Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1917/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Electricity Networks Corporation/Western Power (Western Power)**

1.3. Property details

Property: LOT 5607 ON PLAN 208673 (Lot No. 5607 COOPER MELALEUCA 6065)
LOT 13966 ON PLAN 221189 (BULLSBROOK 6084)
LOT 12887 ON PLAN 219810 (PINJAR 6065)
LOT 2284 ON PLAN 123581 (House No. 339 OLD WEST BULLSBROOK 6084)
LOT 1949 ON PLAN 114253 (House No. 214 OLD WEST BULLSBROOK 6084)
ROAD RESERVE (BULLSBROOK 6084)
LOT 13966 ON PLAN 221189 (MUCHEA 6501)

Local Government Area: City Of Swan & City Of Wanneroo & Shire Of Chittering

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
12		Mechanical Removal	Infrastructure 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
Heddle Vegetation Complexes: KARRAKATTA COMPLEX - NORTH : Predominantly low open forest and low woodland of Banksia spp. E- E. todtiana, less consistently open forest of E. gomphocephala - E. todtiana - Banksia species. KARRAKATTA COMPLEX - NORTH TRANSITION VEGETATION COMPLEX : A transition complex of low open forest and low woodland of Banksia species - E. todtiana on the transition zone of a series of high sand dunes between Bassendean-North and Karrakatta-North. BASSENDEAN COMPLEX - NORTH : Vegetation ranges from a low open forest and low open woodland of Banksia species E. todtiana to low woodland of Melaleuca species and sedgelands which occupy the moister sites.	The proposal is for the clearing of up to 12 hectares of native vegetation for the instillation of fibre optic cable. The condition of the vegetation ranges from Very Good to Completely degraded with large sections denude of vegetation.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation condition was deemed to be very good to completely degraded (Keighery, 1994) from aerial photographs (Swan Coastal Plain North, 20cm, 2006).

BASSENDEAN COMPLEX - CENTRAL AND SOUTH : Vegetation ranges from woodland of E. marginata - C. fraseriana - Banksia spp. to low woodland of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of E. marginata to E. todtiana in the vicinity of Perth.

Beard Vegetation Associations:

1001 - Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina

1948 - Low woodland; banksia on limestone

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

The proposed clearing of 12ha is for the installation of a fibre optic cable along an existing transmission line easement from Gnangara Road, Lexia to Pinjar Power Station, a distance of approximately 30 kilometres. The maximum area of impact is a 4m wide corridor.

The vegetation under application to be cleared ranges in condition from completely degraded to very good (Keighery 1994). There is the possibility of declared rare flora (DRF), priority flora and threatened ecological communities being present in the area.

In addition the proposed area to be cleared traverses Gnangara-Moore River State Forest, Yeal-Gnangara Area, (register of National Estate), Melaleuca Park (register of National Estate), a System 6 area and Bush Forever sites.

Given the above the area under application may contain a high level of biological diversity. To minimise impacts on biodiversity values it is recommended that conditions should be imposed to avoid and minimise clearing. Additionally dieback and weed management is recommended as well as an offset plan to mitigate any loss of environmental values.

Methodology

Keighery, 1994
GIS Database:
- Clearing Regulations - Environmentally Sensitive Areas - DOE 08/03/05
- Swan Coastal Plain North 20cm Orthomosaic - DLI06
- CALM Managed Lands and Waters - CALM 1/06/04
- System 6 Conservation Reserves - DEP 06/95

(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 proposal is for the clearing of up to 12 hectare of native vegetation for the installation of a fibre optic cable along a transmission line easement which has been previously cleared. Considering the area to be cleared is a narrow strip that runs through State Forest and Bush Forever sites and therefore is surrounded by habitat that is heavily vegetated it is unlikely to yield significant impacts to fauna habitat.

Methodology

GIS Database:
- Fauna - SAC Bio datasets 19/07/07
-Clearing Regulations - Environmentally Sensitive Areas - DOE 08/03/05
-Swan Coastal Plain North 20cm Orthomosaic - DLI06

(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

A number of known records of Declared Rare and Priority Flora are associated with the proposed clearing for the instillation of a fibre optic cable. Given the number of Declared Rare and Priority Flora within or in close proximity to the areas proposed to be cleared, the proposal may be at variance with this principle.

