Department of Mines, Petroleum and Exploration

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	11031/1
Permit type:	Purpose Permit
Applicant name:	Process Minerals International Pty Ltd
Application received:	11 April 2025
Application area:	638.4 hectares
Purpose of clearing:	Mineral production and associated activities
Method of clearing:	Mechanical Removal
Tenure:	Mining Lease 47/1592
	Miscellaneous Licence 47/1008
Location (LGA area/s):	Shire of East Pilbara
Colloquial name:	Lamb Creek Iron Ore Project

1.2. Description of clearing activities

Process Minerals International Pty Ltd proposes to clear up to 638.4 hectares of native vegetation within a boundary of approximately 860 hectares, for the purpose of mineral production and associated activities. The project is located approximately 130 kilometres northwest of Newman, within the Shire of East Pilbara (MRL, 2025c).

The application is to allow for construction and operation of iron ore mine (open pit), processing facilities, supporting infrastructure and access/haul road (MRL, 2025a).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	17 October 2025
Decision area:	638.4 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 Mines, Petroleum and Exploration (DMPE) advertised the application for a public comment for a period of 21 days, and one submission was received advising there were no objections to the proposed clearing.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix E), supporting information provided by the applicant including the results of a flora and vegetation survey (Appendix D), the clearing principles set out in Schedule 5 of the EP Act (Appendix B), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

The 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;
- the loss of native vegetation that is critical and supporting habitat for threatened fauna of the region; and
- potential impacts to riparian vegetation and surface water flows.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing can be minimised and managed 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:

- require the submission and implementation of an offset proposal;

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds;
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- implement the management measures and monitoring set out in the Flora and Vegetation Management Plan, Significant Fauna Management Plan, and Surface Water Management Plan; and
- avoid clearing watercourses where practicable, and ensure surface flows are maintained or reinstated downstream.

2. Legislative context

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

In addition to the matters considered in accordance with section 51O of the EP Act (Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

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

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

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)
- Environmental Offsets Guidelines (EPA, August 2014)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016a)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016b)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant has applied the EPA's mitigation hierarchy (avoid, minimise, rehabilitate, offset) during the design, planned construction and operation of the Project to reduce the potential impact to key environmental factors including Flora and Vegetation, Terrestrial Fauna, Inland Waters and Social surrounds (MRL, 2025c). These management measures are listed below (MRL, 2025c):

Land Clearing and Flora Management

- Proposed clearing has been minimised as far as practicable to reduce the extent of disturbance required;
- the Proponent has reduced the Clearing Permit Area from 1,386 hectares to 861 hectares;
- internal approval process will be implemented to ensure all clearing works are compliant with regulatory requirements and are within approved boundary;
- the area to be cleared shall be clearly demarcated and machinery operators made aware of the operational boundary, following confirmation with the relevant manager. Some heavy equipment used may have in-cab GPS mapping and alarm functions however in the absence of this functionality, other control measures such as the use of spotters and/or restricting clearing to the daylight hours will be undertaken;

- implement Flora and Vegetation Management Plan;
- vegetation clearing shall be kept to the minimum amount required, as far as practicable;
- where significant flora taxa populations cannot be avoided, as may be the case with *Aristida lazaridis* (P3), infrastructure should be placed to avoid the highest densities; and
- significant flora populations and the area to be cleared shall be clearly demarcated and machinery operators made aware of the operational boundary, following confirmation with the relevant manager.

Rehabilitation

- Implement an appropriate rehabilitation plan (surface treatments; seed selection, collection, storage and management) in accordance with the approved Mine Closure Plan (MCP);
- progressive rehabilitation of disturbed areas will be undertaken throughout the life of mine, as far as practicable; and
- salvage and stockpile soil and/or habitat features (e.g. vegetation, stumps, logs, boulders) for use in rehabilitation programs.

Weed Management

- Vehicles with ground engaging equipment to be cleaned, inspected and issued with a Weed Hygiene Certificate prior to entry to site or moving between areas on-site;
- vehicles and equipment shall be restricted to designated roads and tracks;
- restrict movement of topsoil at known weed locations; and
- seasonal weed control programs shall be implemented, including herbicide spraying or physical removal, as required.

Fauna Management

- Implement a 100 metre radius exclusion zone around recorded category 2 and category 3 ghost bat roosts;
- temporary closure of cave 1 during construction and operation to avoid impacts to nesting ghost bats. Once the cave is reopened, the ghost bats are likely to return;
- avoid placement of infrastructure in any habitat of high significance, where practicable;
- implement Significant Fauna Management Plan;
- machinery and vehicle movements should be restricted during construction to minimise the potential for vehicle strikes, where practicable;
- machinery and vehicle movements that must be undertaken between dusk and dawn should be limited to low speeds on access tracks; and
- excavations and trenches will be kept open only as long as needed to undertake the work and egress points will be provided dependant on depth / morphology of the excavation.

Watercourse Management

- Access road crossing of Mine Creek designed so as not to impede normal surface water flow;
- culverts and floodways along access roads will maintain existing flood characteristics and maintain natural flow volumes;
- implement surface management strategies in accordance with the Surface Water Management Plan; and
- sediment traps will be designed to remove particles greater than, or equal to, 75 micrometres from surface water prior to release to the environment.

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to critical and supporting habitat for conservation significant fauna necessary. In accordance with the Government of Western Australia's Environmental Offsets Policy and Environmental Offsets Guidelines, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit.

3.2. Assessment of impacts on environmental values

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

The assessment against the clearing principles identified that the impacts of the proposed clearing present a risk to biological values (fauna). 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 (fauna habitats) - Clearing Principle (b)

Assessment

The application area contains suitable habitat for the species discussed below.

