Department of Mines, Petroleum and Exploration

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	11159/1
Permit type:	Purpose Permit
Applicant name:	97992001 Pty Ltd
Application received:	30 June 2025
Application area:	27 hectares
Purpose of clearing:	Mineral Exploration and Associated Activities
Method of clearing:	Mechanical Removal
Tenure:	Exploration Licence 69/3401
Location (LGA area):	Shire of Ngaanyatjarraku
Colloquial name:	Dante Project

1.2. Description of clearing activities

97992001 Pty Ltd proposes to clear up to 27 hectares of native vegetation within a boundary of approximately 2,159 hectares, for the purpose of mineral exploration (97992001 Pty Ltd, 2025). The project is located approximately 600 kilometres (km) northwest of Laverton within the Shire of Ngaanyatjarraku (GIS Database).

The application is to allow for the proposed Stage 2 exploration work comprises the following:

- drill lines, includive of associated drill pads and sumps;
- access tracks; and
- supporitng infrastructure, including laydown areas, parking areas, bag farms and core yards (Aurecon, 2025).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	5 August 2025
Decision area:	27 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Mines, Petroleum and Exploration (DMPE) advertised the application for a public comment for a period of 21 days, and 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 a flora and vegetation survey, the clearing principles set out in Schedule 5 of the EP Act (Appendix B), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section □).

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.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

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

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene seps to minimise the risk of the introduction and spread of weeds;

- avoid clearing riparian vegetation where practicable and maintaining existing waterflow;
- limiting the clearing of individuals of *Amaranthus centralis, Euphorbia parvicaruncula, Menkea lutea, Stackhousia clementii* and *Tephrosia* sp. Central (P.K. Latz 17037);
- pre-clearance targeted surveys for priority and threatened flora will be required prior to clearing native vegetation within the areas not previously subject to flora surveys;
- pre-clearance surveys for fauna species: woma (*Aspidites ramsayi*), great desert skink (*Liopholis kintorei*), greater bilby (*Macrotis lagotis*), brush-tailed mulgara (*Dasycercus blythi*), long-tailed dunnart (*Antechinomys longicaudatus*), night parrot (*Pezoporus occidentalis*) and Southern whiteface (*Aphelocephala leucopsis*); and
- slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals.

2. Legislative context

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

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

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

Other legislation of relevance for this assessment include:

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

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, 2016b)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that the following avoidance and mitigation measures have been considered / will be implemented:

- locations of conservation significant species will be avoided where possible;
- removal of all equipment and wastes;
- backfilling of excavations;
- stockpiled topsoil and vegetation will be respread over cleared areas; and
- ripping of compacted areas as required (Aurecon, 2025).

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 (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 (flora & fauna) - Clearing Principles (a) & (b)

Assessment

Flora

In August 2024, Western Botanical conducted a Reconnaissance and Targeted Flora and Vegetation Survey across tenements E69/3401 and E69/3552, which included the permit application area (Western Botanical, 2024). The targeted flora survey covered a total of 163 hectares, including approximately 75 hectares within the 2,159 hectare application area. Additionally, vegetation mapping was carried out over 6,781 hectares, encompassing surrounding areas and approximately 1,546 hectares of the application area (Western Botanical, 2024). As only the proposed drill locations were subject to a flora survey, the

remaining areas within the permit application area will be managed through a flora management condition which will be placed on the permit, requiring the Permit Holder to undertake targeted flora surveys prior to clearing.

