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:	10636/1
Permit type:	Purpose Permit
Applicant name:	Fenix Beebyn Pty Ltd
Application received:	24 May 2024
Application area:	262.1 hectares
Purpose of clearing:	Mineral Production and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Lease 51/869
	Miscellaneous Licence 20/92
Location (LGA area):	Shire of Cue
Colloquial name:	Beebyn-W11 Iron Ore Project

1.2. Description of clearing activities

Fenix Beebyn Pty Ltd proposes to clear up to 262.1 hectares of native vegetation within a boundary of approximately 1,297.24 hectares, for the purpose of mining related infrastructure (Fenix Beebyn, 2024). The application area is located approximately 60 kilometres northwest of Cue, within the Shire of Cue (GIS Database).

Fenix Beebyn has signed a binding agreement with Sinosteel Midwest Corporation (SMC) securing the exclusive right to mine and export up to 10 million dry metric tonnes of iron ore from the high-grade Beebyn-W11 iron ore deposit in the Weld Range (APM, 2024). The application is to allow for mining and exporting of iron ore from the high-grade Beebyn-W11 iron ore deposit in the Weld Range and will connect to the existing Iron Ridge Project operating on M51/869 (Ecotec, 2024a).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	6 March 2025
Decision area:	262.1 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E 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 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix D), supporting information provided by the applicant including the results of flora and vegetation survey, 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 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 native vegetation that is suitable habitat for conservation significant fauna;
- impacts to riparian vegetation; and
- potential land degradation.

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 can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

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

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- commence construction no later than three months after undertaking clearing to reduce the risk of erosion;
- no clearing of more than four individuals of *Stenanthemum mediale*;
- restricted clearing within drainage line habitat;
- restricting the clearing within the Priority Ecological Community;
- avoid riparian vegetation and maintain existing surface water flow; and
- no clearing within 25 metres *Idiosoma clypeatum* burrows.

1.5. Site map

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

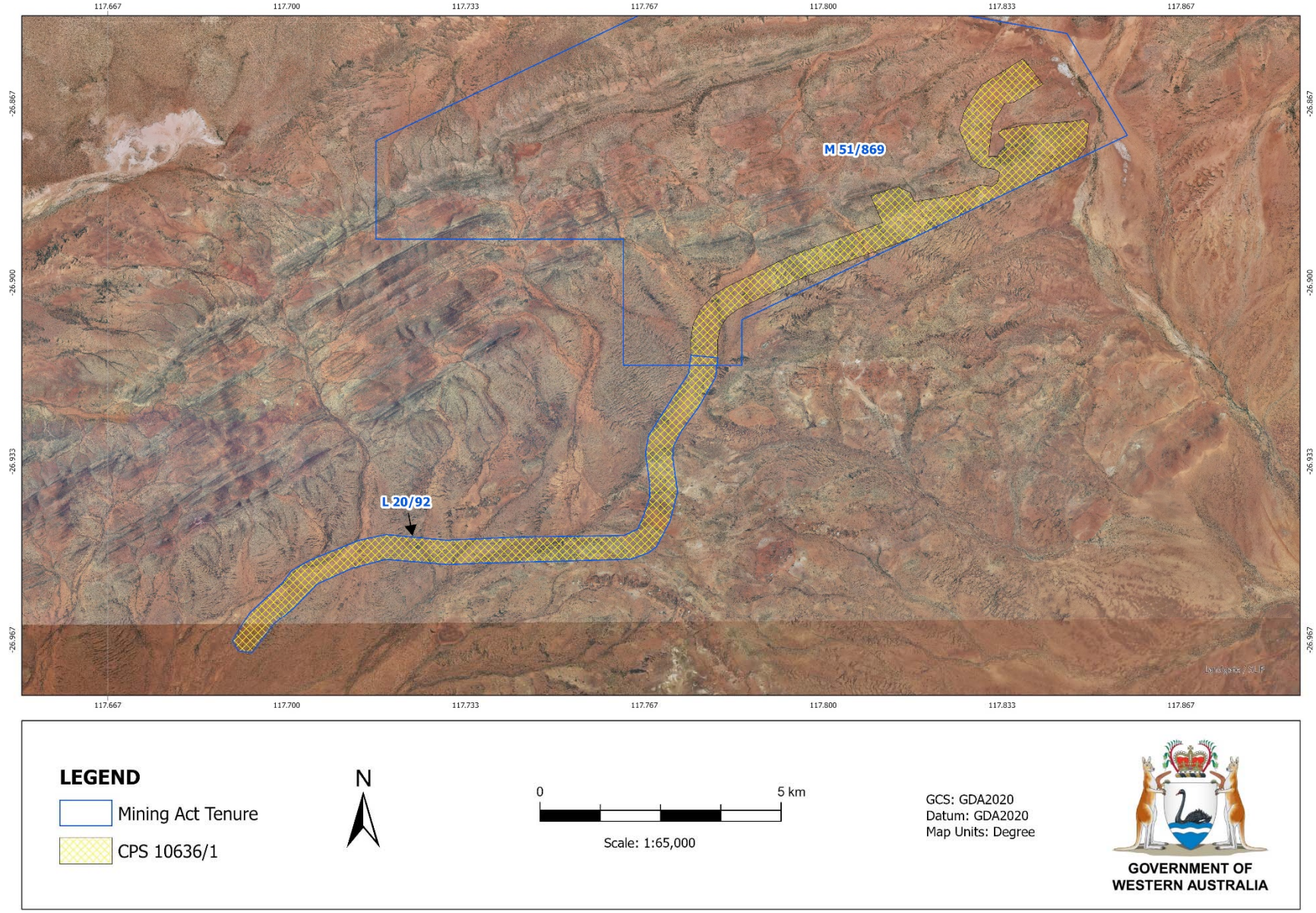

Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under the granted clearing permit.

