC) listed under the EPBC Act.

To support the protection and management of this TEC, a Vegetation Health Monitoring Program (VHMP) has been established. The VHMP is designed to evaluate the effectiveness of management actions outlined in the Flora and Vegetation Management and Monitoring Plan (FVMMP). The results of the monitoring will inform adaptive management, enabling continuous improvement of mitigation strategies.

The VHMP adopts an integrated monitoring approach, combining on-ground visual assessments with remote sensing techniques:

- On-ground visual health assessments are conducted using a standardised method adapted from (Souter *et al.* 2009), originally developed for *Eucalyptus camaldulensis*. This approach provides a rapid and consistent means of estimating ecological condition of significant and other eucalypt trees and identifying trends including vegetation decline, or recovery based on visual indicators.
- Remote sensing enhances field-based assessments by quantifying chlorophyll concentrations in plant foliage through analysis of electromagnetic radiation, including both visible and non-visible wavelengths. This approach enables large-scale spatial coverage and facilitates early detection of foliage stress or declining health.

Both monitoring methods will be conducted simultaneously and at the same time and locations each year to ensure consistency and comparability. This timing is critical for accurately detecting potential indirect impacts, such as dust deposition on foliage and changes to the hydrological regime. Where possible, spectral calibration should be administered for each remote sensing capture to ensure spectral consistency across time.

Quantitative measurements will also be used to support the findings for tree and understory health and may include:

- Leaf water potential.
- Multifunctional plant efficiency analyser (PEA).
- Continuous soil moisture probes.



