

Clearing Permit Decision Report

1. Application details and outcomes

1.1. Permit application details

Permit number:	10729/1
Permit type:	Purpose permit
Applicant name:	Dampier Salt Limited
Application received:	15 August 2024
Application area:	5 hectares
Purpose of clearing:	Infrastructure maintenance and access tracks
Method of clearing:	Mechanical removal
Tenure:	<i>Leslie Solar Salt Industry Agreement Act 1966</i> Mineral Lease 242SA (AML70/242) Mineral Lease 250SA (AML70/250)
Location (LGA area/s):	Town of Port Hedland
Colloquial name:	Port Hedland Operations

1.2. Description of clearing activities

Dampier Salt Ltd proposes to clear up to 5 hectares of native vegetation within a boundary of approximately 6.36 hectares, for the purpose of maintenance around existing infrastructure and minor realignment of access tracks. The project is located less than a kilometre east of Port Hedland, within the Town of Port Hedland. The proposed maintenance works of the siphons will improve flow capacity (Rio Tinto, 2024).

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	20 May 2025
Decision area:	5 hectares of native vegetation

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed, and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Energy, Mines, Industry Regulation and Safety (DEMIRS) advertised the application for a public comment for a period of 21 days, and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix A), relevant datasets (Appendix D), supporting information provided by the applicant including the results of a flora and vegetation survey, the clearing principles set out in Schedule 5 of the EP Act (Appendix B), proposed avoidance and minimisation measures (Section 3.1), relevant planning instruments and any other matters considered relevant to the assessment (Section 3.3). The Delegated Officer also took into consideration the purpose of the clearing to facilitate the replacement of drainage culverts along a haul road.

The assessment identified that the proposed clearing may result in:

- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values;
- impacts to conservation significant flora;
- potential land degradation in the form of water erosion.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing is 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;
- commence activities no later than three months after undertaking clearing to reduce the risk of erosion; and
- retain cleared vegetation and topsoil and respread this on a cleared area of equivalent size within 12 months of clearing.

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 (Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

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

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Mining Act 1978* (WA)
- *Leslie Solar Salt Industry Agreement Act 1966*

Relevant agreements (treaties) considered during the assessment include:

- Japan-Australia Migratory Bird Agreement
- China-Australia Migratory Bird Agreement
- Republic of Korea-Australia Migratory Bird Agreement

The key guidance documents which inform this assessment are:

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

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

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. The proposed clearing activities have been designed to minimise the amount of clearing required to undertake the works (Rio Tinto, 2024). Existing work areas and access tracks will be used where possible to minimise the amount of disturbance.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles identified that the impacts of the proposed clearing present a risk to biological values (flora). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (flora) - Clearing Principle (a)

Assessment

The priority 1 flora species *Atriplex eremitis* was recorded within the application area during the flora survey (Rio Tinto, 2024). *Atriplex eremitis* is a low erect perennial shrub up to 30 centimetres and has been recorded in coastal areas between Port Hedland and Broome (Rio Tinto, 2024; Western Australian Herbarium, 1998-; GIS Database). Habitat for this species is described as tussock grassland associated with *Eragrostis xerophila* Domin and the introduced *Cenchrus ciliaris* occurring as a component of a sub-unit of the Anna land system composed of level sand plains and a mosaic of saline plains (Cranfield, 2008). It was recorded from the TiTtTeCc vegetation type and also from areas mapped as cleared areas (Rio Tinto, 2024). It was recorded from previous disturbance along roads and tracks as well as limestone rockpile (Rio Tinto, 2024). This species has also been observed to occur in areas of disturbance at other locations across its range (Western Australian Herbarium, 1998-).

There were 30 individuals of this species recorded from 25 locations within areas B and C of the application area (Rio Tinto, 2024). There were an additional 49 individuals recorded during the survey outside the application area (Rio Tinto, 2024). Dampier Salt has indicated that the proposed work will impact on 15 individuals with an additional 6 individuals located within 5 metres of the proposed activities (Rio Tinto, 2024). Given this species was found to be growing in areas which have been previously disturbed, it is likely that they will return following the completion of the works. Rehabilitation of the site will result in similar habitat across the application area.

Four weed species have been reported to occur within the application area (Rio Tinto, 2024). Weeds have the potential to significantly change the dynamics of a natural ecosystem and lower the biodiversity of an area.

Conclusion

Given the high levels of disturbance within the application area, the vegetation is not likely to represent significant habitat for *Atriplex eremitis*. Rehabilitation of the area following clearing will result in similar habitat being present. The proposed clearing is not likely to have a significant impact on local or regional populations of *Atriplex eremitis*.