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 (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

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

Other legislation of relevance for this assessment include:

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

The key guidance documents which inform this assessment are:

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

Evidence was submitted by the applicant, demonstrating that that various avoidance and mitigation measures such as the following will be implemented:

- the application area has been designed to avoid conservation significant flora and fauna previously recorded within the northern area on the Weld Ridge;
- implement a Site Disturbance Permit system with strict survey controls and requiring sign off by the Registered Manager prior to clearing commencing;
- clearly delineate areas to be cleared using survey pegs and coloured flagging tape and record (“pick up”) cleared areas on completion;
- maintain records of clearing undertaken;
- provide information to site personnel by way of an induction and specific training where necessary to identify conservation significant species and highlight the importance of clearing protocols;
- machinery and equipment are to be thoroughly cleaned prior to being mobilised to site;
- contractors are to provide a weed hygiene certificate for each item of machinery bought to site;
- machinery and equipment that arrives on site will be inspected. Machinery that does not meet the hygiene requirements will require removal and additional cleaning in an appropriate location;
- regular monitoring of disturbed areas and road verges to identify weeds;
- identifying weeds species, abundance and cover during rehabilitation monitoring;
- control of weed outbreaks using herbicide or manual removal; and
- preventing stock access to rehabilitated areas (Ecotec, 2024a; Fenix Beebyn, 2024).

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see 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 and fauna habitats, flora and vegetation). 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

Database searches indicated that a total of 24 conservation significant flora taxa have been recorded within a 50 kilometre area around the application area (GIS Database). Flora and fauna surveys have been completed in and around the application area and the wider Weld Range from 2008 to 2024 (APM, 2024; ecologia, 2010; 2012; Ecotec 2024a; 2024b). No Threatened flora species have been recorded in the area (GIS Database).

ecologia Environment Pty Ltd (ecololgia) carried out a Level 2 flora and vegetation survey of the application area and surrounds over four surveys between 2006 and 2009 (ecologia, 2010); as well as a targeted conservation significant flora survey of a number of proposed exploration drill lines in the area. The surveys recorded 393 vascular flora taxa from 57 families and 140 genera within the Beebyn-W11 area and surrounding region; including six introduced species and 24 Priority listed flora species (ecologia, 2010). Of the 24 Priority flora species recorded, two Priority 3 flora species were recorded within the application area, *Micromyrtus placoides* and *Prostanthera petrophila* (ecologia, 2010). No Threatened species were recorded.

Animal Plant Mineral Pty Ltd (APM) undertook a detailed flora and vegetation survey of the application area and surrounds during 2023 (APM, 2024), recording 77 vascular flora taxa from 21 families and 40 genera. The reduction in taxa recorded when compared to the earlier surveys is primarily due to the region having been in drought conditions for several years and the prevalence of goats, which have had a significant impact on the vegetation. No Threatened species were recorded; however, a single potential record of the Priority 3 listed species *Hibiscus krichauffianus* was recorded (APM, 2024). Insufficient material was available to definitively determine the species, due to seasonal conditions.

Ecotec undertook a vegetation and targeted conservation significant flora survey of the application area and surrounds in August 2024 (Ecotec, 2024b). No *Hibiscus krichauffianus* individuals were recorded in the application area during the Ecotec (2024b) survey. It is likely that the individuals of this species previously recorded by APM have since senesced or were misidentified due to lack of reproductive material present at the time of the APM survey. No Threatened species were recorded, however five Priority listed flora species were recorded within the survey area, of these the following three priority flora species are proposed to be disturbed by the clearing activities.

Taxa	Known number of individuals at Weld Range	Known number of individuals recorded within the application area (Ecotec, 2024b)	Number of individuals proposed to be impacted
Priority 1			
Stenanthemum mediale	186 (ecololgia, 2012) 264 (Ecotec 2024b)	24	4
Priority 3			
Prostanthera petrophila	2,184 (*ecololgia,* 2012) 108 (Ecotec, 2024b)	41	17
Priority 4			
Acacia speckii	1,193 (*ecololgia,* 2012) 51 (Ecotec, 2024b)	30	25

Stenanthemum mediale, Priority 1, is an erect shrub which is been identified inhabiting red clayey sand, this species has 21 records all within the Murchison bioregion (Western Australian Herbarium, 1998-). The proposed disturbance to four individuals is not considered to significantly impact this species as surveys have identified up to 264 individuals within the surrounding area and suitable habitat is present across the bioregion (ecologia, 2012; Ecotec, 2024b). However, as the Priority 1 flora species is only recorded within the one bioregion, further potential impacts to this species may be managed by implementing a flora management condition limiting the number of individuals cleared.