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

Appendix A Vegetation Health Monitoring Program

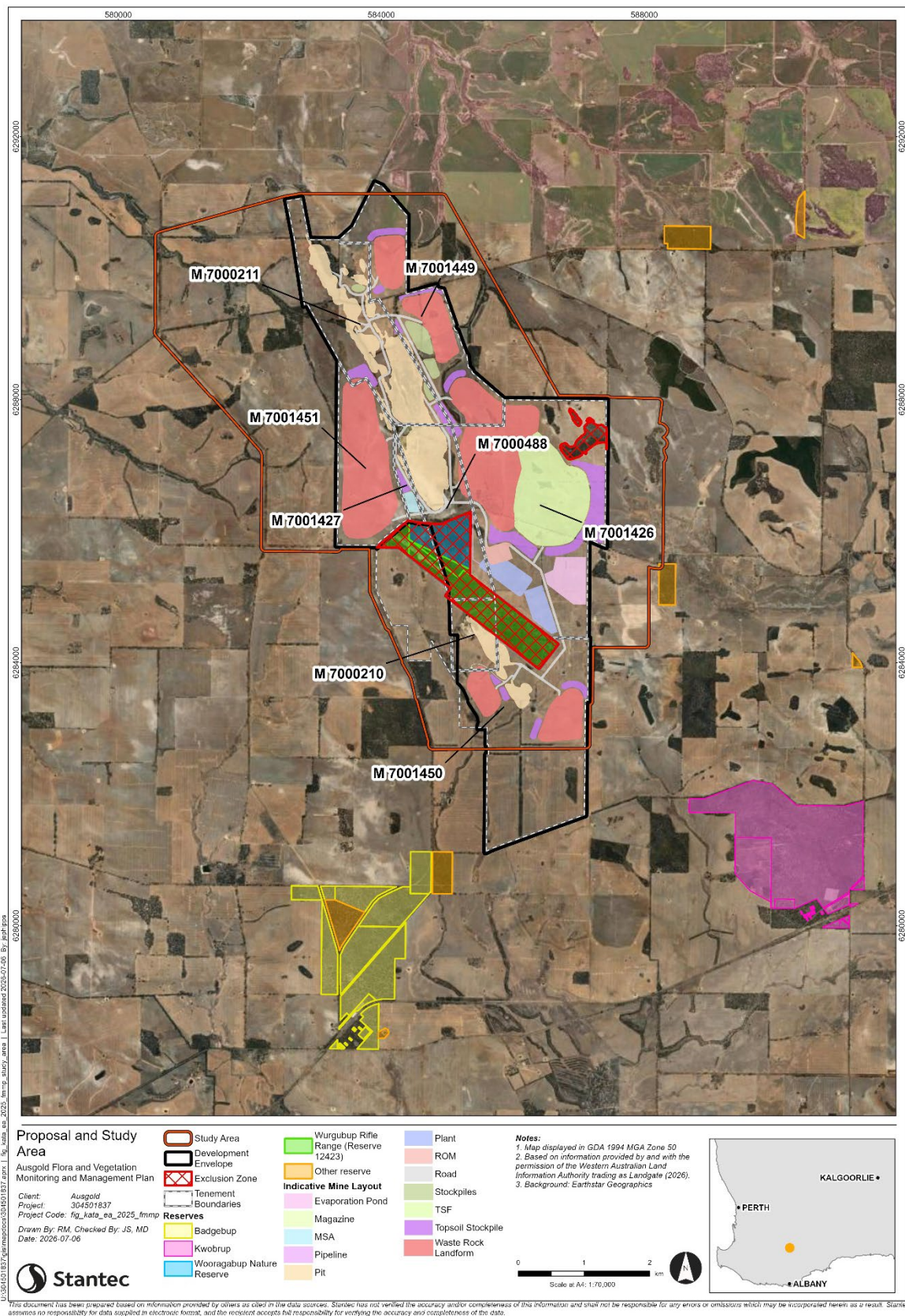


Figure A 1: The Proposal's Development Envelope and Study Area.



A.2 Objectives and Duration of Monitoring

The overall objective of the VHMP is to monitor and measure the success of management actions in the FVMMP to minimise impacts on vegetation and tree health. In particular, the aims include:

- Measure any potential effects of Ausgold's approved activities on vegetation and tree health within the Proposal's Development Envelope.
- Identify if changes in vegetation or tree health are resulting in measurable effects, or threatening to impact, related values.
- Determine if changes in vegetation or tree health within the Proposal Area are a direct or indirect result of Proposal-related activities or broader regional changes.
- Monitor and measure the success of management actions identified in the FVMMP to inform an adaptive management approach.

A.3 Overview and Monitoring

A.3.1 Reference Sites

Visual health assessments for each of the condition and remote sensing methods are to be assessed against an absolute reference tree. A reference tree UN/ECE (2006) describes absolute reference trees as "the best possible trees of a genotype or species, regardless of site conditions, tree age, etc." It should be noted that our absolute reference tree refers to a "*Eucalyptus Woodland of the Wheatbelt Western Australia*" TEC that is isolated from risk of direct and indirect impacts of Ausgold Katanning Gold Project (**Figure A 1**). Nearby to the Proposal, this is judged to be trees and woodland stands within the Badgebup and Kwobrup Reserves.

In addition, an appropriate reference site should be identified, and reference trees within that site should be selected and assessed in accordance with the procedures outlined in this document. Fixed point photography to be set up as part of the monitoring to ensure consistency in assessment.

A.3.2 Visual Health Assessment

The current Visual Health Assessment method is based on a conceptual ground-truthing model adapted from (Souter *et al.* 2009) to assess and monitor individual tree condition and trajectory variables.

A.3.2.1 Selection and Marking of Trees

A recommended minimum sample size for both monitoring sites is 100 trees, ideally within early mature age classes – i.e., trees that, if in good condition, would contribute to recruitment and regeneration. The selection process should represent a gradient of dust exposure and hydrological influence to capture potential variation in environmental stressors.

The Wurgubup Reserves require a minimum of 100 trees to be selected for monitoring. These trees should comprise of:



Ausgold Katanning Gold Project Flora and Vegetation Monitoring and Management Plan

Appendix A Vegetation Health Monitoring Program

- 50 Suitable Breeding Trees² for the Carnaby's Black-Cockatoos (Mature Eucalypt trees with at least one hollow); and
- 50 Suitable Breeding Trees² for Red-tailed Phascogales (Wandoo, York Gum or Sheoak species).

Similarly, a minimum sample size of 100 reference trees is recommended to benchmark against any potential impacts within monitoring sites. Selection of these trees should be conducted using:

- either a four-point cluster method
- a 'zigzag' sampling approach

To ensure repeatability throughout monitoring events, all selected trees should be clearly indicated (and numbered) using either a plastic cattle tag or aluminium tree tags, securely fastened to the trunk. All locations for monitoring and reference trees should be recorded using either a Differential Global Positioning System (DGPS) or Global Positioning System (GPS) and catalogued within a Geographic Information System (GIS) or data sheet. This allows for a "repeatable measures" form of statistical analysis over time.

² Suitable Nesting Trees for Carnaby's Black-Cockatoos and Red-tailed Phascogales serve as indicators of structural maturity and habitat value to compliment the Carnaby's Black- Cockatoo Monitoring Program and Red-tailed Phascogale Monitoring Program in the Ausgold Katanning Gold Project (Stantec. (2025). Ausgold Katanning Gold Project – Terrestrial Fauna Monitoring and Management Plan. Perth.



