

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	6643/5
Permit type:	Purpose Permit
Applicant name:	Origin Energy Resources Ltd
Application received:	6 December 2022
Application area:	45.35 hectares
Purpose of clearing:	Petroleum Production, Associated Infrastructure and Decommissioning
Method of clearing:	Mechanical Removal
Tenure:	Pipeline Licence PL 18 Production Licence L1, Production Licence L11
Location (LGA area/s):	Shire of Irwin
Colloquial name:	Beharra Springs Gas Facility Project

1.2. Description of clearing activities

Origin Energy Resources Ltd proposes to clear up to 45.35 hectares of native vegetation within a boundary of approximately 46.348 hectares, for the purpose of petroleum production, associated infrastructure and decommissioning. The project is located approximately 30 kilometres south-east of Dongara, within the Shire of Irwin.

The amendment application is to allow for decommissioning of a well.

Clearing permit CPS 6643/1 was granted by the Department of Mines and Petroleum (DMP) (now Department of Mines, Industry Regulation and Safety (DMIRS)) on 3 September 2015 and authorised the clearing of 7.577 hectares of native vegetation within a boundary of 7.577 hectares.

CPS 6643/1 was amended on 28 July 2016 for the purpose of increasing the amount of clearing authorised to 25 hectares and increasing the permit boundary to approximately 31.35 hectares.

On 10 July 2020, Origin Energy Resources Ltd applied to amend CPS 6643/2, however due to administrative issues this application was withdrawn.

CPS 6643/2 was amended on 15 October 2020, for the purpose of amalgamating permits, increasing the amount of approved clearing to 45.35 hectares, and increasing the permit boundary to 45.5 hectares.

On 6 December 2022, Origin Energy Resources Ltd applied to amend CPS 6643/4 to increase the permit boundary by 0.998 hectares and update the clearing purpose to include decommissioning.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	22 June 2022
Decision area:	45.35 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51KA(1) of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 6 December 2022. DMIRS advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix D), the clearing principles set out in Schedule 5 of the EP Act (Glossary), 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.

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 not likely to have long-term adverse impacts on fauna, remnant vegetation and land degradation and the impacts of the 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 steps to minimise the risk of the introduction and spread of weeds.

The assessment has not changed since the assessment for CPS 6643/4. The Delegated Officer determined that the proposed increase in permit boundary and updating of the clearing purpose is not likely to lead to an unacceptable risk to environmental values.