Prostanthera petrophila, Priority 3, is a spreading shrub which has been identified inhabiting lateritic soils, this species has 45 records from the Murchison and Yalgoo bioregions (Western Australian Herbarium, 1998-). The proposed disturbance to 17 individuals is not considered to significantly impact this species as surveys have identified up to 2,184 individuals within the surrounding area and suitable habitat is present across the bioregions (ecologia, 2012; Ecotec, 2024b).

Acacia speckii, Priority 4, is a bushy, rounded shrub or tree which has been identified inhabiting rocky soils over granite, basalt or dolerite on rocky hills or rises (Western Australian Herbarium, 1998-). This species has been identified from 40 records across the Gascoyne, Murchison and Yalgoo bioregions (Western Australian Herbarium, 1998-). The proposed disturbance to 25 individuals is not considered significant as surveys have identified up to 1,193 individuals within the surrounding area and suitable habitat is present across the bioregions (ecologia, 2012; Ecotec, 2024b).

The application area transects Priority 1 Priority Ecological Community (PEC) Weld Range Vegetation Complexes (banded ironstone formation) (Ecotec, 2024a; 2024b; GIS Database). Intersecting vegetation types 2, 3, 4, 5, 7, and 8 as identified by Ecotec (2024b) correspond to the PEC, with 116.1 hectares of disturbance proposed for the project occurring within the PEC (Ecotec, 2024a).The impacts to the PEC are not considered significant as the Weld Range PEC occupies an area of 20,073 ha and the proposed clearing will impact less than one percent of the PEC. Cumulative impacts to the PEC is considered likely given the mining activities proposed within the area. It is considered that these impacts can be managed through a vegetation condition restricting the amount of clearing permitted within the PEC.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant flora and priority ecological community can be managed by avoiding and minimising disturbance and by taking steps to minimise the risk of the introduction and spread of weeds and by implementing a flora management condition limiting the impacts to priority flora.

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;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;

- restricting clearing within the Priority Ecological Community;
- no clearing of more than four individuals of *Stenanthemum mediale*.

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

Assessment

ecologia (2010) undertook a Level 2 vertebrate survey of the application area and surrounds over four site visits between 2006 and 2007; recording 148 vertebrate species in and around the application area, including 80 bird species, 44 reptiles, 23 mammals (17 native and six introduced) and one amphibian. APM (2024) identified 20 vertebrate fauna species and two invertebrate species of conservation significance from database searches of a 30 kilometre radius from the application area including seven mammals, 11 birds and two reptiles (see Section A.4). Ecotec (2024b) undertook a habitat and targeted conservation significant fauna survey of the application area in August 2024.

At the Weld Range, the long-tailed dunnart (*Sminthopsis longicaudata*) (Priority 4) has been recorded on exposed rock and stony soils with hummock grasses and shrubs, flat-topped hills, lateritic plateaus, sandstone ranges and breakaways, generally with a vegetation of sparse mulga over spinifex (Ecotec, 2024a). Within the application area, APM (2024) found suitable which habitat exists in the Banded Ironstone and Drainage Line habitats. Potential impacts may be managed by implementing a slow directional clearing condition allowing fauna to move into adjacent vegetation ahead of the clearing activities and to restrict clearing within drainage line habitats.

The application area is on the northernmost extent of malleefowl (*Leipoa ocellata*) (Vulnerable) distribution and the closest records are over 50 kilometres to the south. A sandy substrate and abundance of leaf litter are requirements for the construction of the birds' incubator-nests (Commonwealth of Australia, 2008). Soils in the application area have a reasonably high clay content and litter was sparse to absent, except in the narrow Drainage Lines habitat (APM, 2024). The quality of the habitat for foraging and nest building are generally low, except in small patches of higher quality habitat in or near the larger drainage features low in the plains (APM, 2024). Ecotec undertook a habitat and targeted conservation significant fauna survey of the application area in August 2024 (Ecotec, 2024b). Nine possible extinct (long unused and unlikely to be used again, low and flat profile without a peak or crater) malleefowl mounds were recorded during the survey (Ecotec, 2024b). The survey area now lacks much of the understorey biomass that was once present (as a result of grazing on the pastoral station) and is therefore lacking in leaf litter, food resources and cover provided by denser vegetation (APM, 2024). It was concluded that malleefowl are unlikely to occur in the application area (Ecotec, 2024b).

Suitable foraging habitat for the grey falcon (*Falco hypoleucos*) (Vulnerable) is present within the area, however no suitable nesting habitat is present and preferred nesting habitat is not available in the surrounding local area. Known records are more than 40 kilometres away and whilst the grey falcon may occasionally visit the locality, therefore the application area is unlikely to provide an important habitat for this species (APM 2024; GIS Database).

Western spiny-tailed skink (*Egernia stokesii badia*) (Vulnerable) typically resides in family groups in coarse woody debris, such as fallen log piles (Commonwealth of Australia, 2008) or, in inland areas, burrows under boulders and exfoliated sheets of granite (Ecotec, 2024b). This species is generally easy to detect as the animals use a communal latrine which persists for many months even when the animals are concealed or absent. The species was not recorded in the application area during the recent fauna surveys and the area proposed to clear is not considered significant habitat for this species (APM 2024; Ecotec 2024a; 2024b). Potential impacts may be managed by implementing a slow directional clearing condition allowing fauna to move into adjacent vegetation ahead of the clearing activities.

