Department of Energy, Mines, Industry Regulation and Safety

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	CPS 2161/8
Permit type:	Purpose Permit
Applicant name:	BHP Iron Ore Pty Ltd
Application received:	28 October 2024
Application area:	755 hectares
Purpose of clearing:	Mineral Exploration
Method of clearing:	Mechanical Removal
Tenure:	*Iron Ore (McCamey's Monster) Agreement Authorisation Act 1972,* Mining Lease 266SA (AM 70/266)
Location (LGA area):	Shire of East Pilbara
Colloquial name:	South Jimblebar Project

1.2. Description of clearing activities

This amendment to Clearing Permit CPS 2161/7 is to extend the period in which clearing is authorised and the duration of the permit (BHP, 2024b). Additionally, the clearing footprint is to be reduced, from 6,756 hectares allowed under CPS 2161/7, to 6,499.76 hectares, in order to remove the area subject to Condition 5 under CPS 2161/7, and to excise ghost bat habitat within the application area (see Figure 1, Section 1.5) (BHP, 2024a; 2024b). During this assessment the clearing boundary has been further reduced to 6493.65 hectares, in order to excise additional ghost bat habitat within the application area (see Figure 1, Section 1.5).

Clearing Permit CPS 2161/7 allowed for the clearing of 755 hectares of native vegetation within a footprint of approximately 6,756 hectares within State Agreement Mining Lease 266SA (AM 70/266), to facilitate mineral exploration. The clearing under CPS 2161/7 was authorised until 30 November 2025. The duration of the permit was until 30 November 2030. The applicant (BHP Iron Ore Pty Ltd) advised that a total of 584.41 hectares of clearing has been undertaken under Clearing Permit CPS 2161/7 since 2008, with 165.52 hectares of this rehabilitated by June 30, 2024 (BHP, 2024a).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	17 June 2025
Decision area:	755 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51KA(1) and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advertised the application for a public comment for a period of 7 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix E), supporting information provided by the applicant (Appendix A) including the locations of priority flora (Appendix D), 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 3.2.2). The Delegated Officer also took into consideration the purpose of the clearing for mineral exploration.

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 conservation significant flora;
- the loss of suitable habitat for ghost bat (*Macroderma gigas*); and
- potential land degradation in the form of water erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing can be managed by conditions and is not likely to lead to an unacceptable risk to environmental values. The Delegated Officer decided to reduce the clearing boundary by 6.11 hectares, from the proposed 6,499.76 hectares to 6493.65 hectares, in order to excise ghost bat habitat from the clearing boundary.

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;
- where practicable, avoid clearing riparian vegetation; and
- not clear any of the identified records of *Eremophila capricornica* and *Triodia sp*. Mt Ella, or within 10 metres of them.

The assessment has not changed since the assessment for CPS 2161/7, except in the case of principle (a) and principle (b). The Delegated Officer determined that the proposed extension of the permit duration and decreasing the clearing area is not likely to lead to an unacceptable risk to environmental values.

1.5. Site map

A site map of proposed clearing is provided in Figure 1 below.

