



Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	10388/1
Permit type:	Purpose Permit
Applicant name:	Pilgangoora Operations Pty Ltd
Application received:	20 October 2023
Application area:	650 hectares
Purpose of clearing:	Mining production and associated activities
Method of clearing:	Mechanical Removal
Tenure:	General Purpose Lease 45/351 Miscellaneous Licence 45/404, 45/411, 45/430, 45/473, 45/484, 45/485, 45/555, 45/614, 45/695
Location (LGA area):	Shire of East Pilbara
Colloquial name:	Pilgangoora Lithium-Tantalum Project

1.2. Description of clearing activities

Pilgangoora Operations Pty Ltd proposes to clear up to 650 hectares of native vegetation within a boundary of approximately 903 hectares, for the purpose of mining production and associated activities (PML, 2023). The project is located approximately 80 kilometres south of Port Hedland (GIS Database).

The application is to allow for the expansion of the Pilgangoora Lithium-Tantalum mining operations and associated activities (PML, 2023).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	19 February 2024
Decision area:	650 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E 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 20 October 2023. 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), supporting information provided by the applicant including the results of biological surveys, the clearing principles set out in Schedule 5 of the EP Act (Appendix B), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- impacts to conservation significant flora;
- impacts to conservation significant fauna or their habitats; and
- loss of riparian vegetation.

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 have adverse impacts on environmental values and the impacts of 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:

- avoid, minimise and 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;
- a vegetation management condition to avoid clearing riparian vegetation where practicable, and maintain existing surface water flow;
- a flora management condition where the clearing of *Euploca mutica* individuals is limited to 10 individuals;
- a flora management condition limiting the clearing of *Triodia chichesterensis* to 430 individuals; and
- undertake a pre-clearance inspections for the greater bilby (*Macrotis lagotis*) and brush-tailed mulgara (*Dasycercus blythi*) prior clearing activities.