It is recommended that a flora condition be imposed to mitigate the potential impact on rare flora.

Methodology

GIS Database:
- DEFL SAC Bio Datasets 19/07/07
-Clearing Regulations - Environmentally Sensitive Areas - DOE 08/03/05
-Swan Coastal Plain North 20cm Orthomosaic - DLI06

(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 may be at variance to this Principle

A number of known records of Threatened Ecological Communities (TEC) occur within close proximity to the areas proposed to be cleared. The TECs have been identified as Banksia attenuate woodland over species rich dense shrublands, and occur on the same vegetation and soil type as the area proposed to be cleared.

Given the proximity of the TECs to the areas proposed to be cleared and that identified TECs occur on the same vegetation and soil type as the area under application, the proposal may be at variance to this principle.

It is recommended that conditions relating to the survey and identification of TECs be imposed to mitigate the potential impact on TECs.

Methodology

GIS Database:
- TEC points SAC Bio Datasets 19/07/07
- TEC Buffers SAC Bio Datasets 19/07/07
- Environmentally Sensitive Areas - DOE 30/5/05
- Heddle Vegetation Complexes - DEP 21/06/95

(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

Pre-European	Current extent	Remaining	Conservation **status	% In reserves/CALM	
	(ha)*	(ha)*	(%)*		managed land
IBRA Bioregions					
- Swan Coastal Plain	1501456.550	571758.664	38.1	Depleted	10.4
Shire of Chittering	123,502	48,828	39.5	Depleted	
City of Swan	103,944	54,792	52.7	Least Concern	
City of Wanneroo	78,809	45,361	57.6	Least Concern	
Vegetation type:					
Beard: Unit 1001	57412.897	15241.705	26.5	Vulnerable	1.2
Beard: Unit 1948	81022	17315	21.4	Vulnerable	15.6ˇ
Heddle:					
Karrakatta Complex-North	25,579	9,444	36.9	Depleted	0.2
Karrakatta Complex-North -\Transition	5,260	4,803	91.3	Least Concern	0.0
Bassendean Complex Central And\South	87,477	23,624	27.0	Vulnerable	0.7
Bassendean Complex -North	74,147	53,384	72	Least Concern	27.5

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

The objective for environmental protection and biodiversity conservation, (EPA 2002) is to retain 30% or more of the pre-european clearing extent of each vegetation community.

The proposed clearing is for a 4 m wide strip within an area that is in an area that is highly vegetated, therefore it is not considered to be a significant remnant within an area that has been extensively cleared.

Methodology

Keighery, 1994
EPA (2000)
Shepherd et al (2001)
Shepherd et al (2006)
Beard (1990)
Department of Natural Resources and Environment (2002)
GIS Database:
- Pre-European Vegetation - DA 10/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- EPA Position Paper No. 2 Agriculture Region - DEP 12/00
- Heddle Vegetation Complexes - DEP 21/06/95
- Swan Coastal Plain North 20cm Orthomosaic - DLI06

(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

The area under application is associated and growing within numerous wetlands, including three Conservation Category Wetlands (CCW), two Resource Enhancement Wetlands (REW) and multiple Multi Use Wetlands. CCWs are wetlands with high ecological values and are the highest priority wetlands for protection. CCWs are recognised under objective one of the Wetlands Conservation Policy for Western Australia as valuable (Government of Western Australia, 1997). Therefore, government agencies and the Environmental Protection Authority consider there should be no further loss and degradation of these wetlands. Their protection also requires the retention of an adequate buffer. REWs are priority wetlands, which may have been partially modified but still support substantial ecological attributes and functions. The management objective for these wetlands is restoration and protection towards improving their conservation value.

Given the above the proposed clearing is in an environment associated with a wetland and therefore at variance to the principle.

Given the nature of the clearing, a narrow strip of 4m that will be allowed to naturally revegetate it is considered that the proposed clearing may have short term impact on the environmental values of the wetland areas

To address the loss of wetland vegetation, it is recommended that an offset condition be imposed to mitigate the loss of any environmental values.