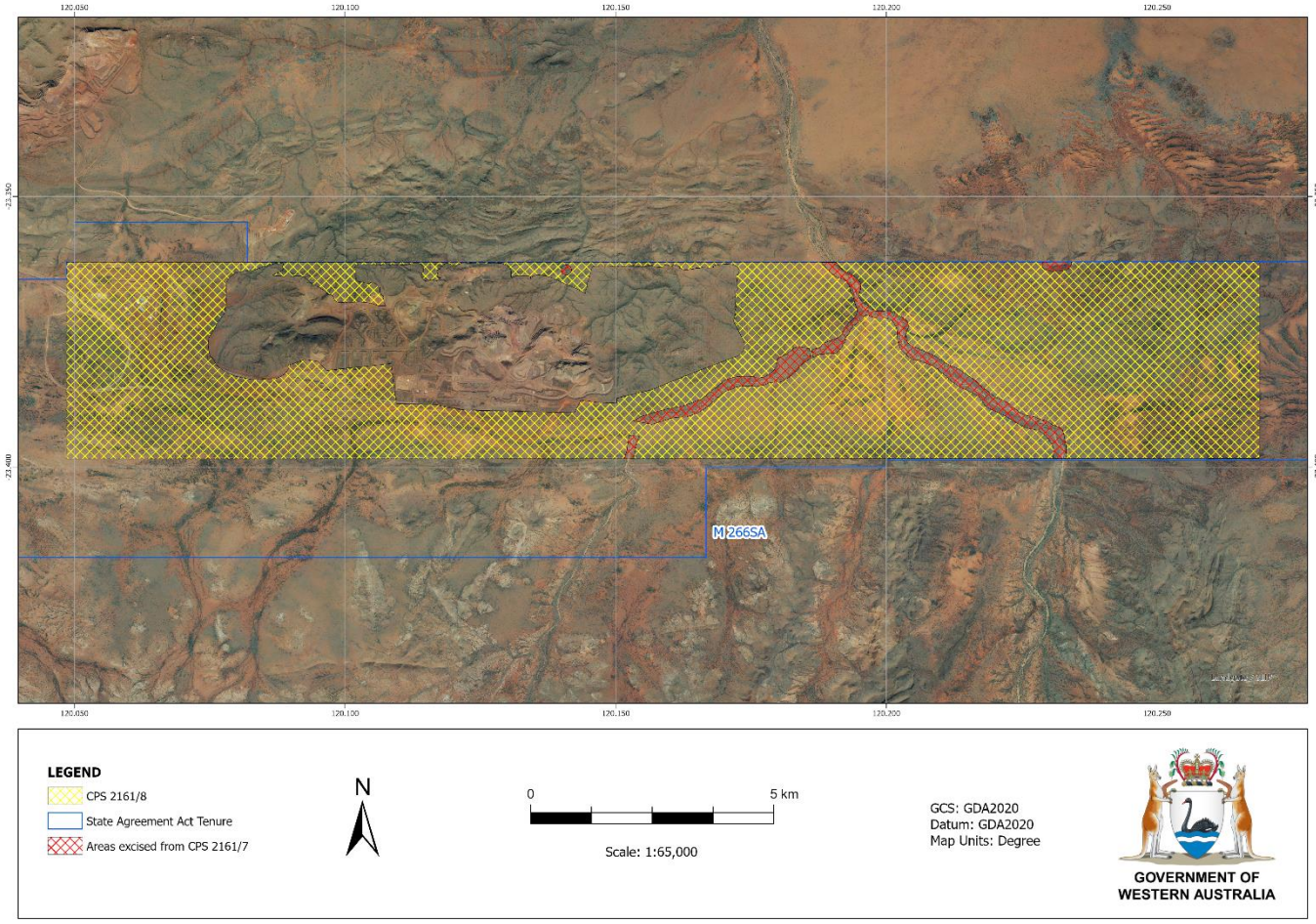

Figure 1. Map of the application area. The yellow crosshatched area indicates the area within which conditional authorised clearing can occur under the granted clearing permit. The red crosshatched area indicates areas which have been removed from the amendment area (CPS 2161/8) but were included within the clearing boundary of CPS 2161/7.

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)
- *Biosecurity and Agriculture Management Act 2007* (BAM Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

- *Iron Ore (McCamey's Monster) Agreement Authorisation Act 1972* (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)
- Guidance for the Assessment of Environmental Factors – *Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004a)
- Guidance for the Assessment of Environmental Factors – *Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia* (EPA, 2004b)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016b)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016a)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Supporting documentation was submitted by the applicant, outlining avoidance and mitigation actions taken under CPS 2161/7. BHP (2024a) stated that clearing has been minimised by restricting activities to the minimal required for safety and equipment access. Populations of significant flora have been avoided using the BHP Project Environmental and Heritage Review (PEAHR) procedure, which is applied to all ground disturbing activities.

Furthermore, the applicant outlined the following management commitments for the proposed clearing:
- Populations of Priority flora will be avoided by a 10 metre buffer where practicable;
- control of established weed populations will be carried out according to BHP's standard Weed Control and Management Procedures;
- in the event that active Mulgara burrows are identified they will be avoided using a 10 metre buffer, where practicable;
- active mounds of the Western Pebble-mound Mouse will be avoided using a 10 metre buffer, where practicable; and
- where practicable, existing cleared tracks will be used to cross the unnamed non-perennial minor drainage line. If it is necessary for new crossings to be installed, clearing will be kept to a bare minimum and will be constructed flat level to the surface (i.e. a simple clearing with no bunds) to maintain the natural surface flow (BHP, 2024a).

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

A review of current environmental information (Appendix B) reveals that the assessment against the clearing principles has not changed significantly from the Clearing Permit Decision Report CPS 2161/7 except in the case of principle (a) and principle (b). The changes to these principles are due to updated biological surveys recording more priority flora species; changes to priority species listings, taxonomic classification of identified species, and misidentification of species; and ghost bat (*Macroderma gigas*) being recorded within the clearing area (Biologic, 2019; GHD, 2019, 2021b; Onshore, 2014; Syrinx, 2012).

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

Assessment

Goodenia nuda and *Goodenia hartiana,* were recorded in the flora and vegetation survey conducted by Ecologia Environment (2007) and were the subject of Condition 9 under the permit CPS 2161/7 (DEMIRS, 2019).

At the time of amendment, several flora surveys have been conducted over the application area, identifying priority flora species not included under Condition 9 of the permit CPS 2161/7 (DEMIRS, 2019; Biologic, 2019; Onshore, 2014; Syrinx, 2012).

- The flora and vegetation survey conducted by Syrinx (2012) identified one priority species within the application area. This species is *Aristida jerichoensis* var. *subspinulifera* (P3) (Western Australian Herbarium, 1998-).

- The targeted significant flora survey conducted by Onshore (2014) identified one priority species within the application area. This species is *Triodia* sp. Mt Ella (P3) (Western Australian Herbarium, 1998-).

- Maps provided in the flora and vegetation survey report by Biologic (2019) showed the locations of five priority species within the application area. These species are listed as follows:
    - *Eremophila capricornica* (P1);
    - *Gompholobium karijini* (P2);
    - *Goodenia hartiana* (P2);
    - *Isotropis forrestii* (P2);
    - *Rhagodia* sp. Hamersley (M. Trudgen 17794) (P3); and
    - *Goodenia nuda* (P4).

Current priority flora species
Eremophila capricornica, Priority 1, can be found inhabiting rocky plains (Biologic, 2019). This species is known from 18 records within the WA Herbarium, from the Gascoyne and Pilbara IBRA regions (Western Australian Herbarium, 1998-). An estimated 1,572 individuals were recorded from 35 known locations within the application area (Biologic, 2019). These locations are shown in Appendix D. A total of approximately 3,838 individuals were recorded from 87 locations within the Biologic (2019) survey area. Approximately 41 percent of the known local population occurs within the application area. If *Eremophila capricornica* were cleared it may lead to significant impacts at a local population level.

Triodia sp. Mt Ella, Priority 3, can be found inhabiting light orange-brown, pebbly loam amongst rocks and outcrops and gully slopes (Western Australian Herbarium, 1998-). This species is known from 40 records within the WA Herbarium, from the Gascoyne, Little Sandy Desert and Pilbara IBRA regions (Western Australian Herbarium, 1998-). An estimated 1,000 individuals were recorded from one known location within the application area (Onshore, 2014). This location is shown in Appendix D. The record is part of one of two major populations of *Triodia sp.* Mt Ella within the Onshore (2014) survey area. These populations are estimated to contain over 10,000 individuals (Onshore, 2014). If *Triodia sp.* Mt Ella were cleared it may lead to significant impacts at a local population level.

Other species
At the time of amendment *Goodenia nuda* and *Rhagodia* sp. Hamersley have been delisted, and are no longer priority species (Western Australian Herbarium, 1998-).

