



1. Application details

1.1. Permit application details

Permit application No.: 607/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Bradford John Young

1.3. Property details

Property: M45/531

Local Government Area: Town Of Port Hedland

Colloquial name: Port Hedland Mining Lease - M45/531

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
16.4		Mechanical Removal	Extractive Industry

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
Vegetation Association #589 - Mosaic: short bunch grassland - savanna / grass plain (Pilbara) / Hummock grasslands, grass steppe; soft spinifex (Shepherd et al., 2001).	The vegetation of the site retains mixed hummock grassland with sparse scrub and very sparse open woodland (Astron Environmental, 1997). The main vegetation types in the open woodland include <i>Triodia</i> spp., <i>Acacia</i> and <i>Eucalyptus</i> . Grazing, vehicle tracks and weed infestation have degraded the vegetation on the site. Further to this, the influence of fire has substantially degraded the vegetation thus limiting its potential conservation value (Astron Environmental, 1997). The northern half of the area under application was cleared and sheeted with crushed stone and used as a construction camp from ~1965 to ~1972 (Warren Jacka, pers. comm. 2005). The vegetation in this area remains severely disturbed and has not fully regenerated (Site Visit, 2005).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	The site under application is an extension of an already existing and operational sandpit. The description of the vegetation under application was obtained from a survey conducted by Astron Environmental (1997) and a site visit to the property on Monday 3rd October 2005 (Site Visit, 2005).

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 vegetation of the site retains mixed hummock grassland with sparse scrub and very sparse open woodland, which has previously been disturbed by fire and human activities including clearing in the late 1960's for a construction camp (Astron Environmental, 1997; W Jacka, pers. comm. 2005). Further to this, the vegetation and flora identified in the Flora and Fauna Survey conducted by Astron Environmental is not restricted to the proposed area to be cleared and is generally widespread throughout the region.

It is therefore unlikely that the proposed clearing represents an area of outstanding biological diversity and would not be at variance to this principle.

Methodology Astron Environmental (1997);
CALM Advice (2005);
Site visit (3/10/2005);
W. Jacka, pers. comm. (2005).

(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 fauna assessment conducted by Astron Environmental (1997) identified a small number of bird species that are considered Specially Protected and Priority species which are known to occur in the local area. These include the Grey Falcon (*Falco hypoleucos*), Black Breasted Buzzard (*Hamirostra melanosternon*), Bush Thicknee (*Burhinus grallarius*) and the Grey Honeyeater (*Conopophila whitei*). These species are likely to be only occasional visitors to the application area (Astron Environmental, 1997).

CALM datasets list Threatened or Priority taxa as having been recorded within a 10km radius of the area under application. These include *Aspidites ramsayi*, Woma Python (Specially Protected), *Lagostrophus fasciatus fasciatus*, Banded Hare-Wallaby, (Threatened - Vulnerable), and the Priority 1 taxon *Mormopterus loriae cobourgiana*, Little North-Western Mastiff Bat (CALM Advice, 2005). While there is potential for the proposed clearing to impact on the identified fauna species, it is unlikely to be significant (in a regional context) since the habitats recorded on the lease are widespread (CALM Advice, 2005).

The habitat values of the area under application have been degraded by previous disturbance to the vegetation, including fire and clearing in the late 1960's for a construction camp, and by heavy machinery on adjacent land (Site Visit, 2005).

Therefore, it is unlikely that the area under application contributes a significant habitat for fauna indigenous to WA and the clearing is unlikely to be at variance to this principle.

Methodology Astron Environmental (1997);
CALM Advice (2005);
Site visit (3/10/2005);
Department of Environment and Heritage, EPBC Act Protected Matters Tool (2005);
CALM (2005).

(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

No Declared Rare or Priority Flora species were identified within the project area (Astron Environmental, 1997). Further to this, there is no evidence that flora of conservation significance exists in the local area according to CALM datasets (CALM Advice, 2005).

Methodology Astron Environmental (1997);
CALM Advice (2005);
Site Visit (3/10/2005);
GIS Datasets:
~ Declared Rare and Priority Flora List - CALM 01/07/05;
~ Clearing Regulations - Environmentally Sensitive Areas - DOE 30/5/05.

(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

There are no known Threatened Ecological Communities within a 10km radius of the area proposed for clearing.

Methodology CALM Advice (2005);
GIS Database - Threatened Ecological Communities - CALM 12/4/05

(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 an extent below 30% of that present pre-European settlement (Department of Natural Resources and Environment, 2002).

Pre-European	Current	Remaining	Conservation	% in reserves/ Status**
	area (ha) *	extent (ha) *	%*	

	CALM-managed				land
IBRA Bioregion - Pilbara	17,944,694	17,944,694	~100%	Least concern	15.17
IBRA Sub-region - PIL 4	2,008,983	2,008,983	~100%	Least concern	9.6
Town of Port Hedland	No information available				
Beard vegetation association - 589	848,201	848,201	~100%	Least concern	1.6

* Shepherd et al. (2001)

** Department of Natural Resources and Environment (2002)

Vegetation complexes within this application are above 30% representation. The vegetation of the site is a component of Beard Vegetation Association 157 (Hopkins et al, 2001), of which there is ~100% of the pre-European extent still remaining (Shepherd et al, 2001). The vegetation type is therefore of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment, 2002).

