Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1417/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Broome Port Authority

1.3. Property details

Property: LOT 616 ON PLAN 240107 (House No. 286 PORT MINYIRR 6725)
Local Government Area: Shire Of Broome
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.3		Mechanical Removal	Miscellaneous

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 Association 750: Shrublands, pindan; Acacia tumida (pindan wattle) shrubland with grey box and Eucalyptus grandifolia (cabbage gum) medium woodland over Chrysopogon spp. (ribbon grass) and Triodia bitextura (curly spinifex) (Hopkins et al, 2001).	The vegetation proposed for clearing is located along Port Drive and south of Kavite Road within the Port precinct. It is located just north of the developed industrial site. The vegetation has suffered some disturbance due to its position in relation to other development and some tracks and existing structures.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The vegetation has been previously described, broadly, by Beard and through aerial photography interpretation (Broome Orthomosaic - DOLA 00).

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 may be at variance to this Principle

Trudgen (2006) noted that there was moderate diversity in the vegetation found on the southern end of the Broome Peninsula. Tim Willing (pers. comm.) in Trudgen (2006) considered that there was significant variation in the vegetation of the Peninsula down its length. Such variation would be expected because of the greater moderation of the climate by the ocean at southern end of the peninsula compared to the northern end.

The area under application is located within the Port of Broome industrial precinct in an area already highly developed. Port Drive and Kavite Road border the northern and eastern sides of the proposed area and industrial development flank the southern and western sides of the area. In this context, and noting that it is recommended that prior to further development on the Port Lands, a comprehensive biodiversity audit be undertaken, the clearing of a relatively small amount of this vegetation community is considered acceptable.

Methodology

Trudgen (2006)
Hopkins et al (2001);
GIS Databases: - Broome 1m Orthomosaic - DOLA 00

(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

A desktop survey found there were no known Threatened Fauna within the area proposed to be cleared

The following species are known to occur within a 10 kilometre radius of the proposal area:
* Gouldian Finch (Erythrura gouldiae) Endangered - preferred habitat of grassy flats and trees near water, tall vegetation along watercourses, drier woodlands and scrublands in the wet season (Pizzey, 2003).
* Australian Painted Snipe (Rostratula australis) Vulnerable - preferred habitat of fringes of swamps, dams, marshy areas with grass cover (Pizzey, 2003).
* Tyto novaehollandiae kimberli (Northern Masked Owl) Vulnerable - preferred habitat of forests and open woodlands adjacent to cleared country, timbered watercourses (Pizzey, 2003).
* Mulgara (Dasycercus cristicauda) Vulnerable - preferred habitat of hummock grasslands, sand ridges, mulga shrubland on loamy sand (Menkhorst & Knight, 2004).
* Greater Bilby (Macrotis lagotis) Vulnerable - preferred habitat of mulga scrublands and hummock grasslands on sandplains or along drainage or salt lake systems (www.calm.wa.gov.au).
* Princess parrot (Polytelis alexandrae) P4 - preferred habitat dry interior-eucalypt-lined watercourses; desert oaks and other casuarinas, mulga and spinifex.

These species are all listed under the Environment Protection and Biodiversity Conservation Act 1999.

The proposed clearing is not likely to impact upon these species of conservation significance, as the type of vegetation to be cleared is not the preferred habitat of these priority listed fauna.

The clearing of 3.3 hectares of vegetation is not likely to significantly impact the fauna of the area. Additionally, areas adjacent to the site in the north are well vegetated.

Therefore, the proposal is not likely to be at variance to this Principle.

Methodology

Methodology:
GIS Databases - Threatened Fauna - CALM 30/9/05
www.deh.gov.au
Pizzey, 2003
Menkhorst & Knight, 2004
www.calm.wa.gov.au

(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

Trudgen (2006) has made an assessment of Keraudrenia exastia on the Broome peninsula and a review of all available information indicates that there is no declared rare flora located within the site proposed for clearing.

There is a known surveyed population of the rare species Keraudrenia exastia located to the north of the amended proposal area. These populations have been surveyed in the past and mapped by botanists (Broome Botanical Society, 1995; Trudgen, 2006). There are two key populations with a further 5 small outlying patches of plants, all located outside of the area proposed for clearing.

There is no evidence to suggest that Keraudrenia exastia occurs within the area proposed for clearing (CAU Advice, 2006). Based on the information available this proposal is not likely to be at variance to this principle.

Methodology

Broome Botanical Society, 1995
Trudgen, 1998
Trudgen, 2006
CAU Advice, 2006

(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

The following Threatened Ecological Communities are known to occur within a 10km radius of the proposal area - Broome Townsite Vine Thicket 01 and Gantheaume Point Vine Thicket.

The Vine Thickets are located in the shelter of the sand dunes, inland from Cable Beach and extending south to Gantheaume Point. The thickets represent the southernmost stand of rainforest vegetation in the Kimberley and important seasonal food source, and are of high ecological importance (Burbidge et al, 1991).