- **Fork-tailed swift (MI)**

The species has been recorded within the application area and it is likely to forage above the application area during summer (MRL, 2025c).

- **Ghost bat (VU)**

No ghost bat roosts were identified within the application area during the in-field fauna surveys although five caves were being utilised by the ghost bat outside of the application area, but within the terrestrial fauna survey area (Rapallo 2012; 2022b). Bat Call WA in Rapallo (2022b) assigned the five ghost bat caves as the following cave type and habitat classification (Phoenix, 2022):

- Ghost bat roost cave recorded within the terrestrial fauna survey area but outside of the application area (Figure 1 - Appendix D):
    - Cave 1 – Category 2 (situated approximately 730 metres from the proposed pit); and
    - Cave 3 – Category 3 (situated >1 kilometres from proposed pit).
- Ghost bat roost cave recorded outside of the terrestrial fauna survey area and the application area (Figure 1 - Appendix D):
    - Cave 2 – Category 3;
    - Cave 4 – Category 3 (apartment block); and
    - Cave 5 – Category 2.

The closest distance from the proposed pit to a ghost bat cave is 730 metres (cave 1; category 2). The same cave is located 870 metres from a Waste Rock Land Form and diversion bund. The remaining caves in proximity to the proposed pit are greater than 1 kilometre away. Cave 4 and cave 5 are located 202 metres and 237 metres, respectively, from the haul road (Figure 1 - Appendix D). A description of the cave categories is provided in Appendix D (Figure 2). All areas of broad fauna habitats within the application area are considered supporting foraging habitat for ghost bat (MRL, 2025b).

- **Grey falcon (VU)**

There were no sightings of the grey falcon in the application area. It has been recorded approximately 14 kilometres from the terrestrial fauna survey area and various records within 20 kilometres of the terrestrial fauna survey area, none of the records were breeding records (Biologic 2017).

- **Northern quoll (EN)**

The northern quoll was recorded within the terrestrial fauna survey area during 2012 (Rapallo, 2012); however, no evidence of the species was found during the 2020 survey (Rapallo, 2022b). The northern quoll has not been recorded within the application area despite systematic trapping and active searches for northern quoll in 2012 and 2022 (Rapallo, 2012; 2022b). However, northern quoll has been recorded on a motion camera approximately 5 kilometres southwest of the proposed pit and has been recorded infrequently at Mining Area C (located 15 kilometres away from the application area), with all records secondary evidence, from scats (Biologic, 2017). Although the application area does not contain gorge, gullies and rocky breakaways, it still contains critical habitat in the form of foraging and dispersal habitat, which includes hill crests and hill slopes and minor and medium drainage habitats, that are located within a one kilometre buffer away from gorges, gullies and rocky breakaways (MRL, 2025b). Supporting habitat is also present, represented by any foraging and dispersal habitat, including hill crests and hill slopes and minor and medium drainage habitats, that are outside of the areas defined as critical habitat (MRL, 2025b).

- **Pilbara leaf-nosed bat (VU)**

No Pilbara leaf-nosed bat individuals have been recorded in surveys of the terrestrial sauna survey area; however, the species is considered likely to occur as a foraging visitor throughout the application area, particularly along major creeks (MRL, 2025c). The application area is unlikely to contain important roost habitat for this species and no roosts for this species were recorded in the rocky ridge and gorge habitat outside the application area (MRL, 2025c).

- **Pilbara olive python (VU)**

The Pilbara Olive Python was not recorded in the application area during field surveys but was recorded approximately 3 kilometres south of the proposed pit (Appendix D) (Rapallo, 2022b). Biologic (2017) recorded Pilbara Olive Python from Mining Area C from four records (15 kilometres from the application area). Critical habitat for this species (gorges, gullies and rocky breakaways) is not present in the application area (MRL, 2025b). Supporting habitat (medium and minor drainage lines), used for foraging and dispersal is present in the application area (MRL, 2025b). This supporting habitat is likely to serve as important seasonal refuges or movement corridors for the Pilbara olive python. This species is known to favour riparian zones and rocky ranges, and its presence, even as a foraging visitor, indicates ecological reliance on these transient water sources (Rapallo, 2022b).

- **Western pebble-mound mouse (P4)**

The tussock grasslands and stony plains habitats are most likely to support this species. This habitat is considered common within the application area, and there is widespread occurrence of suitable habitat for the species within the region (MRL, 2025c). The Western Pebble-mound mouse was recorded during both Rapallo (Rapallo 2012; 2021) in-field surveys, with 40 mounds recorded across the broader local area from within stony plains habitat.

Othe fauna

Suitable habitat for the Gane's blind snake, Pilbara barking gecko, and peregrine falcon occur in the application area.

Conclusion

- **Fork-tailed swift (MI)**

As the species is entirely aerial, the proposed clearing is not expected to impact the species; therefore, the fork-tailed swift has not been considered further (MRL, 2025c).

- **Ghost bat (VU)**

Based on the assessment from Bat Call (2021), category 1 and 2 caves, and category 3 caves when adjacent to category 2 caves are considered critical habitat for ghost bats. Therefore, of the above five caves, three are considered to be critical habitat for ghost bats (caves 1, 4 and 5). All recorded caves will be retained with a 100 metre buffer around them (MRL, 2025b). Potential disturbance to roosting bats from machinery and blasting will be negligible given the proximity of caves (MRL, 2025b). Although the ghost bat has not been recorded within the application area, this species will likely forage over all habitats present within the area. All areas of broad fauna habitats within the application area are considered supporting habitat for ghost bat (of which 638.4 ha occurs in the clearing footprint) (MRL, 2025c; Rapallo, 2022b). No critical habitat (i.e. caves) will be lost due to the proposed clearing (MRL, 2025b). The proposed removal of 638.4 hectares of supporting habitat is considered likely to have a significant impact on this species (Rapallo, 2022b). This supporting habitat includes foraging and dispersal habitats within 12 kilometres of critical habitat that is outside of the areas defined as critical habitat (MRL, 2025b).