A.3.3 Sampling Frequency

It is recommended that the ground-truthing method should be conducted at a frequency at a minimum of two times a year, but ideally four times a year in the first two years to account for seasonal variability and ecological processes that may influence tree condition. The first two years will enable a spatio-temporal analysis to examine variance datasets for statistical power estimates of effect size (% change in health ratings).

A.3.4 Measurements and Assessments

Diameter at breast height, 1.3 m above ground (DBH), is to be recorded for each tree at each monitoring event. Measurements should be recorded as follows:

- Breast height is 1.3 m above the ground measured along the stem. Where the tree is on a slope, 1.3 m is measured on the uphill side of the tree. Where the tree is on a lean, 1.3 m is measured on the underside of the lean.
- For a tree with multiple stems at 1.3 m, the DBH of each stem is to be recorded.
- Where a swelling or limb occurs at 1.3 m, two unaffected points equally spaced above and below 1.3 m are measured and averaged to give an estimate of DBH.
- The measurer should paint the point(s) on the tree where the diameter measurement(s) have been made.
- The measuring tape should be at 90° to the axis of the stem at 1.3 m, if there is lichen or loose bark at 1.3 m it should be gently cleared so as not to remove any firm bark from the tree.
- Basic tree structural assessment to be undertaken which includes how many major branches are present at a specific height (e.g. 6m, 12m and 18m). Tree height to be measured using a Haglöf Vertex.

A total of eight metrics are to be measured and assessed for the Visual Health Assessment; these include:

- Foliage extent and density - poor (0-10% of potential density or extent) to maximum (91-100% of potential density or extent). Full description is provided in **Table A 1**.
- The presence and distribution of new growths and reproductive fruits to assess the positive trajectory of an individual – i.e., its response to stress or sustained health. New growths in this context are assessed as fresh shoots, or leaves, while reproductive fruits are the presence of fruits, flowers, or buds. Assessment of these factors are done on a scale of absent to abundant. Full description is provided in **Table A 2**.
- Leaf die-off and leaf damage to be assessed against the trajectory described in **Table A 3**.
- Mistletoe to be assessed against the trajectory described in **Table A 3**.
- Bark form is assessed as cracked or intact.
- Insect activity/infestation assessed against the trajectory in **Table A 3**.



Table A 1: Visual health categories for assessing foliage extent and density (Souter et al. 2009).

Score	Category	Description
0	None – 0%	Foliage extent, or density, is not present in the individual.
1	Poor – 1-10%	Foliage extent, or density, is present but in poor condition, covering 1-10% of the individual.
2	Sparse – 11-25%	Foliage extent, or density, is in minor condition, covering 11-25% of the individual.
3	Medium – 26-75%	Foliage extent, or density, is in moderate condition, covering 26-75% of the individual.
4	Major – 76-90%	Foliage extent, or density, is in good condition, covering 76-90% of the individual.
5	Maximum – 91 -100%	Foliage extent, or density, is in excellent condition, covering 91-100% of the individual

Table A 2: Visual health categories for assessing new growths and reproductive fruit distribution (Souter et al. 2009).

Score	Category	Description
0	Absent	The distribution of new growths or reproductive fruits on an individual are not present.
1	Scarce	The distribution of new growths or reproductive fruits on an individual are present but not obvious.
2	Common	The distribution of new growths or reproductive fruits on an individual is clearly visible.
3	Abundant	The distribution of new growths or reproductive fruits dominates the appearance of an individual.

Table A 3: Visual health trajectory for leaf die-off, leaf damage, Mistletoe and insect activity/infestation.

Score	Category	Description
0	Absent	Effect is not present
1	Scarce	Effect is not obvious in a cursory examination but is present
2	Common	Effect is clearly visible
3	Abundant	Effect dominating throughout the appearance of the tree.



A.3.5 Remote Sensing

Remote sensing analyses should be applied at both the Reference Site and the Wurgubup Reserves to quantify the photosynthetic condition of canopy foliage. This will be achieved using a suite of vegetation indices (VIs), which are widely used in remote sensing to quantify vegetation condition, density, and diversity. VIs are simple ratios or combinations of spectral reflectance values recorded by multispectral sensors (e.g., drones) to quantify photosynthetic condition.

Stress typically manifests first in the non-visible portions of the spectrum, well before leaves yellow or wilt. By tracking subtle shifts in the red-edge and near-infrared bands with indices such as the Normalised Difference Vegetation Index (NDVI), the Enhanced Vegetation Index (EVI), and the Red-Edge Normalised Difference Vegetation Index (RENDVI), signs of early physiological decline can be detected. By monitoring these changes through VIs, the program can identify early signs of stress and support timely management interventions.

