

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	10026/1
Permit type:	Purpose Permit
Applicant name:	Fortescue Metals Group
Application received:	16 December 2022
Application area:	5.42 hectares
Purpose of clearing:	Access Tracks
Method of clearing:	Mechanical Removal
Tenure:	Iron Ore (Mount Bruce) Agreement Act 1972, Mineral Lease 252SA (AML 70/252)
Location (LGA area/s):	Shire of Ashburton
Colloquial name:	Geode Valley and Channar Tracks

1.2. Description of clearing activities

Fortescue Metals Group proposes to clear up to 5.42 hectares of native vegetation within a boundary of approximately 55.8 hectares, for the purpose of access track construction (FMG, 2022). The project is located approximately 20 kilometres south-east of the Township of Paraburdoo, within the Shire of Ashburton (GIS Database).

The application is to allow for the construction of access tracks which will support the exploration activities across the Geode Valley and Channar Prospects. Fortescue Metals Group previously were the permit holder of permit CPS 7672/1 which authorised clearing up to 5.42 hectares of native vegetation. CPS 7672/1 was granted on 23 September 2017 and expired on 20 September 2022 and a total of 1.61 hectares of native vegetation has been cleared. The application is to allow ongoing use and maintenance of previously cleared access tracks and to allow further clearing of up to 3.81 hectares of native vegetation.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	3 April 2025
Decision area:	5.42 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E and 51O of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS), now Department of Energy, Mines, Industry Regulation and Safety (DEMIRS), on 16 December 2022. DMIRS 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), the clearing principles set out in Schedule 5 of the EP Act (Appendix C), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 0).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- impacts to riparian vegetation; and
- the loss of native vegetation that is suitable foraging and dispersal habitat for several conservation significant fauna species.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to long-term adverse impacts on 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;
- retain vegetative material and topsoil, revegetation and rehabilitation;

- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity; and
- avoid riparian vegetation where practicable and maintain existing surface water flow.

