

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	10224/1
Permit type:	Purpose Permit
Applicant name:	Agnew Gold Mining Company Pty Limited
Application received:	1 June 2023
Application area:	35 hectares
Purpose of clearing:	Mineral Production and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Leases 36/27, 36/32, 36/53, and 36/314
Location (LGA area/s):	Shire of Leonora
Colloquial name:	Hidden Secret Expansion Project

1.2. Description of clearing activities

Agnew Gold Mining Company Pty Limited (AGM) proposes to clear up to 35 hectares of native vegetation within a boundary of approximately 236 hectares, for the purpose of mineral production and associated activities. The project is located approximately 18.5 kilometres southwest of Leinster, within the Shire of Leonora.

The application is to allow for the expansion of the Hidden Secret operations (MBS, 2023). Expansion of the existing operations will involve the following:

- cutback of the Hidden Secret open pit
- expansion of the waste rock landform (WRL West)
- development of a waste rock landform within TSF2
- installation of ancillary infrastructure for access, material stockpiles and water storage

Approximately 70% (165.2 hectares) of the application area has been previously cleared of native vegetation, under a Mining Proposal prior to the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (MBS, 2023). The clearing of up to 35 hectares accounts for approximately 15% of the total application area, and 49.5% of the remaining vegetation within the application area. The clearing will conducted to expand the existing infrastructure within the application area.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	23 January 2024
Decision area:	35 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) on 1 June 2023. DEMIRS advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix D), supporting information provided by the applicant including the results of a biological survey, the clearing principles set out in Schedule 5 of the EP Act (Appendix C), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3). The Delegated Officer also took into consideration that approximately 70% of the application area has already been cleared.

The assessment identified that the proposed clearing may result in:

• the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to have long-term adverse impacts on environmental values and can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

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- avoid, minimise to reduce the impacts and extent of clearing; and
- take hygiene steps to minimise the risk of the introduction and spread of weeds.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the Environmental Protection (Clearing of Native Vegetation) Regulations 2004 (Clearing Regulations).

In addition to the matters considered in accordance with section 510 of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- Biodiversity Conservation Act 2016 (WA) (BC Act)
 - Conservation and Land Management Act 1984 (WA) (CALM Act)
 - Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)
- Mining Act 1978 (WA)

Relevant agreements (treatys) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

The key guidance documents which inform this assessment are:

- A guide to the assessment of applications to clear native vegetation (DER, December 2014)
- Procedure: Native vegetation clearing permits (DWER, October 2021)
- Technical guidance Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance Terrestrial Fauna Surveys for Environmental Impact Assessment (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

AGM have stated that the following environmental avoidance, mitigation, and management measures that will be applied at all stages of the proposal to avoid, prevent, and reduce environmental impacts arising from vegetation clearing. These will include but are not limited to the following (MBS, 2023):

- Ground disturbance will only be undertaken by AGM's internal Land Clearing Procedure to ensure close oversight of land clearing activities.
- Clearing areas will be clearly demarcated and clearing will be kept to a minimum to allow the proposal to be implemented.
- Implement a procedure to record the amount of clearing undertaken and report the cumulative total in the Annual Environmental Report (AER) and Mine Rehabilitation Fund (MRF) reporting.
- All priority flora species with the avoided (located approximately 250 metres northwest of the application area).
- In the event priority flora has been identified, locations will be clearly marked on site and GIS database, and employees educated to reduce the risk of accidental damage to these species.
- Utilise existing disturbed areas and locating roads and infrastructure to avoid fauna habitat where possible.
- Where vegetation is cleared, the topsoil will be appropriately stockpiled for reuse later and returned directly to disturbed areas during progressive rehabilitation operations.
- Areas no longer being utilised will be progressively rehabilitated during the life of the operation.
- The potential impacts of clearing and construction, such as land degradation from erosion and sedimentation, will be managed by standard avoidance and mitigation measures including the installation of toe drains on the WRL and appropriate bunding around the pit and access roads. In addition, direct impacts to drainage lines will be avoided. Indirect impacts will be minimised through incorporation of strategically placed flow control structures, channels and controlled discharge points aimed at minimising flood risk and to reduce erosion and sediment discharge to the receiving environment.
- Common dust suppression management practices will be used to sufficiently manage dust from impacting adjacent vegetation including water cart sprays, operating machinery during favourable wind conditions and regulating traffic speeds.
- Operational speed limits will also be enforced to mitigate the risk of fauna and vehicle interactions.
- AGM have management processes in place to adequately manage feral animals and introduced flora species (weeds); these will be implemented during clearing activities and more broadly operationally across the Hidden Secret project area.
 - Vehicle and equipment hygiene procedures will be implemented to minimise entry of weed and soil borne diseases.
 - Site weed control will be conducted as required.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