Conditions

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

- Rehabilitation and revegetation of cleared areas.
- Weed management condition to limit the spread of weeds outside the application area.
- Flora management condition limiting the number of individuals of *Atriplex eremitis* which may be cleared.

3.3. Relevant planning instruments and other matters

The clearing permit application was advertised on 3 December 2024 by the Department of Energy, Mines, Industry Regulation and Safety inviting submissions from the public. No submissions were received in relation to this application.

There is one native title claim over the area under application (DPLH, 2025). 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, 2025). It is the proponent's responsibility to comply with the *Aboriginal Heritage Act 1972* and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

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

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of an expansive tract of native vegetation in the intensive extensive land use zone of Western Australia. It is adjacent to existing infrastructure and access roads associated with Dampier Salt Ltd's Port Hedland salt operations.
Ecological linkage	The application area does not form part of any ecological linkage.
Conservation areas	The application area is not located within any conservation areas (GIS Database). The nearest conservation area is the Jarrkumpungu Nature Reserve located approximately 122 kilometres north-east of the application area (GIS Database).
Vegetation description	<p>The vegetation of the application area is broadly mapped as the following Beard vegetation associations (GIS Database):</p> <p>127: Bare areas; mud flats; and</p> <p>647: Hummock grasslands, dwarf-shrub steppe; <i>Acacia translucens</i> over soft spinifex.</p> <p>A flora and vegetation survey was conducted over the application area by Rio Tinto during November 2023. The following vegetation associations were recorded within the application area (Rio Tinto, 2024):</p> <ul style="list-style-type: none"> - TiTtTeCc <i>Tecticornia indica</i> subsp. <i>leiostachya</i> and <i>Trianthema turgidifolium</i> very open herbland with <i>Triodia epactia</i> very open hummock grassland and <i>Eragrostis</i> sp. and <i>Cenchrus ciliaris</i> very open tussock grassland. <p>There were also areas mapped as unvegetated saline creek and previously cleared areas (Rio Tinto, 2024).</p>
Vegetation condition	<p>The vegetation survey indicate the vegetation within the proposed clearing area is in poor to degraded (Trudgen, 1991) condition.</p> <p>The full Trudgen (1991) condition rating scale is provided in Appendix C.</p>
Climate and landform	The application area is mapped at an elevation of approximately 10 metres AHD (GIS Database). Average annual rainfall at the nearest weather station (Port Hedland) is approximately 315.6 millimetres (BoM, 2025).
Soil description	<p>The soils of the application area are broadly mapped as the following (DPIRD, 2025):</p> <p>Littoral system (286Li): Bare coastal mudflats (unvegetated), samphire flats, sandy islands, coastal dunes and beaches, supporting samphire low shrublands, sparse acacia shrublands and mangrove forests.</p> <p>River system (281Ri): Narrow, seasonally active flood plains and major river channels supporting moderately close, tall shrublands or woodlands of acacias and fringing communities of eucalypts sometimes with tussock grasses or spinifex.</p>
Land degradation risk	The River land system has a high susceptibility to erosion if vegetation cover is removed (van Vreeswyk et al., 2004). Areas within the Littoral land system are tidal flats which have not been identified as having a high risk of erosion (van Vreeswyk et al., 2004).
Waterbodies	The desktop assessment and aerial imagery indicated that the application area is intersected by saline drainage lines that transect the area proposed to be cleared.
Hydrogeography	The application area is not mapped within any Public Drinking Water Source Areas (GIS Database). The mapped groundwater salinity is 1,000 to 3,000 milligrams per litre total dissolved solids which is described as brackish (GIS Database).
Flora	The priority 1 flora species <i>Atriplex eremitis</i> was recorded within the application area (Rio Tinto, 2024). There are another 13 species of priority flora recorded within the local area (surrounding 50 kilometres).
Ecological communities	No Threatened or Priority ecological communities have been recorded within the application area (GIS Database). The nearest recorded Priority Ecological Community is located approximately 22 kilometres from the application area (GIS Database).