1.5. Site map

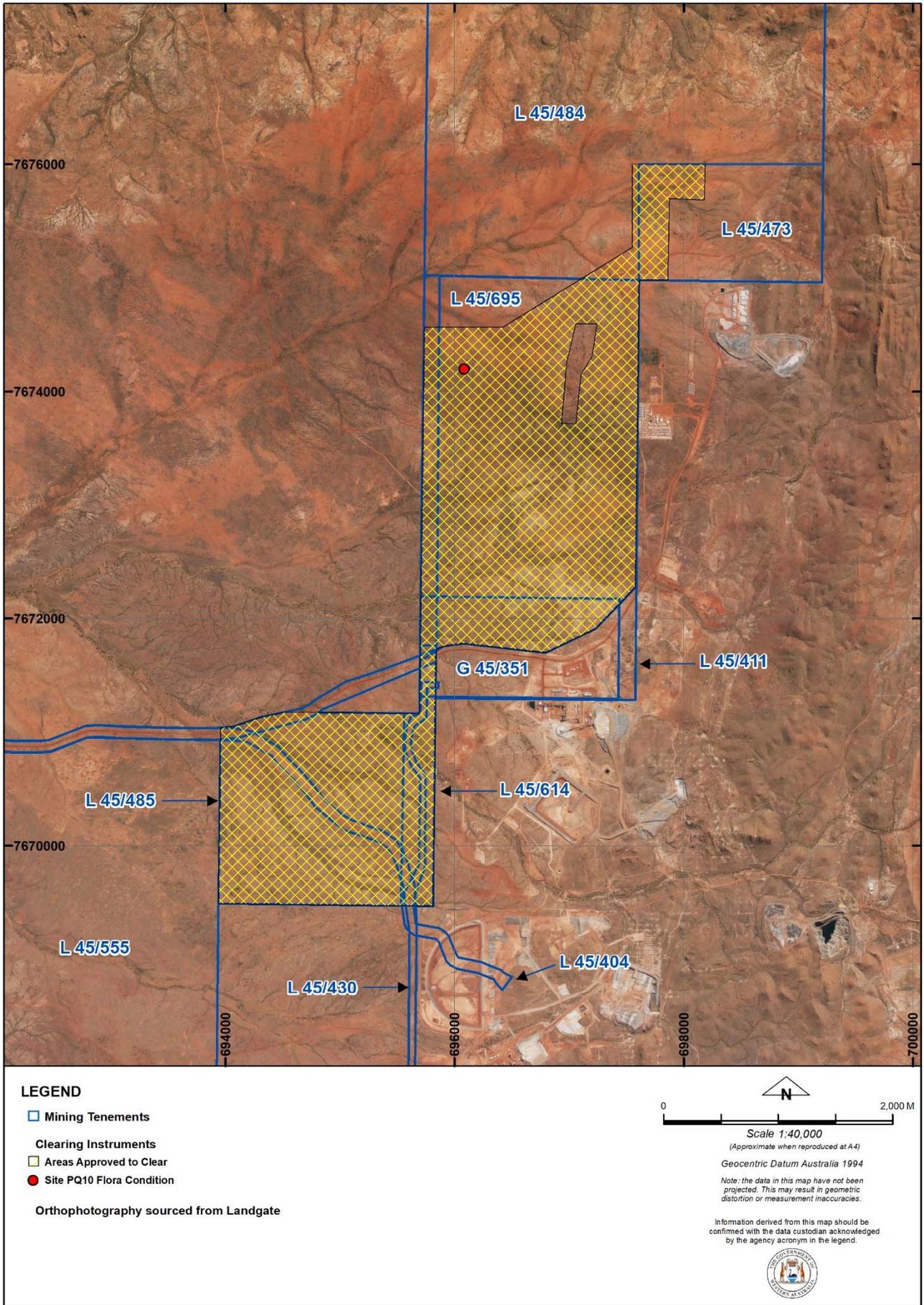


Figure 1. Map of the permit area. The yellow area indicates the area of authorised clearing under the granted clearing permit.

2. Legislative context

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

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

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

Other legislation of relevance for this assessment include:

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

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2014)
- *Procedure: Native vegetation clearing permits* (DWER, October 2021)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

During the assessment, and following discussions with DEMIRS, the applicant has implemented and advised the following avoidance and mitigation measures:

- Significantly reduced the total amount proposed to clear (1,000 to 650 hectares) and the permit boundary (from 1,597 hectares to 903 hectares), which consequently:
 - Removed two critical habitats for the northern quoll (removing a total of 22 hectares inclusive of a one kilometre northern quoll critical habitat buffer);
 - Removed 82 hectares of vegetation identified as consistent with drainage lines; and
 - Removed unplanned and non-operational areas from the original NVCP application area.

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 (flora and 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 - Clearing Principle (a)

Assessment

Three detailed flora and vegetation surveys were undertaken over different sections of the application area and its surroundings by Animal Plant Minerals Pty (APM) between 4 - 8 October 2022, 9 - 31 March 2023, and 27 June – 4 August 2023 (APM, 2022; 2023a; 2023b).

- APM (2022) recorded a total of 123 species within the survey area, comprising 117 native species and six introduced species. No conservation significant flora within the survey area;
- APM (2023a) recorded a total of 119 within the survey area, comprising 117 native species and two introduced species. Two Priority 3 flora species, *Euploca mutica* and *Triodia chichesterensis*, were recorded during the survey;
- APM (2023b) recorded a total of 143 species within the survey area, comprising 139 native species and four introduced species. Of these, one Priority 3 flora species *Triodia chichesterensis* was identified in areas where quartzite was the dominant rock type at the surface.

APM identified a total of 31 individuals from four locations of *Euploca mutica*, Priority 3, occurring within undulating sandy plains in generally low, scattered abundance (APM, 2022; 2023a; 2023b; PML, 2023). All 31 individuals were recorded within the permit area (APM, 2022; 2023a; 2023b). This species has been recorded from 76 locations within the Pilbara Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (Western Australian Herbarium, 1998-). There are 29 records of *Euploca mutica* within 40 kilometres of the application area with abundances ranging from one to more than 100 individuals at each record (GIS Database). The proponent has advised that the clearing of this species will be limited to 10 individuals only, located at PQ10 (See Figure 1) (APM, 2023a). The clearing of 10 individuals would result in a 31 percent impact to this species at a local scale which is considered significant, however, not at the regional scale given there are records of more than 100

individuals within the bioregion (GIS Database). Further impacts to this species may be minimised by the implementation of a flora management condition, restricting the clearing to only 10 individuals of *Euploca mutica* recorded within the application area.