The assessment against the clearing principles (see Appendix B) identified the impacts of the proposed clearing are limited and able to be managed to be environmentally acceptable with standard avoid and minimise, and hygiene management conditions.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 1 December 2023 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WCD2017/001) over the area under application (DPLH, 2024). This claim has been determined by the Federal Court on behalf of the claimant group (Tjiwarl). However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2024). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Other relevant authorisations required for the proposed land use include:

- A Programme of Work approved under the *Mining Act* 1978.
- A Mining Proposal / Mine Closure Plan approved under the Mining Act 1978.

It is the proponent's responsibility to liaise with the Department of Water and Environmental Regulation and the Department of Biodiversity, Conservation and Attractions, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

End

Appendix A.

Site characteristics

A.1. Site cha	aracteristics			
Characteristic	Details			
Local context	extensive lar uncleared la (GIS Databa	poposed to be cleared is part of an expansive tract of native vegetation in the nd use zone of Western Australia (GIS Database). It is surrounded by large areas of nd and mining operations within the Eastern Murchison subregion of the Murchison lse). By 99.4% of the local area (100 kilometre radius from the application area, inclusive		
		proposed to be cleared) remains uncleared (GIS Database).		
Ecological linkage	immediately	The application area is not considered a significant ecological linkage. The vegetation immediately surrounding the application area and the majority of the region remains uncleared (GIS Database).		
Conservation areas	legislated co	The application area is not located within any conservation areas (GIS Database). The nearest legislated conservation area is the Wanjarri Nature Reserve, located approximately 57 kilometres north-northeast of the application area (GIS Database).		
Vegetation description	associations			
		odland; mulga (<i>Acacia aneura</i>); and nds; mulga scrub (GIS Database).		
	application a	regetation survey was conducted over most of the remaining vegetation within the area by Rapallo during September 2016. The following vegetation types were hin the application area, supplemented by information from JSWT (2004) (MBS, lo, 2017):		
	Code	Description		
	1	Acacia-Hakea woodland / shrubland on quartz Acacia aptaneura / Hakea preissii open low woodland trees over Eremophila galeata / Acacia tetragonophylla sparse medium shrubs, over Ptilotus obovatus / Eremophila galeata / mixed chenopod shrubs on a quartz gravel plain.		
	2	Acacia / Hakea red stony plain Acacia / Hakea sparse mixed shrubland on red stony plain.		
	5	Degraded. Scattered Acacia shrubs.		
	9	Mulga / Acacia / Hakea drainage line Acacia aptaneura / Acacia craspedocarpa / Hakea preissii open tall shrublands along drainage lines.		
	13	Mulga 1 / Eremophila / chenopods quartz plain (degraded) Acacia aptaneura scattered low trees over Eremophila galeata / Acacia tetragonophylla sparse medium shrubs, over Ptilotus obovatus / mixed chenopod sparse low shrubland.		
	14	Mulga 1 / Hakea / Ptilotus / chenopods Acacia aptaneura sparse low woodland / tall shrubland, over Hakea preissii sparse tall shrubs, over Ptilotus obovatus / chenopod open low shrubs.		
	16	Mulga low trees on a low rocky outcrop Mulga sparse low trees, over scattered shrubs of <i>Sida ectogama / Senna /</i> <i>Ptilotus obovatus</i> on a low rocky outcrop.		
	17	Mulga trees - Eremophila pantonii shrubs on quartz Acacia incurvaneura sparse low woodland, over Eremophila pantonii open low shrubland with Scaevola spinescens. Stony quartz rise.		
	20	Mixed chenopod low shrubland on quartz gravel Mixed chenopod open low shrubland of <i>Tecticornia doliiformis / Maireana</i> species / Sclerolaena / Frankenia laxiflora.		
	21	<i>Maireana glomerifolia / Chenopod shrubs on quartz</i> <i>Maireana glomerifolia /</i> mixed chenopod sparse low shrubland on low quartz slopes.		
	23	Tecticornia (samphire) shrubland <i>Tecticornia doliiformis</i> (samphire) sparse to open dwarf shrubland on quartz gravel.		
	24	Frankenia / Sclerolaena / Maireana shrubland		