A.3.5.1 Methods and Sampling Frequency

An appropriate remote sensing method, such as NDVI, will be used to assess chlorophyll content and canopy condition. These indices will help detect changes in foliage density, vigour, and potential stress responses. Remote sensing data will be collected annually at the same time each year and aligned with on-ground assessments to ensure consistency and comparability across monitoring periods, preferably Autumn.



Appendix B Indicative Weed Management Plan

B.1 Background

Introduced flora (weeds) have a detrimental effect on ecological values of communities in which they invade. Weeds outcompete native flora, alter the structure of vegetation, have an impact on fire regimes and change habitat characteristics for fauna; often leading to a decline in the quality of fauna habitat.

Ausgold is committed to managing the introduction and spread of weeds as a result of its Proposal through the development and implementation of a Weed Management Plan.

B.2 Objectives

The objective of the Weed Management Plan (WMP) is to:

- Identify new weed populations.
- Identify an increase of existing weed populations at site.
- Determine if control measures are required - based on the type of weed identified.
- Implement weed control measures.

This will be addressed by ensuring potential Proposal-related impacts to flora and vegetation from weeds are avoided to the maximum extent practicable by:

- Identifying the risks and potential impacts from the Proposal in relation to weeds.
- Outlining management provisions for weeds, to avoid and minimise potential impacts to significant flora and vegetation.
- Preparing and implementing monitoring programs for weeds within the Proposal Area.
- Proposing corrective actions and response actions if triggers and thresholds are exceeded to avoid adverse impacts to vegetation resulting from weeds.

B.3 Legislation Requirements

The following legislation is relevant to weed management for the Proposal:

- *Environmental Protection Act 1986.*
- *Agriculture and Related Resources Protection Act 1976.*
- *Biosecurity and Agricultural Management Act 2007.*
- *Biodiversity Conservation Act 2016.*
- *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth) (EPBC Act).

The Department of Primary Industries and Regional Development (DPIRD) regulates weeds under the *Biosecurity and Agriculture Management Act 2007* (BAM Act). Plants that are prevented entry into the State or have control or keeping requirements within the State are declared pests (**Table B 1**). Declared pests can be assigned to a C1, C2 or C3 category under the BAM Act Regulations 2013 (**Table B 2**).



Table B 1: Prohibited organisms can be assigned to a C1 or C2 Control categories.

Category	Description
Permitted organisms under section 11	Organisms that are allowed entry into Western Australia.
Prohibited organisms under section 12	Organisms that are prohibited from entry into Western Australia.
Unlisted organisms under section 14	If an organism cannot be categorised as either permitted or prohibited the organism will be unlisted.
Declared pest under section 22	Pests that may be in the State but are under official containment, control or eradication.

Table B 2: Categories of Declared Pests under the BAM Act Regulations.

Category	Description
C1 Exclusion	Plants which should be excluded from part or all of Western Australia.
C2 Eradication	Plants which should be eradicated from part or all of Western Australia.
C3 Management	Plants that should have some form of management applied that will alleviate the harmful impact of the plant.

B.4 Weeds Recorded in the Proposal Area

Weeds are classified by different government departments based on their invasiveness and the risk they pose to the environment, people or agriculture (**Table B 3**).

Table B 3: Definitions and Classification of Weeds.

Term	Definition
Weed	A weed is defined in the Australian Weeds Strategy (NRMMC 2007) as 'a plant that requires some form of action to reduce its harmful effects on the economy, the environment, human health and amenity'.
Declared Weeds	In order to protect agricultural interests, the Department of Primary Industries and Regional Development maintains a list of "Declared Plants" (weeds): https://www.agric.wa.gov.au/pests-weeds-diseases/weeds/declared-plants 'Declared Weeds', under the Agriculture and Related Resources Protection Act 1976, are those that landowners are required by law to control. They are required to be controlled as they are considered a significant risk to the Western Australian economy. Many weed species, however, are not declared under this Act as they may have an agricultural role. They may, however, be serious environmental weeds with the potential to affect native ecosystems.
Environmental Weeds	The Weed Prioritisation Process for the Department of Biodiversity, Conservation and Attractions (DBCA) prioritise weeds in each Parks and Wildlife region, termed 'environmental weeds'. 'Environmental weeds' is a secondary category of weeds, used to describe "plants that establish themselves in natural ecosystems and proceed to modify natural processes, usually adversely, resulting in the decline of communities they invade" (DEC 1999); page iii).



Weeds of National Significance	The Australian and state and territory governments have agreed a list of thirty-two Weeds of National Significance (WONS), based on the weed species' invasiveness. The full list of WONS can be accessed at www.weeds.gov.au/weeds/lists/wons/html
Weed hygiene	Prevention of the introduction or spread of weeds through movement of earthmoving machinery, vehicles or soil containing weed seed.