Characteristic	Details
Fauna	There are records of 67 species of conservation significant fauna within the local area (50 kilometre radius). More than 50% of the species recorded are migratory bird species (GIS Database). Over half of the total records are of flatback turtles and northern quolls (GIS Database).
Fauna habitat	<p>The following fauna habitats were mapped within the application area:</p> <ul style="list-style-type: none"> - Chenopod shrubland: <i>Tecticornia indica</i> subsp. <i>leiostachya</i> low shrubland over <i>Triodia epactia</i> hummock grassland. The landform is predominantly located on the constructed embankment either side of the Brine transfer channel. In areas the habitat is degraded and dominated by Buffel Grass (<i>*Cenchrus ciliaris</i>). - Tidal creek/flat: Varying in water permanency, this habitat type lacks vegetation and associated microhabitats and is often inundated with saline water. - Completely disturbed: Areas where the natural vegetation and microhabitat have been disturbed (tracks, pads etc.). This habitat contains previously disturbed areas with some natural vegetation regrowth. Where natural regrowth has occurred, the habitat appears to be in degraded or completely degraded condition.

A.2. Vegetation extent

	Pre-European area (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current extent in all DBCA Managed Land (proportion of pre-European extent) (%)
IBRA Bioregion - Pilbara	17,808,657	17,731,765	~99	1,801,715	~10
Beard vegetation associations - State					
127	737,724	697,871	~95	85,858	~12
647	195,861	191,711	~98	0	0
Beard vegetation associations - Bioregion					
127	177,750	159,595	~90	3,704	~2
647	195,860	191,711	~98	0	0

Government of Western Australia (2019)

A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (Appendix D.1), and biological survey information (Rio Tinto, 2024), impacts to the following conservation significant flora required further consideration.

Species	Status	TPFL	Distance to nearest record (km)	Habitat	Flowering time	Likelihood of occurrence and discussion (pre-field)	Likelihood of occurrence and discussion post field
<i>Tephrosia rosea</i> var. Port Hedland (A.S. George 1114)	P1	X	3	Pale red/yellow/brown sand, loam. Sand plains, coastal taxon, along ephemeral sandy rivers.	Jul - Oct	Likely This taxon was recorded less than 5 km from the study area and its preferred habitat may occur within the study area.	Unlikely The preferred broad habitat for this species was present within the survey area. However, the area is heavily degraded and was well searched for all priority species and it is unlikely this species was overlooked.
<i>Gomphrena pusilla</i>	P2	X	9	Fine beach sand. Behind foredune, littoral or near-littoral species. Limestone.	Mar - Apr or Jun	Unlikely This taxon was recorded greater than 5 km from the study area and its preferred habitat is unlikely to occur within the study area.	Unlikely The preferred habitat for this species was not present within the survey area. Additionally, the area is heavily degraded and was well searched for all priority species and it is unlikely this species was overlooked.
<i>Eragrostis crateriformis</i>	P3	X	12	Clayey loam or brown clay. Creek banks, depressions.	Jan - Jul	Unlikely This taxon was recorded greater than 5 km from the study area and its preferred habitat is unlikely to occur within the study area.	Unlikely The preferred habitat for this species was not present within the survey area. Additionally, the area is heavily degraded and was well searched for all priority species and it is unlikely this species was overlooked.
<i>Euploca mutica</i>	P3	X	6	Sandy soils, red sit sand soil. Flats, plains, rocky slopes, low lying floodplain, flat carcareous plains. Quartz and granite.	Aug	Likely This taxon was recorded less than 5 km from the study area and its preferred habitat may occur within the study area.	Unlikely The preferred broad habitat for this species was present within the survey area. However, the area is heavily degraded and was well searched for all priority species and it is unlikely this species was overlooked.
<i>Gomphrena leptophylla</i>	P3	X	18	Sand, sandy to clayey loam, granite, quartzite. Open flats, sandy creek beds, floodplains, edges salt pans & marshes, stony hillsides.	Mar - Sep	Potential This taxon was recorded greater than 5 km from the study area and its preferred habitat may occur within the study area.	Unlikely The preferred habitat for this species was present within the survey area. However, the area is heavily degraded and was well searched for all priority species and it is unlikely this species was overlooked.
<i>Gymnanthera cunninghamii</i>	P3	X	8	Sandy soils. In areas surrounding permanent and semi-permanent watercourses, also among rocks on the Burrup peninsula.	Apr or Dec	Potential This taxon was recorded greater than 5 km from the study area and its preferred habitat may occur within the study area.	Unlikely The preferred habitat for this species was not present within the survey area. Additionally, the area is heavily degraded and was well searched for all priority species and it is unlikely this species was overlooked.
<i>Rothia indica</i> subsp. <i>australis</i>	P3	X	1	Sandy soils. Sandhills and sandy flats.	Apr - Aug	Likely This taxon was recorded less than 5 km from the study area and its preferred habitat is likely to occur within the study area.	Unlikely The preferred broad habitat for this species was present within the survey area. However, the area is heavily degraded and was well searched for all priority species and it is unlikely this species was overlooked.
<i>Bulbostylis burbidgeae</i>	P4	X	10	Granitic soils. Granite outcrops, cliff bases, under rock overhangs, rock crevices, creeklines.	Mar or Jun - Aug	Unlikely This taxon was recorded greater than 5 km of the study area and its preferred habitat is unlikely to occur within the study area.	Unlikely The preferred habitat for this species was not present within the survey area. Additionally, the area is heavily degraded and was well searched for all priority species and it is unlikely this species was overlooked.
<i>Atriplex eremitis</i>	P1			saline plains amongst disturbed soil.	August	Nil Not recorded in the pre-survey likelihood assessment	Recorded Recorded during survey in existing disturbance along saline creeks.