Characteristic	Details	
	Frankenia la shrubland.	axiflora / Sclerolaena species / Maireana species sparse dwarf
	Flat stretchin GSFJWS consisting m	nd Flats (JSWT, 2004) ng plains of course red granite sand with sparse vegetation nainly of ground hugging shrubs and some <i>Acacia aneura</i> over 2 eight and ground hugging plants including <i>Helipterum craspedioides</i> <i>aervoides</i> .
Vegetation condition	The vegetation of the appl 1991): • Good • Poor	ication area is in the following conditions (Rapallo, 2017; Trudgen,
	The full Trudgen (1991) co	ondition rating scale is provided in Appendix C.
	The flora and vegetation s <i>Centaurea melitensis</i> and	urvey of part of the application area recorded two weed species: <i>Rumex vesicarius</i> .
Climate and landform		Murchison subregion is described as arid, with the nearest weather ge rainfall of approximately 242.9 millimetres per year (BoM, 2024;
	(GIS Database). The landf described as low rises, gra	apped at elevations between 450-500 metres Australian height datum forms of the land systems broadly mapped within the application are avelly plains, saline alluvial tracts (Nubev), low breakaways and stony Is and tor fields (Wyarri) (DPIRD, 2024; Payne et al., 1998; Pringle et
Soil description	The soils within the applica Pringle et al., 1994; GIS D	ation area are broadly mapped as (DPIRD, 2024; Payne et al., 1998; atabase):
	LAND SYSTEM	DESCRIPTION
	NUBEV (144.4 ha)	red shallow loam, red shallow sandy duplex, red shallow sand
	SHERWOOD (89.6 ha)	red shallow loam, red shallow sandy duplex, red shallow sand, red/brown non-cracking clay, stony soil
	WYARRI (1.7 ha)	bare rock, red shallow sand, red shallow loam
Land degradation risk		l within the application area have the following degradation risks I., 1998; Pringle et al., 1994; GIS Database):
	LAND SYSTEM	LAND DEGRADATION RISK
	NUBEV (144.4 ha)	Drainage zones are moderately susceptible to soil erosion, particularly where perennial shrub cover is substantially reduced, or the soil surface is disturbed. Disturbance of the protective stone mantle on saline stony plains is also likely to initiate water erosion.
	SHERWOOD (89.6 ha)	Lower footslopes, plains, and drainage tracts generally have fragile soils which are highly susceptible to water erosion.
	WYARRI (1.7 ha)	Generally not susceptible to soil erosion, partly as a consequence of heavy, protective soil mantles.
Waterbodies	Two minor, non-perennial area proposed to clear (Gl	watercourses intersect that application area, along the fringes of the S Database).
Hydrogeography	The application area is not	t within any legislated surface water areas (GIS Database).
	The application area is loc Rights in Water and Irrigat	ated within the Goldfields Groundwater Area proclaimed under the <i>tion Act 1914</i> (GIS Database). The mapped groundwater salinity is solids milligrams per litre, which is described as marginal water quality

Characteristic	Details		
Flora	There are records of 19 conservation significant flora species within 60 kilometres of the application area (GIS Database).		
Ecological communities	There are no know threatened or priority ecological communities mapped within the application area (GIS Database). The nearest known ecological community is the Lake Miranda west calcrete groundwater assemblage types on Carey palaeodrainage on Yakabindie Station (P1), located approximately 24.1 kilometres north of the application area (GIS Database).		
Fauna	There are records of 15 fauna species of conservation significance within 100 kilometres of the application area (GIS Database).		
Fauna habitats	application area by F	una survey was conducted over most of the remaining vegetation within the Rapallo during September 2016. The following fauna habitats were recorded n area (MBS, 2023; Rapallo, 2017):	
	Code	Description	
	BP	Breakaway top - sparse mulga shrubland on stony skeletal soil.	
	BS	Open <i>Melaleuca</i> shrubland and open tall mulga shrubland on breakaway slopes.	
	MD	Open tall mulga / Hakea / Acacia shrubland on minor drainage.	
	SP	Sparse mulga / Acacia / Eremophila / Hakea shrublands on stony plains with quartz and rocky outcrops.	
	SP (Chenopods)	Sparse chenopod dominated and mulga shrubland on low quartz slopes and plains.	
	SP (Samphire)	Open samphire shrubland on stony plain.	
	SR	Sparse mulga/ <i>Eremophila</i> on stony rise with quartz.	
	GSFJWS	Flat stretching plains of course red granite sand, sparse vegetation consisting of shrubland and <i>Acacia aneura</i> .	