Triodia chichesterensis, Priority 3, was recorded within and adjacent to the proposed area to be cleared within stony rises and outcrops vegetation (APM, 2022; 2023a; 2023b). This species has been recorded from 42 locations within the Pilbara IBRA bioregion (Western Australian Herbarium, 1998-). There are 25 records of *Triodia chichesterensis* within 40 kilometres of the application area with abundances ranging from one to more than 500 individuals at each record (GIS Database). A total of 8,591 individuals were recorded during the flora surveys, and 3,760 of these individuals are located within the application area (APM, 2022; 2023a; 2023b). The clearing of 3,760 individuals recorded within the application area would result in a 43 percent impact to this species at a local scale. Impacts to this species may be minimised by the implementation of a flora management condition, restricting the clearing of this species to a limited number of individuals not exceeding five percent.

Eight introduced flora species were identified within the application area (*Aerva javanica*, *Cenchrus ciliaris*, *Cenchrus setiger*, *Echinochloa colona*, *Flaveria trinervia*, *Malvastrum americanum*, *Triumfetta pentandra*, *Tribulus terrestris*) but none are Declared Pest or Weeds of National Significance (PML, 2023).

Conclusion

Based on the above assessment, the proposed clearing may result in a significant impact to *Euploca mutica* and *Triodia chichesterensis* at a local scale.

Conditions

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

- Avoid, minimise and reduce the impacts and extent of clearing;
- Take hygiene steps to minimise the risk of the introduction and spread of weeds;
- A flora management condition where the clearing of *Euploca mutica* individuals is limited to 10 individuals at site PQ10; and
- A flora management condition where the clearing of *Triodia chichesterensis* individuals is limited to 430 individuals.

3.2.2. Biological values - Clearing Principles (b)

Six fauna habitats were identified within the application area (APM, 2022; 2023a; 2023b):

- Low Hills;
- Major Drainage Lines;
- Sandy Plains;
- Shallow Drainage Basins and Creeks;
- Stony Plains; and
- Undulating plains.

Of the mapped habitats, Major Drainage Lines are considered a high-value habitat, as they are the preferred habitat for foraging or dispersal for several Threatened and Priority fauna species (GIS Database).

The biological surveys undertaken by Animal Plant Mineral (2022; 2023a; 2023b) recorded the following five conservation significant fauna species within the application area: *Rhinonicteris aurantia* (Pilbara Leaf-nosed Bat) – Vulnerable; *Pseudomys chapmani* (Western Pebble-Mound Mouse) – Priority 4; *Dasyurus hallucatus* (Northern Quoll) – Endangered; and *Lagorchestes conspicillatus leichardti* (Spectacled Hare-wallaby) – Priority 4.

The Pilbara Leaf-nosed Bat has generally been observed foraging in a variety of habitats over small watercourses (DCCEEW, 2024). While no roost sites for the Pilbara leaf-nosed bats or ghost bats were identified within the application area, it is worth noting that Pilbara leaf-nosed bats were recorded within the application area (APM, 2023a). Additionally, diurnal roosts occur approximately 2.7 kilometres from the application area, suggesting that this species forages within the application area (APM, 2022; 2023a; PML, 2023). The drainage lines within the application area can be considered to provide important foraging habitat for this species.

The Western pebble-mound mouse was recorded within the application area; however, this species occurs in the wider region and suitable habitats extends well beyond the survey areas (APM, 2023a; GIS Database). Therefore, the proposed clearing activities are unlikely to impact the status of this species or its populations.

The original application proposed to DEMIRS included Rocky Outcrops and Platy Rock Outcrops habitats which would provide critical shelter sites for small and large reptiles and mammals such as the Endangered Northern Quoll (*Dasyurus hallucatus*) (APM, 2023a; 2023b; DCCEEW, 2024; GIS Database). The proponent has excised these areas from the application area, including a one kilometre buffer which is considered important foraging and dispersal habitat (PML, 2024). Evidence (single scat) of the Northern Quoll was recorded within the sandy plains habitat within the application area and therefore the proposed area to be cleared may provide important dispersal habitat for this species (APM, 2023a). The proposed cleared will not likely lead to a significant impact to this species as important denning habitat has been excised from the application area and more suitable foraging and dispersal habitat is available within the surrounding environment to the North, West and South of the application area.

Evidence (scats) of the Spectacled Hare-wallaby (*Lagorchestes conspicillatus leichardti*) was recorded within the shallow drainage basins and creeks habitat at one location within the application area (APM, 2023b). This species is known to inhabit open forests, woodlands, shrublands, and hummock grasslands, preferring areas where there is a mosaic of vegetation due to

differences in fire history (DCCEEW, 2024). This species is considered to visit the application area for foraging, and the clearing of 650 hectares of foraging habitat may impact the local population, however the proposed clearing is not considered to significantly impact this species as this species is highly mobile, and suitable habitat is available in the surrounding areas.