Western Botanical identified 198 species from 104 genera and 38 families within the Study Area (Western Botanical, 2024). No Threatened flora species were recorded during the survey and of the six Priority flora species recorded, the following five were recorded within the application area:

- *Amaranthus centralis*
- *Euphorbia parvicaruncula*
- *Menkea lutea*
- *Stackhousia clementii*
- *Tephrosia* sp. Central (P.K. Latz 17037)

The Permit Holder has committed to avoiding Priority flora where practicable, and has determined the least amount of impacts to the aforementioned five Priority flora species:

Species Name	Conservation Status	Number of individuals recorded within the Survey Area (Western Botanica, 2024)	Number of individuals recorded within the Permit Area (Western Botanica, 2024)	Number of individuals proposed to clear
Amaranthus centralis	Priority 3	190	190	5
Euphorbia parvicaruncula	Priority 1	19,188	6,411	50
Menkea lutea	Priority 1	19,151	5,409	20
Stackhousia clementii	Priority 3	22	22	0
Tephrosia sp. Central (P.K. Latz 17037)	Priority 3	2	2	0

The Permit Holder proposes no impacts to *Stackhousia clementii* and *Tephrosia* sp. Central (P.K. Latz 17037) individuals. Five individuals of Priority 3 species *Amaranthus centralis* are proposed to be cleared. This species has seven records within the WA Herbarium collected from the Central Ranges and Pilbara bioregions (WAH, 1998-). The removal of five of the 190 individuals identified within this area is not expected to significantly impact this species at a local or species level. Two Priority 1 flora species, *Euphorbia parvicaruncula* and *Menkea lutea*, had an abundance of individuals recorded within the Survey Area (Western Botanical, 2024). The Permit Holder proposes to clear no more than 50 individuals of *Euphorbia parvicaruncula* and no more than 20 individuals of *Menkea lutea*. The proposed clearing will impact less than one per cent of the local populations. As there is suitable habitat present within the surrounding environments and the clearing of Priority flora will be limited, the proposed clearing of 27 hectares for exploration is not considered to significantly impact these Priority flora species at a local or species level.

Fauna

Terrestrial Ecosystems undertook a basic and targeted vertebrate fauna risk assessment including a site reconnaissance survey across approximately 444 hectares of the 2,159 hectares application area on 12-13 October 2023 and 2-4 September 2024 (Terrestrial Ecosystems, 2024). The survey involved 603 habitat assessments within the Survey Area and the following four fauna habitats were identified within the application area:

- Acacia shrub thicket;
- clay pan;
- grass pan; and
- mixed shrubs over grass plains.

There are records of 23 conservation significant fauna species within 50 kilometres of the application area (Terrestrial Ecosystems, 2024; GIS Database). Based on suitable habitat and historical records, the following conservation significant fauna species are considered to potentially occur within the application area (See Section A.1) (Terrestrial Ecosystems, 2024; Western Botanical, 2024; GIS Database):

Southern whiteface (*Aphelocephala leucopsis*) – Vulnerable – occurs across most of mainland Australia south of the tropics, from the north-eastern edge of the Western Australian wheatbelt, east to the Great Dividing Range (DCCEEW, 2023a). This species is known to inhabit a wide range of open woodlands and shrublands where there is an understory of grasses or shrubs, or both which are usually dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains (DCCEEW, 2023a). The Southern whiteface forages on the ground, favouring habit with low tree densities and an herbaceous understory litter cover and are known to breed between July and October by building large bulky domed nests of grass, bark and roots, usually in a hollow or crevice, although some times in low bushes (DCCEEW, 2023a). Terrestrial Ecosystems did not record this species during the fauna survey, however due to the presence of suitable habitat and records within the surrounding areas, it is considered possible this species could occur in the application area.

Fork-tailed swift (*Apus pacificus*) – Migratory – is an almost exclusively aerial bird which occurs over inland plains but sometimes above foothills or in coastal areas (Commonwealth of Australia, 2008). This species mostly occurs over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh, however they are also found at treeless grassland and sandplains covered with spinifex, open farmland and inland and coastal sand-

dunes and sometimes occur above rainforests, wet sclerophyll forest or open forest or plantations of pines (Commonwealth of Australia, 2008). Foraging habitat is present within the application area, however this species was not recorded during the fauna survey, and it could be considered this species is an infrequent visitor to the area.

