Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9736/1
Permit type:	Purpose permit
Applicant name:	Department of Water and Environmental Regulation
Application received:	12 May 2022
Application area:	0.1 hectares of native vegetation within a larger footprint of 7.23 hectares
Purpose of clearing:	To provide safe access for drilling crews and the storage of equipment and machinery
Method of clearing:	Mechanical clearing
Property:	Lot 51 on Deposited Plan 91839 (Crown Reserve 41648) and Lot 40 on Deposited Plan 238420
Location (LGA area/s):	Shire of Broome
Localities (suburb/s):	Eighty Mile Beach

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5). The application is to selectively clear native vegetation along existing tracks and on proposed areas for safe access of drilling crew and for storage purpose (DWER, 2022a).

The proposed drilling program is part of the State Groundwater Investigation Program – La Grange Groundwater Dependent Ecosystem (GDE) project. The drilling, construction and monitoring of boreholes is intended for the characterisation of the aquifers around the GDEs to better understand GDE reliance on local and/or regional groundwater flows, and monitor for potential impacts from regional abstraction (DWER, 2022c). Ultimately the objective of the project is to better inform groundwater allocation planning within the Canning Basin in the La Grange area (DWER, 2022c).

1.3. Decision on application

Decision:	Granted
Decision date:	7 September 2022
Decision area:	0.1 hectares of native vegetation within a larger footprint of 7.23 hectares, as depicted in Section 1.5, below.

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 Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix 0), the clearing principles set out in Schedule 5 of the EP Act (see 0), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The Delegated Officer also took into consideration the importance of better understanding of the groundwater in the Kimberley and Pilbara as it supports unique ecosystems of high cultural and ecological value and is critical for industry and agriculture.

The Delegated Officer has determined that the proposed clearing of 0.1 hectares of native vegetation, is unlikely to result in significant residual environmental impacts.

However, the proposed clearing may result in the following:

- the potential introduction and spread of weeds into adjacent vegetation
- impacts to terrestrial fauna should they occur within the application area at the time of clearing, noting they may periodically utilise the site.

After considering the available information, the Delegated Officer determined that the following requirements will be conditioned on the clearing permit to manage and address the potential impacts of clearing:

- avoid, minimise to reduce the impacts and extent of clearing
- Take hygiene steps to minimise the risk of the introduction and spread of weeds
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity

The Delegated Officer considered that the impacts of the proposed clearing are unlikely to have any long-term adverse impacts on the environmental values in the local area and that the above mentioned management practices will adequately mitigate any potential impacts.