1.5. Site map

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

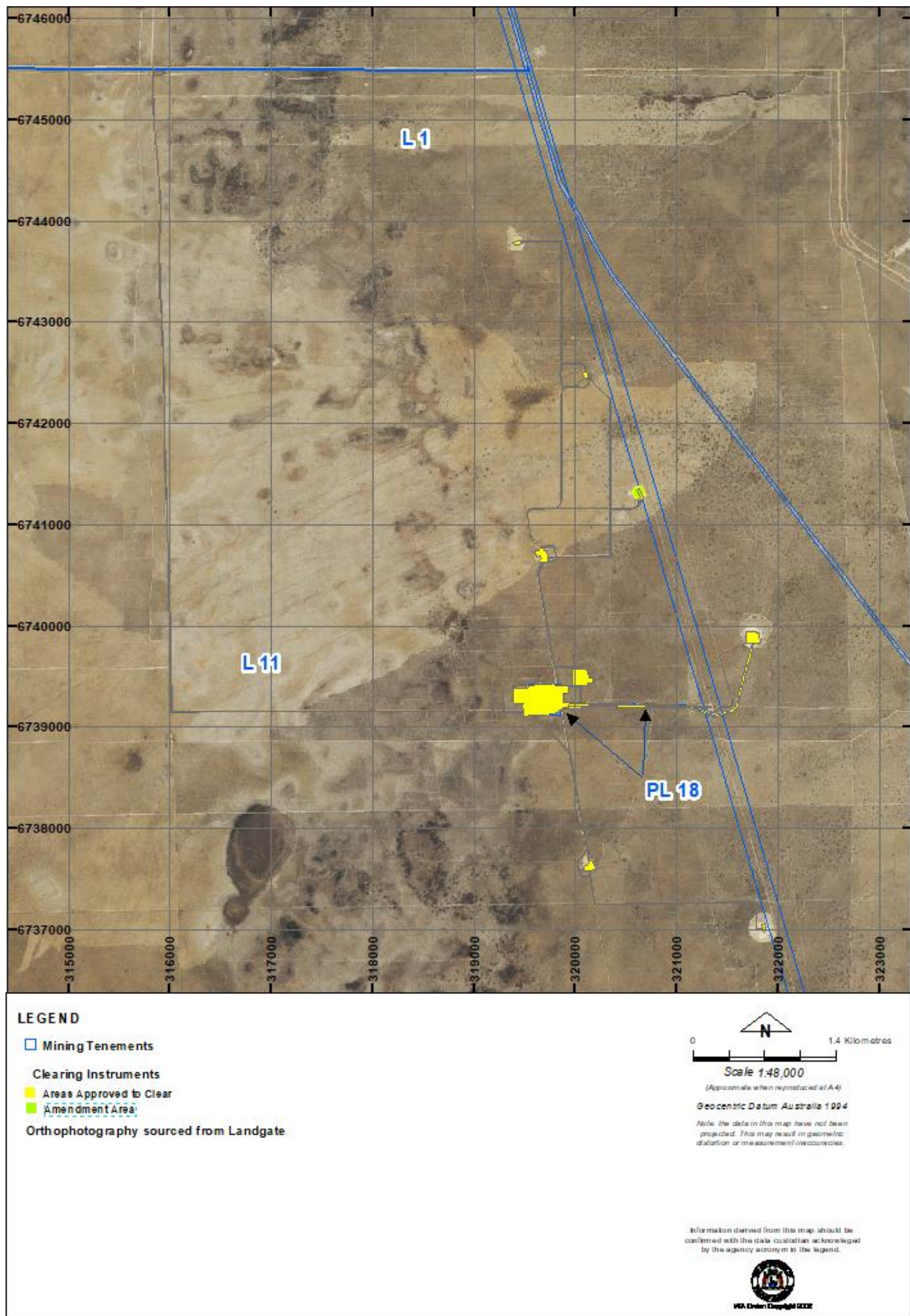


Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under granted clearing permit 6643/4. The green area is the proposed amendment area.

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)
- *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 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

Consideration was made in regards to conducting decommissioning activities without a rig. However, safety and operational requirements have deemed this untenable. DMIRS have also advised they will not approve a completely rigless operation.

3.2. Assessment of impacts on environmental values

The proposed amendment is to include an area (0.998 hectares at Beharra Springs 4) previously cleared to be part of the clearing permit boundary with no required additional clearing footprint. The amendment area was the historic maintenance area for a petroleum production well lease. The entire well pad and access track area (including existing disturbance and proposed regrowth disturbance) will be rehabilitated following decommissioning activities (Beach, 2022). Once complete, arrangements for rehabilitation of the well sites will be made in accordance with progressive rehabilitation requirements of the Beharra Springs Petroleum Production Operations Environment Plan (CDN/ID 3677584) and the Perth Basin Rehabilitation Monitoring Procedure (CDN/ID 18733033) (Beach, 2022).

Beach Energy Limited (the permit holder and owner of Origin Energy Resources Ltd) commissioned Mattiske Consulting (2018) to undertake a targeted flora survey for Threatened and Priority flora species in October 2018. No Threatened flora, Threatened Ecological Communities, or Priority Ecological Communities have been identified within the amended application area.

Three Priority flora species, *Hemiandra* sp. Eneabba (H. Demarz 3687) (Priority 3), *Banksia elegans* (Priority 4) and *Schoenus griffinianus* (Priority 4) were identified during the survey (Mattiske, 2018). *Hemiandra* sp. Eneabba (H. Demarz 3687) was found at a single locality consisting of one plant, *Banksia elegans* (P4) was found from 65 localities totaling 123 plants and *Schoenus griffinianus* was recorded from 35 locations totaling 208 plants. Each of these localities are outside the amendment area (Mattiske, 2018; GIS Database). These species have been recorded previously in the Beharra Springs facility area, and in the surrounding area (Mattiske, 2018). The Western Australia Herbarium also has numerous records of the above species, with 34 recorded populations for *Hemiandra* sp. Eneabba (H. Demarz 3687), 44 records for *Banksia elegans*, and 42 records for *Schoenus griffinianus* (Western Australian Herbarium, 1998-). None of these species were identified within the amendment area. Based on the above, these species are not restricted to the current survey area and the proposed clearing of these species in the broader application area is not likely to result in a significant impact to the population found within the Beharra Springs area (Mattiske, 2018).