The West Coast mulga slider (*Lerista eupoda*) (Priority 1) has been recorded in Weld Range including locations close to the application area; however, APM (2024) found the habitats within the application area were generally of poor quality. Leaf litter is scarce within the application area and soils are degraded and likely poor for burrowing. Higher quality microhabitats occur in the Drainage Line habitat however, soils may be too stony to be suitable. Potential impacts may be managed by implementing a slow directional clearing condition allowing fauna to move into adjacent vegetation ahead of the clearing activities and to restrict clearing within drainage line habitats.

Intensive targeted surveys have previously been conducted throughout the Weld Range when the northern shieldbacked trapdoor spider was previously regarded as *Idiosoma nigrum* (Vulnerable), now regarded as *Idiosoma clypeatum*, (Priority 3) (Ecotec, 2024a). Over 1,800 trapdoor burrows have been identified from database searches, the majority of which are from within the Weld Range (Ecotec, 2024a). Biologic (2012) estimated the population size of *I. clypeatum* across the Weld Range to be more than 14,000 individuals. Ecotec (2024b) found that shield-back trapdoor spider burrows in this region are associated with drainage lines and denser stands of Acacia where the soil has a higher moisture content. Ecotec undertook searches of the main areas of Drainage Line habitat, which is present from the western end of the project infrastructure area and along the haul road route (Ecotec, 2024b). Eleven active and five abandoned *Idiosoma clypeatum* burrows were recorded during the survey within the application area, however it is highly likely that many more burrows are present in suitable habitat across the application area (Ecotec, 2024b). There is abundant suitable habitat in the surrounding region and *I. clypeatum* is known to be widespread across the Murchison and Yalgoo bioregions (Ecotec 2024). The proponent has committed to avoiding all known burrows and will be conditioned on the permit (as recorded by Ecotec, 2024).

The drainage lines habitat recorded within the application area provide significant habitat for several of the aforementioned fauna species. Impacts to this habitat may be managed by implementing a management condition ensuring the permit holder avoids clearing riparian vegetation and maintains existing surface water flow. Further impacts may be managed by implementing a restricted clearing condition, permitting the clearing of only 25 hectares of drainage habitat for the purpose of mineral production.

Conclusion

For the reasons set out above, it is considered that the impacts of the proposed clearing on conservation significant flora and priority ecological community can be managed by avoiding and minimising disturbance and by taking steps to minimise the risk of the introduction and spread of weeds and by implementing a flora management condition limiting the impacts to priority flora.

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

- slow directional clearing in one direction to allow fauna to move into adjacent vegetation ahead of the clearing activities;
- restricted clearing within drainage line habitat;
- avoid riparian vegetation and maintain existing surface water flow; and
- no clearing within 25 metres *Idiosoma clypeatum* burrows.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 11 October 2024 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 (Wajarri Yamatji Part A (WC2004/010)) over the area under application (DPLH, 2025). This claim has been determined by the Federal Court on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There is one 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.

Other relevant authorisations required for the proposed land use include:

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

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The application area is located approximately 60 kilometres northwest of Cue, within the Shire of Cue and falls within Western Murchison subregion of the Murchison Interim Biogeographic Regionalisation for Australia (IBRA) region (GIS Database). The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia (GIS Database).
Ecological linkage	Aerial imagery shows the application area does not form part on any formal or informal ecological linkages (GIS Database).
Conservation areas	The application area does not intersect any conservation areas (GIS Database). The nearest conservation area, Lakeside Conservation Park (R 54420), is located approximately 50 kilometres south from the application area (GIS Database).
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation associations: • 18: Low woodland; mulga (*Acacia aneura*); and • 202: Shrublands; mulga & *Acacia quadrimarginea* scrub (GIS Database). A detailed flora and vegetation survey (1,056 hectares survey area) was conducted over the application area by Animal Plant Mineral Pty Ltd from 15-17 November 2023 (APM, 2024) and a targeted biological survey was undertaken from 29 July to 3 August 2024 by Ecotec (Ecotec, 2024b). The following vegetation types were recorded within the application area (APM, 2024): • **2a. BIF outcrops:** Scattered low *Acacia aneura, Psydrax latifolia* and *Acacia pruinocarpa* over *Eremophila latrobei* subsp. *latrobeii*, *Thryptomene decussata* and *Philotheca brucei* mid sparse shrubland with *Ptilotus obovatus*, *Dodonaea pachyneura* and *Dysphania rhadinostachya* low sparse shrubland; • **3a. Gravely plains:** *Acacia aneura, A. ramulosa* subsp. *linophylla* and *Acacia mulganeura* tall sparse shrubland over *Eremophila punicea*, *Eremophila forrestii* subsp. *forrestii* and *Eremophila margarethae* mid sparse shrubland with *Ptilotus obovatus, Eragrostis eriopoda* and *?Swainsona purpurea* scattered low groundcover; and • **3b. Sandy outwash plains:** *Acacia aneura, Acacia pruinocarpa* and *Acacia ramulosa* var *linophylla* low open woodland over *Eremophila forrestii* ssp *forrestii*, *Eremophila latrobei* and *Grevillea obliquistigma* mid open shrubland and *Ptilotus obovatus*, *Sida calyxhymenia* and *Abutilon cryptopetalum* sparse low shrubs. The targeted flora and vegetation survey refined the aforementioned three vegetation types recorded into the following 16 vegetation types (Ecotec, 2024b): • **1.** *Acacia pruinocarpa* open woodland or isolated trees over *Acacia aptaneura, A. caesaneura, A. craspedocarpa* tall sparse shrubland over *Eremophila fraseri* subsp. *fraseri, Acacia tetragonophylla, Rhagodia eremaea, Teucrium teucriiflorum* sparse shrubland over *Ptilotus obovatus, Menkea villosula, Goodenia tenuiloba* low sparse to open shrubland; understory denser under pockets of trees. Landform: Stony plains and lower slopes; • **2.** *Acacia pruinocarpa* mostly absent; *Harnieria kempeana* subsp. *muelleri*, *Acacia* sp. Weld Range occasional *Acacia incurvaneura, A. pteraneura, Acacia aptaneura, Grevillea berryana* tall open shrubland over *A. ramulosa* var. *linophylla, Ptilotus rotundifolius, Eremophila fraseri* subsp. *fraseri, E. glutinosa, E. forrestii* subsp. *forrestii* sparse shrubland over *Eragrostis eriopoda, Ptilotus aervoides, Erodium cygnorum,* low sparse tussock grassland. Landform: lower to upper midslopes on south facing colluvial outwash slopes; stony and gravel mantles; • **3.** *Acacia ramulosa var. linophylla, A. rhodophloia* isolated tall shrubs over *Eremophila forrestii* subsp. *forrestii, E. latrobei* subsp. *latrobei, Acacia ramulosa* var. *linophylla, Harnieria kempeana* subsp. *muelleri, Sida s*p. Golden calyces glabrous open shrubland over *Erodium cygnorum, Goodenia tenuiloba* Landform: Hills; mostly mid to upper slopes; south aspect; • **4.** *Acacia pruinocarpa, A. incurvaneura* isolated trees over *Eremophila latrobei* subsp. *latrobei, Dodonaea pachyneura, Philotheca brucei* subsp. *brucei, Prostanthera petrophila, Tribulus suberosus* open shrubland over *Ptilotus obovatus, Micromyrtus sulphurea, Eremophila latrobei* subsp. *latrobei, Dysphania rhadinostachya* subsp. *rhadinostachya, Stylidium longibracteatum, Goodenia tenuiloba, Hysterobaeckea occlusa* low open; shrubland/ low open forbland; • **5.** *Acacia incurvaneura* low open woodland/ tall sparse shrubland over *Acacia* sp. Weld Range, *Eremophila macmillaniana* tall sparse shrubland over *Eremophila macmillaniana, Senna glaucifolia, Ptilotus rotundifolius* open shrubland over *Eremophila forrestii* subsp. *forrestii, E. macmillaniana, Hibiscus sturtii* low sparse shrubland over *Maireana melanocoma, Ptilotus aervoides, Goodenia tenuiloba* low sparse chenopod shrubland. Landform: Hill; BIF ridge and upper slopes, moderate to steep slopes; > 80 % rock, boulders, rock outcrops;