1.5. Site map

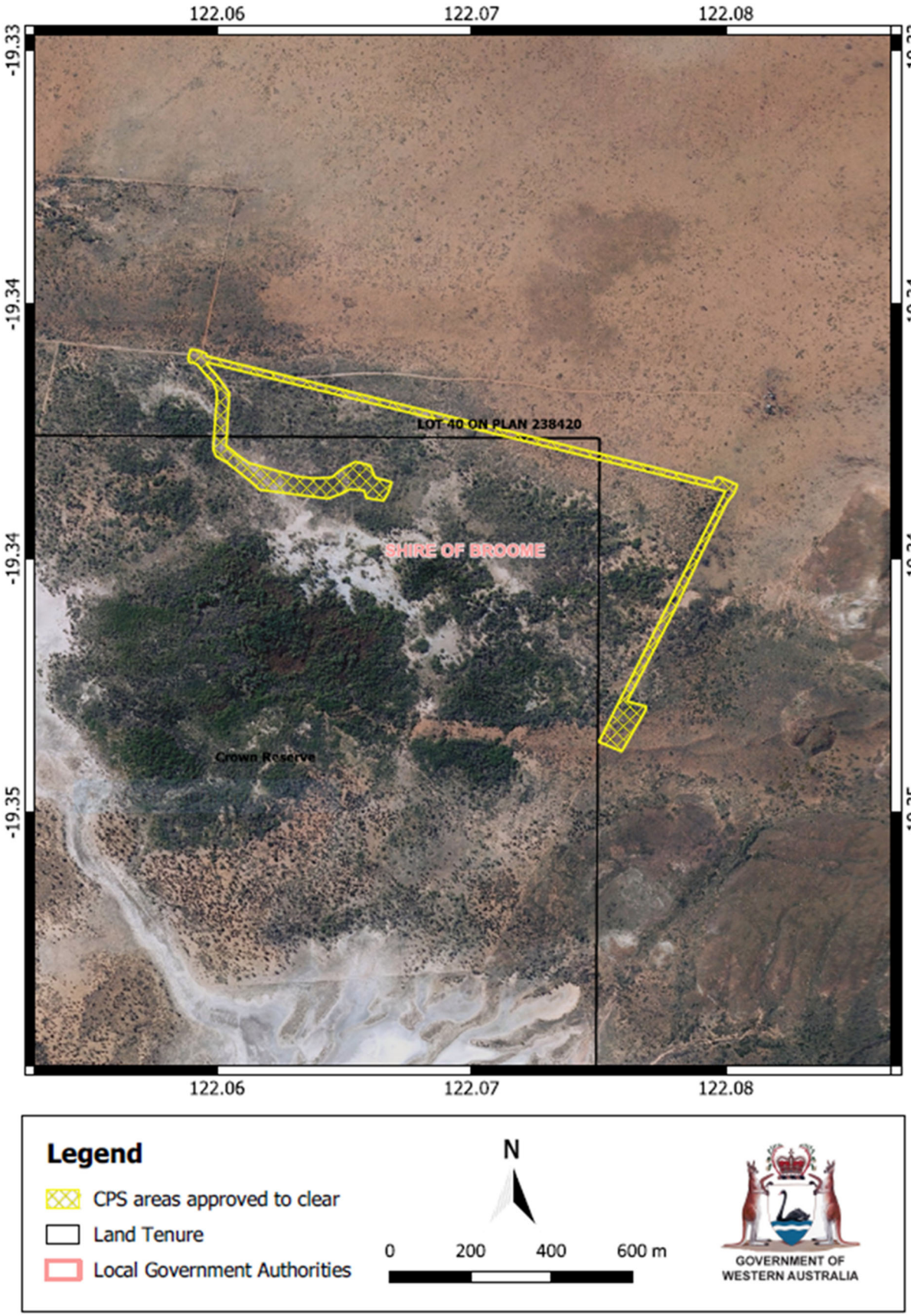

Figure 1 Map of the application area

The area cross-hatched yellow indicate the area authorised to be cleared 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)

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The proposed clearing locations are close to groundwater dependent ecosystems, which are also culturally significant. To protect surface and groundwater resources and the surrounding vegetation, the water resource science team will minimise clearing as much as practical at the drill sites. Sonic drilling, which does not use muds, will be utilised resulting in a reduced risk of any contaminates entering the environment. Most of the drill sites and tracks were selected to minimise vegetation clearing (DWER, 2022c).

Comments, supporting documents, and the photographs (see 0 and E) submitted by the applicant, demonstrated that the area chosen for proposed clearing is an area previously cleared and all vegetation clearing will be minimized by using existing tracks and / or any pre-existing naturally cleared areas to minimize the amount of clearing required.

Some widening of existing tracks may be required, particularly around corners, this will be limited to a maximum of a 3 metre wide track. A 40 metre wide corridor has been applied for in the permit along tracks and at drilling pads to make sure that the clearing permit covers existing tracks that have been sighted from satellite imagery. The corridor is intended to ensure that minimum vegetation is cleared by allowing travel and track maintenance in already clear areas. Alternative site locations have been considered however, due to the required monitoring, the bores need to be close to the natural groundwater hollows which are present on the Roebuck Plains.

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 (see 0 B) identified the impacts of the proposed clearing may pose a risk to the environmental values of biological diversity, fauna, priority ecological communities (PECs) and adjacent natural ground water hollow, and that these required further consideration. 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. The local area is defined as within a radius of 50 kilometres of the application area.