- **Grey falcon (VU)**

Due to the lack of grey falcon records within the application area and the closest record being 14 kilometres away, and the scarcity of nesting trees due to frequent fires, no critical habitat exists in the application area (MRL, 2025b). The entire application area contains foraging and dispersal habitat for this species (MRL, 2025b). The proposed clearing will remove 638.4 hectares of supporting foraging and dispersal habitat for grey falcon (Rapallo, 2022b).

- **Northern quoll (EN)**

The paucity of records within the application area, and adjacent areas, combined with the lack of confirmed records (i.e. observations of individuals), suggests that the species is likely to occur in low numbers, if a permanent population occurs, or that the records to date have been made by individuals dispersing from nearby populations (MRL, 2025c). Actions unlikely to result in a significant impact on the northern quoll include those that maintain dispersal opportunities to populations important for the long-term survival of the northern quoll (Hill and Ward, 2010). The proposed clearing will remove 55.6 hectares of critical habitat and 167.3 hectares of supporting habitat (foraging and dispersal) for northern quoll which is considered likely to have a significant impact on the species' regional persistence (Rapallo, 2022b).

- **Pilbara leaf-nosed bat (VU)**

Given the extensive surveys and the lack of records and roosting caves for Pilbara leaf-nosed bat, the application area does not support critical habitat. All other habitat within the application area is considered to be potential foraging and dispersal habitat (MRL, 2025b). Given the lack of records and that there is no critical habitat and no known roosts within the application area, the habitat in the application area is unlikely to comprise important supporting habitat that is considered critical for survival (breeding, foraging or dispersal) for the species. Therefore, the proposed clearing is unlikely to have a significant impact on the Pilbara leaf-nosed bat (MRL, 2025b).

- **Pilbara olive python (VU)**

This species favours areas with permanent water holes (which are absent from the application area) in rocky ranges or along rivers and is considered likely to occur in the application area at least as a foraging visitor (Rapallo, 2022b). The proposed clearing will result in the destruction of 161.3 hectares of supporting habitat, severing potential dispersal pathways and further fragmenting an already limited and vulnerable habitat network. Given the species' dependence on linear watercourse habitats and the scale of proposed disturbance, the impact is not only significant, it poses a serious risk to the species' long-term viability in the region (Rapallo, 2022b).

- **Western pebble-mound mouse (P4)**

This species is widespread in the broader region and has also been recorded numerous times at Mining Area C (Biologic, 2017) situated approximately 15 kilometres from the application area (MRL, 2025c).

Other fauna

Fauna habitats are not restricted to the application area and all habitats recorded extend outside of the application area. Suitable habitat for the Gane's blind snake, Pilbara barking gecko, and peregrine falcon occur in the application area. The habitat within the proposed clearing area is not likely to be significant habitat or necessary for the maintenance of a significant habitat for these species and they are therefore not considered further.

For the reasons set out above, it is considered that the impacts of the proposed clearing on critical and supporting fauna habitats constitute a significant residual impact.

The applicant may have notification responsibilities under the EPBC Act for impacts to ghost bat, grey falcon, northern quoll, Pilbara leaf-nosed bat, Pilbara olive python 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:

- Slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals.
- Clearing must be conducted by implementing the management measures and monitoring set out in the Significant Fauna Management Plan.
- Provide an offset proposal to counterbalance the significant residual impacts described in Section 4.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 12 August 2025 by the Department of Mines, Petroleum and Exploration inviting submissions from the public. One submission was received advising there were no objections to the proposed clearing.

There is one native title claim (WCD2014/001) over the area under application (DPLH, 2025). This claim has been determined by the Federal Court on behalf of the claimant group (Banjima People). The mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2025). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

The proposed clearing may be a matter of national environmental significance under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The applicant has referred the proposal to the Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEEW) under the EPBC Act (EPBC 2023/09754).

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.

4. Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- 55.6 hectares of critical habitat for the northern quoll (any foraging and dispersal habitat within a one kilometre buffer of denning habitat).
- 167.3 hectares of supporting habitat for the northern quoll (any foraging and dispersal habitat outside of the areas defined as critical habitat).
- 638.4 hectares of supporting habitat for the ghost bat (foraging and dispersal habitats within 12 kilometres of critical habitat that is outside of the areas defined as critical habitat).
- 161.3 hectares of supporting habitat for the Pilbara olive python (foraging and dispersal habitat).

The applicant is required to provide an offset proposal in accordance with the Western Australian Environmental Offsets Policy (2011) and Western Australian Environmental Offsets Guidelines (2014) which adequately counterbalances the clearing of this native vegetation. The offset proposal must be provided to the CEO by 1 December 2025.