Given the previous clearing activities, the amendment area is not likely to contain any significant habitat for native fauna species. Aerial imagery of the amendment area suggests that the faunal habitats are similar to that within the previous permit boundary. The amendment area does not appear to contain significant faunal habitats such as permanent waterbodies, caves or gully habitats (GIS Database). Given the relatively small size of the application area and its lack of notable habitat features, it is unlikely to be considered significant habitat for fauna indigenous to Western Australia.

There are no watercourses within the additional area and the proposed clearing is not likely to impact on surface or groundwater quality (GIS Database).

The additional area is not within any conservation areas and is not part of a remnant forming an ecological linkage to conservation estate (GIS Database).

The proposed amendment is unlikely to result in any significant change to the environmental impacts of the proposed clearing. The assessment against the clearing principles remains consistent with the assessment contained in decision reports CPS 6643/1, CPS 6643/2 and CPS 6643/4.

3.3. Relevant planning instruments and other matters

The amendment application was advertised on 31 January 2023 by the Department of Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2023). 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, 2023). 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:

- An Environment Plan approved under the *Petroleum and Geothermal Energy Resources Act 1967* or the *Petroleum Pipelines Act 1969*.

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 project is located approximately 30 kilometres south-east of Dongara, within the Shire of Irwin. The area proposed to be cleared is an isolated patch of native vegetation in the intensive land use zone of Western Australia. The broader application area is surrounded by a mix of native vegetation pastoral land (GIS Database).
Ecological linkage	According to available databases, the application area does not contain any known or mapped ecological linkages (GIS Database).
Conservation areas	The western most extent of the broader application area is located within the Yandanogo Nature Reserve (GIS Database). However the amendment area is located approximately 4.5 kilometres east of the Yandanogo Nature Reserve (GIS Database).
Vegetation description	The vegetation of the application area is broadly mapped as the following Beard vegetation association: 378: Shrublands; scrub-heath with scattered <i>Banksia</i> spp, <i>Eucalyptus tottiana</i> & <i>Xylomelum angustifolium</i> on deep sandy flats in the Geraldton Sandplain Region (GIS Database). Origin Energy Resources Ltd (2015) consolidated existing mapped flora and vegetation surveys within the local region and mapped three vegetation types within the application area: - H1: Low Heath of mixed Proteaceous and Myrtaceous species on yellow-brown sand on midslopes; - H2: Heath of <i>Banksia hookeriana</i> over Low Heath of mixed species on yellow sand upperslopes; and - D1: Disturbed vegetation on firebreak.
Vegetation condition	The vegetation within the application area are in Pristine to Completely Degraded (Keighery, 1994) condition (Mattiske, 2018). The full Keighery (1994) condition rating scale is provided in Appendix C.
Climate and landform	The application area is mapped within elevations of 30 to 60 metres AHD. The annual average rainfall (Dongara) is 440.9 millimetres (BoM, 2023).
Soil description and Land degradation risk	The soil is mapped as Ca27 which is described as "Sandy plains with occasional pockets of sand dunes, a few small swamps, and stream courses: chief soils are leached sands (Uc2.21), often with a sandy clay substrate between 3 and 6 ft in depth (DPIRD, 2023).
Waterbodies	The desktop assessment and aerial imagery indicated that there are no watercourses or wetlands within the application area (GIS Database).
Hydrogeography	The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database).
Flora	A total of 87 significant flora taxa were identified as potentially occurring within a 20 kilometre radius of the application area (GIS Database). Three Priority flora species, <i>Hemiandra</i> sp. Eneabba (H. Demarz 3687) (Priority 3), <i>Banksia elegans</i> (Priority 4) and <i>Schoenus griffinianus</i> (Priority 4) were identified during the survey undertaken by Mattiske (2018), however is outside the amendment area.
Ecological communities	There are no Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) located within the application area (GIS Database). The nearest known TEC, Ferricrete floristic community (Rocky Springs type) is located approximately 22 kilometres south, south-east of the application area (GIS Database).
Fauna	There are records of 17 conservation significant fauna recorded within a 20 kilometre radius of the application area (GIS Database). The fauna habitat present within the amendment area is common and widespread (Mattiske, 2018).