3.2.1. Environmental value: biological values (fauna)– Clearing Principles (b)

Fauna Habitat

The following conservation significant fauna species (state listing shown below) have been identified as potentially occurring within the application area:

- Greater bilby (*Macrotis lagotis*) (vulnerable)
- Spectacled hare-wallaby (mainland) (*Lagorchestes conspicillatus leichardti*) (priority four)
- North-western free-tailed bat (*Mormopterus cobourgianus*) (priority one)
- Dampierland plain slider (*Lerista separanda*) (priority two)
- Northern marsupial mole (*Notoryctes caurinus*) (priority four)

Greater bilby

The greater bilby is known from numerous records within the local area, the closest of which is 20 kilometres from the application area. Greater bilby largely occupies three major vegetation types; open tussock grassland on uplands and hills, mulga woodland or shrubland growing on ridges and rises, and hummock grassland in plains and alluvial areas (Department of the Environment and Energy, 2016). The distribution of the greater bilby is highly fragmented in Western Australia (Pavey, 2006).

While the closest record of Macrotis lagotis (bilby) from the application area is 20 kilometres, it may transiently occur on site given the proximity of known records, high mobility of the species and habitat suitability of the application area. Given the small area proposed to be cleared and that majority of the application area has been disturbed by existing tracks, it is not considered for bilby burrows to be present.

Spectacled hare-wallaby

The spectacled hare-wallaby has two records within the local area of which the closest is 44 kilometres from the application area. This species exists in patchily distributed populations within the Pilbara and Kimberley regions (Winter et al., 2016). This species occupies a wide variety of habitat types including open forests, open woodland, tall shrublands, tussock grasslands and hummock grasslands. In the drier southern parts of its range (Western Australia) it commonly occupies spinifex (*Triodia* sp.) sandplains interspersed with low shrubs and a diversity of soft grasses, sedges, or forb species (Winter et al., 2016).

While this species has very few and historical records, it may transiently occur on site given the proximity of known records, high mobility of the species and habitat suitability of the application area.

Northern marsupial mole, kakarratul

The kakarratul occurs in the Great Sandy, Little Sandy and the northern Gibson deserts of Western Australia, and probably in the western Tanami Desert of Western Australia and western Northern Territory. Its distribution follows that of the sand dune habitat it prefers. The kakarratul avoids developments especially mines, roads and railways as intense or frequent underground sounds may interfere with foraging and/or reproduction. Mole signs are less common where there is low dune connectivity, and isolated areas of dunes may not be inhabited (DoE, 2022). The closest record is approximately 50 kilometres from the application area dated back in 2014.

Considering the species has very few and distant records, it is unlikely that the proposed clearing will impact on significant habitat for these species.

Dampierland plain slider

This species is from the Dampierland Bioregion and is poorly known. According to the available databases, the closest record of Dampeirland plain slider is approximately 28 kilometres from the site. The Dampierland plain slider has two records, both in Gingerah, and dating back to 1984.

Noting the limited historical records within the local area, it is unlikely that the proposed clearing will impact on significant habitat for these species.

North-western free-tailed bat

The distribution of the species is extensive, occurring in coastal areas from Exmouth to Broome, and in the Northern Territory and Queensland. The species roosts in small spouts and dead upper branches of mangroves from where they disperse (Reardon, et al., 2014). Its closest record was approximately 50 kilometres from the application area. Considering the distance of the species from the application area and its habitat suitability, it is unlikely that the proposed clearing will impact on significant habitat for these species.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to impact on significant habitat for any conservation listed fauna species. However, the proposed clearing may result in fauna fatalities should they occur within the application area at the time of clearing. Impacts to fauna are not expected to be significant given the small extent of vegetation to be cleared within an extensive local and regional extent and the fact that the clearing areas are concentrated along existing tracks. Conducting clearing in a slow, progressive manner from one direction to the other will allow any fauna present to move into adjacent native vegetation ahead of the clearing activity.

Outcome

To address the above impacts and reduce any potential risks to fauna, the clearing permit contains conditions that require the applicant to undertake the following management measures:

- slow, directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity.

3.2.2. Environmental value: Wetlands – Clearing Principle (f)

Sections of the application area occur adjacent to riparian vegetation that surrounds Malupirti Springs, a groundwater hollow.

Noting the small extent of the proposed clearing along existing cleared tracks, the proposed clearing is not likely to have a significant impact on vegetation growing in association with this wetland. Adjacent vegetation may be susceptible to weed invasion during clearing activities and clearing activities may lead to short term sediment release impacting adjacent environmental values.

Outcome

Based on the above assessment, and the avoidance and mitigation measures proposed (Section 3.1), the Delegated Officer has determined that subject to conditions, the proposed clearing is not considered to significantly impact on this environmental value.