Methodology Hopkins et al (2001);
Shepherd et al (2001);
Department of Natural Resources and Environment (2002);
GIS Database:
Pre-European Vegetation - DA 01/01;
Interim Biogeographic Regionalisation of Australia - EA 18/10/00;
Interim Biogeographic Regionalisation of Australia (subregions) - EA 18/10/00.

(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**
The area under application is not associated with a wetland or watercourse.

Methodology Site inspection (3/10/2005);
GIS Databases:
Hydrography, linear (hierarchy) - DOE 13/4/05;
Rivers 250K - GA;
Wild Rivers - DEWCP 05/12/02;
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 average annual rainfall of the site is 400mm, with most rainfall occurring during the summer months, and an evaporation rate of 400mm per annum. As the topography of the site is very flat, very little runoff resulting in water erosion is likely to occur.
The proposed area to be cleared will be for the purpose of soil extraction. Similar activity in adjacent pits has shown very little evidence of erosion occurring despite being exposed for up to 10 years due to the soil having a high clay content and being very compacted (Site visit, 3/10/2005).
Therefore, it is unlikely that the proposed clearing is at variance to this principle.

Methodology Site Visit (3/10/2005)
GIS databases:
~ Rainfall, Mean Annual - BOM 30/09/01;
~ Evapotranspiration, Areal Actual - BOM 30/09/01;
~ Topographic Contours, Statewide - DOLA 12/09/02.

(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 area under application is not adjacent to, or within a 10km radius of any existing or proposed conservation reserves.

Methodology CALM Advice (2005);
GIS Database:
~ CALM Managed Lands and Waters - CALM 1/07/05;
~ Register of National Estate - EA 28/01/03;
~ Register of Heritage Places - DPI 14/7/03.

(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 area under application is not in a Public Drinking Water Source Area (PDWSA). The average annual rainfall of the site is 400mm, with most rainfall occurring during the summer months, and an evaporation rate of 400mm per annum. The topography of the site is very flat, thus very little water is likely to leave the site as runoff. Further to this, as the site is proposed to be cleared for soil extraction, a pit will be formed. This pit is likely to fill with water during high rainfall events and given the high clay content and hard, compacted state of the soil little infiltration to the groundwater will occur (W. Jacka, pers. comm. 2005). Therefore, it is unlikely that the vegetation clearing will have a significant impact on ground or surface water quality.

Methodology Site Visit (3/10/2005);
W. Jacka, pers. comm. (3/10/2005);
GIS Databases:
~ Rainfall, Mean Annual - BOM 30/09/01;
~ Evapotranspiration, Areal Actual - BOM 30/09/01;
~ Public Drinking Water Source Areas (PDWSAs) - DOE 09/08/05

(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 impacts are unlikely to occur as a result of the proposed clearing due to its small size of 16.4ha and location. The elevation is between 15-20 metres, with no river systems in the vicinity. It is considered that the removal of vegetation from the site would have no impact on peak flood height or duration as the site will be used to further develop an adjacent sandpit.

Methodology Site Visit (3/10/2005);
GIS Databases:
~ Topographic Contours, Statewide - DOLA 12/09/02;
~ Hydrography, linear (hierarchy) - DOE 13/4/05;
~ Rivers 250K - GA

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

Comments

The vegetation to be cleared is within Mineral Lease 45/531 granted in accordance with the Mining Act 1978.

No objections were raised to the proposal however it was requested that the following conditions be considered in the granting of the clearing permit:

1. The land is rehabilitated after use when the sandpit is no longer required or in use.
2. The land is not to be used as a dumping area (illegal landfill). The area and access roads need to be properly managed to ensure that the use on site remains appropriate and that no illegal operations occur.

The proponent will be advised that rehabilitation of the sandpit once excavations are complete is recommended. Condition 2 is outside the scope of the Clearing Principles so is unable to be implemented by a Clearing Permit.

The area under application lies within the Kariyarra Native Title Claim area. However, the Mineral Lease has been granted so therefore the granting of a clearing permit does not constitute a future act under the Native Title Act 1993.

No other Environmental Protection instruments are required under the Environmental Protection Act 1986. No Water Licenses under the Rights in Water and Irrigation Act 1914 are required for this project.

Methodology Permit Application
GIS Databases: Native Title Claims - DLI 7/11/05

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Extractive Industry	Mechanical Removal	16.4	Grant	Assessable criteria have been addressed and no objections were raised. However, it is recommended that the proponent rehabilitate the area once excavation activities have ceased. The assessing officer recommends that the permit should be granted.

5. References

- Astron Environmental (1997) Flora and Fauna Survey: Leases M45/531, M45/681, M45/689 Port Hedland. Prepared for BJ Young Earthmoving Pty Ltd. Unpublished Document. Department of Environment Reference: TRIM KNI801
- CALM Advice (2005) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE Reference: Trim IN24742.
- 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, BJ (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Native Vegetation Site Visit (3/10/2005). Site visit carried out by Kate Barr and Joanne Nicol (DOE Karratha) and Warren Jacka (on behalf of BJ Young). TRIM KND 861
- 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.

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)