Goodenia hartiana was identified in flora and vegetation survey conducted by Ecologia Environment (2007), under its former taxonomic name *Goodenia* sp. Rudall River (R.P. Hart 972) (Western Australian Herbarium, 1998-). However further work has indicated that these records were misidentified and are confirmed to be *Goodenia* sp. Sandy Creek (R.D. Royce 1653) (Biologic, 2019). *Goodenia* sp. Sandy Creek is not a current species, with records being updated to *Goodenia vanleeuweniana*, which is not a priority species (Sage & Shepherd, 2024; Western Australian Herbarium, 1998-).

Aristida jerichoensis var. *subspinulifera* locations, recorded by Syrinx (2012) were revisited in the survey by Onshore (2014). This survey states that these records were misidentified as *Aristida jerichoensis* var. *subspinulifera* and are confirmed to be records of *Aristida inaequiglumis* (Onshore, 2014). *Aristida inaequiglumis* is not a priority species (Western Australian Herbarium, 1998-).

A new species, *Gompholobium oreophilum*, was described in a taxonomic review of Pilbara *Gompholobium*, and is closely related to *Gompholobium karijini* (P2) (Wilkins & Trudgen, 2012). These two Gompholobium species in the Pilbara bioregion are largely spatially separated by preference for different geological and habitat types, with *Gompholobium karijini* (P2) being associated with Robe Pisolite geology (Wilkins & Trudgen, 2012). Of the reclassified records, all records in the proximity of the application area are *Gompholobium oreophilum*, with *Gompholobium karijini* (P2) specimens being located to the north-west of the application area (Western Australian Herbarium, 1998-; Wilkins & Trudgen, 2012). For this reason, the specimens in the application are recorded as *Gompholobium karijini* (P2) are likely to be *Gompholobium oreophilum*, which is not a priority species (Western Australian Herbarium, 1998-).

The applicant states that records of *Isotropis forrestii* within the application area were changed to a new taxon *Isotropis* sp. Arid zone (G. Byrne 2775) based on advice from the Department of Biodiversity, Conservation and Attractions in 2018. *Isotropis* sp. Arid zone is not a current species, with records being updated to *Isotropis iophyta*, which is not a priority species (Western Australian Herbarium, 1998-). *Isotropis iophyta* was previously confused with *Isotropis forrestii* within its distribution across the Pilbara, Gascoyne and Murchison bioregions, and the south-western portion of the Little Sandy Desert bioregion (Wege & Davis, 2020). There are records of the new species, *Isotropis iophyta*, within the application area (AVH, 2025).

Conclusion

The proposed clearing may result in the clearing of individuals or habitat for priority species *Eremophila capricornica* and *Triodia sp*. Mt Ella. This may result in significant impacts to these species at a local population level.

All other species listed as priority species within the survey reports have been delisted, were misidentified as priority species, or the species records have been updated to a non-priority listed species following taxonomic review.

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

- Flora management (avoid identified priority flora with a buffer of ten metres)

3.2.2. Biological values (fauna) - Clearing Principles (a) and (b)

Assessment

Ghost bat (*Macroderma gigas*) was recorded within the application area in multiple surveys (GHD, 2019, 2021b). Three caves (EJ1, EJ2 and JB09) which are potential habitat for ghost bats were recorded within the application area (GHD, 2019, 2021b). One of these caves, EJ2, was not assessed for habitat suitability, as the cave was not safe to access (GHD, 2019). BHP (2024a, 2024b) have removed two caves with ghost bat records (EJ1 and JB09) from the amendment application with a 100 metre buffer. The EJ2 cave is not included in these exclusion zones.

Ghost bat foraging habitats include major drainage lines, plains (sand and stony), mulga woodland, breakaways, cliffs, hillcrests, hillslopes, gorges and gullies (GHD, 2021b). These habitats are well-represented in the surrounding area (GHD, 2021b). The

high value foraging habitat, present in Jimblebar Creek, has been excluded from the amendment clearing footprint, however, the minor watercourses intercepting the application area, are also considered high value foraging habitat (GHD, 2019).

Conclusion
Based on the above assessment, the proposed clearing may result in the loss of roosting habitat for the conservation significant species, *Macroderma gigas* (Ghost bat). It may also result in the loss of critical foraging habitat for the species.

For the reasons set out above, it is considered that the impacts of the proposed clearing on ghost bat habitat can be managed by excluding the rock-face where two caves (EJ1 and EJ2) and ghost bat presence were recorded in surveys, with a 100 metre buffer, in line with the buffer used by BHP (2024a); therefore resulting in a 6.11 hectare reduction of the application area. Additionally, it is considered that the impacts of the proposed clearing on ghost bat foraging habitat can be managed by avoiding the clearing of riparian vegetation.

The applicant may have notification responsibilities under the EPBC Act for impacts to *Macroderma gigas* (Ghost bat) and their habitats, as set out in the EPBC Act. 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:

- Vegetation management (avoid riparian vegetation).

3.3. Relevant planning instruments and other matters

The amendment application was advertised on 11 February 2025 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 (WCD2018/008 - Nyiyaparli and Nyiyaparli #3) over the area under application (DPLH, 2025). This claim has been determined by the Federal Court on behalf of the claimant group. However, the state agreement mining lease 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 numerous 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.

This clearing permit application is located within the development envelope of the Jimblebar Iron Ore Project, which was formally assessed by the Environmental Protection Authority (EPA) and approved under Ministerial Statement 1126 on 17 March 2020 (State of Western Australia, 2020; GIS Database). A significant amendment to the Jimblebar operations is currently undergoing formal assessment by the EPA, under Part IV of the *Environmental Protection Act 1986* (EP Act) (EPA, 2025). The application is also located within the project boundary of the BHP Billiton Iron Ore - Pilbara Strategic Proposal (State of Western Australia, 2019; GIS Database). Clearing for the purpose of exploration activities is not constrained by these Proposals (State of Western Australia, 2019; 2020; EPA, 2025).

It is noted that the proposed clearing may impact on *Macroderma gigas* (Ghost bat), which is a protected matter under the *Environment Protection and Biodiversity Conservation Act 1999* (the EPBC Act). The proponent may be required to refer the project to the (Federal) Department of Climate Change, 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 and the Environment 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*.