1.5. Site map

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

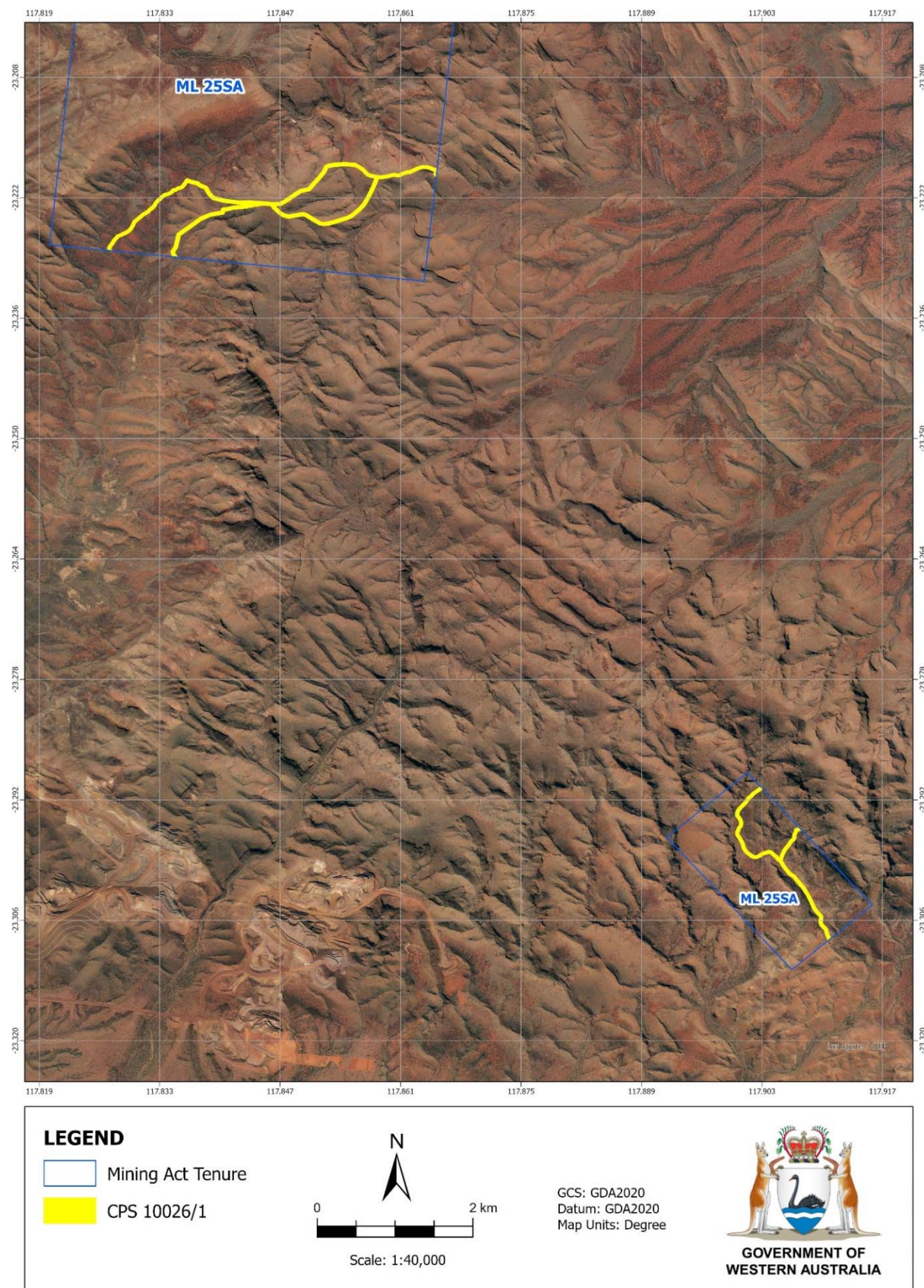


Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under the granted clearing permit.

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)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Iron Ore (Mount Bruce) Agreement Act 1972*

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that avoidance / mitigation measures such as those listed below will be utilised:

- avoid clearing of significant flora and vegetation;
- vegetation clearing will be conducted in accordance with a permit used under the Land Use Certificate Procedure;
- areas to be cleared will be clearly delineated both on maps and on the ground;
- post clearing audits undertaken to assess compliance with internal permits;
- vehicles will be confined to defined roads and tracks; and
- weed hygiene requirements will be implemented (FMG, 2022).

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

3.2. Assessment of impacts on environmental values

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). 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) - Clearing Principle (b)

Assessment

No fauna biological information has been provided in support of the application. The assessing officer has conducted a search of available databases (GIS Database) to review the current environmental values and potential impacts to fauna and fauna habitat. The search has identified 18 conservation significant fauna species which have been previously recorded within 50 kilometres of the application area and could potentially occur in the area (see table A.4) (GIS Database).

Six migratory bird species have been recorded within 50 kilometres of the application area (GIS Database). The application area may contain suitable foraging habitat for these species, however as the habitat within the application area is available throughout the region, it is not considered to be significant, therefore the long narrow clearing of 5.42 hectares for access tracks will not likely lead to a significant impact to these species.

A targeted flora survey of the application area was undertaken from 17 to 20 June 2024 (Ecologia, 2024). This survey identified areas of gentle hills, rocky drainage lines and undulating plains with vegetation ranging from sparse shrubland to open hummock grassland to open woodland, which are considered likely to be widespread in the broader region (Ecologia, 2024). The remaining 12 conservation significant fauna species may potentially occur within the application area as suitable habitat is present, however the proposed clearing of 5.42 hectares for access tracks is not considered likely to impact these species as suitable habitat is available within the surrounding areas and the application area is not considered to consist of significant/critical habitat for any species in table A.4 (GIS Database).

Conclusion

Based on the above assessment, the proposed clearing will result in a disturbance to available fauna habitat.

For the reasons set out above, it is considered that the impacts of the proposed clearing on fauna habitats can be managed by the implementation of a management condition, which is summarised below.

Conditions

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

- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity;
- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within the permit boundary within 12 months of clearing to ensure fauna habitat is not permanently lost; and
- avoid riparian vegetation and where a watercourse is to be impacted by clearing, the permit holder shall ensure that the existing surface flow is maintained, or reinstated downstream into existing natural drainage lines.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 10 February 2023 by the Department of 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 over the area under application (WAD340/2010) (DPLH, 2025). This claim has been determined by the Federal Court on behalf of the claimant groups. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 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:

- *Iron Ore (Mount Bruce) Agreement Act 1972*

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is located approximately 20 kilometres south-east of the Township of Paraburdoo, within the Shire of Ashburton (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. The main use of land surrounding the application area is mineral exploration (GIS Database).
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).
Conservation areas	There are no conservation areas located within the application area (GIS Database). The closest conservation area is Karijini National Park located approximately 13 kilometres east of the application area (GIS Database).
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation association:</p> <ul style="list-style-type: none"> 82: Hummock grasslands, low tree steppe; snappy gum over <i>Triodia wiseana</i> (GIS Database). <p>The targeted flora survey identified the following four broad vegetation types within the application area:</p> <ul style="list-style-type: none"> ApTe: <i>Acacia</i> tall sparse shrubland <i>Acacia pruinocarpa</i>, <i>Acacia rhodophloia</i> tall sparse shrubland; <i>Triodia epactia</i> low open hummock grassland; AaTe1: <i>Acacia</i> low open woodland <i>Acacia aneura</i> complex, <i>Acacia citrinoviridis</i> low open woodland; <i>Triodia epactia</i> low open hummock grassland. ChTw: <i>Corymbia</i> low open woodland <i>Corymbia hamersleyana</i>, <i>Eucalyptus leucophloia</i> subsp. <i>leucophloia</i>, <i>Acacia pruinocarpa</i> low open woodland; <i>Triodia wiseana</i> low open hummock grassland; and AaTe2: <i>Acacia</i> low open woodland <i>Acacia aneura</i> complex, <i>Acacia rhodophloia</i> low open woodland; <i>Triodia epactia</i> low open hummock grassland (Ecologia, 2024).
Vegetation condition	<p>The aerial imagery indicate the vegetation within the proposed clearing area is in 'Excellent' to 'Completely Degraded' (Trudgen, 1991) condition, described as</p> <ul style="list-style-type: none"> Excellent: Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement. 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. <p>The full Trudgen (1991) condition rating scale is provided in Appendix C.</p>
Climate and landform	According to climate data obtained from the Bureau of Meteorology (BoM), the mean annual rainfall the area experiences is 315.4 millilitres (BOM, 2025).
Soil description	<p>The soils of the application area are broadly mapped as the following soil types:</p> <ul style="list-style-type: none"> 285Ne: Newman System. Rugged jaspilite plateaux, ridges and mountains supporting hard spinifex grasslands; and 285Rk: Rocklea System. Basalt hills, plateaux, lower slopes and minor stony plains supporting hard spinifex and occasionally soft spinifex grasslands with scattered shrubs (DPIRD, 2025).
Land degradation risk	Most of the clearing associated with this permit will results in the shallow (<0.3 metres) disturbance of soils for track construction and has an extremely low probability of acid sulfate soils (FMG, 2022).
Waterbodies	The desktop assessment and aerial imagery indicated that the application area intersects a number of minor ephemeral water courses (GIS Database). Turee Creek is located approximately 7.5 kilometres south of the application area, Tabeland Creek is located approximately 11 kilometres west and Bellary Creek is located approximately 10 kilometres north of the application area (GIS Database).
Hydrogeography	Part of the northern application area is located within the Priority 1 Paraburdoo Public Drinking Water Source Area (PDWSA) gazetted under the <i>Country Areas Water Supply (CAWS) Act 1947</i> . (GIS Database). The application area is located within the Pilbara Groundwater Area (GIS Database).
Flora	Desktop surveys have identified records of 33 conservation significant flora species within 50 kilometres of the application area (GIS Database). No conservation significant flora species were recorded within the application area during the flora survey (Ecologia, 2024).
Ecological communities	According to available databases, there are no known Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) within 50 kilometres of the application area (GIS Database). The targeted flora survey did not identify vegetation associations which were representative of a TEC or PEC (Ecologia, 2024).
Fauna	<p>The targeted flora survey recorded three different landforms within the survey area:</p> <ul style="list-style-type: none"> gentle hills; rocky drainage lines; and

Characteristic	Details
	<ul style="list-style-type: none"> undulating plains (Ecologia, 2024). <p>No fauna survey has been carried out within the application area (FMG, 2022). No conservation significant fauna species have been recorded within the application area, however 18 have been recorded within 50 kilometres (GIS Database).</p>

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA Managed Lands
IBRA Bioregion Pilbara	17,808,657.04	17,731,764.88	99.57	1,801,714.98	10.12
Beard vegetation associations - State					
Veg Assoc No. 82	2,565,901.28	2,553,206.19	99.51	295,377.96	11.51
Beard vegetation associations - Bioregion					
Veg Assoc No. 82	2,563,583.23	2,550,888.14	99.50	295,377.96	11.52

Government of Western Australia (2019)