A total of 37 weed species has been recorded within the Survey Area. One of these introduced species (**Asparagus asparagoides* – Bridle Creeper) is a declared pest under the BAM Act 2007 (DPIRD 2025) and also a WONS (Weeds Australia 2025). Weeds with a “High” ecological impact and their suggested control is shown in **Table B 7** in **Appendix A1**.



B.5 Weed Management

Table B 5 outlines the outcome based management provisions for weeds and **Table B 6** outlines the objective based management provisions.



Table B 4: Outcome-based management provisions for weeds.

EPA Factor and Objective	Flora and Vegetation: ‘ <i>To protect flora and vegetation so that biological diversity and ecological integrity are maintained</i> ’ (EPA 2016a). Reflected in this management table as specific outcomes (Outcome 1, Outcome 2 etc.).						
FVMMP Purpose	Implement the Proposal in a manner that ensures there is no significant adverse Proposal-related direct or indirect impacts to flora and vegetation associated with the Proposal.						
Key Impacts and Risks	Potential loss or degradation of vegetation from the proposal area, as a result of implementation of the Proposal.						
Indicators	Decline in the health of vegetation important for supporting significant flora and fauna species. Increase in the proliferation of existing weeds or introduction of new weed species.						
Outcome – based Management Provisions	Trigger and Threshold Criteria		Trigger and Threshold Response Actions		Monitoring	Timing/ Frequency of Monitoring	Reporting
	Trigger Criteria	Threshold Criteria	Trigger Level Actions	Threshold Criteria and Corrective Actions			
Avoid facilitating the introduction of new weed species or the proliferation of existing weed species in the Rifle Range Reserve and Woorgabup adjacent to the Proposal as a result of the Proposal.	Detection of new weed species rated as WONS or high or very high management priority (by DBCA) at a potential impact site where it was not detected during baseline weed mapping of the Proposal Area and a significant increase in cover or abundance over successive monitoring events.	- Repeated detection of a Declared Pest Plant or Weed of National Significance which was not detected during baseline weed surveys for the Proposal Area. or - A 20% increase in cover or abundance of an existing Declared Pest Plant or Weed of National Significance over successive monitoring events. or - Repeated detection of new weed species rated high or very high management priority (by DBCA) (not detected during baseline weed surveys for the Proposal Area) becomes established³	- Report as incident internally. - Investigate cause of occurrence and review management strategies and implement changes to prevent future weed occurrences, where possible. - If exceedance is attributed to Proposal-related activities, undertake a review of procedures to determine if impact can be minimised, develop corrective actions with consideration of the following: - Consider revising monitoring frequency for weeds; and educate staff on weed identification and weed hygiene practices. - Implement weed control as required. - Undertake weed control in accordance with the identified weed control techniques (Section B.6).	- Report any non-compliance to DWER and DPIRD within 7 days of identification. - Undertake investigation to determine source of the occurrence and exceedance. - If Proposal-related, undertake review to determine if impact can be minimised, develop actions to prevent recurrence and communicate findings to relevant personnel. - If continued increase in exceedance is recorded over three consecutive events, additional targeted weed control should be considered. - Revise weed monitoring schedule accordingly and monitor the success of corrective actions. - Undertake weed control in accordance with the identified weed control techniques (Section B.6).	Annual monitoring of the presence and abundance of weeds compared to baseline presence and abundance to determine the effectiveness of control programs.	Annually	- Monitoring reports. - Annual Compliance Assessment Report (ACAR). - Survey data. - Monitoring Program reporting as appropriate. - Incident reports

³Where 'established' means 'A weed species which has grown to maturity and reproduced. Weeds are producing a viable second generation of individual plants signifying persistence at a given location despite treatment.



Table B 5: Objective-based management provisions for weeds.