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. Additional information provided by applicant

Summary of comments	Consideration of comment
New spatial date (shapefile) provided to consolidate priority flora records within the application area.	New spatial date (shapefile) provided was used during the assessment of Principle (a). An updated version was created with records of *Rhagodia sp.* Hamersley (due to being delisted as a Priority species (Western Australian Herbarium, 1998-) and *Aristida jerichoensis var. subspinulifera* removed (due to being incorrectly identified (Onshore, 2014)). A map of the updated spatial data is provided in Appendix D.
Two IBSA numbers (IBSA-2021-0482 and IBSA-2022-0309) were provided following submission.	These IBSA packages and associated surveys were used during the assessment of Principle (a).
Response to query regarding priority flora included in survey reports but excluded from the application supporting report and the consolidated shapefile The applicant stated that *Goodenia hartiana, Gompholobium karijini* and *Isotropis forrestii* were not included in the application supporting report or the consolidated shapefile due to taxonomic changes to these species.	This information provided was used during the assessment of Principle (a).

Appendix B. Site characteristics

B.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 located within the Hamersley, Fortescue and Augustus subregions of the Pilbara and Gascoyne bioregions (GIS Database).
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation associations: • 28: Open low woodland; mulga (*Acacia aneura* and close relatives); • 29: Sparse low woodland; mulga (*Acacia aneura* and close relatives), discontinuous in • scattered groups; • 82: Hummock grasslands, low tree steppe; snappy gum (*Eucalyptus leucophloia*) over *Triodia Wiseana*; and • 216: Low woodland; mulga (*Acacia aneura* and close relatives) (with spinifex) on rises (Biologic, 2019; GIS Database).
Soil description	The soils within the application area are broadly mapped as the following (GIS Database):

SYSTEM	DESCRIPTION
Newman (2245 ha)	Rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands.
Boolgeeda (886 ha)	Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands or mulga shrublands.
Jamindie (849 ha)	Stony hardpan plains and rises supporting groved mulga shrublands, occasionally with spinifex understorey.
Sylvania (763 ha)	Gritty surfaced plains and low rises on granite supporting acacia-eremophila-cassia shrublands.
Divide (661 ha)	Gently undulating sandplains with minor dunes, supporting hard spinifex hummock grasslands with numerous shrubs.
Zebra (556 ha)	Hardpan plains with large linear gravelly sand banks supporting acacia tall shrublands with soft and hard spinifex.
McKay (377 ha)	Hills, ridges, plateaux remnants and breakaways of meta sedimentary and sedimentary rocks supporting hard spinifex grasslands with acacias and occasional eucalypts.
Washplain (156 ha)	Hardpan plains supporting groved mulga shrublands.

Characteristic	Details
Waterbodies	The amendment excludes the major non-perennial watercourse, Jimblebar Creek, and associated riparian vegetation, from the permit clearing footprint (BHP, 2024a, 2024b; DEMIRS, 2019; GIS Database). Multiple minor non-perennial watercourses intercept the application area (GIS Database).
Flora	There are records of 28 priority flora species within a 50-kilometre radius of the application area (GIS Database). The flora and vegetation survey provided with the amendment application identified additional priority flora within the application area (Biologic, 2019).
Ecological communities	There are no mapped Priority or Threatened Ecological Communities within the application area (GIS Database). There is one Threatened Ecological Community (TEC) and one Priority Ecological Community (PEC) within a 50 km radius of the application area, both listed under the BC Act (GIS Database). The PEC is the Priority 3 PEC, the Fortescue Valley Sand Dunes community, located 48.7 km northwest of the application area (GIS Database). The TEC is the Critically Endangered TEC, the Ethel Gorge aquifer stygobiont community, located 17.6 km west of the application area (DBCA, 2023b; GIS Database). In addition to the Ethel Gorge aquifer stygobiont community, there is one other TEC, listed under the BC Act, that occurs in the same bioregion as the application area, being the Themeda grasslands on cracking clays TEC (DBCA, 2023b). The Themeda grasslands on cracking clays TEC is unlikely to occur in the application area, as the soil type required to support this community does not occur within the application area (Biologic, 2019). The Ethel Gorge aquifer stygobiont community is reliant on the Ophthalmia aquifer as its main habitat (DBCA, 2017). As the application is area is outside of the habitat requirements, this TEC is unlikely to occur in the application area. The Fortescue Valley Sand Dunes community is defined as red linear iron-rich sand dunes on the Divide Land system at the junction of the Hamersley Range and Fortescue Valley, between Kalgan Creek and the low hills to the west (DBCA, 2023a). As sand dunes do not occur within the application area, it is unlikely that the application area comprises part of this PEC (Biologic, 2019).
Fauna	There are records of 29 conservation significant fauna species within a 50 kilometre radius of the application area (GIS Database). A terrestrial fauna and habitat survey was conducted by GHD (2019) as well as targeted bilby and ghost bat surveys (GHD, 2021a, 2021b). Ghost bat (*Macroderma gigas*) was recorded within the clearing area in multiple surveys (GHD, 2019, 2021b).
Fauna habitat	Eight broad habitat types were mapped across the application area, excluding disturbed areas (GHD, 2019). These habitat types closely align with the different vegetation types and landforms within the application area, and are listed as follows: • Major drainage lines; • Hillcrest/hillslope; • Sand plain; • Mulga woodland; • Minor drainage lines; • Stony plain; • Claypan; and • Breakaways (GHD, 2019).

B.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 - Pilbara	17,808,657.04	17,731,764.88	99.57	1,801,714.98	10.12
IBRA Bioregion - Gascoyne	18,075,219.48	18,067,441.44	99.96	1,855,508.22	10.27
Beard vegetation associations - State					
28	395,895.08	392,171.83	99.06	0	0

29	7,903,991.45	7,898,973.24	99.94	496,367.56	6.28
82	2,565,901.28	2,553,206.19	99.51	295,377.96	11.51
216	280,759.39	279,237.06	99.46	0	0
Beard vegetation associations - Pilbara					
28	18,323.72	18,323.72	100.00	0	0
29	1,133,219.76	1,131,712.01	99.87	106,259.86	9.38
82	2,563,583.23	2,550,888.14	99.50	295,377.96	11.52
216	26,669.89	26,372.58	98.89	0	0
Beard vegetation associations - Gascoyne					
28	153,279.52	153,264.40	99.99	0	0
29	3,802,459.63	3,799,635.88	99.93	297,087.90	7.81
82	2,318.05	2,318.05	100.00	0	0
216	254,089.50	252,864.49	99.52	0	0

Government of Western Australia (2019)

B.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information (Biologic, 2019; Ecologia Environment, 2007), impacts to the following conservation significant flora required further consideration.

