Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 399/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Co-operative Bulk Handling Limited**

1.3. Property details

Property:

Local Government Area: Shire Of Lake Grace

Colloquial name: Lot 107 on Plan 44397

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3		Mechanical Removal	Building or Structure

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 941: Mosaic: Medium woodland; salmon gum and morrel/ Shrublands; mallee scrub, redwood (Hopkins et al. 2001; Shepherd et al. 2001).	The proposed area to be cleared of 3 hectares is along the northeastern boundary of Lot 107 (total area 22ha), adjacent to the road verge and existing CBH facilities. Bennett Environmental Consulting (2003b) surveyed the area under application, identifying 3 vegetation units: Vegetation Unit 1- Closed Tree Mallee of Eucalyptus salubris over a low shrubland of several species and 90% bare ground. Unit 2 - Open Shrub Mallee of Eucalyptus eremophila and Eucalyptus pileata over an open heath to open shrubland dominated by Melaleuca species. Unit 3 - Closed Heath of Melaleuca uncinata, Melaleuca acuminata and Melaleuca lateriflora over a low shrubland of Melaleuca species over very open shrubland of Lepidosperma affin. Drummondii. From the vegetation units Bennett Environmental Consulting (2003b) surmised that the Beard vegetation associations are No. 516 (Shrublands; mallee scrub, black marlock) and No. 49 (Shrublands; mixed heath) (Bennett Environmental	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the vegetation of the area under application varies from very good to excellent, with very few weed species recorded (Bennett Environmental Consulting. 2003b)

Consulting. 2003b; Hopkins et al. 2001; Shepherd et al. 2001)

CALM (2006) however, advises that from the vegetation units and flora list described by Bennett Environmental Consulting (2003b), Beard vegetation associations 941, 516 (Black Marlock is not on the flora list) and 49 (Eucalyptus eremophila not considered) are not present on Lot 107.

Further, CALM (2006) advises that from the flora list recorded by Bennett Environmental Consulting, only Beard vegetation associations No. 519 (Shrublands; mallee scrub, Eucalyptus eremophila) and No. 8 (Medium woodland; salmon gum (Eucalyptus salmonophloia) and gimlet (Eucalyptus salubris)) are present within the area under application.

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

Bennett Environmental Consulting (2003b) described the condition of the condition within the area under application as very good to excellent with very few weed species recorded.

There are five conservation reserves within a 15km radius of the proposed clearing that are considered to have high levels of biodiversity, with the closest being the Damnosa Nature Reserve (45ha) less than 1km to the west. The biological diversity contained within the proposed area to be cleared is likely to be replicated if not greater in nearby uncleared areas within the Damnosa Nature Reserve.

Given the relatively small area that is proposed to be cleared, it is unlikely to have higher biological diversity than that in the local conservation reserves.

Methodology

Bennett Environmental Consulting (2003b) (DoE TRIM Ref IN 19827)
Site Visit (31/3/04)

(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 at variance to this Principle

CALM (2006) states, 'there are no records on CALM's database of Threatened or Priority Fauna species having been recorded within the 10km buffer around this site. According to CALM Katanning District there are no records of Threatened or Priority species occurring within Damnosa Nature Reserve, <1km west of the notified area.'

The area under application is situated within the Lake King townsite, which is surrounded by an extensively cleared landscape. The remnant vegetation is likely to be important as habitat for local fauna populations. The northern boundary of the area under application is adjacent to existing CBH facilities and is subject to disturbance, and the northeastern boundary is adjacent to a major road, which would result in weed encroachment through edge effects.

Aerial photography shows that the surrounding landscape has largely been cleared. The vegetation that is proposed to be cleared is likely to constitute significant habitat for local populations of endemic fauna.

Methodology

CALM (2006) (DoE TRIM Ref NI 1308)
Site Visit (31/3/04)

(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

CALM (2006) advises that are 11 records of the Declared Rare taxon Goodenia integerrima and 47 records of 18 Priority flora species occurring within the local area.
The DRF Goodenia integerrima grows on gypsum dunes on elevated islets in Lake King (CALM 2006) and therefore it is unlikely that it would occur within the area under application.

A survey conducted by Bennett Environmental Consulting (2003b) recorded no Declared Rare or Priority flora occurring within the area under application (Bennett Environmental Consulting 2003b). Given the above, it is considered that the clearing as proposed is not likely to be at variance to this Principle.

Methodology

Bennet Environmental Consulting (2003b) (DoE TRIM Ref IN 19827)
CALM (2006) (DoE TRIM Ref NI 1308)
GIS Databases:
- Declared Rare and Priority Flora List - CALM 13/08/03

(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

CALM (2006) advises that there is no evidence to suggest that any EPBC Act listed Threatened Ecological Communities (TECs) or State listed TECs are present within the proposed clearing. There are no records of TECs within a 50km radius of the area under application with the nearest recorded TEC located approximately 70km southwest of the current proposal. It is therefore unlikely that the proposed clearing will have an impact on TECs.