These vine thickets do not occur in the area proposed for clearing and therefore the application is not likely to be at variance to this principle (GIS database, CAU Advice, 2006)..

Methodology CAU advice (2006)
Burbidge et al (1991)
GIS Databases:
- Threatened Ecological Communities - CALM 12/4/05
- Broome 1m Orthomosaic - DOLA 00

(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 likely to be at variance to this Principle**
The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with a current extent below 30% of the pre-European settlement extent (Department of Natural Resources and Environment, 2002).

	Pre-European area (ha) *	Current extent (ha) *	Remaining % *	Conservation Status**	% in reserves/CALM-managed land
IBRA Bioregion - Central Kimberley	7,770,436	7,770,436	~100	Least concern	4.4
Shire of Wyndham East Kimberley		No information available			
Beard vegetation association - 750	1,294,465	1,294,465	~100	Least concern	2.3

* Shepherd et al. (2001)
** Department of Natural Resources and Environment (2002)

The area applied to clear is a component of Beard Vegetation Association 750 (Hopkins et al, 2001). 2.3% of this Association is located within IUCN Class I-IV Reserves (Shepherd et al, 2001). There is 1,294,465 hectares of this Association remaining, approximately 100% of the pre-European extent (Shepherd et al, 2001), which indicates it is well represented in the natural environment. Therefore, this Association is of least concern for biodiversity conservation (Department of Natural Resources and Environment, 2002).

Clearing of 3.3 hectares of vegetation will not significantly reduce the remaining extent of this broader Association, therefore the proposal is not likely to be at variance to this principle.

However it is expected that further proposals to clear within the Port Lands will require analysis of the local significance of remaining vegetation communities.

Methodology Hopkins et al (2001)
Shepherd et al (2001)
Department of Natural Resources and Environment (2002)
GIS Database: Pre-European Vegetation - DA 01/01

(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 may be at variance to this Principle**
The area proposed for clearing is located at the southern extent of the Broome Peninsula and approximately 200m from the coastline. The RAMSAR wetland of Roebuck Bay is located to the west of the area proposed for clearing.

The area is not associated with a watercourse or wetland

Based on the information provided it appears unlikely that the clearing of this small area will be at variance to this principle.

Methodology GIS Databases:
- Hydrography, linear (hierarchy) - DOE 13/4/05
- Register of National Estate - EA 28/01/03
- RAMSAR, Wetlands - CALM 14/02/03
- ANCA, Wetlands - CALM 08/01

(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 soils on site are red earthy sands with hummocks of siliceous sands (Northcote et al, 1960-68) so have a moderate potential for erosion (Schoknecht, 2002).

The area proposed for development has been somewhat disturbed by surrounding development and a couple of tracks. The elevation and topography of the area are relatively flat gently sloping downwards towards the north (Kavite Road). The topography and erosion potential of the soils on site suggest that there is unlikely to be a significant risk of land degradation if the vegetation from this site were to be removed.

The proposal is not likely to be at variance to this principle.

Methodology

Northcote et al (1960-68)
Schoknecht (2002)
GIS Database:
- Soils, Statewide - DA 11/99
- Broome 1m Orthomosaic - DOLA 00

(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 following conservation areas are known to occur within a 10 kilometre radius of the proposal area:

* Within the local area there is one System 7 (Red Book) area: Point Coulomb Nature Reserve.
* 198 other reserves that are not vested in the Conservation Commission occur within the local area.
* Three Land for Wildlife sites within the local area.
* There are seven occurrences of Environmentally Sensitive Areas within the local area, including three Threatened Ecological Community sites and one Declared Rare Flora site.
* There are 18 records from the Register of National Estate within the local area, one of which is a site included on the Register for its Natural Heritage values; Roebuck Bay Area including Roebuck Plains and Lake Eda.
* The Roebuck Bay RAMSAR site partly occurs within the local area.
* There is one Important Wetland (Roebuck Bay) record within the local area, closest point being approximately 750 metres. (CAU, 2006)

Roebuck Bay is the closest conservation area to the proposed clearing and regarded as an important wetland (CAU, 2006a). Based on the current information available there is no evidence to suggest that this proposal is likely to be at variance to this Principle.

Methodology

CAU advice (2006a)
GIS Database:
- CALM Managed Lands and Waters - CALM 1/07/05
- Broome 1m Orthomosaic - DOLA 00

(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 proposal area is located in the Broome Townsite Sub-areas within the Broome Groundwater Area proclaimed under the Rights in Water and Irrigation Act 1914. Dampier Creek lies approximately 7.5 kilometres north east of the proposal area. The Public Drinking Water Source Protection Area, consisting of P1 and P3 protection zones, lies approximately 15 kilometres north of the site.

Due to the small size of the proposal area, and the distance away from the creek, coast and Public Drinking Water Source Protection Area, it is unlikely that the clearing will cause deterioration in the quality of surface or underground water.