PML (2023) reported potential signs of greater bilby (*Macrotis lagotis* – Vulnerable) during the survey; however, it could not be confirmed. Despite the inability to confirm records of bilbies, it is possible that this species occurs within the application area given suitable habitats are present, i.e. sandy/undulating plains (DCCEEW, 2024). Considering the size of the proposed clearing activities (650 hectares) and the presence of suitable habitat, the proposed clearing activities may impact on local populations of this species if present. This impact would be significant considering the vulnerability status of this species.

Brush-tailed mulgara (*Dasyercus blythi*) are known to inhabit sandy rises that occur sporadically throughout undulating plains (DCCEEW, 2024). Suitable habitat is present within the application area, however targeted biological surveys did not identify any evidence of this species (APM, 2022; 2023a; 2023b). As this species has been recorded within nine kilometres of the application area and suitable habitat is present, it is considered that this species could potentially occur (GIS Database).

Conclusion:

For the reasons set out above, it is considered that the impacts of the proposed clearing on potential habitats for conservation significant fauna species can be managed with conditions to be environmentally acceptable.

Conditions:

While low impact to the above habitats and species is anticipated, the below measures will require implementation to further reduce risk to these findings.

- Pre-clearance inspections for the greater bilby (*Macrotis lagotis*) and brush-tailed mulgara (*Dasyercus blythi*) to be carried out before clearing activities commence;
- Vegetation management condition requiring the permit holder to avoid riparian vegetation where possible and to maintain surface water flow; and
- Undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 27 October 2023 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (Nyamal People #1) (DPLH, 2024). This claim has been determined by the Federal Court on behalf of the claimant group. However, the mining tenure has been granted in accordance with the future act regime of the *Native Title Act 1993* and the nature of the act (i.e. the proposed clearing activity) has been provided for in that process, therefore, the granting of a clearing permit is not a future act under the *Native Title Act 1993*.

There are no registered Aboriginal Sites of Significance within the application area (DPLH, 2024). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Other relevant authorisations required for the proposed land use include:

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

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia (GIS Database). It is surrounded by large areas of uncleared land and mining operations (GIS Database).
Ecological linkage & Conservation areas	According to available databases, the application area is not considered an ecological linkage, nor is it located in close proximity to conservation areas (GIS Database).
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations:</p> <ul style="list-style-type: none"> 93: Hummock grasslands, shrub steppe - kanji over soft spinifex 619: Medium woodland; river gum (<i>Eucalyptus camaldulensis</i>) (GIS Database). <p>Three detailed flora and vegetation survey were conducted over the application area and surroundings by APM (2022; 2023a; 2023b). The following vegetation types were recorded within the application area (APM 2022; 2023a; 2023b):</p> <ul style="list-style-type: none"> 4b: Major Drainage Line: Low open woodland of <i>Eucalyptus victrix</i> and <i>Corymbia hamersleyana</i> over <i>Cajanus cinereus</i>, <i>Acacia cowleana</i> and <i>Acacia pyrifolia</i> mid sparse shrubland with <i>Triodia epactia</i>, <i>Cenchrus ciliaris</i> and <i>Triodia angusta</i> mid open hummock and tussock grassland; 7b: Drainage depressions: Low open woodland of <i>Corymbia hamersleyana</i>; over <i>Acacia acradenia</i>, <i>Acacia adsurgens</i> and <i>Indigofera rugosa</i> mid open shrubland and <i>Triodia wiseana</i>, <i>Triodia epactia</i> and <i>Triodia chichesterensis</i> hummock grassland; 9a: Stony rises and outcrops: Isolated low <i>Corymbia hamersleyana</i> over mid to tall <i>Grevillea wickhamii</i>, <i>Acacia inaequilatera</i> and <i>Acacia coleii</i> sparse shrubland with <i>Triodia wiseana</i>, <i>Triodia chichesterensis</i> (P3) and <i>Triodia angusta</i> hummock grassland; 12a: Undulating plains: Isolated low <i>Corymbia hamersleyana</i> over mid to tall, isolated shrubs of <i>Acacia tumida</i>, <i>Acacia adsurgens</i> and <i>Acacia inaequilatera</i> with hummock grassland of <i>Triodia angusta</i>, <i>Triodia wiseana</i> and <i>Triodia lanigera</i>; 13a: Creeks: Low open woodland of <i>Eucalyptus camaldulensis</i>, <i>Corymbia hamersleyana</i> and <i>Eucalyptus victrix</i> sparse mid to tall shrubland of <i>Acacia tumida</i>, <i>Acacia stellaticeps</i> and <i>Acacia bivenosa</i> over <i>Triodia epactia</i>, *<i>Cenchrus ciliaris</i> and *<i>Cenchrus setiger</i> tussock/hummock grassland; 15a: Sandy Creek: Low open woodland of <i>Corymbia hamersleyana</i> over <i>Acacia cowleana</i>, <i>Acacia adsurgens</i> and <i>Indigofera rugosa</i> mid open shrubland with <i>Triodia epactia</i>, <i>Triodia lanigera</i> and <i>Triodia wiseana</i> hummock grassland; 16a: Claypans: Open herb field of <i>Sida fibulifera</i>, <i>Eriachne mucronata</i> and <i>Neptunia dimorphantha</i>; and D: Disturbed: clear of vegetation.
Vegetation condition	<p>Vegetation surveys (APM, 2022; 2023a; 2023b) indicate the vegetation within the proposed clearing area is in Excellent to Completely Degraded condition (Trudgen, 1991), 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; Very good (approximately 85% of the survey area); and Completely Degraded (approximately less than 4% of the survey area): 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	The application area is mapped within elevations of 170 to 260 meters AHD (GIS Database). The climate of the region is described as semi-desert-tropical, and the annual rainfall average of approximately 382.1 millimetres (BoM, 2024).
Soil description & Land degradation risk	<p>The soil is mapped as part of the following land systems (DPIRD, 2024), described as:</p> <ul style="list-style-type: none"> Macroy (283Mc): Majority of the application area: Stony plains and occasional tor fields based on granite supporting hard and soft spinifex grasslands; Satirist (283St): Stony plains and low rises supporting hard spinifex grasslands, and gilgai plains supporting tussock grasslands;

