



Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	5310/3
Permit type:	Area Permit
Applicant name:	Dampier Salt Limited
Application received:	15 December 2022
Application area:	37.07 hectares
Purpose of clearing:	Borrow Pits
Method of clearing:	Mechanical Removal
Tenure:	<i>Evaporites (Lake MacLeod) Agreement Act 1967, Mining Lease 245SA (AML70/245)</i>
Location (LGA area/s):	Shire of Carnarvon
Colloquial name:	Lake MacLeod Pits Project

1.2. Description of clearing activities

Dampier Salt Limited proposes to clear up to 37.07 hectares of native vegetation within a boundary of approximately 37.07 hectares, for the purpose of borrow pits. The project is located approximately 50 kilometres north, north-west of Carnarvon, within the Shire of Carnarvon.

The application is to allow for the expansion of salt operations near Lake MacLeod which includes clearing and excavating of Pits 50 to 53 to provide borrow materials to reburish an old crystaliser, created additional crystallisers and for levee repairs (Outback Ecology, 2012).

Clearing permit CPS 8310/1 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 22 November 2012 and was valid from 15 December 2012 to 15 December 2022. This permit authorised the clearing of up to 37.07 hectares of native vegetation within a boundary of 37.07 hectares.

Clearing permit CPS 8310/2 was granted by the Department of Mines and Petroleum (now the Department of Mines, Industry Regulation and Safety) on 1 February 2018 and was valid from 15 December 2012 to 15 December 2027. The permit authorised the clearing of up to 37.07 hectares of native vegetation within a boundary of approximately 37.07 hectares, for the purpose of borrow pits.

On 15 December 2022, the Permit Holder applied to amend CPS 8310/2 to extend the duration for the permit for an additional five years, and to extent the period in which clearing is authorised for an additional five years. No clearing activities have occurred under the current permit to date (Dampier Salt Limited, 2022)

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	23 February 2023
Decision area:	37.07 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Mines, Industry Regulation and Safety (DMIRS) on 15 December 2022. DMIRS advertised the application for a public comment for a period of 7 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix C), 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, proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3).

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

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 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; and
- take hygiene steps to minimise the risk of the introduction and spread of weeds.

The assessment has not changed since the assessment for CPS 8310/2. The Delegated Officer determined that the proposal to extend the duration for the permit for an additional five years, and to extend the period in which clearing is authorised for an additional five years 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.

