



Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	11155/1
Permit type:	Purpose permit
Applicant name:	Norton Gold Fields Pty Ltd
Application received:	27 June 2025
Application area:	500 hectares
Purpose of clearing:	Mineral production and associated activities
Method of clearing:	Mechanical removal
Tenure:	Mining Lease 24/944 Mining Lease 24/978 Miscellaneous Licence 24/220 Miscellaneous License 24/231
Location (LGA area/s):	City of Kalgoorlie-Boulder
Colloquial name:	Mt Jewel Mining Project

1.2. Description of clearing activities

Norton Gold Fields Pty Ltd proposes to clear up to 500 hectares of native vegetation within a boundary of approximately 706.43 hectares, for the purpose of mineral production and associated activities. The project is located approximately 36-54 kilometres north of Kalgoorlie, within the Shire of Kalgoorlie-Boulder.

The application is to allow for the consolidation of two expired permits (CPS 6665/2 and CPS 6666/2) and to undertake mineral production and associated activities.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	22 January 2025
Decision area:	500 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, assessed, and determined in accordance with Sections 51E and 51O of the *Environment Protection Act 1986* (EP Act). The Department of Mines, Petroleum and Exploration (DMPE) 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 E), supporting information provided by the applicant including the results of a flora and vegetation survey (Appendix D), the clearing principles set out in Schedule 5 of the EP Act (Appendix B), 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 the purpose of the clearing to undertake mineral production and associated activities.

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;
- impacts to riparian vegetation and waterflows;
- potential land degradation in the form of water erosion;
- the loss of native vegetation that is suitable habitat for malleefowl (*Leipoa ocellata*);
- potentially suitable habitat for arid bronze azure butterfly (*Ogyris petrina*);

- potentially suitable habitat for inland hairstreak butterfly (*Jalmenus aridus*); and
- potentially suitable habitat for southern whiteface (*Aphelocephala leucopsis*).

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 can be minimised and managed such as that it is unlikely to lead to an unacceptable risk to environmental values.

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

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- avoid clearing watercourses where practicable, and ensure surface flows are maintained or reinstated downstream;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- commence permitted activities no later than six months after undertaking clearing to reduce the risk of erosion;
- a fauna management (malleefowl) condition to identify active ('in use') malleefowl mounds and avoid clearing within 200 metres of any mounds from 1 September to 31 January;
- a fauna management (arid azure bronze butterfly) condition requiring areas proposed to be cleared to be surveyed to identify potentially critical habitat, ant colonies and ABAB individuals; and no clearing within 100 metres of any colonies;
- a fauna management (inland hairstreak butterfly) condition requiring areas proposed to be cleared to be surveyed to identify potential critical habitat and inland hairstreak individuals, and no clearing within 50 metres of inland hairstreak butterfly host plants; and
- a fauna management (southern whiteface) condition requiring areas proposed to be cleared between 1 July and 31 October are inspected to identify active ('in use') southern whiteface nests, and to maintain a 50 metre buffer around identified active nests.

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 51O of the EP Act (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 (treaties) 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, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

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. The mining proposal includes an environmental management plan which addresses impacts to watercourses and groundwater, topsoil, flora, fauna, and related pollution and waste as a result of mining activities (Norton Gold Fields Pty Ltd, 2015). The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts where possible and rehabilitate environmental values where necessary.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles identified that the impacts of the proposed clearing present a risk to biological values (fauna, adjacent flora and vegetation) and land degradation. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (flora) - Clearing principle (a)

Assessment

The application area is located within the Eastern Murchison subregion of the Murchison Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The Eastern Murchison subregion is characterised by internal drainage and extensive areas of elevated red desert sandplains with minimal dune development (CALM, 2002). Vegetation of the subregion is dominated by Mulga woodlands (often rich in ephemerals), hummock grasslands, saltbush shrublands and Tecticornia shrublands (CALM, 2002). Pastoral grazing occurs over a vast majority of the subregion, and consequently, much of the subregion has been severely degraded by feral herbivores. Mining of gold and nickel in the region is considerable, with most mining tenements occurring on pastoral land (CALM, 2002).

Botanica Consulting (2024) undertook a detailed flora and vegetation survey over the application area and surrounds (approximately 1,037 hectares) on 6 and 7 March 2024. No Threatened or priority flora species were recorded within the application area, no survey limitations were identified (Botanica Consulting, 2024). The following conservation significant flora species may potentially occur within the application area:

Angianthus prostratus, Priority 3, is a prostrate annual herb that grows in red clay or loamy soils and saline depressions across the Eastern Murchison and Merredin IBRA subregions (WA Herbarium, 1998-). Due to the lack of recent records within the surrounding area, the species is unlikely to be present within the application area.