EPA Factor and Objective		Flora and Vegetation: ' To protect flora and vegetation so that biological diversity and ecological integrity are maintained ' (EPA 2016a).			
FVMMP Purpose		To avoid adverse Proposal-related impacts to flora and vegetation, including significant flora and vegetation.			
Key Impacts and Risks		Potential loss or degradation of vegetation from the proposal area, as a result of implementation of the Proposal.			
Indicators		Potential risk to long term viability of local and regional vegetation, due to the indirect impacts of weed species on native vegetation.			
Management Target	Management Actions	Monitoring	Timing/ Frequency of Monitoring	Responsibility	Reporting
MO2: No proliferation or introduction of new weed species rated as high or very high management priority by DBCA in the Proposal Area as a result of The Proposal.					
MO3: No new occurrence of recorded weed species within the Development Envelope as a result of construction and operation of The Proposal.					
1. No introduction of new weed species rated as a high or very high management priority by DBCA in the Proposal Area as a result of the Proposal. 2. Weed management programs should be designed in accordance with relevant EPBC Act weed threat abatement plans. 3. Weed management procedures informed by best practice management of the weed species identified during weed baseline surveys. 4. No new occurrences of existing weeds within the Development Envelope as a result of construction and operation of the Proposal.	Avoid: • A Land Clearing Procedure will be implemented to ensure all clearing works are compliant with regulatory requirements and are within approved boundary. Minimise: • A Weed Management Plan shall be prepared and implemented as part of the FVMMP, prior to construction and operation, to control access and movement of vehicles and construction personnel to prevent the introduction and spread of weeds into the Development Envelop, weed free areas, and between work areas. • Vehicles and equipment to be cleaned, inspected and issued with a Weed Hygiene Certificate (WHC) prior to entry to site or moving between areas on-site. • Vehicles and equipment shall be restricted to designated roads and tracks. • Weed awareness and weed hygiene training shall be delivered to all personnel as part of the induction process, in accordance with the training procedure (Section B.7.7), including the environmental implications of the introduction and spread of weeds, identification of weed species, and the process for reporting observations. • Regular inspection and maintenance of vehicles and equipment shall be undertaken. • Restrict movement of topsoil at known weed locations. • Ensure timely response for the management of any declared weed occurrences or other weed infestations occurs. Rehabilitate: • Seasonal weed control programs shall be implemented, as required. • Progressive rehabilitation of disturbed areas will be undertaken throughout the LOM, as far as practicable. Contingency Actions (if Management Targets not met): • Investigate cause or source of infestation. • Inspect surrounding area to assess extent of infestation. • Review weed hygiene measures for efficacy. • Review training and implementation of weed hygiene measures.	1. Biannual monitoring of the presence and abundance of weeds (in accordance with the FVMMP) compared to baseline presence and abundance to determine the effectiveness of control programs. 2. Inspection of cleared and rehabilitated areas to detect presence of new weed species and/or new occurrences of existing weed species to determine success of management actions. 3. Inspection of vehicles and equipment used for construction activities at entry and exit points. 4. Post-construction inspection of cleared areas to detect presence of new weed species and/or new occurrences of existing weed species in the Proposal Area and the adjacent Wurgubup Reserves.	Annually (as a minimum) and bi-annually if Targets 1 and 4 not met.	• Construction • Operations • Environment Team	• Compliance against these Management Targets will be included within a CAR, submitted as part of the AER for the Proposal. • Complete an incident report if new weed species and/or new occurrences of existing weed species are recorded.



	• Implement control measures (e.g. spraying, removal) at seasonally appropriate time. • Monitor success of control actions. • Review frequency and suitability of weed monitoring and control measures. Revise areas of restrict access in accordance with occurrence of new weed species and/or new occurrences of existing weed species.				
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B.5.1 Weed Awareness and Weed Hygiene Training Procedure

Induction and awareness training for weeds will be undertaken through the adoption of site-based procedures including the following actions:

- All employees and contractors are required to participate in the site induction, which will provide an awareness of weeds, including risk species, and an overview of the weed hygiene process.
- Employees and contractors who are involved in movement or operation of earthworks equipment, off road vehicles, and land clearing will be specifically trained in weed hygiene procedures and documentation. This includes but is not limited to, exploration personnel, surveyors, environmental survey consultants, workshop and logistics personnel.
- Training or technical assistance may be required for site personnel to be able to recognise locally occurring weed species.
- Specialist training (chemical handling, personal protection etc.) may be required if site personnel are involved in chemical methods of weed control.
- Toolbox talks will be presented from time to time to refresh employees and contractors on weed hygiene procedures.

The movement of earthmoving equipment and vehicles may require use of a Weed Hygiene Certificate (WHC). This procedure cannot cover every situation, but a WHC would generally be required when there is a medium to high risk. Medium to high-risk situations include:

- New machinery arriving at site (company policy is that machinery arrives clean at site with a WHC).
- Prior to native vegetation clearing and topsoil stripping operations.
- Machinery washdown required when moving from agricultural land to within the active mining disturbance footprint.

An example WHC is included in **Appendix B2**.