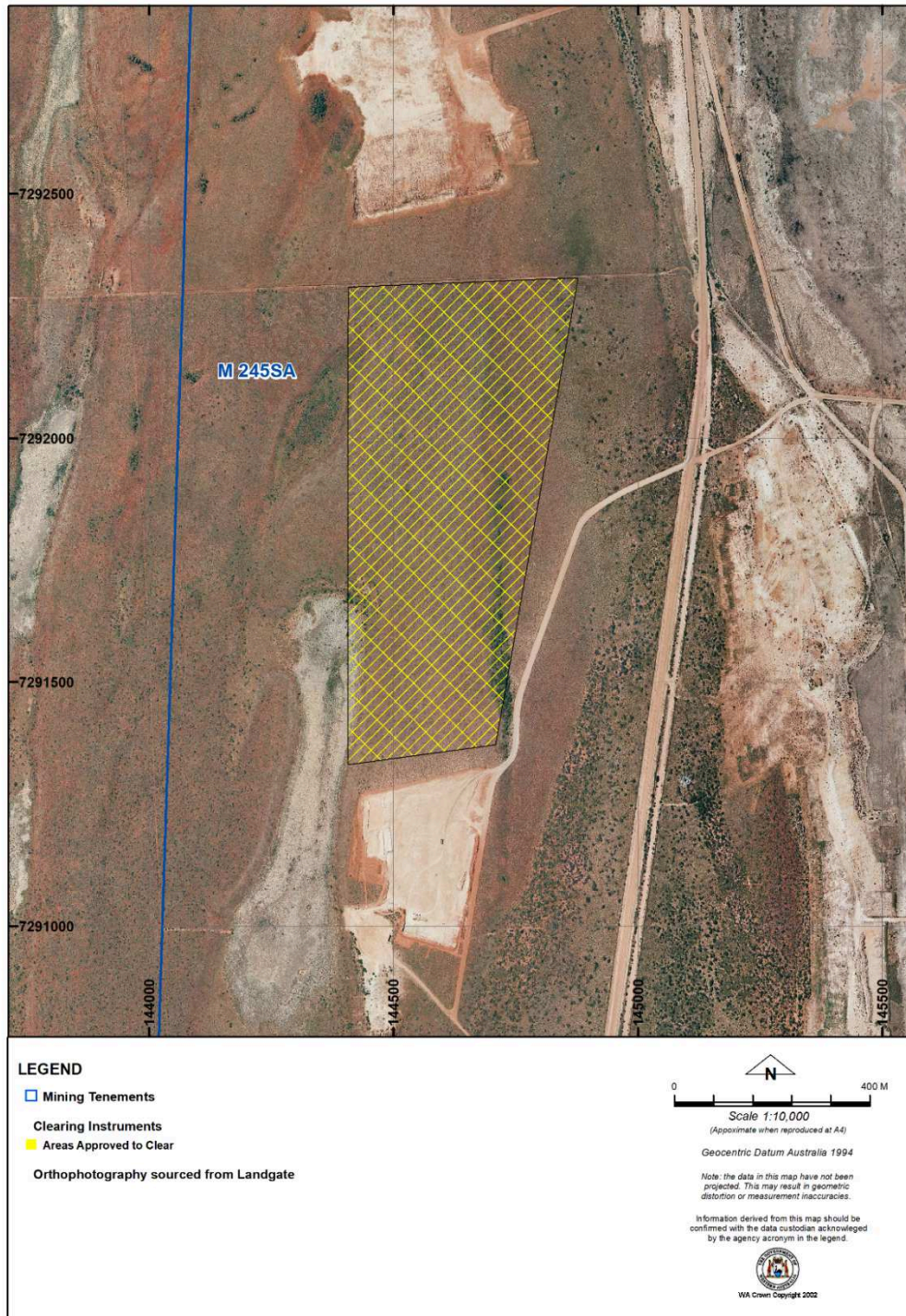


Figure 1. Map of the application area. The yellow area indicates the area within which conditional authorised clearing can occur under the granted clearing permit.

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)
- *Evaporites (Lake MacLeod) Agreement Act 1967*

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

Although no evidence of avoidance or mitigation measures was provided to support the application, the location of the application area / borrow pits are dependent on the location of suitable materials.

3.2. Assessment of impacts on environmental values

A review of current environmental information (Appendix A) reveals that the assessment against the clearing principles has not changed from the Clearing Permit Decision Report CPS 8310/2.

3.3. Relevant planning instruments and other matters

The clearing permit amendment application was advertised on 13 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 have been registered with the National Native Title Tribunal 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:

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

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is located approximately 50 kilometres east of Carnarvon, within the Shire of Carnarvon (GIS Database). The area proposed to be cleared is part of an expansive tract of native vegetation in the extensive land use zone of Western Australia. It is surrounded by similar vegetation and historical mining operations (Outback Ecology, 2012; 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 application area is not located within a conservation area (GIS Database). The nearest conservation area is the conservation reserve at Quobba Point located approximately 8 kilometres south west of the application area (GIS Database).
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation association:</p> <ul style="list-style-type: none"> 328: Saltbush and bluebush with scrub or open scrub (GIS Database). <p>A Level 1 vegetation and flora assessment of the application area conducted by Outback Ecology Services on 23 February 2012 identified the following five vegetation associations within the application area (Outback Ecology, 2012):</p> <ul style="list-style-type: none"> Vegetation Association 1: This association comprised <i>Acacia synchronicia</i> Open Shrubland over <i>Atriplex vesicaria</i> and <i>Frankenia setosa</i> Open Low Heath over *<i>Cenchrus ciliaris</i> and <i>Enneapogon caerulescens</i> Very Open Grassland. This association covered 4.7% of the study area (two hectares) and was recorded on an undulating plain in orange-brown clay over calcrete. Vegetation Association 2: This association comprised <i>Maireana polypterygia</i> and <i>Maireana</i> aff. <i>integra</i> Low Shrubland over <i>Enneapogon caerulescens</i> Grassland. This association was the most well represented (37 hectares, 82%) in the study area and was recorded on a plain in orange-brown clay over calcrete. Vegetation Association 3: This association comprised <i>Tecticornia pterygosperma</i> subsp. <i>denticulata</i> and <i>T. peltata</i> Low Shrubland over <i>Eragrostis dielsii</i> Open Grassland. This association covered 0.7 hectares (1.5%) of the study area and was recorded on a broad saline depression in light-brown sandy loam over calcrete. Vegetation Association 4: This association comprised <i>Acacia sclerosperma</i> and <i>Alectryon oleifolius</i> Open Shrubland over <i>Maireana polypterygia</i> and <i>Dissocarpus paradoxus</i> Low Shrubland. This association was recorded in a relatively small area (0.8 hectares and 1.8% of the study area) in a broad drainage line running into a saline depression. Vegetation Association 5: This association comprises <i>Alectryon oleifolius</i>, (<i>Scaevola spinescens</i>, <i>Acacia sclerosperma</i>, <i>Exocarpos aphyllus</i>) Shrubland over <i>Maireana</i> sp. and <i>M. tomentosa</i> Low Shrubland over *<i>Cenchrus ciliaris</i> Very Open Grassland. This association was recorded on orange-brown clay loam on plains that lacked rocky outcropping and covered two hectares (4.5%) of the study area. <p>Note * = Introduced species</p>
Vegetation condition	<p>The vegetation survey (Outback Ecology, 2012) indicate the vegetation within the proposed clearing area is in 'Good' (Keighery, 1994) condition, described as</p> <ul style="list-style-type: none"> 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. <p>The full Keighery (1994) condition rating scale is provided in Appendix B.</p>
Climate and landform	The Carnarvon region characterised as having a seasonal arid climate with a mean annual rainfall of 223.7 millilitres (BoM, 2023).
Soil description	<p>The soils of the application area are broadly mapped as the following soil type:</p> <ul style="list-style-type: none"> 238Wr: Warroora System. Flat to gently sloping saline alluvial plains, with minor areas of sand and limestone, supporting tall acacia shrublands and low shrublands of saltbush, bluebush and samphire (DPIRD, 2023).