Elachanthus pusillus, Priority 2, is an ascending or decumbent annual herb that grows in red loam or limestone across the Eastern Goldfields, Mardabilla and Southern Cross IBRA subregions (WA Herbarium, 1998-; Botanica Consulting, 2024). Due to the lack of recent records within the surrounding area, the species is unlikely to be present within the application area.

Eremophila praecox, Priority 2, is a broom-like shrub that grows in red/brown sandy loam across the Coolgardie, Murchison and Nullarbor IBRA subregions (WA Herbarium, 1998-). Given there are 52 records across three subregions, it is unlikely that the species will be impacted by the proposed clearing.

Notisia intonsa, Priority 3, is a flowering plant adapted to dry shrublands that is found across the Avon Wheatbelt, Coolgardie, Esperance Plains, Mallee and Murchison IBRA subregions (WA Herbarium, 1998-). Given there are 29 records across five subregions, it is unlikely that the species will be impacted by the proposed clearing.

Rhodanthe uniflora, Priority 1, is an erect, woolly annual herb that grows in brown earth and open eucalypt woodlands across the Murchison IBRA subregion (WA Herbarium, 1998-). There are no recent records within 20 kilometres of the application area, with the closest up to date record being approximately 21 kilometres west northwest of the application area. This record is situated on mid sparse shrubland dominated by *Maireana pyramidata* over low sparse chenopod shrubland of mixed species including *Maireana georgei*, *Sclerolaena diacantha* and *Sclerolaena patentiscuspis*. Given that this habitat is not found within the application area, it is unlikely that the proposed clearing will have any impacts to this species.

Ricinocarpos digynus, Priority 1, is an erect shrub that grows on rocky hillslopes with *Casuarina pauper* across the Coolgardie and Murchison IBRA subregions (WA Herbarium, 1998-). There are 5 records of *Ricinocarpos digynus* populations within one kilometre of the application area, all reporting as either locally common and two of the records as featuring over 100 individuals, however the flora/vegetation survey did not observe any records within the application area (Botanica Consulting, 2024). Given there are no records within the application area, it is unlikely that the species will be impacted by the proposed clearing.

Xanthoparmelia dayiana, Priority 3, is a lichen species that grows on rocks surrounded by open woodlands surrounded by Eucalypt Woodlands with *Acacia* / *Atriplex* across the Coolgardie, Murchison and Yalgoo IBRA subregions (WA Herbarium, 1998-; GIS Database). Given that there are no recent records within the surrounding area, the species is unlikely to be within the application area.

The desktop review undertaken by Botanica Consulting identified 57 introduced flora species within 40 kilometres of the survey area (Botanica Consulting, 2024). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

Two introduced flora species were observed within the application area (Botanica Consulting, 2024). Weeds have the potential to alter the biodiversity of an area, competing with native vegetation for available resources and making areas more fire prone. Potential impacts to biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.

The vegetation associations, fauna habitats and landform types present within the application area, are well represented in surrounding areas (Botanica Consulting, 2024). The application area is unlikely to represent an area of higher biodiversity than surrounding areas, in either a local or regional context.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing of priority flora can be managed by taking the steps to avoid and minimise the extent of the clearing.

Conditions

To address the above impacts. The following management measures will be required as conditions on the clearing permit:

- 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

3.2.2. Biological values (fauna) - Clearing principle (b)

Assessment

A desktop assessment has identified one conservation significant species recorded within the application area (Botanica Consulting, 2024; GIS Database). In addition to this, there is suitable habitat for three more conservation significant fauna species, including one bird species. There were three other bird species located within 20 kilometres of the application area (GIS Database):

Mammals

- malleefowl (*Leipoa ocellata*)

Birds

- hooded plover (*Charadrius cucullatus*)
- sharp-tailed sandpiper (*Calidris acuminata*)
- common greenshank (*Tringa nebularia*)
- southern whiteface (*Aphelocephala leucopsis*)

Invertebrates

- inland hairstreak butterfly (*Jalmenus aridus*)
- arid bronze azure butterfly (*Ogyris petrina*)

Malleefowl

Malleefowl occur in a wide range of habitats generally consisting of a sandy substrate with trees between 3 and 8 metres in height and shrub layer providing horizontal cover (DCCEEW, 2024). The large ground-dwelling bird favours log unburned and ungrazed mallee and constructs nests in sandy soils and leaf litter by building large mounds used for egg incubation (DCCEEW, 2024). There is one record of malleefowl within the application area and one historic record located in the northwest corner of the application area (Botanica Consulting, 2011; GIS Database). The application area contains suitable habitat features i.e. sandy clay loam plain with low mallee woodlands, located along the proposed haul road corridor (Botanica Consulting, 2024; GIS Database). There are 11 records of malleefowl within 20 kilometres of the application area (GIS Database).