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is surrounded by the landscape and vegetation of the Pilbara bioregion and the Hamersley subregion (MRL, 2025c). The dominant land uses in the Pilbara bioregion are pastoralism, conservation, mining, agriculture, tourism and urban (MRL, 2025c).
Ecological linkage	Aerial imagery shows application area does not form part of any formal or informal ecological linkages (GIS Database).
Conservation areas	The application area does not form part of any known or mapped conservation areas. The closest record is the ex pastoral Juna Downs Station located 2 kilometres west of the application area (GIS Database). Karijini National Park is approximately 21 kilometres 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 82: Hummock grasslands, low tree steppe; snappy gum over *Triodia wiseana* (GIS Database). The most recent detailed flora and vegetation survey was conducted over the application area by Umwelt over three survey periods, March, 2022, April 2022, and June 2022. The following vegetation associations were recorded within the application area (Umwelt, 2022a):
	Group 1: Woodlands over sparse shrublands and hummock grasslands on gentle lower to upper slopes on red-brown clay loams
	Type1: Low Open Woodland of *Eucalyptus leucophloia* subsp. *leucophloia* and/or *E. gamophylla* with isolated *Corymbia deserticola* subsp. *deserticola* over low to mid sparse to open shrubland dominated by species including *Acacia atkinsiana* and *A. ancistrocarpa* over low open hummock grassland of *Triodia pungens*, *T. vanleeuwenii* and *T. wiseana* and low open tussock grassland of *Themeda* sp. Mt Barricade and *Paraneurachne muelleri* on red-brown sandy clay loam to clay loam on gently inclined mid to lower slopes and associated drainage lines. **Type 2:** Low open woodland of *Eucalyptus leucophloia* subsp. *leucophloia* with occasional *Corymbia deserticola* subsp. *deserticola* and *C. hamersleyana* over low sparse shrubland of *Acacia hilliana* and *Hakea chordophylla* over open hummock grassland of *Triodia vanleeuwenii* and *T. wi*seana on red-brown clay loam with ironstone pebbles on gently inclined lower to upper slopes. **Type 3:** Isolated trees of *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* and *E. gamophylla* over low sparse shrubland of mixed Acacia species over low hummock grassland of *Triodia pungens* and *T. wiseana* on red-brown sandy clay loam on mid to lower slopes with ironstone pebbles.
	Group 2: Open Woodlands over sparse shrublands and tussock and hummock grasslands on steep slopes, crests, gullies and gorges with exposed ironstone and skeletal soils
	Type 4: Low open woodland of *Corymbia ferriticola* or *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* with *Ficus brachypoda* occurring on gorge and gully areas, over low sparse shrubland of mixed species dominated by *Corchorus laniflorus*, *Dodonaea viscosa* subsp. *mucronata* and *Gossypium robinsonii* over sparse hummock grassland dominated by *Triodia pungens* with *T. wiseana* and tussock grasses including *Cymbopogon ambiguus* and *Aristida burbidgeae* on red brown clay loam on steep upper slopes, gullies, breakaways and gorges with significant ironstone outcropping. **Type 6:** Low woodland to open woodland of *Corymbia hamersleyana* and *Eucalyptus leucophloia* subsp. *leucophloia* and occasional *E. kingsmillii* over mid isolated shrubs of *Acacia hamersleyensis* and *Grevillea wickhamii* ?subsp. *hispidula* over low hummock grassland of *Triodia wiseana* on red brown sandy clay loam on steep mid to upper slopes with exposed ironstone.
	Group 3: Mulga Woodlands over tussock grasslands and open woodlands over sparse shrublands over hummock grasslands on red-brown clay-loam on plains; and open woodlands over shrublands over hummock grasslands on major and minor drainage lines
	Type 7: Isolated trees of *Corymbia hamersleyana*, *Eucalyptus leucophloia* subsp. *leucophloia* and *Eucalyptus xerothermica* over low open to sparse shrubland dominated by *Acacia aptaneura*, *A. aneura* and *A. pruinocarpa* over low tussock grassland to sparse tussock grassland dominated by *Themeda* sp. Mt Barricade (M.E. Trudgen 2471), *Enneapogon polyphyllus*, *Chrysopogon fallax* and *Aristida* spp. with occasional *Triodia pungens* on red brown clay loam with some ironstone pebbles on plains.