A.3. Flora analysis table

With consideration for the site characteristics set out above and relevant datasets (see Appendix D.1), and biological survey information (Ecologia, 2024; Western Australian Herbarium, 1998-), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Distance of closest record to application area (km)	Number of known records derived from Florabase (total)
<i>Aluta quadrata</i>	T	<10	19
<i>Dampiera anonyma</i>	P3	<30	33
<i>Dicrastylis mitchellii</i>	P1	<45	3
<i>Eremophila coacta</i>	P3	<5	15
<i>Eremophila magnifica</i> subsp. <i>magnifica</i>	P4	<20	46
<i>Eremophila naaykensis</i>	P3	<5	22
<i>Eremophila</i> sp. Mt Channar Range (C. Keating & M.E. Trudgen CK 408)	P1	<5	3
<i>Eremophila</i> sp. Snowy Mountain (S. van Leeuwen 3737)	P1	<20	1
<i>Eremophila youngii</i> subsp. <i>lepidota</i>	P4	<10	49
<i>Geijera salicifolia</i>	P3	<45	11
<i>Goodenia</i> sp. East Pilbara (A.A. Mitchell PRP 727)	P3	<15	53
<i>Grevillea saxicola</i>	P3	<5	40
<i>Hibiscus campanulatus</i>	P3	<5	39
<i>Hibiscus</i> sp. Gurinbiddy Range (M.E. Trudgen MET 15708)	P2	<10	38
<i>Indigofera ixocarpa</i>	P2	<50	20
<i>Isotropis forrestii</i>	P1	<15	6
<i>Lepidium catapycnon</i>	P4	<50	39
<i>Olearia mucronata</i>	P3	<5	14
<i>Pilbara trudgenii</i>	P3	<5	12
<i>Ptilotus mollis</i>	P4	<10	45
<i>Ptilotus trichocephalus</i>	P4	<10	21
<i>Rhagodia</i> sp. Hamersley (M. Trudgen 17794)	P3	<30	75
<i>Rostellularia adscendens</i> var. <i>latifolia</i>	P3	<30	48

Species name	Conservation status	Distance of closest record to application area (km)	Number of known records derived from Florabase (total)
<i>Scaevola</i> sp. Hamersley Range basalts (S. van Leeuwen 3675)	P2	<30	12
<i>Senna</i> sp. Barlee Range (S. van Leeuwen 1520)	P2	<35	4
<i>Sida</i> sp. Barlee Range (S. van Leeuwen 1642)	P4	<5	60
<i>Sida</i> sp. Hamersley Range (K. Newbey 10692)	P3	<10	21
<i>Solanum kentrocaule</i>	P3	<10	22
<i>Streptoglossa</i> sp. Cracking clays (S. van Leeuwen et al. PBS 7353)	P3	<15	13
<i>Swainsona thompsoniana</i>	P3	<15	28
<i>Themeda</i> sp. Hamersley Station (M.E. Trudgen 11431)	P3	<15	60
<i>Vittadinia</i> sp. Coondewanna Flats (S. van Leeuwen 4684)	P3	<50	26

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

A.4. Fauna analysis table

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

Species name	Common Name	Conservation status	Distance of closest record to application area (km)	Suitable habitat features? [Y/N]
<i>Actitis hypoleucos</i>	Common Sandpiper	MI	<20	Y
<i>Anilius ganei</i>	Gane's blind snake (Pilbara)	P1	<20	Y
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	MI	<20	Y
<i>Calidris ruficollis</i>	Red-necked stint	MI	<50	Y
<i>Calidris subminuta</i>	Long-toed Stint	MI	<20	Y
<i>Ctenotus nigrilineatus</i>	Pin-striped finessnout Ctenotus	P1	<50	Y
<i>Dasyurus hallucatus</i>	northern quoll	EN	<10	Y
<i>Falco hypoleucos</i>	Grey falcon	VU	<20	Y
<i>Falco peregrinus</i>	peregrine falcon	OS	<45	Y
<i>Leggadina lakedownensis</i>	Northern short-tailed mouse, Lakeland Downs mouse, kerakenga	P4	<45	Y
<i>Liasis olivaceus barroni</i>	Pilbara olive python	VU	<20	Y
<i>Macroderma gigas</i>	Ghost bat	VU	<15	Y
<i>Macrotis lagotis</i>	Bilby, dalgyte, ninu	VU	<40	Y
<i>Plegadis falcinellus</i>	Glossy ibis	MI	<5	Y
<i>Pseudomys chapmani</i>	western pebble-mound mouse, ngadji	P4	<10	Y
<i>Rhinonictis aurantia</i> (Pilbara)	Pilbara leaf-nosed bat	VU	<5	Y
<i>Sminthopsis longicaudata</i>	Long-tailed dunnart	P4	<10	Y
<i>Tringa glareola</i>	Wood sandpiper	MI	<20	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority, OS: Other Specially Protected