B.5.2 Weed Control

Weeds found in the Proposal area and their suggested control is outlined in **Appendix B1**. It is recommended that a weed survey is conducted in late winter/early spring and prior to seed set Weed Hygiene and Control Procedures include:

- If declared or pest plants are identified on site, immediate action will be taken to determine the best method of eradication.
- If populations of environmental weeds occur on site, control should be undertaken where it is practical to do so. Some environmental weeds are so well established that control is not warranted.
- Herbicide use will only be undertaken in accordance with the manufacturer's instructions and preventing wind drift
- Weeds that are physically removed should be disposed of to a landfill or waste rock landform and buried.
- Weed infested topsoil to be stockpiled separately from uninfected topsoil



B.5.3 Roles Responsibilities

Table B 6: Roles and responsibilities for implementation of the TFMMP.

Role	Responsibility
Ausgold General Manager or delegate	• Ensuring full compliance with the requirements of the FVMP. • Audit and compliance. • Engagement with key stakeholders. • Ensuring training in weed hygiene requirements is provided to personnel responsible for the transfer of earthmoving equipment and vehicles between sites. • Ensuring the required resources are allocated to fulfil the requirements of this procedure.
Supervisor	• Ensuring any vehicles or earthmoving equipment leaving a mine is cleaned down so that it is free of vegetation or dirt, and, following an inspection, a Weed Hygiene Certificate (WHC) is issued. • Ensuring that personnel involved in vehicle or equipment transfers are aware of this procedure and can competently meet their responsibilities.
Manager Environment (may delegate all or part responsibility to an appropriately qualified person)	• Providing advice to others about weed hygiene procedures and about the identification of plants that may be weeds. • Undertaking or commission weed control activities. • Undertaking site inspections for weeds. • Keeping records of weed management - weed hygiene certificates, GIS data recording the location and extent of weed populations, control methods used etc. • Presenting ongoing weed management and control awareness training.
All personnel (including contractors)	• Understand and meet the obligations of this procedure. • Report potential weed occurrences and poorly cleaned machinery.



Appendix B1 – Recommended Weed Control



Table B 7: Introduced Flora Species Recorded in the Flora and Vegetation Survey with a High Ecological Impact.

Species (common name)	Description	DBCA Classification		Control Techniques (DBCA 2025b)				Photo
		Ecological Impact	Invasiveness*	Chemical Control	Manual Control	Indicative seed set	Optimal timing for weed control	
<i>Asparagus asparagoides</i> (Bridal creeper)	Bridal Creeper is a perennial vine with rhizomes and tubers, typically growing between 1 and 5 meters tall. It produces white flowers in spring, which die back by summer. The plant usually takes 2 to 3 years to flower for the first time, and its seedbank can remain viable for the same duration if the seeds are buried. It is generally resilient to fire. Birds are attracted to its fleshy fruits and help disperse the seeds through their droppings.	High	Moderate	Spray 0.2 g metsulfuron methyl + Pulse in 15 L water (or 2.5 – 5g /ha + Pulse). Best results achieved when flowering. Biological control agents are available. Read the manufacturers' labels and material safety data sheets before using herbicides. Optimum spraying months are July and August.	There has been limited success controlling this invasive weed using biocontrol agents including a leafhopper, a rust fungus and a leaf beetle. Hand pulling is only recommended for small infestations. The rhizomes (main growing points at the top of the soil where the stem emerge) should be removed when hand pulling. If the plant breaks leaving any or all the rhizome, plants will immediately regrow if conditions allow.	Summer	Autumn and early winter , when the plant is actively growing and before it begins to die back in summer	 <i>Asparagus asparagoides</i> Photos: J.P. Pigott & R. Randall
<i>Aira caryophyllea</i> (Silver hairgrass)	An aggressive annual grass	High	Rapid	Glyphosate based herbicides can be used as a spot spray when applied to young, actively growing plants.	Best done when soil is moist and plants are young. Hand pulling need to be undertaken prior to seed set to prevent further spread.	Shortly after flowering late spring to early summer	Autumn (March – May) capeweed germinates rapidly after first significant rains	 <i>Aira caryophyllea</i> Photo: R. Randall

Ausgold Katanning Gold Project Fauna Monitoring and Management Plan
0 Appendix B1 – Recommended Weed Control