Characteristic	Details
	Type 8: Isolated trees of *Eucalyptus xerothermica* over tall open to sparse shrubland of *Hakea lorea* subsp. *Lorea* and *Acacia aptaneura* over low open tussock grassland of *Aristida contorta*, *A. inaequiglumis* and *Themeda triandra* on red-brown sandy clay to clay on plains. **Type 9:** Low open woodland of *Corymbia hamersleyana*, *C. deserticola* subsp. *deserticola*, *Eucalyptus gamophylla* and *Eucalyptus leucophloia* subsp. *leucophloia* over tall sparse shrubland of *Acacia atkinsoniana* and occasional *A. ancistrocarpa* and *A. aptaneura* over low hummock grassland dominated by *Triodia pungens* and occasional *T. wiseana* with *Paraneurachne muelleri* also dominant on red-brown clay loam with ironstone pebbles on plains. **Type 10:** Low open woodland of *Corymbia hamersleyana* with occasional *Eucalyptus gamophylla*, *E. leucophloia* subsp. *leucophloia* and *E. xerothermica* over tall open shrubland dominated by taxa including *Acacia cowleana*, *A. tumida* var. *pilbarensis*, *Gossypium robinsonii* and *A. pyrifolia* over low open hummock grassland of *Triodia pungens* and tussock grassland dominated by *Themeda* sp. Mt Barricade (M.E. Trudgen 2471) and *Aristida* spp. on red-brown clay loams on major and minor drainage lines.
	Vegetation type 5 was recorded in the survey area but not in the application area.
Vegetation condition	The vegetation survey (Umwelt, 2022a) and aerial imagery indicate the vegetation within the proposed clearing area is in Good to Excellent (Trudgen, 1991) condition. The full Trudgen (1991) condition rating scale is provided in Appendix C.
Climate	The application area is located in an arid zone with an annual average rainfall (Newman Aero) of 327.5 millimetres (BoM, 2025).
Soil description	The soils within the application area are mapped as stony soils, red shallow loams, friable non-cracking clays, and red-brown hardpan shallow loams (DPIRD, 2025).
Land degradation risk	The application area falls within the Boolgeeda, McKay, Newman, Platform, and Wannamunna land systems (DPIRD, 2025). These land systems are described below (van Vreeswyk et al., 2004). **Boolgeeda land system:** Stony lower slopes and plains below hill systems supporting hard and soft spinifex grasslands and mulga shrublands. Vegetation is generally not prone to degradation and the system is not susceptible to erosion. **McKay land system:** Hills, ridges, plateaux remnants and breakaways of meta sedimentary and sedimentary rocks supporting hard spinifex grasslands. Some areas are poorly accessible, and the system is not prone to degradation or soil erosion. **Newman land system:** Rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands. The system contains iron ore deposits which are currently being mined and deposits which are likely to be mined in the future. Spinifex is the dominant vegetation, and the system is burnt fairly frequently. **Platform land system:** Dissected slopes and raised plains supporting hard spinifex grasslands. The system is not susceptible to erosion. **Wannamunna land system:** Hardpan plains and internal drainage tracts supporting mulga shrublands and woodlands (and occasionally eucalypt woodlands). Generally, the system has low susceptibility to erosion. Disturbances to overland flow processes by inappropriate positioning or construction of infrastructure such as roads can have adverse effects on vegetation.
Waterbodies	The desktop assessment and aerial imagery indicated that several minor, non-perennial watercourses transect the area proposed to be cleared (GIS Database).
Hydrogeography	The application area is located within the Pilbara Groundwater Area, which is legislated by the RIWI Act 1914. The mapped groundwater salinity is 500-1,000 milligrams per litre total dissolved solids which is described as marginal quality (GIS Database).
Flora	One Priority flora species was recorded within the application area (Umwelt, 2022a). Four other Priority flora species were recorded adjacent to the application area along with two potentially undescribed species (see Appendix A.2) (Rapallo, 2022c; Umwelt, 2022a).
Ecological communities	The application area does not form part of any known or mapped Threatened or Priority Ecological Communities (MRL, 2025c; GIS Database).
Fauna	Two fauna species of significance were confirmed as occurring within the application area based on the fauna identified in the field surveys (Rapallo, 2012; 2022b): • Western Pebble-mound Mouse (*Pseudomys chapmani*); and • Fork-tailed Swift (*Apus pacificus*). Other eight conservation significant fauna species were considered likely to occur in the application area (see Appendix A.3) (MRL, 2025c).
Fauna habitat	A detailed vertebrate fauna survey was conducted over the application area by Rapallo Environmental (Rapallo) during, April 2020 and February 2021. The following fauna habitats were recorded within the application area (Rapallo, 2022b):

Characteristic	Details
	• **Hill crests and hill slopes:** Slopes and hill crests of higher elevation areas. Spinifex hummock grassland dominated with scattered *Eucalyptus leucophloia* trees and mallee, and *Acacia* spp. and *Grevillea* spp. shrubs on rocky, red skeletal soils (loams to clay/loam). • **Medium drainage line:** Wide loamy drainage channels to undefined drainage (gravelly) containing occasional emergent *Corymbia hamersleyana* over patches of low mixed shrubs over Buffel Grass and tussock grass dominated understory on low relief. Contains very occasional Mulga stands in loamier soils. • **Minor drainage lines:** Smaller narrow drainage channels and shallow gullies that bisect the stony plain habitat and hill slopes, forming flow zones on the valley floor. Mixed open shrubland, to shrubland often over tussock grass and herbs with occasional fringing trees (scattered *Eucalyptus leucophloia*, *Corymbia* spp. or *Eucalyptus gamophylla*). • **Mulga/Corymbia plain:** Open Mulga shrubland patches over spinifex hummock or tussock grassland on loam to sandy clay loam occurring in areas of sheet flow drainage. The Mulga patches are surrounded by run-off zones of stonier plain with open spinifex / tussock grassland under very open Mulga / *Corymbia deserticola* shrubland. • **Stony plain:** Plains and lower slopes of spinifex hummock grasslands (or in small patches, tussock grass) on red sandy clay loam to loam soil. Typically, with a mantle of gravel (less so on the valley floor adjacent to drainage, where soils are loamier). Little to no overstory aside from scattered trees or patches of mixed shrubs often regenerating from fire. Generally, *Eucalyptus leucophloia* occurs on the slopes and *Eucalyptus gamophylla* on lower slopes, with *Corymbia hamersleyana* typically associated with drainage. • **Tussock grassland plain:** Tussock grass (*Aristida inaequiglumis*, *Aristida contorta, Themeda triandra*) dominated, largely undefined drainage plain. Contains occasional open Mulga woodland stands or scattered Mulga individuals on brown sandy clay loam to loams. Contains patches of spinifex.

A.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (Appendix E.1), and biological survey information, impacts to the following conservation significant flora required further consideration (Rapallo, 2022c; Umwelt, 2022a).

Species name	Conservation status	Total individuals recorded (survey area)	Total individuals to be cleared	Distance of closest record to application area	Percentage of individuals to be cleared
Aristida jerichoensis var. *subspinulifera*	P3	97 individuals	0	100 metres	0 per cent
Aristida lazaridis	P3	12,773 individuals	62	0 kilometres	< 0.5 per cent
Corchorus sp.	Undescribed	35 individuals	0	60 metres	0 per cent
Eremophila naaykensii	P3	73 individuals	0	1.4 kilometres	0 per cent
Euphorbia ferdinandi s. lat.	Undescribed	60 individuals	0	900 metres	0 per cent
Hibiscus sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	P2	17 individuals	0	1.4 kilometres	0 per cent
Rostellularia adscendens var. *latiflora*	P3	1 individual	0	60 metres	0 per cent

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

A.3. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (Appendix E.1), and biological survey information, impacts to the following conservation significant flora required further consideration (Bat Call, 2021; Phoenix, 2022; Rapallo, 2012; Rapallo, 2022b; GIS Database).