The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area, species distribution, and known regional records (Biologic, 2019; Ecologia Environment, 2007; Western Australian Herbarium, 1998-; GIS Database).

Species name	Conservation status	Suitable habitat?	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
Eremophila capricornica	P1	Yes	0	Y	Known to occur – discussed in Section 3.2.1
Gompholobium karijini	P2	Yes	0	Y	Known to occur – discussed in Section 3.2.1
Goodenia hartiana	P2	Yes	0	Y	Known to occur – discussed in Section 3.2.1
Isotropis forrestii	P2	Yes	0	Y	Known to occur – discussed in Section 3.2.1
Rhagodia sp. Hamersley (M. Trudgen 17794)	Not listed	Yes	0	Y	Known to occur – discussed in Section 3.2.1
Aristida jerichoensis var. *subspinulifera*	P3	Yes	0	Y	Known to occur – discussed in Section 3.2.1
Eremophila magnifica subsp. *magnifica*	P4	Yes	<36	Y	Likely
Crotalaria smithiana	P3	Yes	<22	Y	Possible
Eremophila magnifica subsp. *velutina*	P3	Yes	<26	Y	Possible
Eremophila naaykensii	P3	Yes	<28	Y	Possible
Goodenia berringbinensis	P4	Yes	<6	N – poor survey conditions for this species	Possible

Species name	Conservation status	Suitable habitat?	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
Goodenia sp. East Pilbara (A.A. Mitchell PRP 727)	P3	No	<23	Y	Possible
Gymnanthera cunninghamii	P3	No	<20	N – requires more intense surveys of potential habitat	Possible
Ipomoea racemigera	P3	Yes	<7	Y	Possible
Isotropis parviflora	P3	Yes	<7	Y	Possible
Streptoglossa sp. Cracking clays (S. van Leeuwen et al. PBS 7353)	P3	Yes	<43	Y	Possible
Swainsona thompsoniana	P3	Yes	<34	Y	Possible
Themeda sp. Hamersley Station (M.E. Trudgen 11431)	P3	Potential	<26	Y	Possible
Uvedalia clementii	P3	Yes	<50	Y	Possible
Vittadinia sp. Coondewanna Flats	P3	Yes	<1	N – poor survey conditions for this species	Possible
Acacia corusca	P1	No	<7	Y	Unlikely
Eremophila pilosa	P1	No	<27	Y	Unlikely
Eremophila rigida	P3	No	<32	Y	Unlikely
Eremophila youngii subsp. *lepidota*	P4	Potential	<20	Y	Unlikely
Euphorbia inappendiculata var. *inappendiculata*	P3	Potential	<1	Y	Unlikely
Indigofera gilesii	P3	No	<43	Y	Unlikely
Lepidium catapycnon	P4	No	<41	Y	Unlikely
Triodia sp. Mt Ella	P3	No	<4	Y	Unlikely
Amaranthus centralis	P3	No	<31	Y	Highly unlikely
Eremophila rhegos	P1	No	<50	Y	Highly unlikely

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

B.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and biological survey information (Ecologia Environment, 2007; GHD, 2019, 2021a, 2021b), impacts to the following conservation significant fauna required further consideration.

The likelihood of occurrence for these species were determined by potentially suitable habitat within the application area, species distribution, and known regional records (Australian Fauna, 2004; Benshemesh, 2004; CALM, n.d.; Commonwealth of Australia, 2020; IDA, 2022; DEC, n.d.; DOTE, 2025a, 2025b; Ecologia Environment, 2007; GHD, 2019, 2021a, 2021b; Pavey et al., 2012; Storr et al., 1999; GIS Database).

Species name	Conservation status		Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
	WA	EPBC				
Macroderma gigas (Ghost bat)	VU	VU	Y	4.4	Y	Known – discussed in Section 3.2.2
Dasycercus blythi (Brush-tailed mulgara)	P4		Y	5.4	Y	Likely

Species name	Conservation status		Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
	WA	EPBC				
Dasycercus cristicauda (Crest-tailed mulgara)	P4		Y	13.7	Y	Likely
Falco peregrinus (Peregrine falcon)	OS		Y	4.4	Y	Likely
Anilios ganei (Gane's blind snake (Pilbara))	P1		Y	4.7	Y	Likely
Lagorchestes conspicillatus leichardti (Spectacled hare-wallaby (mainland))	P4		Y	9.7	N	Likely
Macrotis lagotis (Bilby)	VU	VU	Y	11.3	Y	Likely
Pseudomys chapmani (Western pebble-mound mouse)	P4		Y	0.5	Y	Likely
Rhinonicteris aurantia (Pilbara) (Pilbara leaf-nosed bat)	VU	VU	Y	34.5	Y	Likely
Sminthopsis longicaudata (Long-tailed dunnart)	P4		Y	19.5	Y	Likely
Actitis hypoleucos (Common sandpiper)	MI	MI	Y	2.6	Y	Possible
Liasis olivaceus barroni (Pilbara olive python)	VU	VU	Y	15.3	Y	Possible
Liopholis kintorei (Great desert skink)	VU	VU	Y	17.5	Y	Possible
Calidris acuminata (Sharp-tailed sandpiper)	MI	MI	Y	17.7	Y	Unlikely
Calidris ferruginea (Curlew sandpiper)	CR	MI	Y	17.5	Y	Unlikely
Calidris melanotos (Pectoral sandpiper)	MI	MI	Y	32.3	Y	Unlikely
Calidris ruficollis (Red-necked stint)	MI	MI	Y	17.5	Y	Unlikely
Calidris subminuta (Long-toed stint)	MI	MI	Y	17.7	Y	Unlikely
Charadrius veredus (Oriental plover)	MI	MI	Y	30.5	Y	Unlikely
Ctenotus uber johnstonei (Spotted ctenotus (northeast))	P2		Y	4.8	Y	Unlikely
Gelochelidon nilotica (Gull-billed tern)	MI	MI	Y	17.4	Y	Unlikely
Notoryctes sp. (Marsupial mole)	P4		N	17.5	Y	Unlikely
Petrogale lateralis lateralis (Black-flanked rock-wallaby)	EN	EN	Y	24.1	Y	Unlikely
Plegadis falcinellus (Glossy ibis)	MI	MI	N	17.5	Y	Unlikely
Tringa glareola (Wood sandpiper)	MI	MI	Y	17.7	Y	Unlikely
Tringa nebularia (Common greenshank)	MI	MI	Y	17.7	Y	Unlikely
Tringa stagnatilis (Marsh sandpiper)	MI	MI	Y	17.6	Y	Unlikely
Tringa tetanus (Common redshank)	MI	MI	Y	38.3	Y	Unlikely