It is recommended that for future land development within the Port of Broome's lands that an environmental management plan be developed that addresses such issues as drainage and water quality management.

Methodology

GIS Databases:
- Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06
- RIWI Act, Surface Water Areas - WRC 18/10/02
- RIWI Act, Groundwater Areas - WRC 13/06/00
- Hydrography, linear (hierarchy) - DOE 13/4/05

(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

Flooding occurs seasonally over the December to March period, where the flood height and duration are lengthy and extreme.

The clearing of 3.3 hectares of vegetation is not likely to increase the incidence or intensity of these naturally occurring flood events.

The proposal is not likely to be at variance to this Principle.

Methodology GIS Database: - Rainfall, Mean Annual - BOM 30/09/01

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

Comments

The Broome Port Authority is the vestee of the subject lands by management order under the Port Authorities Act 1999. They have responsibilities to manage the land for activities consistent with the Broome Port Land Use Plan, April 2003, a strategic land use plan that has been developed and is currently used for all planning on these lands.

A submission was received from the Shire of Broome in response to the original application CPS1417 with recommendations relating to the land use plan. The Shire expressed concern about the original proposal to clear areas within an Environmental and Cultural Corridor, and areas containing Declared Rare Flora. The amendment to the application 1417, which is the subject of this assessment, is consistent with the Shire of Broome's submission and the amendment addresses the key concerns.

Three submissions were received from third parties to the original CPS1417 which raised the following concerns:
- Clearing of Declared Rare Flora species within Port Lands;
- Protection of the DRF population with appropriate buffers, localised catchment management and the possible creation of an island of vegetation around the DRF that would be subject to disturbance;
- The application cuts through a dedicated Environmental and Cultural Corridor committed to by the BPA;
- The area originally applied to clear has high cultural heritage value and many cultural sites;
- There are many significant bush tucker and bush medicine species in the local vicinity, in particular a significant population of Pouteria sericea (Mangarr) to the north of the proposed amended clearing;
- Weed management;
- Area 1 on the original application for CPS1417 is considered a significant cultural site and has previously been rejected for clearing;
- Any proposal for a boat harbour should be assessed at the highest level, not through a clearing permit.

These concerns are addressed by the following:
- The BPA have amended their original application from 41ha to 3.3ha at this stage, and it no longer intersects with any populations of DRF and is more than 100m away from mapped populations.
- The amended application avoids the significant cultural site and significant stand of Pouteria sericea;
- It is recommended that further development on Port Lands be preceded by a comprehensive analysis of vegetation value including local community distributions within a regional context as well as DRF protection, the development of an environmental management plan to address: protection of the DRF and locally significant vegetation; considering culturally significant vegetation; spatial arrangement of agreed ECCs and comittments to manage their ongoing maintenance as ECCs; weed management; and impact of proposed land-use.

There is one Native Title claim over the area under application. The proposed activity complies with the land zoning so the granting of a clearing permit does not constitute a future act under the Native Title Act 1993.

The proposed clearing occurs in an area that is covered by a Registered Indigenous Heritage Site. 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.

Methodology GIS Databases:
- Native Title Claims - DLI 7/11/05
- Aboriginal Sites of Significance - DIA

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Miscellaneous	Mechanical Removal	3.3	Grant	For suplly bases and harbour. Assessable criteria have been addressed and based on the currently available information the proposal was found not likely to be at variance to nine of the principles. It is recommended that this permit for 3.3ha be granted. The proponent should be advised that any further development is likely to require a comprehensive biodiversity assessment and consideration of other issues raised in this assessment.

5. References

Broome Botanical Society (1995) Port of Broome Flora Survey Keraudrenia Species B

Clearing Assessment Unit's biodiversity advice for land clearing application (2006a). Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC1070.

Clearing Assessment Unit's biodiversity advice for land clearing application (2006b). Advice to Director General, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC3335.

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.

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Menkhorst, P. and Knight, F. (2004) A Field Guide to the Mammals of Australia. Second Edition. Oxford Publishers.

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.

Pizzey, G. (2003) A Field Guide to the Birds of Australia. Collins Publishers.

Schoknecht N. (2002) Soil Groups of Western Australia. A simple guide to the main soils of Western Australia. Resource Management Technical Report 246. Edition 3

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

Trudgen (1998) A review of the status of Keraudrenia species B with advice on an appropriate plan of management and an assessment of the significance of a stand of Mangarr (Pouteria sericea) trees, prepared for ERM Mitchell McCotter.

Trudgen (August 2006) A report on Keraudrenia exastia and related issues, prepared for Urbanplan.

www.calm.wa.gov.au

www.deh.gov.au

6. Glossary

Term	Meaning
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
DoE	Department of Environment
DoIR	Department of Industry and Resources
DRF	Declared Rare Flora
EPP	Environmental Protection Policy
GIS	Geographical Information System
Ha	Hectare (10,000 square metres)
TEC	Threatened Ecological Community
WRC	Water and Rivers Commission (now DoE)