Species name	Conservation status	Suitable habitat? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Fork-tailed swift	MI	Y	0 km	47	Y
Gane's blind snake	P1	Y	24 km	631	Y
Ghost bat	VU	Y	0.2 km	9,525	Y
Grey falcon	VU	Y	8.4 km	215	Y
Northern quoll	EN	Y	5 km	21,240	Y

Species name	Conservation status	Suitable habitat? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Peregrine falcon	OS	Y	9 km	1,8215	Y
Pilbara barking gecko	P2	Y	11.3 km	28	Y
Pilbara leaf-nosed bat	VU	N	9.8 km	10,238	Y
Pilbara olive python	VU	N	4 km	430	Y
Western pebble-mound mouse	P4	Y	0 km	2,527	Y

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

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 habitat for conservation significant flora and fauna. Umwelt (2022b) assessed direct impacts and edge effects to all species listed in Appendix A.2 and their preferred habitats as unlikely to be significant at both the local and regional scale due to the low percentage of plants and habitat impacted, the range of populations and the common and widespread nature of their preferred habitats. None of the mapped vegetation communities were considered representative of any listed Priority Ecological Communities (MRL, 2025c). In total, six introduced flora species (weeds) have been recorded within the application area (Umwelt, 2022a). None of these taxa were listed as Declared Pests or Weeds of National Significance (MRL, 2025c). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area. Potential impacts to the biodiversity as a result of the proposed clearing may be minimised by the implementation of a weed management condition.	At variance	No
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 critical and supporting habitat for conservation significant fauna (see Appendix A.3). It is unlikely that important habitat for short-range endemic (SRE's) occurs within the application area. No short-range endemic species were recorded within the application area (MRL, 2025c; Rapallo, 2022a).	At variance	Yes *Refer to Section 3.2.1, 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 records of *Seringia exastia* in the application area proposed to be cleared. This species is listed as Threatened under the EPBC Act but not under the BC Act as it was de-listed due to a taxonomic revision. *Seringia exastia* is widespread across northern Western Australia (MRL, 2025c; WAM, 1998-). This species will be assessed by DCCEEW under the federal referral process.	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: None of the mapped vegetation communities were considered representative of any known Threatened Ecological Communities (MRL, 2025c; Umwelt, 2022b).	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 Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (GIS Database). Over 99 per cent of the pre-European vegetation still exists in the Pilbara Bioregion (Government of Western Australia, 2019). The application area is broadly mapped as Beard vegetation associations 18 and 82 (GIS Database). These vegetation associations have not been extensively cleared as over 99 per cent of the pre-European extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2019).	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 any known or mapped conservation areas (GIS Database).	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: Given several water courses are recorded within the application area (GIS Database), the proposed clearing will impact vegetation growing in, or in association with, an environment associated with a watercourse. No groundwater dependent vegetation was identified from the proposed application area. Potential impacts to riparian vegetation can be minimised by the implementation of a watercourse management condition and the implementation of the Surface Water Management Plan.	At variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are not susceptible to erosion (van Vreeswyk, et al., 2004). Noting the location of the application area, the proposed clearing is not likely to cause appreciable land degradation.	Not likely to 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: Given no permanent water courses, wetlands, or Public Drinking Water Source Areas are recorded within the application area, the proposed clearing is unlikely to cause deterioration in the quality of surface or underground water.	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: Given no permanent water courses or wetlands are recorded within the application area (GIS Database), the proposed clearing is unlikely to contribute to cause, or exacerbate, the incidence or intensity of flooding.	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. Survey mapping