Methodology

CALM (2006) (DoE TRIM Ref NI 1308)
GIS Databases:
- Threatened Ecological Community Database - CALM 15/07/03
- Environmentally Sensitive Areas - DOE 22/10/04

(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 at variance to this Principle

The area under application falls within the Mallee IBRA Bioregion of which 55.1% remnant native vegetation remains (Hopkins et al 2001). The vegetation within the proposed clearing area is mapped as Beard vegetation association 941 (GIS database), of which 37.5% (15,375 ha) of the original extent remains with 14.9% in secure tenure (Shepherd et al 2001, Hopkins et al 2001). This vegetation type is therefore regarded as 'depleted' in terms of biodiversity conservation (Department of Natural Resources and the Environment 2002). However, the description of the vegetation proposed to be cleared is not considered representative of Beard vegetation association 941 (Bennett Environmental Consulting 2003b).

Bennett Environmental Consulting (2003b) identified the area as components of Beard vegetation associations 516 and 49. Of Beard vegetation association 516, 43.2% of the original extent is remaining with 35.9% in secure tenure, and 40.4% of the original extent of Beard vegetation association 49 is remaining with 45.7% in secure tenure (Shepherd et al 2001, Hopkins et al 2001). These vegetation types are also regarded as 'depleted' in terms of biodiversity conservation (Department of Natural Resources and the Environment 2002).

CALM (2006) identified the vegetation within the area under application as components of Beard vegetation associations 519 and 8. Of Beard vegetation association 519, 60.6%of the original extent is remaining with 18.9% in secure tenure (Shepherd et al 2001, Hopkins et al 2001). And for Beard vegetation association 8, 54.5% of the original extent is remaining with 37.8% in secure tenure (Shepherd et al 2001, Hopkins et al 2001). These vegetation types are therefore regarded as 'least concern' in terms of biodiversity conservation (Department of Natural Resources and the Environment 2002).

The area under application falls within the Environmental Protection Authority (EPA) Position Statement No 2 - Agricultural Area and the EPA does not support further clearing in these areas. It also is located within the Shire of Lake Grace, which has only 21.9% remnant vegetation remaining.

Aerial imagery shows that the vegetation that is proposed to be cleared is significant as it is continguous with Damnosa Nature reserve, in an otherwise locally cleared landscape.

Methodology

Bennett Environmental Consulting (2003b) (DoE TRIM Ref IN 19827)
CALM (2006) (DoE TRIM Ref NI 1308)
Shepherd et al. (2001)
Hopkins et al. (2001)
JANIS Forest Criteria (1997)

Department of Natural Resources and Environment (2002)
EPA (2000)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- EPA Position Paper No 2 Agriculture Region - DEP 12/00

(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 likely to be at variance to this Principle

There are no wetlands or watercourses within the area under application. As such, the vegetation under application is not considered to be wetland or watercourse dependent and the clearing is therefore unlikely to be at variance to this Principle.

Methodology

GIS Databases:
- Hydrography, linear - DOE 01/02/04
- Hydrographic Catchments - Catchments DOE 3/4/03

(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 soil types of the area under application have been described as loamy clay, brownish-yellow loam and brownish-yellow clayey loam (Bennett Environmental Consulting 2003b).

On-site and off-site land degradation risk will be minimised, as on-site stormwater will be managed by CBH by harvesting the water and storing it in one of the town dams (Bennett Environmental Consulting 2003a). Also the risk of water logging and salinity would be low, as additional discharge will be diverted from Lake King Nature Reserve. Therefore, this proposal is not likely to cause appreciable land degradation.

Methodology

Bennett Environmental Consulting (2003a) (DoE TRIM Ref IN 19827)
Bennett Environmental Consulting (2003b) (DoE TRIM Ref IN 19827)
Site Visit (31/03/04)
GIS Databases:
- Salinity Mapping LM 25m - DOLA 00
- Salinity Monitoring LM 50m - DOLA 00
- Salinity Risk LM 25m - DOLA 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 may be at variance to this Principle

There are a number of conservation reserves in the local area including Damnosa Nature Reserve approximately 375m to the west of the area under application. Other conservation reserves in the surrounding area include Lake King Nature Reserve approximately 4km west, Kathleen Nature Reserve approximately 5km north, Lake Ace Nature Reserve approximately 11km north-west and Pallarup Nature Reserve approximately 11km south-west.