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre- European extent in all DBCA Managed Lands
IBRA Bioregion - Murchison	28,120,586	28,044,823	~99	2,185,987	7.77
Beard vegetation asso - State	ciations				
18	19,892,306	19,843,148	~99	1,317,179	6.62
39	6,613,567	6,602,578	~99	795,070	12.02
Beard vegetation associations - Murchison bioregion					
18	12,403,172	12,363,252	~99	614,964	4.96
39	1,148,400	1,138,064	~99	40,834	3.56

Government of Western Australia (2019)

Appendix B. Assessment against the clearing principles		
Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): "Native vegetation should not be cleared if it comprises a high level of biodiversity."	Not likely to be at variance	No
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Assessment against the clearing principles	Variance level	Is further consideration required?
Assessment:		
No threatened or priority flora species were identified within the application area during the field assessment (Rapallo, 2017). Two priority flora species were recorded approximately 250 metres outside the application area during the survey: <i>Eremophila pungens</i> (P4) and <i>Thryptomene</i> sp. Leinster (P3) (Rapallo, 2017). No suitable habitat for these species is currently present within the application area, and are unlikely to boccur (MBS, 2023; Rapallo, 2017).		
The area proposed to be cleared does not contain locally or regionally significant flora, auna, habitats, or assemblages of plants (MBS, 2023; Rapallo, 2017; GIS Database).		
Principle (b): "Native vegetation should not be cleared if it comprises the whole or a poart of, or is necessary for the maintenance of, a significant habitat for fauna."	Not likely to be at variance	No
Assessment:		
The reconnaissance fauna survey did not identify any conservation significant fauna species within the application area (Rapallo, 2017). The fauna habitats identified within the application area during the survey may provide suitable habitat for a number of conservation significant fauna species, however these habitats are not considered significant (MBS, 2023; Rapallo, 2017). Fauna habitats recorded are common and widespread in the region (MBS, 2023; Rapallo, 2017).		
Given the proximity to existing mining operations and disturbance, the loss of 35 nectares of potential fauna habitat within a region which remains largely uncleared is unlikely to have a significant impact on potentially occurring fauna species.		
Principle (c): "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."	Not likely to be at variance	No
Assessment:		
There are no known records of threatened flora species within the application area or within a 60 kilometre radius (GIS Database).		
The flora and vegetation survey did not identify any threatened flora species or /egetation necessary for the continued existence of threatened flora (MBS, 2023; Rapallo, 2017).		
Principle (d): "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."	Not likely to be at variance	No
Assessment:		
There are no known state or federally listed threatened ecological communities TECs) located within or in close proximity to the application area (GIS Database). The nearest known threatened ecological community is the 'Depot Springs stygofauna community' state listed threatened ecological community (VU), located approximately 38.6 kilometres west of the application area (GIS Database).		
A flora and vegetation survey of the application area and surrounds did not record regetation that would be representative of a TEC (Rapallo, 2017).		
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."	Not at variance	No
Assessment: The application area falls within the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99% of the pre-European vegetation still exists in the IBRA Murchison Bioregion Government of Western Australia, 2019).		
The application area is broadly mapped as Beard vegetation associations 18: Low woodland; mulga (<i>Acacia aneura</i>); and 39: Shrublands; mulga scrub (GIS Database). Approximately 99% of the pre-European extent of these vegetation associations emain uncleared at both the state and bioregional level (Government of Western Australia, 2019).		
The vegetation proposed to be cleared is unlikely to represent a significant area of emnant vegetation within a bioregional context (GIS Database).		