Arid bronze azure butterfly and inland hairstreak butterfly

Arid bronze azure butterfly (ABAB) has a severely fragmented and restricted geographic distribution across two remaining subpopulations in Western Australia. They are known to have a complex dependency on the co-occurring sugar ant (*Camponotus* sp. nr. *terebrans*) to complete their lifecycle, with ABAB larvae living entirely in the sugar ants nest during their development (WABSI, 2022). The preferred habitat for ABAB is described as vegetation of mature mixed gimlet (*Eucalyptus salubris*) and salmon gum (*Eucalyptus salmonophloia*) woodlands on red-brown loam soils, with an open understorey (DBCA, 2020). The application area contains suitable vegetation i.e. Mid woodland of *Eucalyptus salmonophloia* over mid open shrubland of *Senna artemisioides* subsp. *filifolia* over low open chenopod shrubland of *Maireana sedifolia* on clay loam plain (Botanica Consulting, 2024). There are six records of ABAB within 20 kilometres of the application area.

The Inland hairstreak butterfly is known from two locations near Kalgoorlie; however, has been recorded from another 10 locations within an area extending approximately 121 kilometres north to south by 42 kilometres east to west (Eastwood et al., 2023). The preferred habitat for this species is open woodland with mature *Senna artemisioides* ssp. *filifolia* and mixed flowering shrubs (*Eremophila*, *Scaevola* and *Maireana*) with open areas of well drained exposed ground adjoining the hostplants (Eastwood et al., 2023). Inland hairstreak caterpillars feed on the flowers of *Senna artemisioides* ssp. *filifolia*. The species has a symbiotic relationship with the ant species *Froggattella kirbii* (Eastwood et al., 2023). The application area occurs within mapped potential habitat for inland hairstreak, particularly where *Senna artemisioides* ssp. *filifolia* occurs in Eucalyptus woodlands (CLP-EW1), Casuarina woodlands (CLP-CW1) and rocky hillslope (RH-EW1). There are five records of inland hairstreak butterflies within 20 kilometres of the application area.

Southern whiteface

Southern whiteface occurs across most of mainland Australia, within open woodlands and shrublands where there is an understorey of grasses, shrubs, or both (DCCEEW, 2023). This species is unobtrusive, foraging on the ground amongst leaf litter, and nests within tree hollows or low foliage and shrubs (DCCEEW, 2023; Menkhorst et al., 2019). This species breeds

from July to October and builds large domed nests of grass, bark, and roots in tree crevices and low bushes (DCCEEW, 2023). Botanica Consulting (2024) notes that the species is found in arid regions across most of the southern half of the Australian continent and may occur within the application area, likely within open woodlands with scattered shrublands. For these reasons, it is possible that the southern whiteface may occur within the application area or utilise the suitable habitat.

Other conservation significant fauna

Several conservation significant species have been recorded within 20 kilometres of the application area, however there is a low likelihood of occurrence for many of these species including: hooded plover, sharp-tailed sandpiper and the common greenshank. While the application area contains some suitable habitat for these bird species, it is unlikely that these species will be significantly impacted at a regional level, given similar habitat occurring in the regional area (GIS Database). However, it is recommended that trees containing hollows be inspected prior to clearing to avoid clearing any potential roosting or nesting habitat.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on potentially suitable conservation significant fauna habitat can be managed by implementing fauna management conditions for malleefowl, ABAB, inland hairstreak and southern whiteface, as well as a directional clearing condition to ensure that any remaining populations of native fauna living in the area to be cleared are not harmed during the clearing process.

