



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 4738/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Dampier Salt Limited

1.3. Property details

Property: *Evaporites (Lake McLeod) Agreement Act 1967, Mineral Lease 245SA (AML 70/245)*
Local Government Area: Shire of Carnarvon
Colloquial name: Cape Cuvier Haul Road

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.77		Mechanical Removal	Haul Road Upgrade

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 1 March 2012

2. Site Information

2.1. Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description	Clearing Description	Vegetation Condition	Comment
Beard vegetation associations have been mapped for the whole of Western Australia and are useful to look at vegetation in a regional context. The following Beard vegetation association has been mapped within the application area (GIS Database): 329: Shrublands; dwarf waterwood (<i>Acacia coriacea</i>) shrubs on recent dunes. A Level 1 flora and vegetation survey of the application area was conducted by Outback Ecology on 13 October 2011. There was one vegetation association recorded within the application area (Outback Ecology, 2011): - <i>Acacia tetragonophylla</i> , <i>Acacia coriacea</i> , <i>Scaevola spinescens</i> , <i>Pimelea microcephala</i> var. <i>microcephala</i> Scattered Shrubs over <i>Frankenia pauciflora</i> Scattered Low Shrubs over Very Open to Closed Grassland of <i>Cenchrus ciliaris</i> .	Dampier Salt Limited has applied to clear 0.77 hectares for the purpose of realigning a section of haul road at its Cape Cuvier loading facility (Outback Ecology, 2011).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994); to Completely Degraded: No longer intact; completely/almost completely without native species (Keighery, 1994).	The vegetation condition was assessed by a botanist from Outback Ecology. Seasonal conditions were well above average with rainfall for the previous year well above average (Outback Ecology, 2011). This resulted in a large number of annual species being recorded (Outback Ecology, 2011).

3. Assessment of application against clearing principles

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

Comments **Proposal is not likely to be at variance to this Principle**
The flora survey of the application area identified one vegetation association within the application area (Outback Ecology, 2011). The vegetation condition ranged from 'degraded' to 'completely degraded' due to its proximity to the existing haul road. The vegetation association was not identified as being a Threatened Ecological Community, however, the application area is within the buffer area of a Priority Ecological Community (PEC) (Outback Ecology, 2011; GIS Database). The PEC is the 'Lake MacLeod Invertebrate Assemblages'. This PEC is an aquatic community so the proposed clearing will not impact on this PEC.

A total of 45 flora taxa from 20 families and 39 genera were recorded within the application area (Outback Ecology, 2011). The floristic diversity relative to the size of the application area could be considered reasonably high, but this is largely due to the abundance of annual species recorded (Outback Ecology, 2011). None of the species recorded were Threatened or Priority Flora species (Outback Ecology, 2011). There were four species of weed recorded within the application area; Buffel grass (*Cenchrus ciliaris*), Doublegee (*Emex*

australis), Iceplant (*Mesembryanthemum crystallinum*) and Common Sowthistle (*Sonchus oleraceus*). The most common of these weeds was Buffel Grass which provided 5 to 80% of the vegetation cover across areas of the application area (Outback Ecology, 2011). The presence and abundance of these weed species lowers the biodiversity value of the application area. Potential impacts from weed species may be minimised by the implementation of a weed management condition.

Given the degraded state of the application area and the limited habitat present, the application area is not likely to support a high level of faunal diversity.

Based on the above, the proposed clearing is not likely to be at variance to the proposed clearing.

Methodology Outback Ecology (2011)
GIS Database:
- Threatened Ecological Sites Buffered

(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 indigenous to Western Australia.

Comments **Proposal is not likely to be at variance to this Principle**
No fauna surveys have been undertaken over the application area. The application area is in 'degraded' to 'completely degraded' condition and suffers from significant Buffel Grass invasion (Outback Ecology, 2011). A number of conservation significant fauna species have been recorded within 50 kilometres of the application area (Outback Ecology, 2011). However, they are all avian species and would be able to relocate following the clearing. Given the degraded state of the application area and its proximity to an existing haul road, the application area is not likely to represent significant habitat for native fauna.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Outback Ecology (2011)

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

Comments **Proposal is not likely to be at variance to this Principle**
According to available databases, there are no records of Threatened Flora within the application area (GIS Database). No Threatened Flora was recorded within the application area during the flora survey (Outback Ecology, 2011).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Outback Ecology (2011)
GIS Database:
- Threatened and Priority 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.