Oriental Plover (*Charadrius veredus*) – Migratory – are found inhabiting flat, open, semi-arid or arid grasslands, where the grass is short and sparse, and interspersed with hard, bare ground, such as claypans, dry paddocks, playing fields, lawns and cattle camps, or open areas that have been recently burnt (Commonwealth of Australia, 2008). During the Wet Season, individuals disperse into various habitats including wooded grasslands, estuarine and littoral zones, terrestrial wetlands, and occasionally saltmarshes in southern Australia (Commonwealth of Australia, 2008). Although suitable foraging habitat is present within the application area, the species was not detected during the fauna survey. This suggests that the species may be an infrequent or occasional visitor to the site.

Malleefowl (*Leipoa ocellata*) – Vulnerable – are large ground-dwelling birds that occur in a range of habitat types, primarily found in semi-arid to arid shrublands and low woodlands (3-8 metres in height) dominated by mallee and associated habitats, such as broombush (*Melaleuca uncinata*) and native pine (*Callitris* spp) scrub (DCCEEW, 2024). The nest is constructed in sandy soils and leaflitter by building a large mound for egg incubation (DCCEEW, 2024). This species favours mallee that has been long unburnt and ungrazed (DCCEEW, 2024). Due to the lack of suitable leaflitter, the application area is not considered suitable breeding habitat. Suitable foraging habitat is present within the application area and there are records of Malleefowl within the local area, however no individuals or evidence of this species was identified during the fauna survey (Terrestrial Ecosystems, 2024).

Western Botanical (2024) and Terrestrial Ecosystems (2024) identified areas containing Spinifex hummock grassland and dune habitats outside of the application area. No areas containing Spinifex/dunes were identified within the application area, however only 444 hectares of the 2,159 hectare application area was subject to the flora and fauna survey. Approximately 1,546 hectares of the application area was subject to vegetation mapping which yielded no indication of the presence of Spinifex vegetation/dunes (Western Botanical, 2024). The remaining 612 hectares of the application area was left unsurveyed and as such, there is potential for this vegetation and landform to be present and providing habitat to the following conservation significant fauna species which may potentially occur within these areas.

- bilby (*Macrotis lagotis*) – Vulnerable
- Brush-tailed Mulgara (*Dasycercus blythi*) – Priority 4
- Great desert skink (*Liopholis kintorei*) – Vulnerable
- long-tailed dunnart *(Antechinomys longicaudatus)* - Priority 4
- night parrot (*Pezoporus occidentalis*) - Critically Endangered
- woma (*Aspidites ramsayi*) – Priority 1

Conclusion

Potential impacts to these species may be mitigated by imposing pre-clearance fauna surveys targeting the identified species associated with *Triodia* (Spinifex), as well as other conservation-significant fauna considered likely to occur based on habitat assessments within unsurveyed areas.

The proposed clearing for exploration activities is not considered to significantly impact the above species as the habitats encountered within the application area are well represented in the surrounding region and bioregion and are not restricted to the area. While it is unlikely the proposed clearing will lead to significant impacts to these species at a regional level, local impacts can be environmentally acceptable.

Conditions

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

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene seps to minimise the risk of the introduction and spread of weeds;
- limiting the clearing of individuals of *Amaranthus centralis, Euphorbia parvicaruncula, Menkea lutea, Stackhousia clementii* and *Tephrosia* sp. Central (P.K. Latz 17037);
- pre-clearance targeted surveys for priority and threatened flora will be required prior to clearing native vegetation within the areas not previously subject to flora surveys;
- pre-clearance surveys for fauna species: woma (*Aspidites ramsayi*), great desert skink (*Liopholis kintorei*), greater bilby (*Macrotis lagotis*), brush-tailed mulgara (*Dasycercus blythi*), long-tailed dunnart (*Antechinomys longicaudatus*), night parrot (*Pezoporus occidentalis*) and Southern whiteface (*Aphelocephala leucopsis*); and
- slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 11 July 2025 by the Department of Mines, Petroleum and Exploration inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim (Ngaanyatjarra Lands (Part A)) over the area under application (DPLH, 2025). This claim has been registered with the National Native Title Tribunal on behalf of the claimant group. 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:

- A Programme of Work approved under the *Mining Act 1978*

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

End

Appendix A. 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). The area is located within the Mann-Musgrave Block subregion of the Central Ranges Interim Biogeographic Regionalisation for Australia (IBRA) bioregion (GIS Database). The dominant land uses in this IBRA subregion are Aboriginal Reserve (94.33% of subregion area), grazing – freehold (0.03%), grazing – leasehold (1.36%), unallocated crown land and crown reserves (4.28%) (Western Botanical, 2024; GIS Database).
Ecological linkage	The application area is not known to be an important ecological linkage (GIS Database).
Conservation areas	The application area is located within an Environmentally Sensitive Area as it lies within an area known as the Ranges of the Western Desert, which is listed on the Register of the National Estate as having Indigenous values of National Estate significance and is approximately 8,016,568 hectares in size (Western Botanical, 2024; GIS Database).
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation association: • 18: Low woodland; mulga (*Acacia aneura*) (GIS Database). A flora and vegetation survey was conducted over part of the application area by Western Botanical during August, 2024. The following vegetation associations were recorded within the application area (Western Botanical, 2024): • CPNG: Claypan Grassland (16.5%); • CPP: Claypan Playa (0.2%); • GRMU: Mulga Grove on Hardpan Plain (2.1%); • HPMW / CPNG: Mosaic of Hardpan Mulga Woodland and Claypan Grassland (1.1%); • HPMW: Hardpan Mulga Woodland (55.8%); • HPMWD: Hardpan Mulga Woodland Drainage (17%); • MpS: Maireana pyramidata Shrubland (0.4%); • MUWA: Mulga Wanderrie Grassy Shrubland (1.2%); • SMS: Stony Mulga Shrubland (0.7%); and • SS: Senna Shrubland (5.1%).
Vegetation condition	The vegetation survey (Western Botanical, 2024) indicates the vegetation within the proposed clearing area is in Very Good to Excellent (Trudgen, 1991) condition, described as: • 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. The full Trudgen (1991) condition rating scale is provided in Appendix C.
Climate and landform	The climate of the Mann-Musgrave Block subregion is characterised as arid (Graham & Cowan, 2011). The area experiences an average annual rainfall of 200 millimetres from both summer and winter rain (BoM, 2025).
Soil description and Land degradation risk	The soils within the application area are mapped as: • Atlas System (My109): Outwash plains and dissected fan and terrace formations flanking ranges of sedimentary and some metamorphic, volcanic, and granitic rocks; and • Atlas System (BA21): Steep hills and ranges on sedimentary and some metamorphic, volcanic, and granitic rocks; bare rock outcrop is common; some gorges (DPIRD, 2025). Based on the sandy composition of many areas within the Mann-Musgrave Block subregion, the proposed clearing may exacerbate erosion in some areas (Graham & Cowan, 2011).
Waterbodies	There are no permanent waterbodies or watercourses within the application area (GIS Database).
Hydrogeography	The application area is not mapped within a proclaimed public drinking water area (GIS Database). The area is mapped within the East Murchison Groundwater Area, proclaimed under the Rights in Water Irrigation (RIWI) Act (GIS Database).
Flora	Thirteen Priority flora species have previously been recorded within 50 kilometres of the application area (GIS Database). Five Priority flora species were recorded within the application area during the flora survey (Western Botanical, 2024; GIS Database).
Ecological communities	The application area is not located within any known or mapped Threatened Ecological Community (TEC) (Western Botanical, 2024; GIS Database).
Fauna	Twenty-three conservation significant fauna species have been recorded within 50 kilometres of the application area (GIS Database). No conservation significant fauna were recorded within the survey area during the fauna and habitat assessment (Terrestrial Ecosystems, 2024).

Characteristic	Details
Fauna habitat	Terrestrial Ecosystems identified the following four habitat types within the application area: • Acacia shrub thicket; • clay pan; • grass plain; and • shrubs over grass (Terrestrial Ecosystems, 2024).