To mitigate potential impacts from clearing, the following conditions will be added to the permit:

- Weed management measures to mitigate impacts to adjacent groundwater hollow vegetation.

3.3. Relevant planning instruments and other matters

The Shire of Broome advised that local government approvals are not required, and that the proposed clearing is consistent with the Shire's Local Planning Scheme. The Shire did not have any objections to the proposed clearing.

Other relevant authorisations required for the proposed land use include a Licence to abstract water under the *Rights in Water and Irrigation Act 1914*. Under the Rights in Water and Irrigation Exemption (Section 26C) Order 2012, the proposed construction of relevant boreholes is exempt from licensing.

Two Aboriginal sites of significance have been mapped within the application area Karajarri People (Area A) and Karajarri People (Area B). It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Identified native title holders/claimants were notified and invited to comment on the clearing permit application CPS 9736/1, in accordance with the *Native Title Act 1993* (Cth) (the NT Act) and section 51E(4) of the EP Act. No response was received.

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is a 0.1 hectare part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is surrounded by vast area of vegetation.

Characteristic	Details
	Aerial imagery indicates the local area (50-kilometre radius from the centre of the area proposed to be cleared) retains approximately 99 per cent of the original native vegetation cover.
Ecological linkage	No ecological linkages are mapped within the application area, no significant linkages are considered to exist within the application area as the local area Is highly vegetated.
Conservation areas	The nearest conservation area to the application area is the Walyarta Conservation Park, located approximately 40 kilometres from the application area.
Vegetation description	Available databases indicate the vegetation within the proposed clearing area consists of Beard vegetation association 713, which is described as Hummock grasslands, open low tree steppe; bloodwood (*Eucalyptus dichromophloia)* over soft spinifex soft spinifex / Hummock grasslands, open low tree steppe; desert walnut over soft spinifex between sandridges (Shepherd et al, 2001). Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of Hummock grasslands on open low tree steppe. Representative photos are available in E. The mapped vegetation type retains approximately 100 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Excellent to Good condition (Trudgen, 1991) described as: • Excellent: Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement. • Good: More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure. The full Trudgen (1991) condition rating scale is provided in Appendix C. Representative photos are available in **Error! Reference source not found.**.
Climate and landform	The mean annual rainfall recorded in the area is 623 millimetres. The application area has a relatively flat landscape, approximately 40 metres above sea level.
Soil description	The soil is mapped as Quaternary aeolian sands in extensive dune fields of linear dunes supporting spinifex grasslands with scattered shrubs and trees.
Land degradation risk	The mapped soil type shows some susceptibility to wind erosion immediately after burning but stabilise rapidly after rain. Dune crests and flanks are moderately to highly susceptible to erosion after any disturbance that removes vegetation. Approximately 94% of map unit has a high subsurface acidification risk (DPIRD, 2019).
Waterbodies	The desktop assessment and aerial imagery indicated that no watercourses or wetlands intersect the application area. However, the proposed clearing is adjacent to Malupirti Springs (also known as Munro Springs), a natural groundwater hollow.
Hydrogeography	The application area is within the Canning-Kimberley Groundwater Area proclaimed under the *Rights in Water and Irrigation Act* 1914. The mapped groundwater salinity within the application area is <500 milligrams per litre.
Flora	According to available databases, seven species of conservation significant flora have been recorded within the local area, one of which is threatened. The nearest flora record is the threatened species, *Seringia exastia* (T), found approximately 14 kilometres from the application area.

Characteristic	Details
	A likelihood of analysis indicated that based on habitat suitability, historical nature of records and proximity of the clearing area to known records, it is unlikely that these species would occur within the application areas. Recent advice from the Department of Biodiversity, Conservation and Attractions (DBCA) indicated that a nomination to delist S. exastia due to no plausible significant threats to the species has been prepared and considered by the WA Threatened Species Scientific Committee (TSSC). DBCA anticipates that at the next TSSC meeting, recommendations will be made to the Minister to delist the species.
Ecological communities	There are no mapped Threatened Ecological Communities within the 50-kilometre radius of the application area. However, two Priority (P3) Ecological Communities were found in the local area: • Roebuck Land System - 24 kilometres from the application area • Parda Land System - 37 kilometres from the application area
Fauna	During the desktop assessment, five conservation significant fauna species were identified within the 50-kilometre radius of the application area. The closest record was of vulnerable species *Macrotis lagotis* (bilby), approximately 20 kilometres from the application area.