Characteristic	Details
Land degradation risk	<p>The application area has been mapped as occurring on the Warroora land system (GIS Database). The Warroora land system consists of flat to gently sloping saline alluvial plains, with minor areas of sand and limestone, supporting tall acacia shrublands and low shrublands of saltbush, bluebush and samphire (Payne et al., 1987). Drainage is internal into depressions with sluggish tracts (Payne et al., 1987). It has considerable drought durability and is not usually susceptible to erosion (Payne et al., 1987).</p> <p>The application area experiences a seasonal arid climate trending towards bimodal rainfall (CALM, 2002). The majority of rainfall occurs in winter (between May and July), however, tropical cyclones, decaying cyclones or tropical cloud bands can produce heavy rainfall between January and July (Outback Ecology, 2012). The annual average rainfall for Carnarvon is 223.7 millimetres and the average annual evaporation rate for the application area is approximately 2,600 millimetres (BoM, 2023; GIS Database). The application area is relatively flat with some gradient towards Lake Macleod (Outback Ecology, 2012).</p>
Waterbodies	<p>According to available databases there is one small non-perennial lake (approximately 20.7 hectares) that intersects the south western boundary of the application area (approximately 1.4 hectares occurs within the application area) (GIS Database). Observations by Rio Tinto (RTIO, 2012) indicate the saline depression is a natural swathe which does not hold water.</p> <p>Lake Macleod is located approximately 500 metres east of the application area and occupies an area of approximately 200,000 hectares (DEC, 2009). It is a predominately dry lakebed, episodically flooded by the Lyndon and Minilya rivers, and other tributaries with freshwater inundation generally following heavy rains, particularly during the cyclone season and mid-winter (DEC, 2009). According to Outback Ecology (2012), the southern end of Lake MacLeod tends to remain dry whereas the northern end is permanently inundated with saline water, providing habitat for migratory birds and a large stand of inland mangroves. The application area is located adjacent to the southern portion of the lake and is over 45 kilometres south, south west of the permanent water areas fed by a subterranean connection to the ocean (GIS Database). At its closest point to the application area the lake is described as non-perennial (GIS Database) and is used for salt mining operations (Outback Ecology, 2012).</p>
Hydrogeography	The application area is located within the proclaimed Gascoyne groundwater area under the <i>Rights in Water and Irrigation Act 1914</i> (GIS Database).
Flora	<p>A total of 52 vascular flora species were recorded within the application area and no Threatened or Priority Flora were recorded during the vegetation survey (Outback Ecology, 2012). However, Outback Ecology (2012) did note that the survey was not conducted at an optimal time for the detection of annual priority flora species and that the application area may support two such species (<i>Chthonocephalus spathulatus</i> and <i>Chthonocephalus tomentellus</i>). According to Outback Ecology (2012), the nearest populations of these species are approximately 15 to 25 kilometres east of the application area on the eastern side of Lake Macleod. A review of nearby clearing permits show these species were not recorded during the surveys undertaken. Based on the above, it is unlikely the proposed clearing will have a significant impact on these species.</p> <p>Vegetation mapping shows that two vegetation associations are associated with the small non-perennial lake intersecting the application area. Vegetation association 3 (approximately 0.7 hectares of the application area) is associated with a broad saline depression and vegetation association 4 (approximately 0.8 hectares of the application area) is associated with a broad drainage line running into the saline depression (Outback Ecology, 2012). Rio Tinto (RTIO, 2012) states it is not expected that planned excavations will be from the depression as the material is saline, closer to the water table and appears to be unsuitable. Aerial imagery shows clearing has been undertaken adjacent to this saline depression to the south of the application area (GIS Database).</p> <p>Three introduced flora species were recorded within the application area, none of these species are declared weeds (Outback Ecology, 2012).</p>
Ecological communities	No Threatened Ecological Communities (TEC) or Priority Ecological Communities (PEC) were recorded within the application area (Outback Ecology, 2012; GIS Database). The nearest known PEC (Lyell Land System (Priority 3)) is located approximately 18 kilometres south east of the application area and the nearest TEC is approximately 450 kilometres north east of the application area (GIS Database).
Fauna	There was no fauna survey conducted over the application area. Multiple conservation significant fauna species (all avian) have been recorded within 20 kilometres of the application area, however majority of these species are likely to be associated with Lake Macleod which has been identified as one of the most important sites for migratory shorebirds in Australia (NRM, 2012). Large aggregations of migratory shorebirds have been counted at Lake Macleod, mainly on the shallows and mudflats associated with the permanent lagoons (Outback Ecology, 2012; GIS Database). Some species have also been recorded along the coastline, located approximately nine kilometres to the west of the application area (DEC, 2012a).