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current extent in all DBCA Managed Land (proportion of pre-European extent) (%)
IBRA Bioregion Central Ranges	4,701,519.37	4,700,206.00	99.97	0.00	0.00
Beard vegetation associations - State					
Veg Assoc No. 18	19,892,306.46	19,843,148.07	99.75	1,317,179.00	6.62
Beard vegetation associations - Bioregion					
Veg Assoc No. 18	1,075,927.72	1,075,162.33	99.93	0.00	0.00

Government of Western Australia (2019)

A.3. Flora analysis table

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

Species name	Conservation status	Suitable habitat features? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)
Amaranthus centralis	P3	Y	0	7
Chrysocephalum apiculatum subsp. *racemosum*	P3	Y	<40	5
Euphorbia inappendiculata var. *queenslandica*	P3	Y	<1	17
Euphorbia parvicaruncula	P1	Y	0	2
Goodenia asteriscus	P3	Y	<32	6
Goodenia gibbosa	P3	Y	<41	8
Indigofera warburtonensis	P1	y	<21	6
Menkea lutea	P1	Y	0	5
Neurachne lanigera	P1	N	<34	17
Stackhousia clementii	P3	Y	0	22
Tephrosia sp. Central (P.K. Latz 17037)	P3	Y	0	3
Thryptomene sp. Warburton (M. Henson & M. Hannart 32433)	P1	Y	<25	1
Vittadinia pustulata	P3	Y	<48	11

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

A.1. Fauna analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix D.1), and biological survey information (Terrestrial Ecosystems, 2024; Western Botanical, 2024; GIS Database), 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]
Amytornis oweni oweni	sandhill grasswren	P4	31	N
Antechinomys longicaudatus	long-tailed dunnart	P4	<50	Y
Aphelocephala leucopsis	southern whiteface	VU	<50	Y
Apus pacificus	fork-tailed swift	MI	<50	Y
Aspidites ramsayi	woma	P1	<50	Y
Charadrius veredus	oriental plover	MI	<50	Y
Dasycercus blythi	brush-tailed mulgara	P4	29	Y
Dasycercus cristicauda	crest-tailed mulgara	P4	<50	N
Erythrotriorchis radiatus	red goshawk	EN	<50	N
Falco hypoleucos	grey falcon	VU	<50	N
Falco peregrinus	peregrine falcon	OS	34*	N
Leipoa ocellata	malleefowl	VU	47	Y
Leporillus conditor	greater stick-nest rat	CD	30	N
Liopholis kintorei	great desert skink	VU	31	Y
Macroderma gigas	ghost bat	VU	<50	N
Macrotis lagotis	bilby	VU	31	Y
Motacilla cinerea	grey wagtail	MI	<50	N
Motacilla flava	yellow wagtail	MI	<50	N
Notoryctes typhlops	marsupial mole	P4	49*	N
Petrogale lateralis centralis	Central australian rock-wallaby	VU	29*	N
Petrogale lateralis lateralis	black-flanked rock-wallaby	EN	29*	N
Pezoporus occidentalis	night parrot	CR	<50	Y
Polytelis alexandrae	princess parrot	P4	<50	N
Sminthopsis psammophila	sandhill dunnart	EN	<50	Y

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority; OS: other specially protected

