Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1991/1

Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property:

Local Government Area: City Of Albany & Shire Of Broomehill & Shire Of Collie & Shire Of Gnowangerup & Shire Of Kojonup & Shire Of Tambellup & Shire Of West Arthur

Colloquial name: Muja to Wellstead powerline

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
41.2		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
The vegetation within the area under application is representative of 18 mapped Beard (1980) types.	Specifically, the area under application comprises a linear strip of approximately 280 kilometres in length that traverses several remnants and affects various scattered vegetation. The condition of the vegetation, ascertained from aerial photography, ranges on average from degraded to good (Keighery 1994).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	

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 at variance to this Principle

The proposed clearing involves the removal of approximately 41.2 hectares of vegetation within intermittent remnants along a 280 kilometre long x 50 metre wide linear alignment for proposed transmission line construction between Muja Power Station in Collie and Wellstead. The current alignment (the area under application) is preferentially located through degraded vegetation and/or along edges of vegetation to minimise disturbance and fragmentation to better quality vegetation, habitat and significant species.

Two surveys have been undertaken within selected remnants along the alignment of the proposed transmission line. Sites surveyed during the 2005 survey were not surveyed again in the 2006 survey.

A survey undertaken by Ecoscape (Australia) Pty Ltd in spring 2005 identified 39 areas of remnant vegetation along the alignment, and surveyed 31 of these. The 2005 survey indicates that survey sites were selected along the alignment in consultation with the proponent, on the basis of where aerial interpretation indicated the presence of native vegetation and access was permitted by landholders.

The 2005 survey identified several species and vegetation of significance, and the alignment was subsequently amended to avoid these areas. The western sites 1-11 and 14-15 are considered to occur within the area under application for the purpose of this assessment. The condition of the vegetation within these 13 sites (by site number) is described as follows:

- excellent: 7
- very good: 1 and 6
- good: 2, 3, 4, 5 and 8

- degraded: 11, 14 and 15
- completely degraded: 9 and 10.

A survey was undertaken by ENV Australia in spring 2006 to investigate previously unsurveyed areas of the now-amended alignment. Separate flora, fauna and dieback survey sites were located along the alignment. The 2006 survey indicates that flora survey sites were selected along the alignment in consultation with the proponent and using aerial photography, and where they met one or more of the following criteria: continuous remnant vegetation of greater than 100 metres along the proposed alignment, intact native vegetation in good or better condition, tall vegetation (over 7 metres) based on condition or potential habitat value, and areas that may be important for fauna habitat (e.g. rivers and wetlands, or granite outcrops along the alignment). The 2006 survey indicates that fauna survey sites were selected along the alignment using information obtained during the flora survey along with a review of aerial photography, and where they met one or more of the following criteria: vegetation in good or better condition, presence of suitable habitats (e.g. large trees, litter cover), and areas that may be important for fauna habitat (e.g. rivers and wetlands, or granite outcrops along the alignment). The 2006 survey indicates that dieback survey sites were identified by aerial photography as being 'protectable' (i.e. free of the pathogen Phytophthora cinnamomi, and positioned in the landscape and of a suitable size greater than 4 hectares that the pathogen will not autonomously engulf them in the short term).

Following the 2006 survey further amendments were made to the alignment to avoid areas identified as containing high quality vegetation. Flora survey sites 11-15, 31, 33-39, 41-49, 54, 56-59, 62-77, 79-82 and 86-88, fauna survey sites 7-12 and 14-19, and dieback survey sites 1-4, 1a-4a, 12-20, 21, 21a, 23-25 and 23a-25a, are considered to occur within the area under application for the purpose of this assessment. It needs to be noted that there is some overlap between the 2006 flora, fauna and dieback survey sites. With respect to the flora survey sites, the condition of the vegetation within these 48 sites (by site number) is described as follows:
- very good: 34, 82 and 87
- good: 11, 42, 46, 48, 54, 57 and 86
- degraded: 31, 39, 45, 47, 63-64, and 79-81
- completely degraded: 12-15, 33, 35-38, 41, 43-44, 49, 56, 58-59, 62, and 65-77.

The 2006 survey confirmed the presence of dieback within dieback survey sites 1, 1a, 21 and 21a. The 2006 dieback survey site 1 corresponds with 2005 survey site 1, 2006 dieback survey site 21 corresponds with 2006 flora survey site 48, and 2006 dieback survey site 21a corresponds with 2006 flora survey site 49.

Of the 61 remnants surveyed for flora, 18 are considered to be in good or better condition (2 of which have been confirmed to contain dieback and therefore condition may change over time). It can be surmised that these 18 remnants contain a high level of biological diversity, particularly in the eastern portion of the alignment where the surrounding landscape has been extensively cleared. For this reason a condition to offset the clearing has been imposed on the clearing permit, to mitigate the loss of biodiversity within these 18 sites.

Methodology Ecoscape (Australia) Pty Ltd 2005
ENV Australia 2006
Western Power 2007

(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

Two surveys have been undertaken within selected remnants along the alignment of the proposed transmission line. Sites surveyed during the 2005 survey were not surveyed again in the 2006 survey.