Characteristic	Details
	<ul style="list-style-type: none"> • River (283Ri): Active flood plains, major rivers and banks supporting grassy eucalypt woodlands, tussock grasslands and soft spinifex grasslands; and • Talga (283Ti): Hills and ridges of greenstone and chert and stony plains supporting hard and soft spinifex grasslands. <p>Macroy (283Mc), Satirist (283St) and Talga (283Ti) land systems have low to very low risk erosion hazards (DPIRD, 2024). River system usually does not present soil erosion; however, susceptibility to erosion is high or very high if vegetative cover is removed (DPIRD, 2024).</p>
Waterbodies & Hydrogeography	<p>Several ephemeral drainage lines run through the application area (GIS Database). The application area is not located within a Public Drinking Water Source Area (GIS Database).</p> <p>The mapped groundwater salinity is between 500 - 1,000 milligrams per litre total dissolved solids, which is described as marginal water quality (GIS Database).</p>
Flora	<p>There are no records of Threatened flora species; however, two Priority 2 flora species were identified within the application area (APM, 2022; 2023a; 2023b; GIS Database).</p>
Ecological communities	<p>There are no known threatened or priority ecological communities mapped within the application area (GIS Database). The nearest known ecological community is the Gregory Land System priority ecological community (P3), located approximately 29 kilometres west of the application area (GIS Database).</p>
Fauna	<p>There are 18 known records of conservation significant species within 40 kilometres of the application area, of which eight of them are birds (GIS Database).</p>

A.2. Flora analysis table

Likelihood of occurrence of conservation significant flora species within the application area (APM, 2022; 2023a; 2023b).