** Dated records prior to the year 2000*

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: Western Botanical recorded 198 plant species across 104 genera and 38 families within the Study Area (Western Botanical, 2024). No Threatened flora species were identified; however, five Priority flora species were identified within the application area.	At variance	Yes *Refer to Section 3.2.1, above.*
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment:	At variance	Yes *Refer to Section 3.2.2, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
The area proposed to be cleared contains habitat for several conservation significant fauna species (Terrestrial Ecosystems, 2024; GIS Database).		
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: There are no known records of Threatened flora within the application area (GIS Database). The flora survey which was undertaken in part of the application area did not record any species of Threatened flora (Western Botanical, 2024).	Not likely to be at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: There are no known Threatened Ecological Communities (TECs) located within the application area and the flora and vegetation survey did not identify any TECs (Western Botanica, 2024; GIS Database).	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas (GIS Database).	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Drainage lines within the application area are only likely to flow following major rainfall events (Aurecon, 2025). As the vegetation associated with these ephemeral drainage lines may be cleared, it is recommended to maintain surface water flow or reinstate downstream into existing natural drainage lines. Potential impacts to watercourses can be managed through the implementation of a vegetation management condition, which includes avoiding clearing riparian vegetation and maintaining surface water flow.	May be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: Based on the sandy composition of many areas within the Mann-Musgrave Block subregion, the proposed clearing may exacerbate erosion in some areas (Graham & Cowan, 2011). The proposed clearing includes a disturbance of 27 hectares within 2,159 hectares for access tracks and drill pads using machinery with the blade up to ensure soil is not removed where practicable (Aurecon, 2024). The proposed clearing activities are not likely to result in large areas of disturbed or open land. Given the small size of the proposed activities, the clearing is not likely to result in appreciable land degradation.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: The application area is not mapped within any legislated Country Areas Water Supply area or Public Drinking Water Source Area (GIS Database). The application area is located within the East Murchison Groundwater Area proclaimed under the *Rights in Water and Irrigation Act 1914* (GIS Database). Given that only 27 hectares are proposed to be cleared within a total area of 2,159 hectares, the clearing is minimal, widely dispersed, and unlikely to have a significant impact on surface or underground water. The vegetation management condition will also assist in mitigating any potential impacts to surface water by minimising clearing riparian vegetation where practicable.	Not likely to be at variance	*No*
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: There are no permanent water courses or waterbodies within the application area (GIS Database). Seasonal drainage lines are common in the region and temporary localised flooding may occur briefly following heavy rainfall events. However, the proposed clearing is unlikely to increase the incidence or intensity of natural flooding events.	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

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

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

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

Appendix D. Sources of information

D.1. GIS datasets

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

- Cadastre (Polygon) (LGATE-217)
- Clearing Instruments Proposals (Areas Applied to Clear) (DWER-075)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)

- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)
- DBCA Fire History (DBCA-060)
- EPA Redbook Recommended Conservation Reserves 1976-1991 (DBCA-029)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Native Title (Determination) (LGATE-066)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Rivers (DWER-036)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Townsites (LGATE-248)
- WA Now Aerial Imagery

Restricted GIS Databases used:

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

D.2. References

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4. Glossary

Acronyms:

BC Act	*Biodiversity Conservation Act 2016,* Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety (now DMPE)
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DMPE)
DMP	Department of Mines and Petroleum, Western Australia (now DMPE)
DMPE	Department of Mines, Petroleum and Exploration
DoEE	Department of the Environment and Energy (now DCCEEW)
DoW	Department of Water, Western Australia (now DWER)
DPaW	Department of Parks and Wildlife, Western Australia (now DBCA)
DPIRD	Department of Primary Industries and Regional Development, Western Australia
DPLH	Department of Planning, Lands and Heritage, Western Australia
DRF	Declared Rare Flora (now known as Threatened Flora)
DWER	Department of Water and Environmental Regulation, Western Australia
EP Act	*Environmental Protection Act 1986*, Western Australia
EPA	Environmental Protection Authority, Western Australia
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth Act)
GIS	Geographical Information System
ha	Hectare (10,000 square metres)
IBRA	Interim Biogeographic Regionalisation for Australia
IUCN	International Union for the Conservation of Nature and Natural Resources – commonly known as the World Conservation Union
PEC	Priority Ecological Community, Western Australia
RIWI Act	*Rights in Water and Irrigation Act 1914*, Western Australia
TEC	Threatened Ecological Community

Definitions:

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

Threatened species

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

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

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

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

CR **Critically endangered species**

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

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

EN **Endangered species**

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

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

VU **Vulnerable species**

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

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

Extinct species

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

EX **Extinct species**

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

EW **Extinct in the wild species**

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

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

Specially protected species

SP **Specially protected species**

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

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

MI **Migratory species**

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

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

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

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

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

OS **Other specially protected species**

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

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

Priority species

P **Priority species**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(d) Other species in need of monitoring.

Principles for clearing native vegetation:

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

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

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

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

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

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

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

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

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

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