The applicant may have notification responsibilities under the EPBC Act for impacts to malleefowl, arid bronze azure butterfly and southern whiteface and their habitats, as set out in the appropriate EPBC Act National Recovery Plans. The applicant has been advised to contact the federal Department of Climate Change, Energy, the Environment and Water (DCCEEW) to discuss EPBC Act referral requirements.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- a fauna management (malleefowl) condition to identify active ('in-use') malleefowl mounds and avoid clearing within 200 metres of any mounds from 1 September to 31 January;
- a fauna management (arid bronze azure butterfly) condition requiring areas proposed to be cleared to be surveyed to identify potentially critical habitat, ant colonies and ABAB individuals; and no clearing within 100 metres of any colonies;
- a fauna management (inland hairstreak butterfly) condition requiring areas to be cleared to be surveyed to identify potential critical habitat and inland hairstreak individuals, and no clearing within 50 metres of inland hairstreak butterfly host plants; and
- a fauna management (southern whiteface) condition requiring areas proposed to be cleared between 1 July and 31 October are inspected to identify active ('in-use') southern whiteface nests, and to maintain a 50 metre buffer around identified active nests.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 9 September 2025 by the Department of Mines, Petroleum and Exploration inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (WC2020/005) over the area under application (DPLH, 2025). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group (Kakarra Part A). 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, 2025). 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.

It is noted that the proposed clearing may impact on malleefowl (*Leipoa ocellata*), arid bronze azure butterfly (*Ogyris petrina*) and southern whiteface (*Aphelocephala leucopsis*) which are a protected matters under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Commonwealth) Department of Climate Change, Energy, the Environment and Water for environmental impact assessment under the EPBC Act. The proponent is advised to contact the Department of Climate Change, Energy, the Environment and Water for further information regarding notification and referral responsibilities under the EPBC Act.

Other relevant authorisations required for the proposed land use include:

- A Programme of Work approved under the *Mining Act 1978*
- A Mining Development and Closure Proposal 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 characteristics