Methodology

Government of Western Australia, 1997
GIS Database:
- Hydrography, Linear - DOE 1/2/04
- Rivers 250K - GA
- EPP, Lakes - DEP 1/12/92
- EPP, Areas -DEP 06/95
- Geomorphic Wetlands (Management Categories), Swan Coastal Plain - DEC

(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 area proposed to be cleared has a low to high acid sulphate soil disturbance risk. The risk of wind erosion and water erosion causing land degradation are considered to be low based on short slope lengths, low slope gradients, hydrogeology and rainfall.

Given the above and the nature of the clearing, a narrow strip of 4m that will be allowed to naturally revegetate, and the surrounding vegetation it is unlikely that the proposed clearing will cause appreciable land degradation.

Methodology

GIS Database:
- Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC
- Hydrogeology, Statewide - DOW
- Soils, Statewide - DA 11/99

(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

The proposed vegetation to be cleared passes through Gnangara-Moore River State Forest, Yeal-Gnangara Area (Register of National Estate), Melaleuca Park (Register of National Estate) and three Bush Forever sites, including one reference site no.399.

Given that this clearing is in a narrow 4m strip and will be allowed to regenerate it is considered that the proposed clearing may have short term impact on the environmental values of the conservation areas.

Methodology

GIS Database:
- CALM Managed Lands and Waters - CALM 1/07/05
- Bushforever - MFP 07/01
- System 6 Conservation Reserves - DEP 06/95
- Register of National Estate - EA 28/04/03

(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 may be at variance to this Principle

The area under application is situated in a Priority 1 (P1) Public Drinking Water Source Area, Gnangara Underground Pollution Control Area. The area under application is within the Gnangara Mound EPP, the policy has the stated purpose of protecting native vegetation and wetlands within the policy area.

This application was referred to EPA with regards to the Gnangara Mound Environmental Protection Policy area the EPA advised that the referral was Not Assessed - Managed under Part V of the EP Act (Clearing) (TRIM Ref. DOC37301).

Given the linear nature of the proposed clearing it is unlikely to impact on long term surface and groundwater quality.

Methodology

GIS Database:
- Hydrographic Catchments - Catchments - DOE 23/03/05
- Rainfall, Mean Annual - BOM 30/09/01
- Groundwater Salinity, Statewide - 22/02/00
- EPP, Areas -DEP 09/95
- Public Drinking Water Source Areas (PDWSAs) - DOW
- 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

The proposal is for the temporary clearing of a narrow strip, of native vegetation in an area that is heavily vegetated. It is therefore unlikely to cause or exacerbate the incidence or intensity of flooding.

Methodology

GIS Database:
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

No submissions from the public have been received.

DPI have advised that a Development Application will have to be submitted to WAPC for approval as the installation of fibre optic cables is considered to be new infrastructure.

As the proposed clearing traverses through Bushforever sites, DPI recommend an offset package and that an Environmental Management Plan and a Plan of Works for Maintenance (detailing how contractors or staff will minimise the impact of works on the native vegetation) be submitted by Western Power.

Methodology

GIS Database:
- Public Drinking Water Source Areas (PDWSAs) - DOW
- RIWI Act, Surface Water Areas - DOW
- RIWI Act, Rivers - DOW
- RIWI Act, Irrigation Districts - DOW
- RIWI Act, Groundwater Areas - DOW
- RIWI Act, Areas - DOW
- Native Title Claims - DLI 7/11/05

- Aboriginal Sites of Significance - DIA

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Infrastructure Maintenance	Mechanical Removal	12	The assessable criteria have been addressed, and the proposal is at variance to Principle (f); may be at variance to Principles (a), (c), (d), (h) and (i); and is not likely to be at variance to Principles (b), (e) (g) and (j). Conditions are recommended to be imposed to manage and offset the principles at variance.

5. References

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.

Government of Western Australia (1997) Wetlands Conservation Policy for Western Australia, Department of Conservation and Land Management and the Water and Rivers Commission, Perth WA.

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.

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 2005).

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)

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.
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. (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.
Woodman Environmental Consulting Pty Ltd (2007) Southern Cross Pumping Station Distribution Line Route - Flora and Vegetation Survey. Prepared for Western Power.

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)