Comments **Proposal is not likely to be at variance to this Principle**
According to available databases, there are no records of any Threatened Ecological Communities (TECs) within the application area (GIS Database). The vegetation within the application area was not identified as being a TEC (Outback Ecology, 2011).

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Outback Ecology (2011)
GIS Database:
- Threatened Ecological Sites Buffered

(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.

Comments **Proposal is not at variance to this Principle**
The application area falls within the Carnarvon Biogeographic Regionalisation of Australia (IBRA) bioregion in which approximately 99.8% of the pre-European vegetation remains (see table) (GIS Database, Shepherd, 2009).

The vegetation of the application area has been mapped as the following Beard vegetation association (GIS Database):

329: Shrublands; dwarf waterwood (*Acacia coriacea*) shrubs on recent dunes.

According to Shepherd (2009) over 95% of this Beard vegetation association remains at both a state and

bioregional level. Therefore the area proposed to be cleared does not represent a significant remnant of native vegetation within an area that has been extensively cleared.

	Pre-European area (ha)*	Current extent (ha)*	Remaining %*	Conservation Status**	Pre-European % in IUCN Class I-IV Reserves
IBRA Bioregion – Carnarvon	8,382,606	8,368,970	~99.84	Least Concern	3.62
Beard veg assoc. – State					
329	27,383	26,342	~96.2	Least Concern	
Beard veg assoc. – Bioregion					
329	25,106	25,100	~100	Least Concern	

* Shepherd (2009)

** Department of Natural Resources and Environment (2002)

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology Department of Natural Resources and Environment (2002)
Shepherd (2009)
GIS Database:
- IBRA WA (Regions - Sub Regions)
- Pre-European Vegetation

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

Comments **Proposal is not at variance to this Principle**
There are no watercourses or wetlands within the application area (GIS Database). None of the vegetation within the application area was identified as growing in association with a watercourse or wetland (Outback Ecology, 2011).

Based on the above, the proposed clearing is not at variance to this Principle.

Methodology Outback Ecology (2011)
GIS Database:
- Hydrography, linear

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

Comments **Proposal is not likely to be at variance to this Principle**
The application area has been mapped as being comprised of the Coast land system (GIS Database). Several units of this land system are highly susceptible to wind erosion when degraded (Payne et al., 1987). The vegetation within the application area is most similar to Coast land system unit 4 which is described as blow-out dunes which are mostly unvegetated with *Frankenia* spp., *Acacia coriaca* and *Acacia xanthina* as pioneer stabilisers of deflated areas (Outback Ecology, 2011; Payne et al., 1987). The proposed clearing of 0.77 hectares is not likely to lead to appreciable land degradation.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology Outback Ecology (2011)
Payne et al. (1987)
GIS Database:
- Rangeland Land System Mapping

(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.

Comments **Proposal is not likely to be at variance to this Principle**
The application area does not lie within any conservation areas or DEC managed tenure (GIS Database). The nearest conservation area is the ex Boologooro pastoral lease located approximately 35 kilometres east of the application area (GIS Database). At this distance the proposed clearing is not likely to have any impact on this conservation area.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- DEC Tenure

(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.

Comments **Proposal is not likely to be at variance to this Principle**

The application area is not located within a Public Drinking Water Source Area (PDWSA) (GIS Database). There are no watercourses within the application area (GIS Database). The average annual rainfall is 300 millimetres and the average annual evaporation rate is 2,600 millimetres (GIS Database). During normal rainfall events it would be expected that any surface water would evaporate quickly.