Characteristic	Details									
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is surrounded by the landscape and vegetation of the Murchison bioregion. The proposed clearing area is part of the existing Mt Jewell mining operations and has areas of previously disturbed land.									
Ecological linkage	According to available datasets, the application does not include any known or mapped ecological linkages (GIS Database).									
Conservation areas	The application area is not located in any known or mapped conservation areas. The closest record is Goongarrie National Park located approximately 15 kilometres north of the application area (GIS Database).									
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations:</p> <ul style="list-style-type: none">• 10: Medium woodland: red mallee group;• 529: Succulent steppe with open low woodland: mulga & sheoak over bluebush; and• 555: Hummock grasslands, mallee steppe: red mallee over spinifex, <i>Triodia scariosa</i> (GIS Database). <p>A flora and vegetation survey was conducted over the application area by Botanica Consulting during March, 2024. The following vegetation associations were recorded within the application area (Botanica Consulting, 2024):</p> <ul style="list-style-type: none">• Mid woodland of <i>Eucalyptus salmonophloia</i> over mid open shrubland of <i>Senna artemisioides</i> subsp. <i>filifolia</i> over low open chenopod shrubland of <i>Maireana sedifolia</i> on clay loam plain;• Mid mallee woodland of <i>Eucalyptus oleosa</i> subsp. <i>oleosa</i> over mid open shrubland of <i>Acacia hemiteles</i> over low hummock grassland of <i>Triodia scariosa</i> on sandy clay loam plain;• Mid mallee woodland of <i>Eucalyptus oleosa</i> subsp. <i>oleosa</i> over mid open shrubland of <i>Acacia acuminata</i> over low open shrubland of <i>Ptilotus obovatus</i> on clay loam plain;• Low open forest of <i>Acacia caesaneura</i> over mid shrubland of <i>Acacia ramulosa</i> over low isolated shrubs of <i>Ptilotus obovatus</i> on clay loam plain;• Low woodland of <i>Casuarina pauper</i> over mid open shrubland of <i>Senna artemisioides</i> subsp. <i>filifolia</i> over low open shrubland of <i>Olearia muelleri</i> and <i>Ptilotus obovatus</i> on clay loam plain; and• Low woodland of <i>Eucalyptus lesouefii</i> over mid open shrubland of <i>Senna artemisioides</i> subsp. <i>filifolia</i> over low open shrubland of <i>Ptilotus obovatus</i> on rocky hillslope.									
Vegetation condition	<p>The vegetation survey (Botanica Consulting, 2024) indicates the vegetation within the proposed clearing area is in ‘Completely Degraded; to ‘Very Good’ (Trudgen, 1991) condition.</p> <p>The full Trudgen (1991) condition rating scale is provided in Appendix C.</p>									
Climate and landform	The application area is located within the arid climate of the Murchison bioregion. The area experiences an average annual rainfall of 214.6 millilitres (BoM, 2025).									
Soil description	The soil in the application area is, in the majority, mapped as red-brown hardpan shallow loam and red loamy earth. There are areas of calcareous loamy earth, friable non-cracking clay, red shallow loam and red shallow sand throughout the application area as well.									
Land degradation risk	<p>The application area lies within the Helag, Gumland, Kanowna, Moriarty, Gundockerta, Bandy, Gransal, Bannar, Woolibar, and Bunyip land systems (GIS Database). These systems have been mapped and described as (Waddell and Galloway, 2023):</p> <table><tr><th>Land system</th><th>Description</th><th>Degradation and erosion risk</th></tr><tr><td>Bandy system</td><td>Low outcrops of granite and gritty-surfaced plains, supporting scattered acacia and shrublands.</td><td>Not susceptible to erosion</td></tr><tr><td>Banner system</td><td>Level to gently undulating gravelly sandy pains, supporting acacia and Allocasuarina scrublands, commonly with scattered</td><td>Not susceptible to erosion</td></tr></table>	Land system	Description	Degradation and erosion risk	Bandy system	Low outcrops of granite and gritty-surfaced plains, supporting scattered acacia and shrublands.	Not susceptible to erosion	Banner system	Level to gently undulating gravelly sandy pains, supporting acacia and Allocasuarina scrublands, commonly with scattered	Not susceptible to erosion
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Characteristic	Details		
		native pines and emergent mallees.	
	Bunyip system	Alluvial tracts, commonly with gilgai, draining greenstone hills, supporting mixed halophytic shrublands occasionally with a black oak or eucalypt overstorey.	Alluvial plains – prone to erosion
	Gumland system	Alluvial plains, supporting eucalypt woodlands with halophytic shrub understoreys.	Alluvial plains and drainage tracts – susceptible to erosion
	Gundockerta system	Extensive, gently undulating, calcareous plains, supporting bluebush shrublands.	Saline story plains not protected by a stony mantle, and adjacent to lower alluvial landforms – susceptible to water erosion
	Gransal system	Stony plains and low rises on granite, supporting acacia and halophytic shrublands.	Breakaway footslopes- highly susceptible to erosion Alluvial plains – moderately susceptible to erosion
	Helag system	Hardpan plain and central drainage tracts, supporting mulga and eucalypt (mallee) woodlands with minor chenopod shrublands.	Susceptible to water erosion
	Kanowna system	Undulating stony plains on metasedimentary and felsic volcanoclastic rocks with saline drainage tracts, supporting scattered eucalypt woodlands and halophytic shrublands.	Susceptible to water erosion (except for areas with loamy plain landforms)
	Moriarty system	Low greenstone rises and stony plains, supporting mixed shrublands with eucalypt or casuarina overstoreys.	Susceptible to water erosion
	Woolibar system	Gently undulating calcareous gravelly plains, supporting bluebush shrublands and eucalypt woodlands.	Saline plains and alluvial plains – very susceptible to erosion (particularly where not protected by a gravelly mantle, and especially when associated with weathered felsic volcanoclastic rocks)
Waterbodies	The desktop assessment and aerial imagery indicated that five minor, non-perennial watercourses transect the area proposed to be cleared (GIS Database).		
Hydrogeography	<p>The application area is not within any legislated surface water areas. A swamp (Lignum Swamp) is located approximately five kilometres northeast of the application area; and a non-perennial lake system located approximately four kilometres south of the application area. The Broad Arrow Dam Catchment Area is the closest public drinking water source area located approximately 10 kilometres southwest of the application area (GIS Database).</p> <p>The application area is located within the Goldfields Groundwater Area which has a mapped groundwater salinity of 14,000-35,000 milligrams per litre total dissolved solids which is described as saline (GIS Database).</p>		
Flora	The desktop assessment located seven conservation significant flora species recorded within a 20 kilometre radius of the application area (GIS Database). The nearest record is located less than one kilometre from the application area (GIS Database).		