<i>Arctotheca calendula</i> (Capeweed)	A low-growing spreading annual or short-lived perennial with bright yellow daisy like flowers. Common in pastures, roadsides and disturbed soils.	High	Rapid	Lontrel® 6 ml/10 L (300 ml/ha) in early growth stages. Glyphosate at 0.2% will offer selective control if the plants are young or at the budding stage. Or spot spraying glyphosate at 10 ml/L will control capeweed at all growth stages. A combination of chemical and physical control with follow up treatment is recommended.	Effective for small infestations especially before flowering and seed set. Roots need to be severed well below ground level to prevent re-sprouting from the crown	Summer (October to December)	June to November	 <i>Arctotheca calendula</i> Photos: K.C. Richardson
<i>Avena barbata</i> (Slender wild oats)	Annual grass that grows in tufts or clumps up to 100cm tall. Grows in disturbed areas, roadsites and pastures	High	Rapid	Spray at 3-5 leaf stage with Fusilade® Forte at 16 ml/10 L + wetting agent or for generic fluazifop-p (212g/L active ingredient) 10mL/10L or 0.5L/ha + wetting agent. Undertake treatment for 2 years with the aim to prevent seed production.	Best done when soil is moist and plants and young. Hand pulling need to be undertake prior to seed set to prevent further spread. Gloves need to be worn to prevent injury and skin irritation.	December	July to October	 <i>Avena barbata</i> Photo: R. Randall
<i>Avena</i> sp. (Wild oats)								
<i>Briza maxima</i> (Greater quaking-grass)	Tufted, glabrous annual that grows up to 0.6 metres with green-purple flowers.	High	Rapid	Spray at 3-5 leaf stage with Fusilade® Forte at 16 ml/10 L or 800 ml/ha (based on 500 L water/ha) + wetting agent or for generic fluazifop-p (212g/L active ingredient) 10ml/10L or 500ml/ha + wetting agent. Repeat treatment for 2 - 3 years.	Hand pulling need to be undertake prior to seed set to prevent further spread.	October to December	July to August	 <i>Briza maxima</i> Photos: A. Ireland & K.R. Thiele



<i>Bromus diandrus</i> (Ripgut brome)	Turfed annual growing to 0.7m high with purple/yellow green/cream flowers	High	Rapid	In degraded areas use 1% glyphosate on seedlings, young plants or when flowering. Alternatively spray plants at 3-5 leaf stage with Fusilade® Forte at 16 ml/10 L or 800 ml/ha (based on 500 L water/ha) + wetting agent or for generic fluazifop-p (212g/L active ingredient) 10ml/10L or 500ml/ha + wetting agent. Do follow up control the next year if required.	Hand pulling need to be undertake prior to seed set to prevent further spread.	November to December	June to August	 <i>Bromus diandrus</i> Photos: L. Fontanini & K.C. Richardson
<i>Mesembryanthemum nodiflorum</i> (Common ice plant)	Prostrate annual succulent growing to 0.2 m high with white flowers blooming in September to November	High	Rapid	Use either Chlorsulfuron (750 g/kg) – 15 g/ha or Metsulfuron-methyl (600 g/kg) – 5 g/ha. Apply before germination, ideally after the first rains but before seedling emergence.	Effective for small infestations, ensure the entire root system is removed.	August to September	Late Autumn to Early Winter (May – July)	 <i>Mesembryanthemum nodiflorum</i> Photos: G. Byrne & J. Dodd
<i>Romulea rosea</i> (Pink fairy)	Cormous, perennial herb growing to 0/25, high with red-pink-purple-blue flowers blooming in August to November. Grows on roadsides and pastureland.	High	Rapid	Spot spray metsulfuron methyl 0.2 g/15 L + Pulse® or 2.5-5 g/ha + Pulse® . Apply just on flowering at corm exhaustion.	Best undertaken in late winter to early spring. Corns are usually 5 to 10 cm below the surface and need removing including smaller daughter corms.	August to October	July to August	 <i>Romulea rosea</i> Photos: J. Dodd, K. Richardson & K.R. Thiele



Appendix B2 – Weed Hygiene Certificate Example

MACHINERY AND VEHICLE WEED HYGIENE INSPECTION CERTIFICATE				
Vehicle Registration:		Drivers name:		
Make and Model:		Organisation:		
Entry or Exit from site?				
WEED AND SEED INSPECTION				
Inspection Area	N/A	Compliant	Not Compliant	Comment / Action taken
Inside cab and boot (includes inspection of mats, cargo spaces and areas between the cab and tray)				
External surfaces and panels (includes inspection of mud flaps, towbar, bulbar, bumper, wheel arches steps, platforms and grills)				
Wheels (includes inspection of tyre thread, tracks, cupped sections and skids)				
Undercarriage (includes inspection of diff, axel, chassis, suspension, belly plate, spare tyre)				
Ground Engaging Tools (includes inspection of bucket, blade, drill bits, attachments, hydraulics)				
Other				
SIGN OFF				
This vehicle/machinery has been inspected and is free of soil and plant material				
Inspector's name	Signature	Date	Time	Organisation

Attach any photos of the vehicle/machinery/equipment to the checklist to confirm status.





Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

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