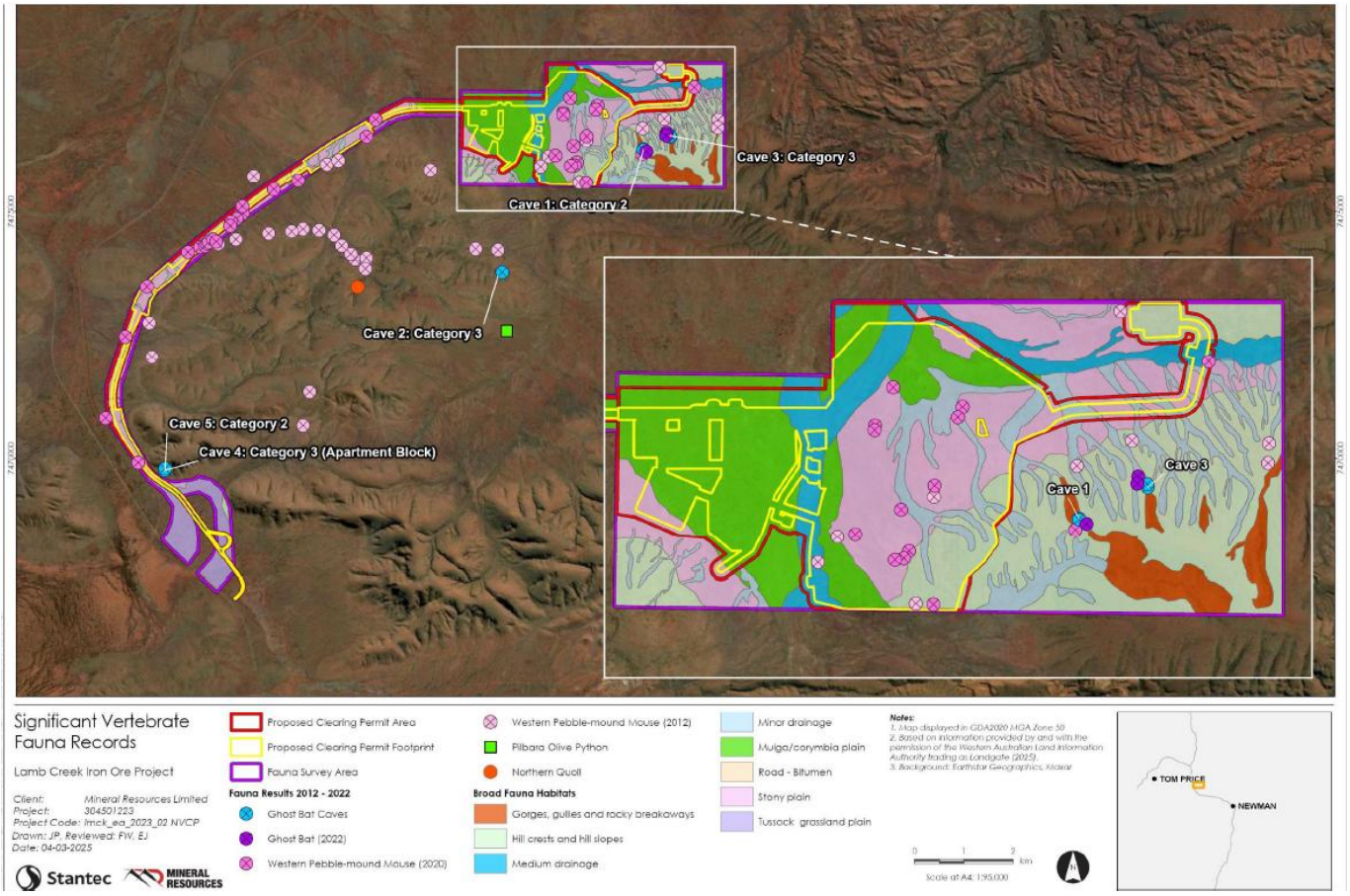


Figure 1. Fauna habitat map (MRL, 2025c).

Roost Category	Roost Classification	Description	Habitat Importance

Category 1	Maternity/diurnal roost sites with permanent ghost bat occupancy	• Breeding activities, such as mating and/or the repeated presence of females either pregnant or with pups, should be used to confirm the roost cave's categorisation. Often, ongoing studies or monitoring may be required before Category 1 and 2 roosts can be confirmed; it can rarely be unequivocally confirmed by a single visit.
		• Proposing a cave to have category 2 'maternity' status may entail observing one or more of the following cave characteristics:
		  • One or more roosting chambers behind a narrow entrance or in-cave constriction that is elevated to reduce the risk of predation, always dark (though not necessarily completely dark), holds a steady microclimate, and contains substantial evidence of historic occupation (for example, extensive scat pile/s typically comprising >2,000 scats, sometimes but not always mixed with a food midden.
		  • occupation by multiple individuals (preferably females) during the species' late pregnancy or lactating period.
		  • caves used by multiple individuals on a semi-permanent or recurring basis.
		  • the presence of one or more large scat piles/middens where scat analysis shows usage by multiple females with high levels of progesterone.
			Critical habitat

Category 2	Maternity/diurnal roost caves with regular occupancy		Critical habitat
Category 3	Diurnal roost caves with occasional occupancy	• Category 3 diurnal caves are usually less well developed as underground structures. • They may be shallower allowing some light into their deeper areas, have a wide and not constricted entrance or not have a stable microclimate in an elevated roosting chamber. • Usually associated with a roosting chamber with a ceiling over 1.5 m high and usually, but not always, have significant scats and food middens.	When adjacent to Category 2 caves, these are considered to be critical habitat important for the ongoing presence of the species in the area. In contrast, isolated Category 3 caves are not considered critical habitat.
Category 4	Nocturnal roost caves with opportunistic usage	• Evidence of such visits is the widespread presence of small numbers of scats and/or food scraps found, or occasional echolocation calls recorded during surveys. • These visits may or may not be repeated, depending on whether the bat is passing through a district or is a more permanent resident nearby.	Not considered critical habitat.

Figure 2. Ghost bat roost and critical habitat classification (Bat Call, 2021; MRL, 2025c).

Appendix E. Sources of information

E.1. GIS datasets

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

- 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)
- EPA Referred Significant Proposals (DWER-120)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- IBSA Survey Details (DWER-118)
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Native Title (Determination) (LGATE-066)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Townsites (LGATE-248)

- WA Now Aerial Imagery

Restricted GIS Databases used:

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

E.2. References

Bat Call WA Pty Ltd (Bat Call) (2021) Acoustic Survey of Bat and Night Parrot Activity, April 2020, February 2021. Prepared for Rapallo Group, November 2021.

Biologic (2017) Proposed Mining Area C Development Envelope Vertebrate Fauna Desktop Assessment. Unpublished report for BHP Billiton Iron Ore Pty Ltd.

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 5 September 2025).

Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf

Department of Planning, Lands and Heritage (DPLH) (2025) Aboriginal Cultural Heritage Inquiry System. Department of Planning, Lands and Heritage. https://espatial.dplh.wa.gov.au/ACHIS/index.html?viewer=ACHIS (Accessed 19 September 2025).

Department of Primary Industries and Regional Development (DPIRD) (2025) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. https://dpird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f (Accessed 10 September 2025).

Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. https://www.wa.gov.au/system/files/2024-11/procedure-native-vegetation-clearing-permits.pdf

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.

