



1. Application details

1.1. Permit application details

Permit application No.: 3113/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Robe River Iron Company

1.3. Property details

Property: UNALLOCATED CROWN LAND (WICKHAM 6720)
LOT 64 ON PLAN 57724 (MOUNT ANKETELL 6714)
PART LOT 63 ON PLAN 54397 (MOUNT ANKETELL 6714)
PART LOT 63 ON PLAN 54397 (MOUNT ANKETELL 6714)
PART LOT 63 ON PLAN 54397 (MOUNT ANKETELL 6714)
PART LOT 63 ON PLAN 54397 (MOUNT ANKETELL 6714)

Local Government Area: Shire Of Roebourne
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
14.3		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: 157: Hummock grasslands, grass steppe; hard spinifex, Triodia wiseana.	The proposal is to clear 14.3ha of native vegetation for a landfill site. The central section of the application area is in a degraded (Keighery, 1994) condition, which has been cleared in the past for borrow pits and access tracks (Western Botanical, 2008). The vegetation within the application area is predominately Acacia sp. over tussock and hummock grasslands (Western Botanical, 2008).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The condition of the vegetation within the application area was assessed through aerial photography (Cape Lambert 20cm Orthomosaic - Landgate) and a vegetation survey (Western Botanical, 2008).

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 proposal is to clear 14.3ha of native vegetation for a landfill site. The area to be cleared consists of Beard vegetation association 157 of which there is approximately 99.9% of the Pre-European extent remaining (Shepherd et al., 2007). The central section of the application area is in a degraded (Keighery, 1994) condition, which has been cleared in the past for borrow pits and access tracks (Western Botanical, 2008). The vegetation within the rest of the area is predominately Acacia sp. over tussock and hummock grasslands (Western Botanical, 2008).

There are a number of weeds (including buffel grass) common to the Pilbara region within the site and surrounding areas.

Hibiscus brachysiphonius (P3) recorded 2.6km west, Abutilon trudgenii (P3) recorded 1.7km south east and Helichrysum oligochaetum (P1) recorded 4.4km east of the application area were not observed during a survey of the application area (Western Botanical, 2008). However, no map showing the area surveyed was provided.

Given the high extent of native vegetation remaining, the application area is unlikely to represent an area of higher biodiversity value when compared to representative vegetation in a local and regional context.

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

Methodology Keighery (1994)
Shepherd et al (2007)
Western Botanical (2008)
GIS Layer:
- Sac Biodatasets 250509

(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**
The fauna habitats within the proposed area to be cleared are well represented elsewhere within the local (20km radius) and regional area. The area proposed to be cleared does not represent a fauna corridor and therefore the clearing will not remove an ecological linkage that is necessary for the maintenance of local fauna populations.

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

Methodology GIS Layers:
- Sac biodatsets 250509

(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**
There are no records of rare flora within the local area (20km radius) of the application area. Given this it is unlikely that the proposal is at variance to this principle.

Methodology GIS Layer:
-Sac Biodataset 250509

(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**
No records of threatened or priority ecological communities within the immediate proximity of the area under application. The closest recorded occurrence was a Roebourne chenopod association located 11.8km south. Given the distance from the application area it is unlikely that the proposal is at variance to this principle.

Methodology GIS Layer:
Sac Biodataset 250509

(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		
	Pre-European (ha)	Current extent (ha)	Remaining (%)
IBRA Bioregions			
Pilbara	17,804,187	17,794,646	99.95
Shire			
Roebourne	1,535,622	1,515,551	98.65
Beard Vegetation Complex			
157 (in bioregion)	198,633	198,518	99.94
157 (in shire)	73,039	71,824	98.34

(Shepherd et al. 2007)

Approximately 99.9% and 98.3% of the Pre-European vegetation remains of Beard vegetation association 157 in the Pilbara IBRA bioregion and the shire of Roebourne respectively, within which this proposal is located (Shepherd

et al., 2007).

Beard Vegetation association 157 has approximately 99.9% of the Pre-European extent remaining and therefore the 14.3 ha area proposed to be cleared is not considered to be a significant remnant of native vegetation within an extensively cleared area. The local area is approximately 80% vegetated.

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

Methodology Shepherd (2007)

(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 at variance to this Principle

Two minor non-perennial watercourses are located within the applied area. One dissects the application area centrally travelling from the north east corner to the south west corner, the other passes through the northern arm of the application area from west to south. The central watercourse runs through the highly degraded portion of the application area, where previous borrow pits and access tracks are located (Western Botanical, 2008). The topography of the application area shows that the clearing will not impact downstream as the application area is within a depression and is self contained.

Given the above, the proposal is at variance to this principle.

Methodology Keighery (1994)
Western Botanical (2008)
GIS Layer:
- Hydrography linear - DOW 13/7/06
- Topographic contours statewide - DOLA and ARMY 12/09/02

(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 consists of Ruth Land System which comprises of hills and ridges (Western Botanical, 2008). Soils are brown loams along with significant areas of earthy loam soils and chief soils are deep cracking clays and shallow stony earthy loams (Northcote et al., 1960-68). These soil types are not overly susceptible to erosion following disturbance.