Characteristic	Details
	Based on the flora and vegetation survey conducted by Outback Ecology (2012), the vegetation present within the application area is widespread through the region, the application area does not contain significant fauna habitat and the survey did not identify critical feeding or breeding habitat for any conservation significant fauna species (Outback Ecology, 2012; GIS Database).

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent Remaining %	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA Managed Lands
IBRA Bioregion Carnarvon	8,382,890.35	8,360,801.46	99.74	1,020,434.08	12.17
Beard vegetation associations - State					
Veg Assoc No. 328	10,236.89	9,954.66	97.24	0	0
Beard vegetation associations - Bioregion					
Veg Assoc No. 328	10,236.89	9,954.66	97.24	0	0

Government of Western Australia (2019)

Appendix B. 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 C. Sources of information

C.1. GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- Clearing Regulations – Schedule One Areas (DWER-057)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)

- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrographic Catchments – Catchments (DWER-028)
- Hydrography – Inland Waters – Waterlines
- Hydrography, Linear (DWER-031)
- 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)

C.2. References

- BoM (2023) Bureau of Meteorology Website – Climate Data Online. Bureau of Meteorology. <http://www.bom.gov.au/climate/data/>. Accessed 21 February 2023.
- CALM (2002) A Biodiversity Audit of Western Australia's 53 Biogeographical Subregions. Carnarvon 2 (CAR2 Wooramel subregion) Department of Conservation and Land Management, Western Australia.
- Dampier Salt Limited (2022) Native Vegetation Clearing Permits – 2021 Annual Reports. February 2022.
- DEC (2009) Resource Condition Report for a Significant Western Australian Wetland Lake Macleod System. Department of Conservation and Land Management, Western Australia. August 2009.
- Department of Environment Regulation (DER) (2013) *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf
- Department of Planning, Lands and Heritage (DPLH) (2023) Aboriginal Heritage Inquiry System. Department of Planning, Lands and Heritage. <https://espatial.dplh.wa.gov.au/AHIS/index.html?viewer=AHIS> (Accessed 13 February 2022).
- 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 13 February 2023).
- Department of Water and Environmental Regulation (DWER) (2021) Procedure: Native vegetation clearing permits. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.pdf
- Environmental Protection Authority (EPA) (2016) Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment. Available from: http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf
- 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.
- Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68) Atlas of Australian Soils, Sheets 1 to 10, with explanatory data. CSIRO and Melbourne University Press: Melbourne.
- NRM (2012) Business Plan 2012-2013 Site Investment Guide Protecting Critical Aquatic Ecosystems Priority Site 11: Lake Macleod. Available at: <http://www.nrm.gov.au/resources/publications/bp-2012-13/pubs/sig-hevae-lake-macleod.pdf>.
- Outback Ecology (2012) Dampier Salt Ltd. Lake Macleod Pits 50 to 53. Level 1 Vegetation and Flora Assessment. Unpublished report prepared for Dampier Salt Limited, April 2012.
- Payne, A.L., Curry, P.J. and Spencer, G.F. (1987) An Inventory and Condition Survey of Rangelands in the Carnarvon Basin, Western Australia. Department of Agriculture, Western Australia.
- RTIO (2012) Further Information provided by Rio Tinto in email correspondence dated 13 November 2012.