Characteristic	Details
	• **6.** *Acacia incurvaneura, A. pruinocarpa, A. fuscaneura* low woodland over *Acacia ramulosa* var. *linophylla, Psydrax latifolia* tall open shrubland over *Eremophila forrestii* subsp. *forrestii, E. georgei, Rhagodia eremaea, Senna artemisioides* subsp*. xsturtii, S. glutinosa* subsp. *xluerssenii* shrubland over *Erodium cygnorum, Tetragonia cristata, Isoetopsis graminifolia, Menkea villosula, Cheilanthes sieberi* subsp. *sieberi* low forbland. Landform: Drainage lines and depressions; lower to midslopes; water gaining areas; • **7.** *Acacia incurvaneura, A.* sp. Weld Range, *A. speckii* tall sparse shrubland over *Ptilotus rotundifolius, Eremophila fraseri, E. latrobei, Senna artemisioides* subsp*. helmsii* sparse shrubland over *Sida ectogama, Ptilotus aervoides, P. schwartzii , Erodium cygnorum l*ow sparse shrubland. Landform: Hill; Midslopes; dolerite; very rocky, minor outcrops; • **8.** *Acacia incurvaneura, A. pruinocarpa* tall open shrubland over *Acacia ramulosa, Eremophila latrobei, Scaevola spinescens, Senna glaucifolia,* sparse shrubland over *Eremophila latrobei, Stenanthemum mediale, Sida ectogama, Micromyrtus sulphurea* low sparse shrubland. Landform: Low hill; minor outcrops; • **9.** a) Patches of Acacia *pruinocarpa* low woodland over *Acacia incurvaneura, A. ramulosa* var*. linophylla* tall open shrubland over *Eremophila simulans* subsp*. simulans, E. georgei, E. forrestii* subsp*. forrestii* open shrubland over *Eragrostis eriopoda, Paspalidium basicladum, Ptilotus obovatus* low sparse tussock grassland. b) Tall open shrubland of *Acacia incurvaneura* and *A. ramulosa* var*. linophylla* over sparse shrubland over low sparse tussock grassland c) Mulga low woodlands further away from disturbance areas Landform: Hardpan plain lower catchment; • **10.** *Acacia incurvaneura, A. caesaneura, A. pruinocarpa, A. ramulosa* var*. linophylla, Grevillea berryana,* low open woodland/ tall open shrubland over *Eremophila forrestii* subsp*. forrestii, Senna artemisioides* subsp*. filifolia, Acacia* spp. open shrubland over *Eremophila jucunda* subsp*. jucunda, E. forrestii* subsp*. forrestii, E. simulans* subsp*. simulans, Sida ectogama, S.* sp. Golden calyces glabrous*, Ptilotus schwartzii, Eragrostis eriopoda* low sparse shrubland. Landform: Low gravel hills; • **11.** a) *Acacia pruinocarpa, A. incurvaneura* open forest over *Glycine canescens, Santalum spicatum, Psydrax latifolia* vineland over *Acacia ramulosa* var. *linophylla, Glycine canescens, Psydrax latifolia, Eremophila forrestii* subsp. *hastieana, E. georgei* open shrubland over *Sida ectogama, Ptilotus obovatus, Glycine canescens, Rhagodia eremaea* low shrubland b) *Acacia pruinocarpa, A. incurvaneura* open forest over *Psydrax suaeveolens* low open woodland over *Eremophila forrestii* subsp. *hastieana, E. georgei, Sida ectogama, Glycine canescens* shrubland over *Ptilotus obovatus, Eremophila georgei, Acacia incurvaneura* low open shrubland. Landform: Alluvial plain; broad unincised drainage line; • **12.** *Acacia incurvaneura, A. caesaneura, A. pruinocarpa l*ow woodland*/ A. tetragonophylla, A. craspedocarpa, Psydrax latifolia* tall open shrubland*/ Eremophila forrestii* var. *forrestii* or var. *hastieana, A. ramulosa, Eremophila georgei* shrubland*/ Sida ectogama, Cheilanthes sieberi* low shrubland. Landform: Drainage lines lower catchment, plains; often associated with VC11; • **13.** Groves: *Acacia pruinocarpa* low isolated trees over *Acacia incurvaneura, A. tetragonophylla* tall sparse shrubland over *Acacia ramulosa* var. *linophylla, A. incurvaneura, Eremophila forrestii* subsp. *forrestii, E. latrobei* subsp. *latrobei, E. georgei* open shrubland over *Eremophila georgei, E. foliosissima, Ptilotus schwartzii, Stenopetalum filifolium, Menkea villosula, Isoetopsis graminifolia* low open forbland Stony plain: *Acacia aptaneura* tall sparse shrubland over *Acacia tetragonophylla, A. ramulosa* var. *linophylla Eremophila fraseri* subsp. *fraseri* sparse shrubland over *Eremophila jucunda subsp. jucunda* or *E. compacta* or *E. punicea, Ptilotus schwartzii, Solanum lasiophyllum, Eragrostis eriopoda, Monachather paradoxus* low isolated to sparse shrubs and grass tussocks. Landform: Ironstone gravel plain; • **14.** *Acacia aptaneura, A. grasbyi* low open woodland over *Eremophila pantonii, Acacia aptaneura, Senna glaucifolia* sparse shrubland over *Maireana thesioides, M. triptera, Senna glaucifolia* low open chenopod shrubland; • **15.** *Acacia aneura, A. sp. Weld Range* tall isolated shrubs over *Eremophila macmillaniana, Acacia* sp. Weld Range*, Acacia speckii* sparse shrubland over *Cephalipterum drummondii, Sida ectogama, Aristida contorta* low sparse forbland; • **16.** *Acacia pteraneura, A. fuscaneura* tall open shrubland over *Acacia fuscaneura, Grevillea deflexa, Eremophila fraseri* subsp*. fraseri* sparse shrubland over *Calytrix desolata, Grevillea deflexa* low sparse shrubland over *Calytrix desolata, Grevillea deflexa* low sparse shrubland over *Cymbopogon ambiguus* low sparse tussock grassland; and • **CL.** Cleared areas.
Vegetation condition	The vegetation surveys (APM, 2024; Ecotec; 2024b) indicate the vegetation within the proposed clearing area is in “Completely Degraded” to “Good” condition, described as