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> “Native vegetation should not be cleared if it comprises a high level of biodiversity.”</p> <p><u>Assessment:</u></p> <p>The application area is largely in a degraded condition and is not likely to support a high level of floral or faunal diversity (Rio Tinto, 2024; GIS Database). The priority 1 flora species <i>Atriplex eremitis</i> was recorded within the application area. This species is often found in areas of disturbance and the proposed clearing is not likely to have a significant impact on the local population.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (b):</u> “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.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain significant habitat for conservation significant fauna. Over half of the application area has been mapped as completely disturbed. Given the high level of disturbance in the application area, it is not likely to have a high value for local fauna species.</p>	Not likely to be at variance	No
<p><u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain records of any Threatened flora species listed under the BC Act (Rio Tinto, 2024; GIS Database). The application area is not likely to contain habitat for any Threatened flora species.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> “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.”</p> <p><u>Assessment:</u></p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
The proposed clearing area does not contain species representative of a Threatened Ecological Community listed under the BC Act or EPBC Act (Rio Tinto, 2024; GIS Database).		
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."</i></p> <p><u>Assessment:</u></p> <p>The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30% of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The extent of the mapped vegetation type is over 99% at both a state and bioregional level. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	Not at variance	No
<p><u>Principle (h):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."</i></p> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of conservation areas (GIS Database).</p>	Not likely to be at variance	No
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."</i></p> <p><u>Assessment:</u></p> <p>The application area is intersected by several minor ephemeral drainage lines. These watercourses have already been impacted by the current infrastructure and the proposed clearing for maintenance of the siphons will improve water flow through the area. Whilst it will involve the clearing of vegetation associated with a watercourse, the proposed clearing activities are not likely to have a significant impact on watercourses in the local area.</p>	At variance	No
<p><u>Principle (g):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."</i></p> <p><u>Assessment:</u></p> <p>The application area has been mapped as the Littoral and River land systems (van Vreeswyk et al., 2004; GIS Database). Coastal dunes within the Littoral land system are susceptible to wind erosion if vegetation cover is removed however, there are no dunes present within the application area (van Vreeswyk et al., 2004). The River land system is highly susceptible to erosion if vegetative cover is removed (van Vreeswyk et al., 2004). Area B and a small portion of area C are mapped as the River land system. The area has already been significantly disturbed. Potential risks associated with land degradation may be minimised by the implementation of a staged clearing condition to limit the amount of time cleared areas remain open and a rehabilitation condition to return vegetation cover to the area.</p>	May be at variance	No
<p><u>Principle (i):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."</i></p> <p><u>Assessment:</u></p> <p>There are no Public Drinking Water Source Areas within or in close proximity to the application area (GIS Database). There are no permanent watercourses or wetlands within the area proposed to clear (GIS Database). Creek lines in the region are dry for most of the year, only flowing briefly immediately following significant rainfall. The proposed clearing is unlikely to result in significant changes to surface water quality.</p> <p>The groundwater within the application area is between 1,000 to 5,000 milligrams per litre of Total Dissolved Solids (GIS Database). This is considered to be brackish</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
water. It would not be expected that the proposed clearing would cause salinity levels within the application or surrounding area to alter.		
<p>Principle (j): <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."</i></p> <p><u>Assessment:</u></p> <p>The application area is located adjacent to tidal flats which are subject to inundation (GIS Database). The proposed clearing of 5 hectares for maintenance works of the existing siphons is not likely to cause an increase in the intensity or incidence of flooding.</p>	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