Species name	Conservation status		Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Are surveys adequate to identify? [Y, N, N/A]	Likelihood of occurrence
	WA	EPBC				
Hydroprogne caspia (Caspian tern)	MI	MI	N	17.5	Y	Highly unlikely

CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, MI: migratory, CD: conservation dependent, OS: other specially protected,

Appendix C. 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."* Assessment: The flora and vegetation surveys provided with the amendment application identified additional priority flora within the application area (Biologic, 2019; Onshore, 2014; Syrinx, 2012). There have been changes to the names and listings of recorded priority flora from these surveys.	May be at variance (changed from CPS 2161/7)	Yes *Refer to Section 3.2.1, above.*
Principle (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."* Assessment: The area proposed to be cleared contains significant habitat for conservation significant fauna.	May be at variance (changed from CPS 2161/7)	Yes *Refer to Section 3.2.2, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: There are no known records of Threatened flora within a 50 kilometre radius of the application area (GIS Database). The flora survey of the application area did not record any species of Threatened flora (Biologic, 2019).	Not likely to be at variance (as per CPS 2161/7)	No
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."* Assessment: There are no mapped Priority or Threatened Ecological Communities (TECs) within the application area (GIS Database). The application area is unlikely to support TECs known to the Pilbara or Gascoyne bioregions (DBCA, 2017, 2023b; Biologic, 2019).	Not likely to be at variance (as per CPS 2161/7)	No
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."* Assessment: The mapped vegetation type and vegetation extent in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not at variance (as per CPS 2161/7)	No
Principle (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."* Assessment: The application area is not located within any DBCA legislated conservation areas (GIS Database). The nearest legislated conservation area is the Fortescue Marsh	Not likely to be at variance (as per CPS 2161/7)	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Nature Reserve approximately 76.9 km north-northwest of the application area (GIS Database). 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.		
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given multiple minor non-perennial watercourses intercept the application area, the proposed clearing is likely to impact surface water flows and riparian vegetation, despite the exclusion of the major non-perennial watercourse, Jimblebar Creek, and associated riparian vegetation, from the permit clearing footprint (BHP, 2024a, 2024b; DEMIRS, 2019; GIS Database). Condition To address the above impact, the following management measure will be required as a condition on the clearing permit: • A watercourse management condition requiring that surface water flows are not impacted by the proposed clearing.	At variance (as per CPS 2161/7)	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The proposed clearing area is comprised of eight different land systems, as listed in Appendix B.1 (GIS Database). Based on the land system mapping undertaken by Van Vreeswyk et al. (2004), soils in the proposed clearing area are likely to be stony, red shallow loams, red shallow and deep sands and earths. Biologic (2019) generally report that loamy soils occur across most of the site, whilst areas on the ridge tops are rocky with little or no soil cover. Red/brown sandy loams were characteristic of most sites surveyed by Ecologia Environment (2007). Some areas were characterised by a surface mantle of ironstone pebbles, rocks and/or boulders; whilst other sites were characterised by loose soil (Ecologia Environment, 2007). Given the varying landform and soil characteristics of the proposed clearing area, some areas are more prone to land degradation than others. Following vegetation removal, loose soils in the proposed clearing area will be exposed to the erosive forces of intense summer rainfall events associated with cyclonic activity. Soils protected by a stony mantle are less likely to erode, however removal of the stony mantle during clearing may initiate soil erosion. Based on the above, the proposed clearing may be at variance to this Principle. Erosion is likely to be minimised by avoiding clearing in erosion sensitive areas such as drainage lines. Condition To address the above impact, the following management measure will be required as a condition on the clearing permit: • A watercourse management condition requiring that surface water flows are not impacted by the proposed clearing.	May be at variance (as per CPS 2161/7)	No
Principle (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."* Assessment: The proposed clearing area is not located within a Public Drinking Water Source Area (GIS Database). There are no permanent watercourses or wetlands within the project area, however a number of ephemeral creeks traverse the area (GIS Database). Care must be taken to ensure that the proposed clearing activities do not cause or increase sedimentation, erosion or turbidity to watercourses on or off site. BHP (2024a) state that clearing near surface water features will be restricted to a bare minimum, and cleared areas that are no longer required will be revegetated.	Not likely to be at variance (as per CPS 2161/7)	No

Assessment against the clearing principles	Variance level	Is further consideration required?
There is one main aquifer within the Amendment Application Area, the Hamersley – Fractured Rock Aquifer (BHP, 2024a). The groundwater salinity of the permit area has been broadly mapped as being 500-3,000 milligrams per litre total dissolved solids (GIS Database). It is not expected that the proposed clearing will significantly impact upon groundwater levels or quality.		
Principle (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."* Assessment: The average annual rainfall of Newman is 327.5 millimetres (BoM, 2025). Average annual evaporation exceeds rainfall is between 3,200 and 3,600 millimetres per year, exceeding rainfall (BoM, 2006). Rainfall in the area is highly sporadic, with intense rainfall events typically associated with tropical storms and cyclonic activity (BHP, 2024a). Localised flooding is known to occur following intense rainfall events, however the incidence or intensity of flooding is not likely to be significantly influenced by the proposed vegetation clearing (BHP, 2024a).	Not likely to be at variance (as per CPS 2161/7)	No

Appendix D. Map of known priority flora locations

A site map showing Priority flora locations within the proposed clearing area is provided in Figure 2 below.