Characteristic	Details
	• 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; and • 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. The full Trudgen (1991) condition rating scale is provided in Appendix C.
Climate and landform	The application area is located in the Midwest Region of Western Australia and experiences hot, dry summers and mild winters (APM, 2024). The area experiences an average annual rainfall of 232.6 millimetres (BoM, 2025).
Soil description	The soil is mapped within five soil landscape systems: • Jundee system: Hardpan plains with variable gravelly mantles and minor sandy banks supporting weakly groved mulga shrublands; • Violet system: Gently undulating gravelly plains on greenstone, laterite and hardpan, with low stony rises and minor saline plains; supporting groved mulga and bowgada shrublands and occasionally chenopod shrublands; • Weld system: Rugged ranges and ridges of banded ironstone and quartzite, supporting acacia shrublands; • Wiluna system: Low greenstone hills with occasional lateritic breakaways and broad stony slopes, lower saline stony plains and broad drainage tracts; supporting sparse mulga and other acacia shrublands with patches of halophytic shrubs; and • Yarrameedie system: Undulating stony interfluves, drainage floors and pediment foothill plains below major ranges, supporting sparse mulga shrublands (DPIRD, 2025; GIS Database).
Land degradation risk	The five land systems mapped within the application area may be susceptible to accelerated erosion when degraded or when vegetation is removed (Curry, et al., 1994).
Waterbodies	The desktop assessment and aerial imagery indicated that several minor non-perennial watercourses transect the application area (GIS Database).
Hydrogeography	The application area is mapped within the East Murchison Groundwater area, however is not within any public drinking water supply areas (GIS Database).
Flora	No Threatened flora species have been recorded within the application area (GIS Database). There are records of 24 conservation significant flora within the local area (20 kilometres) and three have been recorded within the application area (APM, 2024; Ecotec, 2024b; GIS Database).
Ecological communities	There are no mapped Threatened Ecological Communities within the permit area (GIS Database). The application area transects the mapped distribution of the Priority 1 Priority Ecological Community (PEC) Weld Range Vegetation Complexes (banded ironstone formation) (GIS Database).
Fauna	There are records of 30 fauna of conservation significance within the local area, one conservation significant fauna species, *Idiosoma clypeatum* – Priority 3 – has been recorded within the application area (GIS Database).
Fauna habitat	Four main habitat types have been recorded within the application area: • Acacia Sand Plains: Occasional *Acacia pruinocarpa* low trees with *A. aneura* (mulga) and *Acacia ramulosa* var. *linopylla* tall shrubs, over medium to low mixed shrubs predominantly of *Eremophila* spp., over sparse grasses and perennial herbs, on a sandy to lightly rocky clay loam; • Banded Ironstone Ridge: Occasional *Acacia pruinocarpa* low trees and/or *Acacia aneura* (mulga) tall shrubs, over medium to low mixed shrubs, over sparse grasses, on an ironstone and clayey loam; • Drainage Line: Open *Acacia pruinocarpa* and *Acacia aneura* low trees over low to medium mixed shrubs, over sparse to dense grasses on a stony sandy and clayey soil; • Mulga Woodland on Hill Slope: Open *Acacia pruinocarpa* low trees over *Acacia aneura* high shrubs, over mixed medium shrubs, over sparse grasses and herbs on a sandy or stony clay loam; and • Disturbed (APM, 204; Ecotec, 2024b).

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	1.00	0.00
Beard vegetation associations - State					
Veg Assoc No. 18	19,892,306.46	19,843,148.07	99.75	1,317,179.00	6.62
Veg Assoc No. 202	448,529.31	448,343.80	99.96	102,759.63	22.91
Beard vegetation associations - Bioregion					
Veg Assoc No. 18	12,403,172.30	12,363,252.47	99.68	1.00	0.00
Veg Assoc No. 202	339,742.69	339,641.41	99.97	1.00	0.00

Government of Western Australia (2019)

A.3. Flora analysis table

With consideration for the site characteristics set out above and biological survey information (APM, 2024; Ecotec, 2024b; GIS Database), impacts to the following conservation significant flora required further consideration (Ecotec, 2024a).

Species	Conservation Status	Likelihood of occurrence
Acacia dilloniorum	P1	Possible – suitable habitat exists in the project area, no known records in immediate vicinity.
Beyeria lapidicola	P1	Recorded (*ecologia* 2010b, Ecotec 2024)
Euphorbia sarcostemmoides	P1	Recorded (Ecotec 2024)
Stenanthemum mediale	P1	Recorded (Ecotec 2024)
Acacia burrowsiana	P3	Possible – suitable habitat exists in the project area
Hemigenia virescens	P3	Possible - suitable habitat exists in the project area, no known records in immediate vicinity.
Hibiscus ?krichauffianus	P3	Recorded (APM 2024)
Homalocalyx echinulatus	P3	Possible - suitable habitat exists in the project area, previous records in immediate vicinity (*ecologia* 2010b)
Micromyrtus placoides	P3	Recorded (Ecotec 2024)
Prostanthera petrophila	P3	Recorded (*ecologia* 2010b, Ecotec 2024)
Sauropus sp. Woolgorong (M. Officer s.n. 10/8/94)	P3	Possible - suitable habitat exists in the project area, no known records in immediate vicinity
Verticordia jamiesonii	P3	Recorded (*ecologia* 2010b, Ecotec 2024)
Acacia speckii	P4	Recorded (*ecologia* 2010b, Ecotec 2024)
Dodonaea amplisemina	P4	Recorded (*ecologia* 2010b)
Grevillea inconspicua	P4	Possible - suitable habitat exists in the project area, no known records in immediate vicinity.

A.4. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.1), and biological survey information (APM, 2024; Ecotec, 2024b; GIS Database), impacts to the following conservation significant fauna required further consideration (Ecotec, 2024a).