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

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

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

Appendix D. Sources of information

D.1. GIS databases

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

- 10 metre contours (DPIRD-073)
- 2 metre contours (DPIRD-072)
- Cadastre (Polygon) (LGATE-217)
- Clearing Instruments Activities (Areas Approved to Clear) (DWER-076)
- Clearing Instruments Conditions (Areas Subject to Conditions) (DWER-077)
- Clearing Instruments Proposals (Areas Applied to Clear) (DWER-075)
- Clearing Referral Proposal (DWER-116)
- Clearing Regulations - Environmentally Sensitive Areas (DWER-046)
- Clearing Regulations - Schedule One Areas (DWER-057)
- DBCA - Lands of Interest (DBCA-012)
- DBCA - Legislated Lands and Waters (DBCA-011)

- Directory of Important Wetlands in Australia - Western Australia (DBCA-045)
- Groundwater Salinity Statewide (DWER-026)
- HIR Carbon Sequestration Projects (DPLH-072)
- IBRA Vegetation Statistics
- Local Government Area (LGA) Boundaries (LGATE-233)
- Localities (LGATE-234)
- Native Title (Determination) (LGATE-066)
- Native Title (Fed Court) (LGATE-005)
- Native Title (ILUA) (LGATE-067)
- Native Title (NNTT) (LGATE-004)
- Native Vegetation Extent (DPIRD-005)
- Pre-European Vegetation (DPIRD-006)
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Mapping - Best Available (DPIRD-027)
- Soil Landscape Mapping - Rangelands (DPIRD-063)
- Townsites (LGATE-248)
- WA Now Aerial Imagery

Restricted GIS Databases used:

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

D.2. References

- Bureau of Meteorology (BoM) (2025) Bureau of Meteorology Website – Climate Data Online, Port Hedland Airport. Bureau of Meteorology. <https://reg.bom.gov.au/climate/data/> (Accessed 14 May 2025).
- Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.
- Cranfield, R.J. (2008) *Atriplex eremitis* (Chenopodiaceae), a new species from northern Western Australia. *Nuytsia—The journal of the Western Australian Herbarium* 18: 49-52 <https://florabase.dbca.wa.gov.au/science/nuytsia/550.pdf>
- Department of Environment Regulation (DER) (2014) *A guide to the assessment of applications to clear native vegetation*. Perth. https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf
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- Department of Primary Industries and Regional Development (DPIRD) (2025) NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. <https://dpiird.maps.arcgis.com/apps/webappviewer/index.html?id=662e8cbf2def492381fc915aaf3c6a0f> (Accessed 16 May 2025).
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4. Glossary

Acronyms:

BC Act	<i>Biodiversity Conservation Act 2016</i> , Western Australia
BoM	Bureau of Meteorology, Australian Government
DAA	Department of Aboriginal Affairs, Western Australia (now DPLH)
DAFWA	Department of Agriculture and Food, Western Australia (now DPIRD)
DCCEEW	Department of Climate Change, Energy, the Environment and Water, Australian Government
DBCA	Department of Biodiversity, Conservation and Attractions, Western Australia
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
DER	Department of Environment Regulation, Western Australia (now DWER)
DMIRS	Department of Mines, Industry Regulation and Safety, Western Australia (now DEMIRS)
DMP	Department of Mines and Petroleum, Western Australia (now DEMIRS)
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 (2023) Conservation Codes for Western Australian Flora and Fauna. Department of Biodiversity, Conservation and Attractions, Western Australia:

Threatened species

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

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

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

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

CR Critically endangered species

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

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

EN Endangered species

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

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

VU Vulnerable species

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

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

Extinct species

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

EX Extinct species

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

EW Extinct in the wild species

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

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

Specially protected species**SP Specially protected species**

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

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

MI Migratory species

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

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

CD Species of special conservation interest (conservation dependent fauna)

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

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

OS Other specially protected species

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

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

Priority species**P Priority species**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (a) Rare. Species that are considered to have been adequately surveyed, or for which sufficient knowledge is available, and that are considered not currently threatened or in need of special protection but could be if present circumstances change. These species are usually represented on conservation lands.
- (b) Near Threatened. Species that are considered to have been adequately surveyed and that are close to qualifying for vulnerable but are not listed as a conservation dependent specially protected species.
- (c) Species that have been removed from the list of threatened species or lists of conservation dependent or other specially protected species, during the past five years for reasons other than taxonomy.
- (d) Other species in need of monitoring.

Principles for clearing native vegetation:

- (a) Native vegetation should not be cleared if it comprises a high level of biological diversity.
- (b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.
- (c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.
- (d) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of a threatened ecological community.
- (e) Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.
- (f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.
- (g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

- (h)** Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.
- (i)** Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.
- (j)** Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.