4. Glossary

Acronyms:

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

Definitions:

{DBCA (2019) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia):-

T **Threatened species:**

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

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

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

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

CR **Critically endangered species**

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

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

EN **Endangered species**

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

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

VU **Vulnerable species**

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

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

Extinct Species:

- EX Extinct species**
Species where “*there is no reasonable doubt that the last member of the species has died*”, and listing is otherwise in accordance with the ministerial guidelines (section 24 of the BC Act).
Published as presumed extinct under schedule 4 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018* for extinct fauna or the *Wildlife Conservation (Rare Flora) Notice 2018* for extinct flora.
- EW Extinct in the wild species**
Species that “*is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; and it has not been recorded in its known habitat or expected habitat, at appropriate seasons, anywhere in its past range, despite surveys over a time frame appropriate to its life cycle and form*”, and listing is otherwise in accordance with the ministerial guidelines (section 25 of the BC Act).
Currently there are no threatened fauna or threatened flora species listed as extinct in the wild. If listing of a species as extinct in the wild occurs, then a schedule will be added to the applicable notice.

Specially protected species:

- Listed by order of the Minister as specially protected under section 13(1) of the BC Act. Meeting one or more of the following categories: species of special conservation interest; migratory species; cetaceans; species subject to international agreement; or species otherwise in need of special protection.
Species that are listed as threatened species (critically endangered, endangered or vulnerable) or extinct species under the BC Act cannot also be listed as Specially Protected species.
- MI Migratory species**
Fauna that periodically or occasionally visit Australia or an external Territory or the exclusive economic zone; or the species is subject of an international agreement that relates to the protection of migratory species and that binds the Commonwealth; and listing is otherwise in accordance with the ministerial guidelines (section 15 of the BC Act).
Includes birds that are subject to an agreement between the government of Australia and the governments of Japan (JAMBA), China (CAMBA) and The Republic of Korea (ROKAMBA), and fauna subject to the *Convention on the Conservation of Migratory Species of Wild Animals* (Bonn Convention), an environmental treaty under the United Nations Environment Program. Migratory species listed under the BC Act are a subset of the migratory animals, that are known to visit Western Australia, protected under the international agreements or treaties, excluding species that are listed as Threatened species.
Published as migratory birds protected under an international agreement under schedule 5 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.
- CD Species of special conservation interest (conservation dependent fauna)**
Fauna of special conservation need being species dependent on ongoing conservation intervention to prevent it becoming eligible for listing as threatened, and listing is otherwise in accordance with the ministerial guidelines (section 14 of the BC Act).
Published as conservation dependent fauna under schedule 6 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.
- OS Other specially protected species**
Fauna otherwise in need of special protection to ensure their conservation, and listing is otherwise in accordance with the ministerial guidelines (section 18 of the BC Act).
Published as other specially protected fauna under schedule 7 of the *Wildlife Conservation (Specially Protected Fauna) Notice 2018*.

- P Priority species:**
Possibly threatened species that do not meet survey criteria, or are otherwise data deficient, are added to the Priority Fauna or Priority Flora Lists under Priorities 1, 2 or 3. These three categories are ranked in order of priority for survey and evaluation of conservation status so that consideration can be given to their declaration as threatened fauna or flora.
Species that are adequately known, are rare but not threatened, or meet criteria for near threatened, or that have been recently removed from the threatened species or other specially protected fauna lists for other than taxonomic reasons, are placed in Priority 4. These species require regular monitoring.

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

P1 Priority One - Poorly-known species

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

P2 Priority Two - Poorly-known species

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

P3 Priority Three - Poorly-known species

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

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

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

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

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

Principles for clearing native vegetation:

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