Assessment against the clearing principles	Variance level	Is further consideration required?
<u>Principle (h):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."	Not likely to be at variance	No
Assessment:		
Given the distance to the nearest conservation area (Appendix A.1; GIS Database), the proposed clearing is unlikely to have an impact on the environmental values of any conservation areas.		
Environmental value: land and water resources	1	
<u>Principle (f):</u> "Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland." Assessment:	May be at variance	No
While the vegetation survey recorded one vegetation type that is growing in association with a drainage line, the mapped extent within the application area is 0.31 hectares (MBS, 2023; Rapallo, 2017). This vegetation type falls outside the indicative clearing area and is unlikely to be impacted (MBS, 2023).		
<u>Principle (g):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."	Not likely to be at variance	No
Assessment:		
The mapped land systems within the application area are susceptible to water and soil erosion where perennial vegetation is removed within in drainage zones (DPIRD, 2024; Payne et al., 1998; Pringle et al., 1994; GIS Database). Given the lack of drainage lines within the main disturbance footprint of the application area, the proposed clearing is unlikely to have an appreciable impact on land degradation.		
<u>Principle (i):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."	Not likely to be at variance	No
Assessment:		
Given the streams of the drainage lines that intersect the application start in, and flow downstream away from the application area, the proposed clearing is unlikely to cause deterioration in the quality of surface water (GIS Database).		
There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). The quality of groundwater is unlikely to be significantly impacted from the proposed clearing.		
<u>Principle (j):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."	Not likely to be at variance	No
Assessment:		
The soils of the application area include deep sands and loamy earths, likely to result in surface water rapidly infiltrating the soil rather than sheet flow (MBS, 2023)		
The application area is located at a slightly higher elevation than the surrounding gently undulating landscape (GIS Database). In the instance that a significant rainfall event occurs, water from rainfall is likely to run off into areas adjacent to the application area (MBS, 2023; GIS Database).		
Given the non-perennial drainage lines that intersect the application area form the headwater of Claudius Creek, and flow down downstream away from the application area, the proposed clearing is unlikely to contribute to increased incidence or intensity of flooding (GIS Database).		

Appendix C. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Trudgen, M.E. (1991) *Vegetation condition scale* in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

Condition	Description
Excellent	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Very good	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Good	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Poor	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Very poor	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely degraded	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

Measuring vegetation condition for the Eremaean and Northern Botanical Provinces (Trudgen, 1991)

Appendix D. Sources of information

D.1. GIS databases

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Contours (DPIRD-073)
- Clearing Regulations Schedule One Areas (DWER-057)
- DBCA Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments Catchments (DWER-028)
- Hydrography Inland Waters Waterlines
- Hydrography, Linear (DWER-031)
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Pre-European Vegetation Statistics
- Interim Ramsar Sites (DBCA-010)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping Best Available (DPIRD-027)
- Soil Landscape Mapping Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

D.2. References

Bureau of Meteorology (BoM) (2024) Bureau of Meteorology Website – Climate Data Online, Leinster Aero. Bureau of Meteorology. <u>https://reg.bom.gov.au/climate/data/</u> (Accessed 2 January 2024).

CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.

Department of Environment Regulation (DER) (2014) A guide to the assessment of applications to clear native vegetation.
Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-
vegetation/Guidelines/Guide2 assessment native veg.pdf

- Department of Planning, Lands and Heritage (DPLH) (2024) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <u>https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS</u> (Accessed 12 January 2024).
- Department of Primary Industries and Regional Development (DPIRD) (2024) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <u>https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f</u> (Accessed 2 January 2024).
- Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. Available from: <u>https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.pdf</u>
- Environmental Protection Authority (EPA) (2016) Technical Guidance Flora and Vegetation Surveys for Environmental Impact Assessment. Available from:

http://www.epa.wa.gov.au/sites/default/files/Policies and Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf

- Environmental Protection Authority (EPA) (2016) Technical Guidance Terrestrial Fauna Surveys. Available from: <u>https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf</u>
- Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics
- JSWT (2004) Flora Survey of the Lawlers Gold Mine Leases. Prepared for Gold Fields Limited, by Jim's Seeds, Weeds & Trees Pty Ltd, September 2004.
- MBS Environmental (MBS) (2023) Native Vegetation Clearing Permit Application Agnew Gold Mine Hidden Secret Expansion Project. Prepared By MBS Environmental, for Gold Fields Australia Pty Ltd, May 2023.
- Payne, A.L., van Vreeswyk, A.M., Leighton, K.A., Pringle, H.J., and Hennig, P. (1998) An inventory and condition survey of the Sandstone-Yalgoo-Paynes Find area, Western Australia. Technical Bulletin 90. Department of Agriculture and Food, Western Australia, Perth.
- Pringle, H.J., Gilligan, S.A., and van Vreeswyk, A.M. (1994) An inventory and condition survey of rangelands in the northeastern Goldfields, Western Australia. Technical Bulletin 87. Department of Agriculture and Food, Western Australia, Perth.
- Rapallo (2017) Level 1 Flora and Fauna Survey of the Hidden Secret, Leviathan and Songvang Corridor Project Areas. Prepared by Rapallo Group, for Agnew Gold Mining Company, May 2017.
- Trudgen, M.E. (1991) Vegetation condition scale in National Trust (WA) 1993 Urban Bushland Policy. National Trust of Australia (WA), Wildflower Society of WA (Inc.), and the Tree Society (Inc.), Perth.

4. Glossary

Acronyms:

BC Act	Biodiversity Conservation Act 2016, Western Australia
ВоМ	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety, Western Australia
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DEMIRS)
DMP	Department of Mines and Petroleum, Western Australia (now DEMIRS)
DoEE	Department of the Environment and Energy (now DCCEEW)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	Environmental Protection Act 1986, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (Federal Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia

TEC

Definitions:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia}:-

T <u>Threatened species:</u>

Listed by order of the Minister as Threatened in the category of critically endangered, endangered or vulnerable under section 19(1), or is a rediscovered species to be regarded as threatened species under section 26(2) of the *Biodiversity Conservation Act 2016* (BC Act).

Threatened fauna is that subset of 'Specially Protected Fauna' listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

Threatened flora is that subset of 'Rare Flora' listed under schedules 1 to 3 of the *Wildlife* Conservation (Rare Flora) Notice 2018 for Threatened Flora.

The assessment of the conservation status of these species is based on their national extent and ranked according to their level of threat using IUCN Red List categories and criteria as detailed below.

CR Critically endangered species

Threatened species considered to be "facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines. Published under schedule 1 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for critically endangered fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for critically endangered flora.

EN Endangered species

Threatened species considered to be "facing a very high risk of extinction in the wild in the near future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines. Published under schedule 2 of the *Wildlife Conservation* (Specially Protected Fauna) Notice 2018 for endangered fauna or the *Wildlife Conservation* (Rare Flora) Notice 2018 for endangered flora.

VU Vulnerable species

Threatened species considered to be "facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with criteria set out in the ministerial guidelines".

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines. Published under schedule 3 of the *Wildlife Conservation* (Specially Protected Fauna) Notice 2018 for vulnerable fauna or the *Wildlife Conservation* (Rare Flora) Notice 2018 for vulnerable flora.

Extinct Species:

EX Extinct species

Species where "there is no reasonable doubt that the last member of the species has died", and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).

Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.

EW Extinct in the wild species

Species that "is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form", and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species:

Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.

Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.

MI Migratory species

Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).

Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.

Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018.*

CD Species of special conservation interest (conservation dependent fauna)

Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).

Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018.*

OS Other specially protected species

Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).

Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018.*

P Priority species:

Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.

Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

Assessment of Priority codes is based on the Western Australian distribution of the species, unless the distribution in WA is part of a contiguous population extending into adjacent States, as defined by the known spread of locations.

P1 Priority One - Poorly-known species

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under immediate threat from known threatening processes. Such species are in urgent need of further survey.

P2 Priority Two - Poorly-known species

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, e.g. national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation. Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements and appear to be under threat from known threatening processes. Such species are in urgent need of further survey.

P3 Priority Three - Poorly-known species

Species that are known from several locations, and the species does not appear to be under imminent threat, or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat. Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. Such species are in need of further survey.

P4

Priority Four - Rare, Near Threatened and other species in need of monitoring

(a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as Conservation Dependent.

(c) Species that have been removed from the list of threatened species during the past five years for reasons other than taxonomy.

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.
- (h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.