Rainfall and evapotranspiration rates for the local area (20km radius) are 300mm and 400mm respectively, suggesting that there is a low risk of water logging within the proposed clearing area.

Given the above, the proposal is unlikely to cause appreciable land degradation.

Methodology Northcote et al. (1960-68)
Western Botanical (2008)
GIS Layer:
- Evapotranspiration Isopleths - WRC 29/09/98
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05

(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

There are no mainland conservation areas within the local area (20km radius) of the application area. Given this, it is unlikely that the proposal is at variance to this principle.

Methodology - CALM Managed Lands and Waters - CALM 01/06/05

(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 clearing of 14.3 hectares of vegetation is unlikely to have a significant impact on groundwater in the proposed clearing area given the average annual rainfall of the site is 300mm, with most rainfall occurring over the summer months, and an evapotranspiration rate of 400mm per annum. Groundwater salinity is rated as 1000-3000mg/L which is marginally saline.

The majority of existing vegetation is shallow rooted grass and shrub species and thus the proposed clearing is unlikely to have a significant impact on the level or quality of the groundwater table.

Given the above, the application is unlikely to be at variance to this principle.

Methodology GIS Database:

- Hydrogeology, statewide - DOW 13/07/06
- Groundwater Salinity Statewide DoW 13/07/06
- Hydrography, linear - DOW 13/7/06
- Evapotranspiration Isopleths - WRC 29/09/98
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05

(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**

Clearing of 14.3ha is unlikely to have a significant impact on quality or quantity of groundwater given the mean annual rainfall for the site is 300mm with most rainfall occurring around the summer months, and an evapotranspiration rate of 400mm per annum.

Given the above, it is unlikely that the proposed clearing will cause or exacerbate the incidence or intensity of flooding.

Methodology GIS Layer:

- Hydrographic catchments, catchments - DoW 01/06/07
- Evapotranspiration Isopleths - WRC 29/09/98
- Mean Annual Rainfall Isohytes (1975 - 2003) - DEC 02/08/05

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

Comments

The application area falls within the Pilbara Rivers and Tributaries and Groundwater RIWI Area. A Section 26D licence is required from the Department of Water for installation of groundwater monitoring wells (DEC TRIM Ref: DOC87470).

Native title notification was made on 26 August 2009. A response by the claimants was made on 24 September 2009 advising that the claimants and the applicant are currently negotiating an Indigenous Land Use Agreement, and when finalised, a cultural heritage survey would be required (DEC TRIM Ref: DOC98978).

Current leases for Lot 64 on Deposited Plan 57724 and Lot 63 on Deposited Plan 54397 are due to expire 31 October 2012. Further terms will be sought by the applicant (DEC TRIM Ref: DOC87470).

Planning Approval is required from the Shire of Roebourne. This has been submitted to the Shire DEC TRIM Ref: DOC87470).

DEC Works approval is required through industry regulations branch for the construction of a Landfill site (to accept class 1 and/or class 11 waste). This has not yet been submitted to DEC as the applicant is waiting for legal access to the site (Section 91) (DEC TRIM Ref: DOC87470).

Town planning scheme zoning over the application area has been rezoned to "landfill site" (DEC TRIM Ref: DOC90849).

The Department of Planning and Infrastructure are in the process of providing tenure over Lot 500 on Deposited Plan 63022, however, no approval for Robe River to clear within this lot has been received. A copy of the section 91 licence has not been received by DEC (DEC TRIM Ref: DOC87470).

Methodology DEC TRIM Ref: DOC87470

GIS Layers

- Native Title Claims - LA 2/5/07
- Town Planning Scheme Zones - MFP 31/08/98

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing to be at variance to Principle (f) and is not likely to be at variance to the remaining clearing Principles.

5. References

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

WA (Inc). Nedlands, Western Australia.

Northcote, K. H. with Beckmann G G, Bettenay E., Churchward H. M., van Dijk D. C., Dimmock G. M., Hubble G. D., Isbell R. F., McArthur W. M., Murtha G. G., Nicolls K. D., Paton T. R., Thompson C. H., Webb A. A. and Wright M. J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.

Shepherd, D.P. (2007). 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. Includes subsequent updates for 2006 from Vegetation Extent dataset ANZWA1050000124.

Western Botanical (2008). Proposed 7kp Replacement Landfill Site at Cape Lambert: Native Vegetation Clearing Permit Report May - June 2008. Prepared for Pilbara Iron Pty Ltd July 2008.

6. Glossary

Term	Meaning
BCS	Biodiversity Coordination Section of DEC
CALM	Department of Conservation and Land Management (now BCS)
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
DEP	Department of Environmental Protection (now DEC)
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 DEC)