Species	Cons. Code		Preferred Habitat	Likelihood of Occurrence
	BC Act	EPBC Act		
<i>Acacia leeuweniana</i>	P1	-	Gritty, skeletal red-grey sandy loam, light orange-brown gravelly sand, granite. In rock fissures in outcrops, among boulders.	Possible. Suitable habitat in granite outcrop areas.
<i>Bulbostylis burbidgeae</i>	P4	-	Granitic soils. Granite outcrops and cliff bases.	Possible. Suitable habitat in granite outcrop areas.
<i>Eragrostis crateriformis</i>	P3	-	Clayey loam or clay. Creek banks, depressions.	Possible. Suitable habitat in the claypans.
<i>Euphorbia clementii</i>	P3	-	Gravelly hillsides, stony grounds.	Likely. Suitable habitat on the stony plains and rises.
<i>Euploca mutica</i>	P3	-	Hummock grassland and sandplains.	Likely. Suitable habitat in sandplains.
<i>Gomphrena leptophylla</i>	P3	-	Open flats, sandy creek beds, edges salt pans and marshes, stony hillsides.	Possible. Suitable habitat in the plains and sandy creek beds.
<i>Goodenia nuda</i>	P4	-	Has been previously found in drainage lines of red-brown loamy sand or sandy loam and in disturbed roadside areas	Possible. Suitable habitat in creeks and roadsides.
<i>Gymnanthera cunninghamii</i>	P3	-	Sandy soils, creeks.	Possible. Suitable habitat in sandy creeks.
<i>Nicotiana umbratica</i>	P3	-	Typically grows in shelter of large boulders on rocky outcrops and in shallow soils	Possible. Suitable habitat in granite outcrop areas.
<i>Phyllanthus hebecarpus</i>	P3	-	Granite boulders/outcropping	Possible. Suitable habitat in granite outcrop areas.
<i>Quoya zonalis</i>	EN	EN	Steep, rocky, sandstone conglomerate and granite slopes in skeletal, brown, sandy loam soils of the Capricorn Land System	Unlikely to occur. No suitable habitat.
<i>Rothia indica</i> subsp. <i>australis</i>	P3	-	Sandy soils. Seasonally inundated areas, sandhills and flats.	Likely. Suitable habitat in sandplains.
<i>Stylidium weeliwolli</i>	P3	-	Gritty sand soil, sandy clay. Edge of watercourses.	Possible. Sandy creek edges.
<i>Terminalia supranitifolia</i>	P3	-	Sand. Among basalt rocks.	Unlikely to occur.
<i>Themeda</i> sp. Panorama (J. Nelson <i>et al.</i> NS 102)	P1	-	Has been found growing along watercourses and creek lines and on rocky substrate	Possible. Suitable habitat along rivers and creeks and outcrops.
<i>Triodia basitricha</i>	P3	-	Occurs on rocky and gravelly slopes of mountains or low hills.	Unlikely to occur.
<i>Triodia chichesterensis</i>	P3	-	Occurs on sand or loam over rocky or gravelly substrates, often with quartzite.	Present. Suitable habitat includes low rises with rocky soils containing quartzite.
<i>Vigna triodiophila</i>	P3	-	Local record among dolerite boulders on very steep upper slope. Stony red-brown clay loam.	Unlikely to occur.

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

A.3. Fauna analysis table

Fauna likelihood of occurrence within the application area (APM, 2023a; 2023b).

