Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2212/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **John Holland Rail Pty Ltd**

1.3. Property details

Property: DOLA_LAND_DESCRIPTION
Local Government Area: LGA
Colloquial name: COLLOQUIAL_NAME

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.47		Mechanical Removal	Railway construction or maintenance
		Mechanical Removal	Railway construction or maintenance

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
The vegetation present on the area under application consist of two types of Beard Vegetation associations 967 (Medium woodland; wandoo & yate) and 968 (Medium woodland; jarrah, marri & wandoo).	From images taken courtesy of proponent and Geographical Information System (GIS), showed the 0.47 ha of proposed vegetation to be cleared appears to be in ' Very Good' condition throughout, although it is only a narrow strip flanked by a railway track and surrounded by extensively cleared land.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The Description and condition of the application area was determined via the use of aerial mapping and photographs of the site supplied by the applicant.

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**

Images supplied by proponent (site photographs) and Aerial mapping show the vegetation present on the area under application to be in "Very Good" condition (Keighery 1994). Parts of the Jarrah Forest Bioregion are known for their high species diversity of flora (CALM 2002), and within the local area (10km radius) there are 8 priority listed flora, however, due to the size of the proposed area to be cleared (0.47 ha), and its surrounds, it is unlikely to be an area of outstanding biodiversity, comparatively or in isolation.

Methodology GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
- Interim Biogeographic Regionalisation of Australia
CALM (2002)\
Keighery (1994)

(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**

Images captured by the proponent (site photographs) of the area under application, as well as images from aerial mapping, show the area to be in "Very Good" condition (Keighery 1994) , however the surrounding area has been extensively cleared for farmland and the previous construction of the railway line. There are 2 species located in the local area (10km radius) the Falco peregrinus (Peregrine Falcon), which has a status of specially

protected, and the Phascogale tapoatafa (Brush-tailed Phascogale), which is classed as Declared Threatened.

It is unlikely that the proposed area to be cleared will make up a significant habitat for these species, given its size and exclusion from other large remnants.

Methodology GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
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(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments

Proposal may be at variance to this Principle

Within the local area (10km radius) there are 2 species present with a status of Declared Rare Threatened (DRF), Orthrosanthus muelleri which occurs at 11 different sites within the local area and Thelymitra psammophila.

It is possible, considering the multiple occurrences of Orthrosanthus muelleri within the local area which is already extensively cleared, that it could also occur on the area under application despite its size and exclusion from other pockets of remnant vegetation.

Orthrosanthus muelleri inhabits low scrub in wandoo woodland. The soils are shallow brown to grey gravely loam (Brown et al. 1998). The area under application is mapped as Beard vegetation units 967 and 968 which are described as jarrah, marri, wandoo medium woodland and medium woodland, wandoo and yate (Shepherd 2001). Photographs sent with the application (DOC40185) confirm the presence of a medium woodland of this description. Soils for the area under application are mapped as Ub93 - hard neutral yellow mottled soils and Uf2 - hard neutral yellow mottled soils and ironstone gravel (Northcote et al. 1968). The soil types and vegetation types are the same as that found in nearby O. muelleri populations, the closest of which is 1.6km away.

The extremely localised nature of the largest population is a major threat to the survival of the species. The road verge habitat is badly degraded and weed infested and plants are vulnerable to grazing, road maintenance and fire (Brown et al 1998). It is therefore likely that this species could occur within the area under application and if found would increase the survival of this species by having populations distributed throughout the landscape.

Thelyitra psammophila favours open conditions amongst low shrubs and sedges, often in sandy clay soil, which becomes saturated during the winter months (Brown et al. 1998). Photographs (DOC40185), soil types (Northcote et al. 1968) and vegetation mapping (Shepherd 2001) of the area under application suggest that the above mentioned favoured conditions for T. psammophila are not present within this area. It is unlikely that this species occurs within the area under application.

Methodology Brown et al (1998)
Northcote et al. (1968)
Shepherd (2001)
GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
- DEFL
- albany_wa_herb
- Soils, statewide
- Pre-European Vegetation

(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 at variance to this Principle

There are no Threatened Ecological Communites (TECs) present within the local area (10km radius) or on the area under application; therefore the proposed clearing is not at variance to this principle.

Methodology GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
- Threaten Ecological Communities
- Priority Ecological Communities

(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 vegetation within the area under application is in " Very Good" condition (Keighery 1994) but is flanked by a railway line and extensively cleared areas of land. Within the IBRA Bioregion (Jarrah Forest) the Vegetation types present on the area under application (Beard Vegetation Assossiations 967 & 968) currently remain at 16.2% and 50.4% respectivley, of pre-1750 extent (Shepherd et al 2006).