A potential risk that would impact the environmental values of the nearby Damnosa Nature Reserve is the spread of weeds. A winter survey in 2003 by Bennett Environmental Consulting (2003b) recorded 12 weed species in an area previously cleared for existing infrastructure, of which two of the grass species are prioritised for control and/or research by CALM. CALM (2006) recommends that the proponent be required (by permit condition) to adhere to the weed control measures set out on page 3 of the Environmental Management Plan for Extension of Infrastructure (Bennett 2003a), in order to prevent the spread of weeds into adjacent bushland and Damnosa Nature Reserve.

The remnant native vegetation within the area under application and Damnosa Nature Reserve is likely to act as a stepping stone for ecological connectivity between nature reserves and other remnants in the local area, such as the Lake King Nature Reserve. The proposed clearing would have an impact on the environmental values of adjacent or nearby conservation areas.

Methodology

Bennett Environmental Consulting (2003b) (DoE TRIM Ref IN 19827)
CALM (2006) (DoE TRIM Ref NI 1308)
Shepherd et al. (2001)
Hopkins et al. (2001)
GIS Databases:
- CALM Managed Lands and Water - CALM 01/08/04

- Pre-European Vegetation - DA 01/01

(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

With an average annual rainfall of 300mm and an annual evaporation rate of 2000mm there is little surface flow during normal seasonal rains. It is only during major rainfall events that there is likely to be any significant surface flow and the flow during these events would tend to be relatively fresh. The Lake King salt lake system within the Lockhart Catchment of the Avon River Basin becomes a medium for the collection and transportation of major flows.

With high annual evaporation rates and low annual rainfall there is little recharge into regional groundwater that is considered to be highly saline at this site (between 14 000 mg/l and 35 000 mg/l). The proposed clearing of native vegetation for this proposal is unlikely to have an impact on regional groundwater considering the relatively small size of the proposal and the magnitude of the Yilgarn-Goldfields Groundwater Province (~24 600 sq km).

Methodology

GIS Databases:
- Evaporation Isopleths - BOM 09/98
- Isohyets - BOM 09/98
- Groundwater Salinity, Statewide - 22/02/00
- Hydrography, linear - DOE 01/02/04
- Groundwater Provinces - WRC 98
- Hydrographic Catchments, Basins - DOE 23/03/05
- Salinity Mapping LM 25m - DOLA 00
- Salinity Monitoring LM 50m - DOLA 00
- Salinity Risk LM 25m - DOLA 01
- Topographic Contours, Statewide - DOLA 12/09/02

(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 300mm and an annual evaporation rate of 2000mm there is little surface flow during normal seasonal rains. It is only during major rainfall events that there is a likelihood of flooding for which the broad valleys and lake systems of the Lake King salt lake system are designed to compensate and sustain floodwaters.

Methodology

GIS Databases:
- Evaporation Isopleths - BOM 09/98
- Isohyets - BOM 09/98
- Hydrography, linear - DOE 01/02/04
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

There is no other RIWI Act Licence, Works Approval or EPA Act Licence that affects the area under application.

No comment has been received from the Shire of Lake Grace. However, the assessing officer contacted the Shire of Lake Grace and was told that development approvals are required by CBH.

An environmental management plan for the site was prepared to support the previous Notice Of Intent to Clear application. The plan outlines strategies to protect surrounding native vegetation from damage during and after the proposed clearing. These strategies include clearly demarcating the proposed clearing area prior to development taking place, instructing contractors on the importance of minimising damage to surrounding native vegetation, undertaking weed control at the site, and in surrounding bushland if necessary and chipping the cleared vegetation and spreading it over areas to be rehabilitated (Bennett Environmental Consulting 2003a).

Methodology

Bennett Environmental Consulting (2003a) (DoE TRIM Ref IN 19827)

GIS databases:
- RIWI Act, Groundwater Areas - WRC 13/06/00
- RIWI Act, Surface Water Areas - WRC 18/10/02

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment

Building or Structure	Mechanical Removal	3	The Clearing Principles have been addressed and no objections have been raised. CBH requires development approval from the Shire of Lake Grace. The application was found to be at variance to Principles (b), &(e), may be at variance to Principle h and not likely to be at variance to Principles (a,c,d,f,g,i,j)

5. References

Bennett Environmental Consulting. (2003a) Environmental Management Plan for Extension of Infrastructure at Lake King Wheatbin Area. Bennett Environmental Consulting Pty Ltd, Perth. DoE TRIM Ref IN19827

Bennett Environmental Consulting. (2003b) Vegetation and Flora - Lake King. Bennett Environmental Consulting Pty Ltd, Perth. DoE TRIM Ref IN19827

CALM. (2006) Land clearing proposal advice. Advice to A/Director General, Department of Environment (DoE). Department of Conservation and Land Management, Western Australia. DoE TRIM Ref NI1308

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.

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.

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.

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
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)