Species	Common Name	Conservation Code		Assessment of Occurrence
		BC Act	EPBC Act	
<i>Actitis hypoleucos</i>	Common sandpiper	MI	MI	
<i>Calidris acuminata</i>	Sharp-tailed sandpiper	MI	MI	
<i>Calidris ferruginea</i>	Curlew sandpiper	CR	CR, MI	Unlikely. No saline or coastal habitats available.
<i>Calidris melanotos</i>	Pectoral sandpiper	-	MI	Freshwater habitats are likely to be seasonally present in the claypans (gilgai) within the Stony Plains however the high evaporation rate means these habitats are unlikely to persist more than a few weeks at most. The major drainage line with granite bedrock has the potential for ephemeral pools however there are no permanent or semi-permanent pools evident.
<i>Numenius madagascariensis</i>	Eastern curlew	CR	CR, MI	
<i>Glareola maldivarum</i>	Oriental pranticole	MI	MI	
<i>Hirundo rustica</i>	Barn swallow	MI	MI	
<i>Motacilla cinerea</i>	Grey wagtail	MI	MI	
<i>Motacilla flava</i>	Yellow wagtail	MI	MI	
<i>Apus pacificus</i>	Fork-tailed swift	MI	MI	Possible. Utilises a broad array of habitats.
<i>Charadrius veredus</i>	Oriental plover	MI	MI	Likely. Suitable habitat in the open plains.
<i>Polytelis alexandrae</i>	Princess parrot	-	VU	Unlikely, preferred feeding species are not present in high densities along the major drainage.
<i>Erythrotriorchis radiatus</i>	Red goshawk	VU	VU	Unlikely. Not within the known range of the species distribution.
<i>Falco hypoleucos</i>	Grey falcon	VU	VU	Likely. All areas are suitable for foraging. No suitable nesting habitat.
<i>Falco peregrinus</i>	Peregrine falcon	OS	-	Likely. All areas are suitable for foraging. No suitable nesting habitat.
<i>Pezoporus occidentalis</i>	Night parrot	CR	EN	Possible. No local records. Habitat modelling includes the Survey Area at the extremity of the species potential extent. Foraging resources are limited.
<i>Rostratula australis</i>	Australian painted-snipe	EN	EN	Unlikely. No habitat occurs in the Survey Area. Vegetation too open to provide well vegetated shallows.
<i>Dasyercus blythi</i>	Brush-tailed mulgara	P4	-	Likely. Sandy plains habitat is suitable.
<i>Dasyurus hallucatus</i>	Northern quoll	EN	EN	Present. Suitable foraging habitat in the creeks but of low quality. Limited suitable denning and foraging habitat available in the Rocky Outcrops.
<i>Lagorchestes conspicillatus leichardti</i>	Spectacled hare-wallaby	P4	-	Present. Historic records nearby and suitable habitat is present in the Shallow Drainage Basins and Creeks habitat.
<i>Macroderma gigas</i>	Ghost bat	VU	VU	Likely. Foraging habitat available. No roosting habitat available.
<i>Macrotis lagotis</i>	Greater bilby	VU	VU	Possible. All habitats are suitable.
<i>Pseudomys chapmani</i>	Western pebble-mound mouse	P4	-	Present. Mounds located in the plains where suitable pebbles occur.
<i>Rhinonicteris aurantia</i>	Pilbara leaf-nosed bat	VU	VU	Present. No roosting habitat available, foraging habitats present.
<i>Sminthopsis longicaudata</i>	Long-tailed dunnart	P4	-	Unlikely. No suitable habitat.
<i>Anilius ganei</i>	Gane's blind snake (Pilbara)	P1	-	Unlikely. No suitable habitat.
<i>Liasis olivaceus</i> subsp. <i>baronni</i>	Pilbara olive python	VU	VU	Unlikely. No suitable habitat.
<i>Liopholis kintorei</i>	Great desert skink	VU	VU	Unlikely. No records in the local area. May occur 10 km to the east.