The groundwater salinity within the application area is between 3,000 and 7,000 milligrams per litre of Total Dissolved Solids (TDS) (GIS Database). This is considered to be brackish to saline. Given the small scale of the clearing (0.77 hectares) the proposed clearing is not likely to cause the groundwater quality to deteriorate any further.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Evaporation Isopleths
- Hydrography, linear
- Public Drinking Water Source Areas (PDWSAs)
- Rainfall, Mean Annual

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

Comments **Proposal is not likely to be at variance to this Principle**

With an average annual rainfall of 300 millimetres and an average annual evaporation rate of 2,600 millimetres there is likely to be little surface flow during normal seasonal rains (GIS Database). Whilst large rainfall events may result in the flooding of the area, the proposed clearing is not likely to lead to an increase in incidence or intensity of flooding.

Based on the above, the proposed clearing is not likely to be at variance to this Principle.

Methodology GIS Database:
- Evaporation Isopleths
- Rainfall, Mean Annual

Planning instrument, Native Title, Previous EPA decision or other matter.

Comments

There is one Native Title claim (WC97/28) over the area under application (GIS Database). This claim has been registered with the 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 located within the clearing permit application area (GIS Database). 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 Environment and Conservation and the Department of Water, to determine whether a Works Approval, Water Licence, Bed and Banks Permit, or any other licences or approvals are required for the proposed works.

The clearing permit was advertised on 19 December 2011 by the Department of Mines and Petroleum inviting submissions from the public. There were no submissions received.

Methodology GIS Database:
- Aboriginal Sites of Significance
- Native Title Claims – Registered with the NNTT

4. References

- Department of Natural Resources and Environment (2002) Biodiversity Action Planning. Action planning for native biodiversity at multiple scales; catchment bioregional, landscape, local. Department of Natural Resources and Environment, Victoria.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Outback Ecology (2011) Cape Cuvier Haul Road Realignment Level 1 Vegetation and Flora Assessment. Unpublished report for Dampier Salt Ltd, dated December 2011.

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.

Shepherd, D.P. (2009) Adapted from: Shepherd, D.P., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

5. Glossary

Acronyms:

BoM	Bureau of Meteorology, Australian Government
CALM	Department of Conservation and Land Management (now DEC), Western Australia
DAFWA	Department of Agriculture and Food, Western Australia
DEC	Department of Environment and Conservation, Western Australia
DEH	Department of Environment and Heritage (federal based in Canberra) previously Environment Australia
DEP	Department of Environment Protection (now DEC), Western Australia
DIA	Department of Indigenous Affairs
DLI	Department of Land Information, Western Australia
DMP	Department of Mines and Petroleum, Western Australia
DoE	Department of Environment (now DEC), Western Australia
DoIR	Department of Industry and Resources (now DMP), Western Australia
DOLA	Department of Land Administration, Western Australia
DoW	Department of Water
EP Act	Environmental Protection Act 1986, Western Australia
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999 (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
RIWI Act	Rights in Water and Irrigation Act 1914, Western Australia
s.17	Section 17 of the Environment Protection Act 1986, Western Australia
TEC	Threatened Ecological Community

Definitions:

{Atkins, K (2005). *Declared rare and priority flora list for Western Australia, 22 February 2005*. Department of Conservation and Land Management, Como, Western Australia} :-

P1	Priority One - Poorly Known taxa: taxa which are known from one or a few (generally <5) populations which are under threat, either due to small population size, or being on lands under immediate threat, e.g. road verges, urban areas, farmland, active mineral leases, etc., or the plants are under threat, e.g. from disease, grazing by feral animals, etc. May include taxa with threatened populations on protected lands. Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P2	Priority Two - Poorly Known taxa: taxa which are known from one or a few (generally <5) populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in urgent need of further survey.
P3	Priority Three - Poorly Known taxa: taxa which are known from several populations, at least some of which are not believed to be under immediate threat (i.e. not currently endangered). Such taxa are under consideration for declaration as 'rare flora', but are in need of further survey.
P4	Priority Four – Rare taxa: taxa which are considered to have been adequately surveyed and which, whilst being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years.
R	Declared Rare Flora – Extant taxa (= Threatened Flora = Endangered + Vulnerable): taxa which have been adequately searched for, and are deemed to be in the wild either rare, in danger of extinction, or otherwise in need of special protection, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.
X	Declared Rare Flora - Presumed Extinct taxa: taxa which have not been collected, or otherwise verified, over the past 50 years despite thorough searching, or of which all known wild populations have been destroyed more recently, and have been gazetted as such, following approval by the Minister for the Environment, after recommendation by the State's Endangered Flora Consultative Committee.