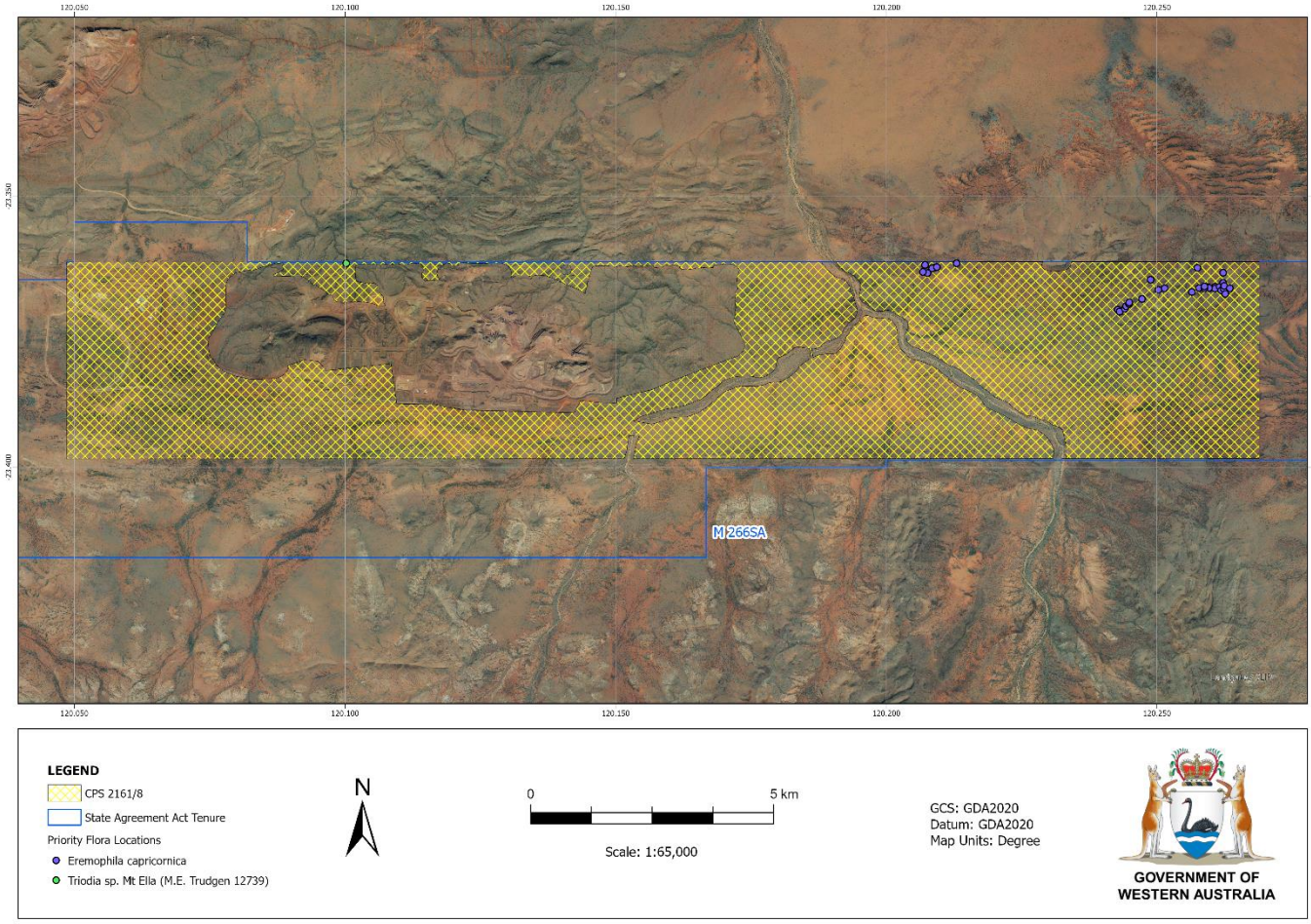

Figure 2. Map of the priority flora locations within the application area. The yellow crosshatched area indicates the area within which conditional authorised clearing can occur under the granted clearing permit. Locations of priority flora species *Eremophila capricornica* are marked with an indigo point. Locations of priority flora species *Triodia sp.* Mt Ella are marked with a green point.

Appendix E. Sources of information

E.1.GIS databases

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

- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Legislated Lands and Waters (DBCA-011)

- Esri World Imagery
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- 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

Australasian Virtual Herbarium (AVH) (2025) The Australasian Virtual Herbarium. Council of Heads of Australasian Herbaria. https://avh.chah.org.au/ (Accessed 9 April 2025).

Australian Fauna (2004) Mulgara (*Dasycercus cristicauda*). Australian Fauna. Mulgara (Accessed 6 March 2025).

Benshemesh, J. (2004) Recovery Plan for Marsupial Moles *Notoryctes typhlops* and *N. caurinus* 2005-2010. Department of Infrastructure, Planning and Environment, Alice Springs, Northern Territory. https://www.dcceew.gov.au/sites/default/files/documents/marsupial-moles.pdf

Biologic (2019) East Jimblebar & Caramulla detailed flora and vegetation assessment. Prepared for BHP Western Australian Iron Ore, October 2019.

BHP Iron Ore Pty Ltd (BHP) (2024a) Application to amend NVCP CPS 2161/7 Jimblebar exploration: Native vegetation clearing permit application supporting document. Prepared by BHP Iron Ore Pty Ltd, October 2024.

BHP Iron Ore Pty Ltd (BHP) (2024b) Clearing permit amendment application CPS 2161/8, received 28 October 2024.

Bureau of Meteorology (BoM) (2006) Map of average pan evaporation – Annual. Bureau of Meteorology. Average annual, monthly and seasonal evaporation maps, Bureau of Meteorology (Accessed 12 March 2025).