Characteristic	Details
Ecological communities	The biological survey did not record any threatened ecological communities (TECs) or priority ecological communities (PECs) within the application area (Botanica Consulting, 2024). The Emu Land System PEC is located within six kilometres of the application area.
Fauna	The desktop assessment located one conservation significant fauna species within the application area, and five others within 20 kilometres of the application area (GIS Database).
Fauna habitat	<p>A fauna habitat field assessment was conducted in March 2024 by Botanica Consulting. Three broad habitat types were identified (Botanica Consulting, 2024).</p> <ul style="list-style-type: none"> Rocky Hillslope, Low Eucalypt Woodlands Clay loam plain, low open woodlands Sandy clay loam plain, low mallee woodlands Cleared areas <p>Representative photos provided by the basic fauna survey are available in Appendix D.</p>

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current extent in all DBCA Managed Land (proportion of pre-European extent) (%)
IBRA Bioregion - Murchison	28,120,586.77	28,044,823.42	99.73	2,185,987.96	7.77
Beard vegetation associations - State					
Veg Assoc No. 10	145,676.38	144,162.80	98.96	4,438.04	3.05
Veg Assoc No. 529	102,579.86	102,479.14	99.90	4,482.01	4.37
Veg Assoc No. 555	57,420.34	57,252.24	99.71	25,398.89	44.23
Beard vegetation associations - Bioregion					
Veg Assoc No. 10	65,387.97	64,757.47	99.04	3,052.41	4.67
Veg Assoc No. 529	62,202.81	62,102.10	99.84	2,774.93	4.46
Veg Assoc No. 555	22,475.98	22,468.35	99.97	4,080.18	18.15

Government of Western Australia (2019)

A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (Appendix E.1), and biological survey information, impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (local area)	Likelihood of occurrence
<i>Ricinocarpos digynus</i>	P1	Y	<5	5	Possible – discussed in Section 3.2.2 habitat
<i>Acacia epedunculata</i>	P1	N	<10	2	Unlikely
<i>Angianthus prostratus</i>	P3	Y	<15	3	Possible – discussed in Section 3.2.2
<i>Eremophila praecox</i>	P2	Y	<15	21	Possible – discussed in Section 3.2.2
<i>Ptilotus rigidus</i>	P1	N	<20	2	Unlikely
<i>Eucalyptus jutsonii</i> subsp. <i>jutsonii</i>	P4	N	<20	1	Unlikely
<i>Rhodanthe uniflora</i>	P1	Y	<20	1	Possible – discussed in Section 3.2.2

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (local area)	Likelihood of occurrence
<i>Notisia intonsa</i>	P3	Y	<35	Unknown	Possible – discussed in Section 3.2.2
<i>Elachanthus pusillus</i>	P2	Y	<40	Unknown	Possible – discussed in Section 3.2.2
<i>Xanthoparmelia dayiana</i>	P3	Y	<40	Unknown	Possible – discussed in Section 3.2.2

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, MI: migratory, P: priority

A.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (Appendix E.1), and biological survey information, impacts to the following conservation significant fauna required further consideration.

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (local area)	Likelihood of occurrence
<i>Leipoa ocellata</i> (malleefowl)	VU	Y	0	12	Recorded – discussed in Section 3.2.1
<i>Jalmenus aridus</i> (inland hairstreak butterfly)	P2	Y	<15	5	Possible – discussed in Section 3.2.1
<i>Charadrius cucullatus</i> (hooded plover, hooded dotterel)	P4	N	<15	1	Unlikely
<i>Ogyris subterrestris petrina</i> (arid bronze azure butterfly)	CR	Y	<20	6	Possible – discussed in Section 3.2.1
<i>Calidris acuminata</i> (sharp-tailed sandpiper)	MI	N	<20	1	Unlikely
<i>Tringa nebularia</i> (common greenshank)	MI	N	<20	1	Unlikely
<i>Aphelocephala leucopsis</i> (southern whiteface)	VU	Y	Unknown	Unknown	Possible – discussed in Section 3.2.1

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, MI: migratory, P: priority

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<u>Principle (a):</u> “Native vegetation should not be cleared if it comprises a high level of biodiversity.” <u>Assessment:</u> The area proposed to be cleared may contain habitat necessary for the maintenance of conservation significant flora.	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above</i>
<u>Principle (b):</u> “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.” <u>Assessment:</u> The area proposed to be cleared contains habitat necessary for the maintenance of conservation significant fauna.	At variance	Yes <i>Refer to Section 3.2.2, above.</i>
<u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.” <u>Assessment:</u>	Not likely to be at variance	No .