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The proposed clearing area is not likely to contain locally or regionally significant flora or assemblages of plants and animals. The application area: • has been confined to previously disturbed and open areas; • provides habitat for conservation significant fauna which has not been deemed significant in the local context; • does not resemble habitat for threatened or priority flora; and • does not contain native vegetation which represents a TEC or PEC.	Not likely to be at variance	No
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The application area may provide habitat for mobile fauna species such as the Bilby as they move across the landscape. While the closest record of *Macrotis lagotis* (bilby) from the application area is 20 kilometres, it may transiently occur on site given the proximity of known records, high mobility of the species and habitat suitability of the application area.	Not likely to be at variance	Yes Refer to section 3.2.2, above.
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act. Noting previous disturbances of clearing and tracks the area proposed to be cleared is unlikely to contain habitat for threatened flora species.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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: The area proposed to be cleared does not contain species that can indicate a threatened ecological community.	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 mapped vegetation type is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not likely to be at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: No water courses or wetlands are recorded within the application area. However, the application area is adjacent to a natural spring. Given the minor short-term impacts of the clearing, the proposed clearing is unlikely to significantly impact on- or off-site hydrology and riparian vegetation.	May be at variance	Yes Refer to section 3.2.2, above.
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: Noting the extent of the application area (0.1 hectares of native vegetation within a larger footprint of 7.23 hectares is), the proposed clearing is not likely to cause appreciable land degradation through wind erosion, water erosion or sedimentation.	Not likely to be at variance	No
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Noting the extent of the application area (0.1 hectares of native vegetation within a larger footprint of 7.23 hectares is), the proposed clearing is not likely to cause deterioration of surface or ground water quality.	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: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Noting the extent of the application area (0.1 hectares of native vegetation within a larger footprint of 7.23 hectares is), the proposed clearing is not likely	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
to contribute to waterlogging.		

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. Proposed drilling sites

Figure 2. Locations of the bore pads and access tracks (DWER, 2022)

The proposed drilling sites are within 200 kilometres of Broome (Figure 1) at Malupirti Springs. An area of 200 m2 to 900 m2 will be required around each bore site. Where possible clearing of vegetation will be avoided by using non-vegetated areas. Details of the maximum potential clearing areas associated with the proposed bore sites are provided in **Error! Reference source not found.** below (DWER, 2022).

Table 1: Potential clearing areas associated with proposed bore sites

Proposed Site	**Estimated clearing area for pads (m^2)^**	**Estimated clearing for tracks (m^2)**	**Estimated clearing area for tracks and pads (m^2)***	**Comments**
MAL01	200	200	400	Approximate drilling site location. Most likely no clearing required.
MAL02	200	400	600	Clearing only required at pad and possibly around corner of track.
Total (m^2)	**400**	600	1000	
Total (ha)	**0.04**	0.06	**0.1**	

**Clearing is estimated from aerial photos as a percentage of existing tracks that may require maintenance, the resulting length is multiplied by a 3 m wide track for the estimated area. As most tracks are probably accessible on the ground, the clearing area is likely to be much less*

^The maximum pad size has been estimated as 10 m x 20 m however these are expected to be smaller and vegetation clearing will be avoided as much as possible

Appendix E. Photographs of vegetation near drilling sites

Photograph 1: Site MAL01, probable drilling pad

Photograph 2: Site MAL01, support trucks will drive over this vegetation, no clearing required but driving will likely create a track

Photograph 3: Site MAL02, drilling pad will probably push vegetation down with tracks of rig

Photograph 4: Shows track near Site MAL02 towards drilling pad. Demonstrates condition of existing tracks, unlikely to require any clearing

Appendix F. Sources of information

F.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- 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)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

F.2. References

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Department of Water and Environmental Regulation (2022b) *Supporting information for clearing permit application CPS 9736/1,* received 25 May 2022 (DWER Ref: DWERDT608166).

Department of Water and Environmental Regulations (2022c) *Clearing permit application CPS 9698/1*, received 12 April 2022 (DWER Ref: DWERVT9998).

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

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