Bureau of Meteorology (BoM) (2025) Bureau of Meteorology Website – Climate Data Online, Newman Aero. Bureau of Meteorology. https://reg.bom.gov.au/climate/data/ (Accessed 7 March 2025).

Commonwealth of Australia (2020) Wildlife Conservation Plan for Seabirds. Department of Agriculture, Water and the Environment, Canberra, 2020. https://www.dcceew.gov.au/sites/default/files/documents/wildlife-conservation-plan-for-seabirds.pdf

Department of Biodiversity, Conservation and Attractions (DBCA) (2017) Threatened Ecological Community Factsheet: Ethel Gorge aquifer stygobiont community. Department of Biodiversity, Conservation and Attractions. www.dbca.wa.gov.au

Department of Biodiversity, Conservation and Attractions (DBCA) (2023a) Priority ecological communities for Western Australia, Version 35. Species and Communities Program, Department of Biodiversity, Conservation and Attractions, June 2023.

Department of Biodiversity, Conservation and Attractions (DBCA) (2023b) Threatened Ecological Communities List 2023.

Indigenous Desert Alliance (IDA) (2022) Looking after Tjakura, Tjalapa, Mulyamiji, Warrarna, Nampu: National Recovery Plan for the Great Desert Skink (Liopholis kintorei). Department of Climate Change, Energy, the Environment and Water, Canberra. https://www.dcceew.gov.au/sites/default/files/documents/national-recovery-plan-great-desert-skink.pdf

Department of Conservation and Land Management (CALM) (n.d.) Black-flanked Rock-wallaby factsheet. Department of Conservation and Land Management. Black-flanked rock-wallaby.doc

Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) (2019) Clearing Permit Decision Report CPS 2161/7. Department of Energy, Mines, Industry Regulation and Safety, February 2019.

Department of Environment and Conservation (DEC) (n.d.) Mulgara (*Dasycercus* sp.). 071542.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 6 March 2025).

Department of the Environment (DOTE) (2025a). *Plegadis falcinellus* in Species Profile and Threats Database. Department of the Environment, Canberra. https://www.environment.gov.au/sprat (Accessed 6 March 2025).

Department of the Environment (DOTE) (2025b). *Tringa totanus* in Species Profile and Threats Database. Department of the Environment, Canberra. https://www.environment.gov.au/sprat (Accessed 6 March 2025).

Ecologia Environment (2007) Hashimoto Exploration Project biological survey: Flora and vegetation. Prepared for BHP Billiton Iron Ore Pty Ltd, March 2007.

Environmental Protection Authority (EPA) (2025) Jimblebar Hub Significant Amendment, assessment number 2397. Jimblebar Hub Significant Amendment | EPA Western Australia (Accessed 11 June 2025).

GHD (2019) BHP Billiton Iron Ore Pty Ltd: Jimblebar East and Caramulla fauna survey. Prepared for BHP Billiton Iron Ore Pty Ltd, August 2019.

GHD (2021a) BHP Western Australian Iron Ore: East Jimblebar and Caramulla targeted Greater Bilby Survey. Prepared for BHP Western Australian Iron Ore, June 2021.

GHD (2021b) BHP Western Australian Iron Ore: Jimblebar targeted ghost bat survey. Prepared for BHP Western Australian Iron Ore, June 2021.

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

Onshore Environmental (Onshore) (2014) Orebody 31 Targeted Significant Flora Survey. Prepared for BHP Billiton Iron Ore Pty Ltd, June 2014.

Pavey, C. R., Nano, C. E. M., Cooper, S. J. B., Cole, J. R. and McDonald, P.J. (2012) Habitat use, population dynamics and species identification of mulgara, *Dasycercus blythi* and *D. cristicauda*, in a zone of sympatry in central Australia. Australian Journal of Zoology 59(3) 156-169. https://doi.org/10.1071/ZO11052

Sage, L. W. and Shepherd, K. A. (2024) *Goodenia austrina* and *G. vanleeuweniana* (Goodeniaceae), two new blue-flowered species from Western Australia. Nuytsia: Journal of the Western Australian Herbarium, 35, 91-99. https://doi.org/10.58828/nuy01080

State of Western Australia (2019) Ministerial Statement No. 1105, statement that a future proposal(s) identified in a strategic proposal may be implemented (Sections 40B and 45 of the *Environmental Protection Act 1986*): Pilbara expansion strategic proposal. Published 11 July 2019. 1619 Statement 1105 for publishing.pdf

State of Western Australia (2020) Ministerial Statement No. 1126, statement that a revised proposal may be implemented (*Environmental Protection Act 1986*): Jimblebar Optimisation Project. Published 17 March 2020. 1663 Statement for publishing - Jimblebar.pdf

Storr, G. M., Smith, L. A. and Johnstone, R. E. (1999) Lizards of Western Australia, Volume I: Skinks. Western Australian Museum, Perth, July 1999.

Syrinx Environmental PL (Syrinx) (2012) Wheelarra Hill North level 2 flora and vegetation assessment. Prepared for BHP Billiton Iron Ore, February 2012.

Van Vreeswyk, A. M. E., Payne, A. L., Leighton, K. A. and Hennig, P. (2004) An inventory and condition survey of the Pilbara Region, Western Australia. Technical Bulletin No. 92. Department of Agriculture, South Perth, Western Australia.

Wege, J. A. and Davis, R. W. (2020) A case of mistaken identity: *Isotropis iophyta* (Fabaceae), a new Western Australian Lamb's Poison previously confused with *I. forrestii*. Nuytsia: Journal of the Western Australian Herbarium, 31, 187-191. https://doi.org/10.58828/nuy00970

Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dbca.wa.gov.au/ (Accessed 8 April 2025).

Wilkins, C. F. and Trudgen, M. E. (2012) A new species of *Gompholobium* (Fabaceae: Mirbelieae) from the Pilbara bioregion of Western Australia. Nuytsia: Journal of the Western Australian Herbarium, 22(1), 31-40. https://doi.org/10.58828/nuy00628

4. Glossary

Acronyms:

BC Act	*Biodiversity Conservation Act 2016,* 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
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	Threatened Ecological Community

Definitions:

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

T **Threatened species:**

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:

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:

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.

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.