Assessment against the clearing principles	Variance level	Is further consideration required?
The area proposed to be cleared is unlikely to contain flora species listed under the BC Act (Botanica Consulting, 2024; GIS Database).		
<p><u>Principle (d):</u> <i>"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."</i></p> <p><u>Assessment:</u></p> <p>No Threatened Ecological Communities (TECs) have been recorded within the application area, and there are no TECs mapped near the application area (GIS Database).</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."</i></p> <p><u>Assessment:</u></p> <p>The application area falls within Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (GIS Database). Over 99 per cent of the pre-European vegetation still exists in the Murchison Bioregion (Government of Western Australia, 2019). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area (GIS Database).</p>	Not at variance	No
<p><u>Principle (h):</u> <i>"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></p> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."</i></p> <p><u>Assessment:</u></p> <p>There are no permanent watercourses or wetlands within the area proposed to be cleared (GIS Database).</p> <p>There are five minor, non-perennial watercourses within the application area which are all ephemeral watercourses draining into the King of the West non-perennial lake system and its associated waterbodies located south of the application area.</p> <p>The potential impacts to vegetation can be managed with the implementation of a vegetation management condition.</p>	At variance	No
<p><u>Principle (g):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."</i></p> <p><u>Assessment:</u></p> <p>The landforms and soil types of the subregion include broad plains of red-brown soils, breakaway complex and red sandplains (CALM, 2002). The vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands (CALM, 2002). Soils of the region are generally protected by stony mantles, however accelerated soil erosion may occur where vegetation is cleared or protective stony mantles are distributed (DAFWA, 2015).</p> <p>Potential impacts to the land may be managed with a staged clearing condition to minimise the risk of erosion following the proposed clearing.</p>	May be at variance	No
<p><u>Principle (i):</u> <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."</i></p> <p><u>Assessment:</u></p> <p>There are no Public Drinking Water Source Areas (PDWSA) within or in close proximity to the application area (GIS Database). The closest PDWSA is located uphill, approximately 11 kilometres west southwest of the application area. For these reasons, proposed clearing is unlikely to affect salinity, pH levels, or nutrient levels of</p>	Not likely to be at variance	No.

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>the PDWSA. The ephemeral creek lines within the application area are non-perennial, flowing briefly after significant rainfall (Botanica Consulting, 2024; GIS Database).</p> <p>Due to the current levels of groundwater salinity in the application area it is unlikely that the purposed clearing would result in all incremental increase in groundwater salinity, nor cause deterioration in the quality of the groundwater.</p> <p>As a result, significant impacts to surface water and underground water are considered unlikely.</p>		
<p><u>Principle (i):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."</i></p> <p><u>Assessment:</u></p> <p>The climate of the region is semi-arid, with a low average rainfall of approximately 214.6 millilitres per year (BoM, 2025). Drainage lines in the area are dry for most of the year, only flowing briefly immediately following significant rainfall (CALM, 2002).</p> <p>There are no permanent watercourses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy rainfall events (CALM, 2002).</p> <p>The proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.</p>	Not likely to be at variance	No

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.

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

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.

Appendix D. Photographs of the vegetation

The following photographs represent the main fauna habitats in the application area (Botanica Consulting, 2024).



Figure 1. Rocky hillslope, low eucalypt woodlands (13.9% of the survey area)



Figure 2. Clay loam plain, low open woodlands (75.6% of the survey area)



Figure 3. Sandy clay loam plain, low mallee woodlands (8.9% of the survey area)

Appendix E. Sources of information

E.1. GIS datasets

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

- Clearing Instruments Activities (Areas Approved to Clear) (DWER-076)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- Contaminated Sites Database - Restricted (DWER-073)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- IBSA Survey Details (DWER-118)
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Native Title (Determination) (LGATE-066)
- Native Title (NNTT) (LGATE-004)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Townsites (LGATE-248)
- WA Now Aerial Imagery

Restricted GIS Databases used:

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

E.2. References

- Botanica Consulting (2011) Level 1 Flora and Vegetation Survey of Lignum Dam Tenements E24/146. Report prepared for Pioneer Resources Ltd, by Botanica Consulting, January 2011.
- Botanica Consulting (2024) Mt Jewell Project Detailed Flora/Vegetation Survey and Basic Fauna Assessment. Unpublished report prepared for Norton Gold Fields Pty Ltd, April 2024.
- Bureau of Meteorology (BoM) (2025) Bureau of Meteorology Website – Climate Data Online, Gindalbie. Bureau of Meteorology. <https://reg.bom.gov.au/climate/data/> (Accessed 10 December 2025).
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographic Subregions in 2002. Department of Conservation and Land Management, Western Australia.
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- Department of Agriculture and Food, Western Australia (DAFWA) (now Department of Primary Industry and Regional Development) (2015) Advice received in relation to Clearing Permit Application CPS 6666/1. Office of the Commissioner of Soil and Land Conservation, Department of Agriculture and Food, Western Australia, July 2015.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2020) Guideline for the survey of arid bronze azure butterfly (ABAB) in Western Australia. Available from: Threatened and priority fauna resources | Department of Biodiversity, Conservation and Attractions
- Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2023) Conservation Advice for *Aphelocephala leucopsis* (southern whiteface). Available from: <https://environment.gov.au/biodiversity/threatened/species/pubs/529-conservation-advice-31032023.pdf> (Accessed 11 December 2025).
- Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2024) National recovery plan for the Malleefowl (*Leipoa ocellata*). Available from: <https://www.dcceew.gov.au/environment/biodiversity/threatened/publications/recovery/malleefowl>

- Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. 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) (2025) Aboriginal Cultural Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/ACHIS/index.html?viewer=ACHIS> (Accessed 10 December 2025).
- Department of Primary Industries and Regional Development (DPIRD) (2025) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. <https://dpiird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (Accessed 10 December 2025).
- Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. <https://www.wa.gov.au/system/files/2024-11/procedure-native-vegetation-clearing-permits.pdf>
- Eastwood, R. Jacks, A. Williams, A.A.E. Petersen. L, Cameron, J. (2023) Current distribution, preferred habitat, behaviour, and biology of the Inland Hairstreak, *Jalmenus aridus* Graham & Moulds, 1988 (*Lepidoptera: Lycaenidae*) in the Eastern Goldfields region of Western Australia. Records of the Western Australian Museum.
- Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. 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) (2020) Technical Guidance – Terrestrial Fauna Surveys. https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/2020.09.17%20-%20EPA%20Technical%20Guidance%20-%20Vertebrate%20Fauna%20Surveys%20-%20Final.pdf
- 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>
- Menkhorst, P., Rogers, D., Clarke, R., Davies, J., Marsack, P., and Franklin, K. (2019) The Australian bird guide: Revised Edition. CSIRO Publishing, Victoria, 2019.
- Norton Gold Fields Pty Ltd (2015) Mt Jewell Open Pit Mining Proposal, unpublished document prepared for Department of Mines and Petroleum, July 2015.
- Waddell PA and Galloway PD (2023) 'Land systems, soils and vegetation of the southern Goldfields and Great Western Woodlands of Western Australia', Technical bulletin 99, vol 2, Department of Primary Industries and Regional Development, Western Australian Government.
- The Western Australian Biodiversity Science Institute (WABSI) (2022) Arid Bronze Azure Butterfly – Workshop Report 2022. The Western Australian Biodiversity Science Institute.
- 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.

Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	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 (now DMPE)
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)
DMP	Department of Mines and Petroleum, Western Australia (now DMPE)
DMPE	Department of Mines, Petroleum and Exploration
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	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth 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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

DBCA (2023) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia:

Threatened species

T 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 the species of fauna that are listed as critically endangered, endangered or vulnerable threatened species.

Threatened flora is the species of flora that are listed as critically endangered, endangered or vulnerable threatened species.

The assessment of the conservation status of threatened species is in accordance with the BC Act listing criteria and the requirements of [Ministerial Guideline Number 1](#) and [Ministerial Guideline Number 2](#) that adopts the use of the International Union for Conservation of Nature (IUCN) [Red List of Threatened Species Categories and Criteria](#), and is based on the national distribution of the species.

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.

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.

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.

Extinct species

Listed by order of the Minister as extinct under section 23(1) of the BC Act as extinct or extinct in the wild.

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).

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.

Specially protected species

SP 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).

Migratory species include birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) or 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.

CD Species of special conservation interest (conservation dependent fauna)

Species of special conservation need that are 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).

Currently only fauna are listed as species of special conservation interest.

OS Other specially protected species

Species 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).

Currently only fauna are listed as species otherwise in need of special protection.

Priority species

P Priority species

Priority is not a listing category under the BC Act. The Priority Flora and Fauna lists are maintained by the department and are published on the department's website.

All fauna and flora are protected in WA following the provisions in Part 10 of the BC Act. The protection applies even when a species is not listed as threatened or specially protected, and regardless of land tenure (State managed land (Crown land), private land, or Commonwealth land).

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey 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 prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

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

Assessment of priority status 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 – known from few locations, none on conservation lands

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, for example, 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 for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

P2 Priority Two - Poorly-known species – known from few locations, some on conservation lands

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, for example, 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 for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

P3 Priority Three - Poorly-known species – known from several locations

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. These species need 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 a conservation dependent specially protected species.
- (c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.
- (d) Other species in need of monitoring.

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.