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> <i>"Native vegetation should not be cleared if it comprises a high level of biodiversity."</i></p> <p><u>Assessment:</u></p> <p>Ecologia undertook a targeted flora survey of the application area from 17 to 20 June 2024 (Ecologia, 2024). No conservation significant flora were recorded within the study area and the four broad vegetation types recorded within the survey area are considered likely to be widespread in the broader region and do not support any Threatened or Priority species (Ecologia, 2024).</p>	Not likely to be at variance	No
<p><u>Principle (b):</u> <i>"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."</i></p> <p><u>Assessment:</u></p> <p>No fauna habitats of conservation have been recorded within the application area (GIS Database). Eighteen species of conservation significant fauna may potentially utilise the habitat within the application area, however, the application area is not likely to represent significant habitat for the species (GIS Database).</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</i></p> <p><u>Assessment:</u></p> <p>The targeted flora survey did not record any threatened or priority conservation flora within the survey area (Ecologia, 2024).</p>	May be at variance	No
<p><u>Principle (d):</u> <i>"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."</i></p> <p><u>Assessment:</u></p> <p>There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the permit area (GIS Database). The flora and vegetation survey did not identify any TECs (Ecologia, 2024).</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."</i></p> <p><u>Assessment:</u></p> <p>The extent of native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (GIS Database).</p>	Not at variance	No
<p><u>Principle (h):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."</i></p> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas (GIS Database).</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."</i></p> <p><u>Assessment:</u></p> <p>The application area intersects a number of minor ephemeral watercourses (FMG, 2022; GIS Database). The proposed clearing for access tracks is not likely to have a significant impact on riparian areas in the local region. Potential impacts may be managed by implementing a condition on the permit ensuring the permit holder avoids clearing riparian vegetation where practicable and maintains surface water flow.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p><u>Principle (g):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</p> <p><u>Assessment:</u></p> <p>Most of the clearing associated with this permit will result in the shallow (<0.3 metres) disturbance of soils for track construction and has an extremely low probability of acid sulfate soils (FMG, 2022).</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</p> <p><u>Assessment:</u></p> <p>The application area intersects a number of minor ephemeral watercourses and is mapped within the P1 Paraburdoo Public Drinking Water Source Area (FMG, 2022; GIS Database). The proposed clearing for access tracks is unlikely to impact on the quality of surface and groundwater in the local area (DWER, 2023).</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment:</u></p> <p>The application area intersects a number of minor ephemeral watercourses, however the proposed clearing of 5.42 hectares for access tracks is unlikely to cause an increase in the incidence or intensity of flooding (GIS Database).</p>	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

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

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

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

Appendix D. Sources of information

D.1. GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- Bush Forever (Regional Scheme) (DPLH-022)

- Cadastre (LGATE-218)
- Clearing Regulations – Schedule One Areas (DWER-057)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Interim Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

D.2. References

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4. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DAWE	Department of Agriculture, Water and the Environment, Australian Government

DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DoEE	Department of the Environment and Energy (now DAWE)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	<i>Environmental Protection Act 1986</i> , Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (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	<i>Rights in Water and Irrigation Act 1914</i> , Western Australia
TEC	Threatened Ecological Community

Definitions:

{DBCA (2019) 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 that subset of ‘Specially Protected Fauna’ listed under schedules 1 to 3 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for Threatened Fauna.

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

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

CR Critically endangered species

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

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

EN Endangered species

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

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

VU Vulnerable species

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

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

Extinct Species:

EX Extinct species

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

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

EW

Extinct in the wild species

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

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

Specially protected species:

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

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

MI

Migratory species

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

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

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

CD

Species of special conservation interest (conservation dependent fauna)

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

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

OS

Other specially protected species

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

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

P

Priority species:

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

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

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

P1

Priority One - Poorly-known species

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

P2 Priority Two - Poorly-known species

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

P3 Priority Three - Poorly-known species

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

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

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

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

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

Principles for clearing native vegetation:

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