The percentage of Beard vegetation type 967 is well below the recommended threshold of 30% as oulined in The National Objectives and Targets for Biodivesity Conservation 2001-2005. The application area lies within an agricultural area which the EPA has stated from an environmental perspective the EPA is of the view that it is unreasonable to expect to be able to continue to clear native vegetation from land within the agricultural area other than relatively small areas where alternative mechanisms for protecting biodiversity are addressed (EPA 2000).

The total remaining percentages (state wide) of the vegetation types present on the area under application are 12.2% (for 967) and 32.9% (for 968). Yet due to the size and condition of the area under application, and its surrounds, it is considered unlikely that this area will be a remnant in an already cleared area.

Methodology

GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
- Pre-European Vegetation
- Interim Biogeographic Regionalisation of Australia

The National Objectives and Targets for Biodivesity Conservation 2001-2005.(2001)
Shepherd et al. (2006)
EPA (2000)

(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

A mainstream of the Kalgan River is located 800m to the south east of the proposed area to be cleared and there is also an unnamed Wetland, which is classed in the Conservation category within the local area (10km radius).

The area under application is not considered to be growing in a watercourse or wetland.

Methodology

GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
- Rivers
- South Coast Significant Wetlands
- CALM Managed Lands and Waters

(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 vegetation within the proposed area to be cleared is in " Very Good" condition (Keighery 1994), yet due to being located adjacent to the railway line and extensively cleared land, it is unlikely that the proposed clearing of 0.47 ha of native vegetation will cause any appriciable land degredation.

Methodology

GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03

(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 Stirling Range National Park is located 8.4km north east of the proposed area to be cleared and has a vast array of vegetation associations present within its borders, one being the same as the area under application. However, there is no linkage between the area under application and the Stirling Range National Park due to the extensive clearing in the local area (10km Radius) which has already taken place, so it is unlikely that the proposed clearing of 0.47 ha of native vegetation will impact on any environmental values of the conservation area.

Methodology

GIS Datasets:

- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
- CALM Managed Lands and Waters
- Pre-European Vegetation

(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

There are no known potable water sources present within the local area (10km radius), groundwater salinity is 3000-7000 TDS mg/L, and groundwater depth ranges from 7 m to more than 20 m, while the pH is 6 to 7 (neutral). Levels are currently rising at a steady rate of 0.10 -0.15m/yr (Ryder 2004).

The local area has a medium risk of shallow water tables occurring, due to current depth and rate of rise. At the current rate, it will be more than 50 years before groundwater is close to the surface (Ryder 2004).

Given the size of the area under application, and the condition of its surrounds, it is unlikely that the proposed clearing of 0.47 ha of native vegetation will reduce the surface or ground water quality.

Methodology

GIS Datasets:
- Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
- Groundwater Salinity, statewide

Ryder (2004)

(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

The average annual rainfall for the local area (10km radius) is 600mm, as is the evaporation rate, the elevation ranges from between 190 - 200 on the application area and the hydrogeology consists of rocks of low permeability, fractured and weathered rocks.

It is unlikely that the proposed clearing of 0.47 ha of native vegetation will impact on peak flood height or duration in flood peak given the attributes of the area proposed to be cleared and the local area.

Methodology

GIS Datasets:
-Mount Barker North 1.4m Orthomosaic DLI 01
- Albany 1.4m Orthomosaic DLI March 03
- Rainfall, Mean Annual
- Evapotranspiration, Areal Actual
- Topography Contours, statewide

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

Comments

The Southern Noongar Community has a Native Title Claim on the local area which includes the area under application. As there is a Native Title Claim over the area under application. The Department of Environment and Conservation's advertising of the application in the West Australian newspaper constitutes legal notification of the native title representative body for the purpose of the future act procedures under the Native Title Act 1993. No response was received from the representative body.

The area under application is proposed to be cleared within a railway reserve for safety clearance and a line of sight for a nearby level crossing that occurs immediately after a bend in the railway.

Methodology

GIS Datasets
- Native Title Claims

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Railway construction o maintenance	Mechanical Removal	0.47	Safety Clearance - Line of Sight Improvement The assessment against clearing has found: Principle (c) may be at variance Principle (d) is not at variance All other Principles are not likely to be at variance
Railway construction o maintenance	Mechanical Removal		

5. References

Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

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.

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

National Objectives and Targets for Biodiversity Conservation2001-2005, (2001), Canberra.

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.

Ryder.A, (2004) Groundwater trends in the Albany Hinterland sub-region, Department of Agriculture Western Australia

Shepherd, D.P. (2006). 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.

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.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001a) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia (updated 2006).

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)