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

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>According to available databases and flora and vegetation surveys, two Priority 3 flora species occur within the application area, but there are no known Threatened flora species (PML, 2023).</p> <p>No Threatened or Priority Ecological Communities were identified within the application area (APM, 2023a; 2023b; PML, 2023; GIS Database).</p>	At variance	Yes <i>Refer to Section 3.2.1, above.</i>
<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>The application area contains suitable habitat for several conservation significant fauna species (APM, 2023a; 2023b; GIS Database).</p>	At variance	Yes <i>Refer to Section 3.2.2, 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>There are no known records of Threatened flora within the application area (GIS Database). Flora and vegetation surveys of the application area did not record any species of Threatened flora, and none were considered likely to occur (APM, 2022; 2023a; 2023b; PML, 2023).</p>	Not likely to 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 or mapped Threatened Ecological Communities (TECs) located within or in close proximity to the application area (APM, 2022, 2023a, 2023b; PML, 2023).</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The application area falls within the Pilbara Bioregion of the Interim Biogeographic Regionalisation for Australia (IBRA) (GIS Database). Approximately 99.57% 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 93 and 619 (GIS Database). These vegetation associations have not been extensively cleared as over 99.8% of the pre-European extent of these vegetation associations remain uncleared at both the state and bioregional level (Government of Western Australia, 2019). The permit area does not contain any remnants, nor does it form part of any remnants in the local area (GIS Database).</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 (78 kilometres) 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).</p>	Not likely to be at variance	No
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
<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>Northern Creek, Houston Creek, Pilgangoora Creek and Southern Creek are ephemeral watercourses that run through the application area (PML, 2023; GIS Database). Being ephemeral creeks, the associated vegetation is adapted long periods with no stream-flows (PML, 2023).</p> <p>Four vegetation types were mapped within the drainage features of the application area, including vegetation types: 4b, 7b, 13a, and 15a (PML, 2023).</p> <p>Vegetation type 13a contains two species that are normally identified to be associated with Groundwater Dependent Ecosystems (GDEs). However, the records of these species are of low height and stem diameter, likely to be a consequence of intermittent water availability, hence, vegetation type 13a was deemed to have low likelihood of access to groundwater (PML, 2023).</p> <p><i>Eucalyptus victrix</i> was recorded in vegetation type 4b in the Major Drainage Line vegetation type (APM, 2023b; PML, 2023). This species is regarded as being a facultative phreatophyte that most likely draws most of its water requirement from the unsaturated zone but can use groundwater opportunistically (PML, 2023). The individuals identified during the survey are relatively old with a large diameter at breast height compared to other trees in the surrounding habitats (PML, 2023).</p> <p>Pilbara Minerals Pty Ltd (2023) advised that clearing of major creek lines and ephemeral creeks will be limited and stream flow will be reinstated. In line with PML commitment, impacts to vegetation growing in association with a watercourse can be managed by a vegetation management condition to avoid clearing of riparian vegetation where possible and maintaining water flows.</p>	At variance	No
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped land systems within the application area present low to very low risk to soil erosion, except for River system if vegetation coverage is removed (DPIRD, 2024). However, this system comprises only a small portion on the south-west of the application area (DPIRD, 2024; GIS Database); hence, considerable land degradation is unlikely to occur.</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u></p> <p>The four main creeks and its tributaries that run across the application area are ephemeral and tend to flow only during the summer (PML, 2023). Additionally, the proposed clearing is not likely to intersect groundwater resources of the area as the reported groundwater is more than 15 metres below ground level (PML, 2023).</p> <p>PML (2023) advised that the clearing will take place shortly before the commencement of infrastructure construction (less than 3 months), limiting the period during which cleared land is subject to erosion that would lead to surface water quality decline.</p> <p>Given the above and that no permanent water courses, wetlands, or Public Drinking Water Source Areas are recorded within the application area (GIS Database), the proposed clearing is unlikely result in significant changes to surface water flows or to cause deterioration in the quality of underground water.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The climate of the region is semi-arid-tropical, with a low average rainfall of approximately 382.1 millimetres per year (BoM, 2024). The evaporation rate in the Pilbara is considerably higher than the average rainfall and can exceed 3000 millimetres per year (PML, 2023). Further, the ephemeral creeks flow periodically</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
during high rainfall events associated with cyclonic events and tropical lows (PML, 2023). It is expected that the proposed clearing would further reduce the volume of water produced by the catchment; however, the potential for causing or exacerbating the incidence or intensity of flooding is minimal (PML, 2023).		

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):

- 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)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Pre-European Vegetation Statistics
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

Restricted GIS Databases used:

- Threatened 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

- Animal Plant Mineral Pty Ltd (APM) (2022) Pilbara Minerals: TSF Options 2 and 5, Pilgangoora Project Biological Survey, Pilbara, Western Australia. Unpublished report prepared by Animal Plant Mineral Pty Ltd for Pilbara Minerals Limited, November 2022.
- Animal Plant Mineral Pty Ltd (APM) (2023a) E45/2287 Infill Biological Survey – Pilgangoora Project, Pilbara, Western Australia. Unpublished report prepared by Animal Plant Mineral Pty Ltd for Pilbara Minerals Limited, May 2023.
- Animal Plant Mineral Pty Ltd (APM) (2023b) Pilgangoora Project Biological Survey, Pilbara, Western Australia. Unpublished report prepared by Animal Plant Mineral Pty Ltd for Pilbara Minerals Limited, October 2023.
- Bureau of Meteorology (BoM) (2024) Bureau of Meteorology Website – Climate Data Online, Marble Bar. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 1 March 2024).
- Department of Climate Change, Energy, the Environment and Water (DCCEEW) (2024) Species Profile and Threats Database (SPRAT). Available from <http://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl> (Accessed 1 March 2024).
- Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: 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) (2024) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 1 March 2024).
- Department of Primary Industries and Regional Development (DPIRD) (2024) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://dpiird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (Accessed 1 March 2024).
- Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.pdf
- Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf
- Environmental Protection Authority (EPA) (2020) Technical Guidance – Terrestrial Fauna Surveys. Available from: 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>
- Pilbara Minerals Limited (PML) (2023) Pilgangoora Lithium Project - Supporting Information for Native Vegetation Clearing (Purpose) Permit Application. Prepared by Pilbara Minerals Limited, October 2023.
- Pilbara Minerals Limited (PML) (2024) Additional information (Response Letter) in support to the clearing permit CPS 10388/1. Prepared by Pilbara Minerals Limited, January 2024.
- 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.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 1 March 2024).

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