Common name	Scientific name	EPBC status	WA status	Comments	Likelihood of occurrence
Mammals					
Bilby	*Macrotis lagotis*	VU	VU	The local record has a low level of certainty and was recorded in 1984.	Unlikely
Black-flanked rock-wallaby	*Petrogale lateralis lateralis*	EN	EN	Historical local record is a fossilised specimen	Unlikely
Brush-tailed mulgara	*Dasycercus blythi*		P4	Historical local record is a fossilised specimen	Unlikely
Ghost bat	*Macroderma gigas*	VU	VU	Historical local record is a fossilised specimen	Unlikely
Gould's mouse	*Pseudomys gouldii*	VU	VU	Historical local record is a fossilised specimen	Unlikely
Greater stick-nest rat	*Leporillus conditor*	VU	CD	Historical local record is a fossilised specimen	Unlikely
Long-tailed dunnart	*Antechinomys longicaudata*		P4	Suitable habitat present in the BIF	Recorded
Birds					
Curlew sandpiper	*Calidris ferruginea*	CR, MI	CR	No suitable habitat present	Unlikely
Fork-tailed swift	*Apus pacificus*	MI	IA	All habitats suitable, predominantly a coastal non-breeding visitor to Australia. Project area is outside of likely habitat range.	Unlikely
Grey falcon	*Falco hypoleucos*	VU	VU	Suitable foraging habitat present. No suitable nesting habitat.	Possible
Grey wagtail	*Motacilla cinerea*	MI	MI	No suitable habitat present	Unlikely
Malleefowl	*Leipoa ocellata*	VU	VU	Inactive mounds have been recorded	Possible
Night parrot	*Pezoporus occidentalis*	EN	CR	No suitable habitat present	Unlikely
Pectoral sandpiper	*Calidris melanotos*	MI	IA	No suitable habitat present	Unlikely
Peregrine falcon	*Falco peregrinus*		OS	Foraging habitat present	Possible
Sharp-tailed sandpiper	*Calidris acuminata*	VU, MI	IA	No suitable habitat present	Unlikely
Southern whiteface	*Aphelocephala leucopsis*	VU	-	All habitats suitable, project area unlikely to host habitat critical to survival.	Possible
Yellow wagtail	*Motacilla flava*	MI	MI	No suitable habitat present	Unlikely
Reptiles					
West coast mulga slider	*Lerista eupoda*		P1	Suitable habitat is present in the Mulga Woodland on Hill Slope habitat.	Possible
Western spiny-tailed skink	*Egernia stokesii badia*	EN	VU	No granite outcrops are present but suitable habitat may be present in the BIF outcrops	Possible
Invertebrate					
Northern shield-backed trapdoor spider	*Idiosoma clypeatum*		P3	Recorded within the study area, then identified as *I. nigrum*	Recorded
Shield-backed trapdoor spider	*Idiosoma nigrum*	VU	EN	All specimens in the Murchison region determined to be *I. clypeatum*	Unlikely

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared contains conservation significant flora, fauna and assemblages of plants (APM, 2024; Ecotec, 2024b; GIS Database). A portion of the application area is mapped as the 'Weld Range Vegetation Complexes (banded ironstone formation)' (Priority 1) Priority Ecological Community (PEC) (APM, 2024; Ecotec, 2024b; GIS Database).	May be at variance	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 suitable habitat for several conservation significant fauna species.	May be at variance	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 the permit area (GIS Database). Flora surveys of the permit area did not record any species of Threatened flora (APM, 2024; Ecotec, 2024b; GIS Database).	Not likely to be at variance	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 known Threatened Ecological Communities (TECs) located within the permit area (GIS Database). The flora and vegetation surveys over the permit area have not identified any TECs (APM, 2024; Ecotec, 2024b; GIS Database).	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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 application area falls within the Murchison Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99.73% of the pre-European vegetation still exists in the Murchison Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations 18 and 202 (GIS Database). These vegetation associations have not been extensively cleared as over 99% of the pre-European extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2019). The permit area does not contain any remnants nor does it form part of any remnants in the local area (GIS Database).	Not at variance	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: 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.	Not likely to be at variance	No
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: There are no permanent watercourses or wetlands mapped within the application area (GIS Database). There are several minor ephemeral drainage lines which intersect the application area (GIS Database).	May be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped land systems may experience accelerated erosion following clearing of native vegetation (Curry, et al., 1994). Land degradation may be managed by implementing a staged clearing condition on the permit ensuring native vegetation is not cleared unless the purpose for which the clearing is authorised is enacted within three months of the authorised clearing being undertaken.	May be at variance	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: There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Drainage lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed clearing is unlikely to result in significant changes to surface water flows or to cause deterioration in the quality of underground water, however potential impacts may be managed by implementing a condition on the permit, requiring the permit holder to maintain any existing surface water flows.	Not likely to be at variance	No
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: There are no permanent water courses 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. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.	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. Sources of information

D.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Bush Forever (Regional Scheme) (DPLH-022)
- Cadastre (LGATE-218)
- Contours (DPIRD-073)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Esri World Imagery
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Threatened and Priority Flora (TPFL)
- Threatened and Priority Flora (WAHerb)
- Threatened and Priority Fauna

- Threatened and Priority Ecological Communities
- Threatened and Priority Ecological Communities (Buffers)

D.2. References

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Ecotec (2024a) Beebyn-W11 Iron Ore Project Clearing Permit Application Supporting Information Tenements: M51/869, L20/92. Report prepared for Fenix Beebyn Pty Ltd by Eco tech (WA) Pty Ltd, November 2024.

Ecotec (2024b) Beebyn-W11 Iron Ore Project Targeted Biological Survey. Report prepared for Fenix Beebyn Pty Ltd by Eco tech (WA) Pty Ltd, July 2024.

Environmental Protection Authority (EPA) (2004a) Guidance for the Assessment of Environmental Factors - Terrestrial Fauna Surveys for Environmental Impact Assessment in Western Australia, No. 56, June 2004.

Environmental Protection Authority (EPA) (2004b) Guidance for the Assessment of Environmental Factors - Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia, No. 51, June 2004.

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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.