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		

Assessment against the clearing principles	Variance level	Is further consideration required?
<u>Principle (a):</u> <i>"Native vegetation should not be cleared if it comprises a high level of biodiversity."</i> <u>Assessment:</u> The additional area proposed to be cleared contains similar vegetation as the previous amendment boundary (GIS Database). As the amendment is for the maintenance/removal of petroleum infrastructure, the proposed clearing consists of mostly previously cleared areas, it is considered unlikely that the proposed clearing will have an impact on biodiversity values.	Not likely to be at variance	Yes <i>Refer to Section 3.2, above.</i>
<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> <u>Assessment:</u> Given the previous clearing activities, the permit area is not likely to contain any significant habitat for native fauna species. Aerial imagery of the amendment area suggests that the faunal habitats are similar to that within the previous permit boundary. The amendment area does not appear to contain significant faunal habitats such as permanent waterbodies, caves or gully habitats (GIS Database).	Not likely to be at variance	No
<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> <u>Assessment:</u> The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act (Mattiske, 2018; GIS Database).	Not likely to be at variance	No
<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> <u>Assessment:</u> There are no known Threatened Ecological Communities (TECs) located within or in close proximity to the amendment areas (GIS Database). A flora and vegetation survey of the amendment area did not identify any TECs (Mattiske, 2018).	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<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> <u>Assessment:</u> The extent of the mapped vegetation type is consistent with the national objectives and targets for biodiversity conservation in Australia. The application area is broadly mapped as Beard vegetation association 378 (GIS Database). This vegetation association has not been extensively cleared as over 60% of the pre-European extent of this vegetation association remains uncleared at both the state and bioregional level (Government of Western Australia, 2019). 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
<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> <u>Assessment:</u> The western most extent of the broader application area is located within the Yardanogo Nature Reserve (GIS Database). Therefore the proposed clearing has the potential to have an impact on the environmental values of the conservation area. However, it is considered that the clearing for the proposed amendment to take place is low impact and of a small scale due to being for the rehabilitation / removal / maintenance of petroleum production infrastructure, and subsequently will not significantly impact on the environmental values of the Yardanogo Nature Reserve.	Not likely to be at variance	No
Environmental value: land and water resources		

Assessment against the clearing principles	Variance level	Is further consideration required?
<u>Principle (f):</u> "Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland." <u>Assessment:</u> Given no watercourses or wetlands are recorded within the application area, the proposed clearing unlikely to impact hydrology and water quality.	Not likely to be at variance	No
<u>Principle (g):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation." <u>Assessment:</u> The mapped soils are generally not susceptible to wind and water erosion. Noting the location of the application area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No
<u>Principle (i):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water." <u>Assessment:</u> Given no water courses / wetlands / Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.	Not likely to be at variance	No
<u>Principle (j):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding." <u>Assessment:</u> 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. Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.	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 Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the 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):

- 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)
- 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 – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- IBRA Vegetation Statistics
- Native Title (ILUA) (LGATE-067)
- Pre-European Vegetation Statistics
- Interim Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping – Best Available (DPIRD-027)
- Soil Landscape Mapping – Rangelands (DPIRD-064)
- WA Now Aerial Imagery

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

- Beach (2022) Beharra Springs Gas Facility Project - NVCP Amendment Application (CPS 6643/4). Supporting document prepared by Beach Energy Ltd, November 2022.
- Bureau of Meteorology (BoM) (2023) Bureau of Meteorology Website – Climate Data Online, Dongara. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/> (Accessed 31 May 2023).
- Department of Planning, Lands and Heritage (DPLH) (2023) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 29 May 2023).
- Department of Primary Industries and Regional Development (DPIRD) (2023) 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 30 May 2023).
- 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>
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske (2018) Flora survey for the Beharra Springs Clearing Permit (CPS 4607). Supporting document prepared for Beach Energy Ltd by Mattiske Consulting, October 2018.
- Western Australian Herbarium (1998-) FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions, Western Australia. <https://florabase.dpaw.wa.gov.au/> (Accessed 30 May 2023).

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
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia
DMP	Department of Mines and Petroleum, Western Australia (now DMIRS)
DoEE	Department of the Environment and Energy (now 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.