Environmental Protection Authority (EPA) (2014) WA Environmental Offsets Guidelines. https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/WA%20Environmental%20Offsets%20Guideline%20August%202014.pdf

Environmental Protection Authority (EPA) (2016a) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf

Environmental Protection Authority (EPA) (2016b) Technical Guidance – Terrestrial Fauna Surveys. https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf

Environmental Protection Authority (EPA) (2020) Technical Guidance – Terrestrial Fauna Surveys. https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/2020.09.17%20-%20EPA%20Technical%20Guidance%20-%20Vertebrate%20Fauna%20Surveys%20-%20Final.pdf

Government of Western Australia (2019) 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Hill B.M. and Ward S.J. (2010). National Recovery Plan for the Northern Quoll *Dasyurus hallucatus*. Department of Natural Resources, Environment, The Arts and Sport, Darwin.

Mineral Resources Limited (MRL) (2025a) Clearing permit application form, CPS 11031/1, received 11 April 2025.

Mineral Resources Limited (MRL (2025b) EPBC Referral Preliminary Documentation Lamb Creek Iron Ore Project. Prepared for the Department of Climate Change, Energy, the Environment and Water, August 2025.

Mineral Resources Limited (MRL) (2025c) NVCP Supporting Document Lamb Creek Iron Ore Project. Prepared for Department of Mines, Petroleum, and Exploration, by Mineral Resources Limited, April 2025.

Phoenix Environmental Sciences (Phoenix) (2022) Ghost Bat Significance Assessment for the Lamb Creek Iron Ore Project. Prepared for Mineral Resources Limited, February 2022.

Rapallo Environmental (Rapallo) (2012) Level 2 Fauna Survey and Targeted Northern Quoll Survey of the Lamb Creek. Prepared for Process Minerals International Pty Ltd, October 2012.

Rapallo Environmental (Rapallo) (2021) Report J020348 – Detailed fauna survey and targeted conservation significant fauna survey of the Lamb Creek survey area. Unpublished report prepared for Mineral Resources Limited.

Rapallo Environmental (Rapallo) (2022a) Baseline Short-range Endemic Invertebrate Survey of the Lamb Creek Iron Ore Project. Prepared for Mineral Resources Limited, February 2022.

Rapallo Environmental (Rapallo) (2022b) Detailed vertebrate fauna survey of the Lamb Creek project. Prepared for Mineral Resources Limited, January 2022.

Rapallo Environmental (Rapallo) (2022c) Targeted conservation significant flora survey of the Lamb Creek project area. Prepared for Mineral Resources Limited, January 2022.

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.

Umwelt (2022a) Lamb Creek Project Detailed and Targeted Flora and Vegetation Survey. Prepared for Mineral Resources Limited, November 2022.

Umwelt (2022b) Lamb Creek Project Flora and Vegetation Impact Assessment. Prepared for Mineral Resources Limited, November 2022.

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.

Western Australian Herbarium (WAM) (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. https://florabase.dpaw.wa.gov.au/ (Accessed 12 September 2025).

5. 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 (now DMPE)
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)
DMP	Department of Mines and Petroleum, Western Australia (now DMPE)
DMPE	Department of Mines, Petroleum and Exploration
DoEE	Department of the Environment and Energy (now DCCEEW)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	*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:

Threatened species

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

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

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

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

CR **Critically endangered species**

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

Listed as critically endangered under section 19(1)(a) of the BC Act in accordance with the criteria set out in section 20 and the ministerial guidelines.

EN **Endangered species**

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

Listed as endangered under section 19(1)(b) of the BC Act in accordance with the criteria set out in section 21 and the ministerial guidelines.

VU **Vulnerable species**

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

Listed as vulnerable under section 19(1)(c) of the BC Act in accordance with the criteria set out in section 22 and the ministerial guidelines.

Extinct species

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

EX **Extinct species**

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

EW **Extinct in the wild species**

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

Currently there are no threatened fauna or threatened flora species listed as extinct in the wild.

Specially protected species

SP **Specially protected species**

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

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

MI **Migratory species**

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

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

CD **Species of special conservation interest (conservation dependent fauna)**

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

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

OS **Other specially protected species**

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

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

Priority species

P **Priority species**

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

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

Species that may possibly be threatened species that do not meet the criteria for listing under the BC Act because of insufficient survey or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of prioritisation for survey and evaluation of conservation status so that consideration can be given to potential listing as threatened.

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

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

P1 **Priority One - Poorly-known species – known from few locations, none on conservation lands**

Species that are known from one or a few locations (generally five or less) which are potentially at risk. All occurrences are either: very small; or on lands not managed for conservation, for example, agricultural or pastoral lands, urban areas, road and rail reserves, gravel reserves and active mineral leases; or otherwise under threat of habitat destruction or degradation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under immediate threat from known threatening processes. These species are in urgent need of further survey.

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

Species that are known from one or a few locations (generally five or less), some of which are on lands managed primarily for nature conservation, for example, national parks, conservation parks, nature reserves and other lands with secure tenure being managed for conservation.

Species may be included if they are comparatively well known from one or more locations but do not meet adequacy of survey requirements for threatened listing and appear to be under threat from known threatening processes. These species are in urgent need of further survey.

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

Species that are known from several locations and the species does not appear to be under imminent threat or from few but widespread locations with either large population size or significant remaining areas of apparently suitable habitat, much of it not under imminent threat.

Species may be included if they are comparatively well known from several locations but do not meet adequacy of survey requirements and known threatening processes exist that could affect them. These species need further survey.

P4 **Priority Four - Rare, Near Threatened and other species in need of monitoring**

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

(b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.

(c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.

(d) Other species in need of monitoring.

Principles for clearing native vegetation:

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.

(d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.

(e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

(i) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.

(j) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.