{Wildlife Conservation (Specially Protected Fauna) Notice 2005} [Wildlife Conservation Act 1950] :-

- Schedule 1** **Schedule 1 – Fauna that is rare or likely to become extinct:** being fauna that is rare or likely to become extinct, are declared to be fauna that is need of special protection.
- Schedule 2** **Schedule 2 – Fauna that is presumed to be extinct:** being fauna that is presumed to be extinct, are declared to be fauna that is need of special protection.
- Schedule 3** **Schedule 3 – Birds protected under an international agreement:** being birds that are subject to an agreement between the governments of Australia and Japan relating to the protection of migratory birds and birds in danger of extinction, are declared to be fauna that is need of special protection.
- Schedule 4** **Schedule 4 – Other specially protected fauna:** being fauna that is declared to be fauna that is in need of special protection, otherwise than for the reasons mentioned in Schedules 1, 2 or 3.

{CALM (2005). *Priority Codes for Fauna*. Department of Conservation and Land Management, Como, Western Australia} :-

- P1** **Priority One: Taxa with few, poorly known populations on threatened lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not managed for conservation, e.g. agricultural or pastoral lands, urban areas, active mineral leases. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P2** **Priority Two: Taxa with few, poorly known populations on conservation lands:** Taxa which are known from few specimens or sight records from one or a few localities on lands not under immediate threat of habitat destruction or degradation, e.g. national parks, conservation parks, nature reserves, State forest, vacant Crown land, water reserves, etc. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P3** **Priority Three: Taxa with several, poorly known populations, some on conservation lands:** Taxa which are known from few specimens or sight records from several localities, some of which are on lands not under immediate threat of habitat destruction or degradation. The taxon needs urgent survey and evaluation of conservation status before consideration can be given to declaration as threatened fauna.
- P4** **Priority Four: Taxa in need of monitoring:** Taxa which are considered to have been adequately surveyed, or for which sufficient knowledge is available, and which are considered not currently threatened or in need of special protection, but could be if present circumstances change. These taxa are usually represented on conservation lands.
- P5** **Priority Five: Taxa in need of monitoring:** Taxa which are not considered threatened but are subject to a specific conservation program, the cessation of which would result in the species becoming threatened within five years.

Categories of threatened species (*Environment Protection and Biodiversity Conservation Act 1999*)

- EX** **Extinct:** A native species for which there is no reasonable doubt that the last member of the species has died.
- EX(W)** **Extinct in the wild:** A native species which:
(a) is known only to survive in cultivation, in captivity or as a naturalised population well outside its past range; or
(b) has not been recorded in its known and/or expected habitat, at appropriate seasons, anywhere in its past range, despite exhaustive surveys over a time frame appropriate to its life cycle and form.
- CR** **Critically Endangered:** A native species which is facing an extremely high risk of extinction in the wild in the immediate future, as determined in accordance with the prescribed criteria.
- EN** **Endangered:** A native species which:
(a) is not critically endangered; and
(b) is facing a very high risk of extinction in the wild in the near future, as determined in accordance with the prescribed criteria.
- VU** **Vulnerable:** A native species which:
(a) is not critically endangered or endangered; and
(b) is facing a high risk of extinction in the wild in the medium-term future, as determined in accordance with the prescribed criteria.
- CD** **Conservation Dependent:** A native species which is the focus of a specific conservation program, the cessation of which would result in the species becoming vulnerable, endangered or critically endangered within a period of 5 years.