A survey undertaken by Ecoscape (Australia) Pty Ltd in spring 2005 identified 39 areas of remnant vegetation along the alignment, and surveyed 31 of these. The 2005 survey indicates that survey sites were selected along the alignment in consultation with the proponent, on the basis of where aerial interpretation indicated the presence of native vegetation and access was permitted by landholders.

The 2005 survey determined that a possible 298 taxa of terrestrial vertebrate fauna may occur along the proposed alignment, with 50 of these being of conservation significance (Threatened or Priority). Within the current alignment (the area under application), the 2005 survey determined that sites 1-5, 7 and 8 contain good or better condition Marri, Jarrah and Wandoo woodland and provide good habitat for fauna including several species of conservation significance. Aerial photography indicates that a large expanse of similar condition/composition and continuous vegetation occurs between 2005 survey sites 1-2, thus the impact of the proposed clearing of 50 metre x 50 metre areas at intervals in a lineal pattern is not expected to be significant in this section of the area under application.

A survey undertaken by ENV Australia in spring 2006 selected fauna survey sites using information obtained during the flora survey, along with a review of aerial photography. The 2006 survey indicates that fauna survey sites were selected along the alignment is they met one or more of the following criteria: vegetation in good or better condition, presence of suitable habitats (e.g. large trees, litter cover), and areas that may be important for fauna habitat (e.g. rivers and wetlands, or granite outcrops along the alignment).

The 2006 survey investigated fauna habitat values within a number of sites along two proposed realignments. It is noted that a third realignment following this survey has avoided some of these areas along the alignment. The 2006 survey indicates that fragmentation throughout the landscape has meant that isolated patches of remnant vegetation (regardless of condition) can provide important refuge for fauna, and clearing within those areas where fauna habitat is described as being of high quality should be avoided where possible or minimised. The 2006 survey recommends that habitats within and around granite outcrops, waterways and swamps should be avoided wherever possible. The 2006 survey also indicates that the linear nature of the proposed clearing would not be expected to have a significant impact on the regionally widespread fauna within the vicinity of the alignment.

There are more than 300 records of Threatened and Priority fauna within a 50 kilometre radius of the area under application. With respect to species of local conservation significance and/or with restricted range, the 2006 survey indicates that granite outcrops within fauna survey site 9 may host the Ornate Rock Dragon and Granite Worm Lizard. A subsequent realignment has excluded these habitats from the area under application. The 2006 survey indicates that within the area under application, fauna survey site 12 contains habitat suitable for the Glossy Swamp Skink, Crowned Snake and Australasian Bittern (Threatened). With respect to Threatened and Priority fauna within the area under application, the 2006 survey indicates that fauna survey sites 12, 14, 16 and 18 contain sufficient understorey for Malleefowl (Threatened).

The remaining sites from both the 2005 and 2006 surveys may be considered to have a lower value as fauna habitats because they are either in close proximity to similar quality vegetation, or are in degraded or completely degraded condition. The 2006 survey indicates that observations made in the field suggest that most survey sites are unlikely to provide suitable habitats for significant fauna.

With respect to the 2005 survey sites 3-5, 7 and 8, and 2006 fauna survey sites 12, 14, 16 and 18, all which have been determined to contain significant fauna habitat, plus 2006 flora survey sites 34, 82 and 87 which have been determined to contain very good condition vegetation and therefore may also provide significant habitat for fauna, a condition has been imposed on the clearing permit to ensure that these habitats are disturbed as little as possible.

Methodology

Ecoscape (Australia) Pty Ltd 2005
ENV Australia 2006
GIS datasets
- Fauna

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments

Proposal is at variance to this Principle

There are more than 300 records of Declared Rare and Priority flora within a 50 kilometre radius of the area under application.

Two surveys have been undertaken within selected remnants along the alignment of the proposed transmission line. Sites surveyed during the 2005 survey were not surveyed again in the 2006 survey.

A survey undertaken by Ecoscape (Australia) Pty Ltd in spring 2005 identified 39 areas of remnant vegetation along the alignment, and surveyed 31 of these. The 2005 survey indicates that survey sites were selected along the alignment in consultation with the proponent, on the basis of where aerial interpretation indicated the presence of native vegetation and access was permitted by landholders.

The 2005 survey determined that the Declared Rare flora taxa Dryandra mucronulata subsp. mucronulata occurred within 100 metres of the proposed alignment between site 12 and 13 (approximately east of the Wadjekanup River crossing), and the alignment was subsequently amended to avoid this population. Within the current alignment (the area under application), the 2005 survey also identified the Priority flora taxa Pultenaea skinneri (Priority 4) within site 1 (State Forest adjacent Muja Power Station).

A survey undertaken by ENV Australia in spring 2006 selected flora survey sites in consultation with the proponent. The 2006 survey indicates that flora survey sites were selected along the alignment if they met one or more of the following criteria: continuous remnant vegetation of greater than 100 metres along the proposed alignment, intact native vegetation in good or better condition, tall vegetation (over 7 metres) based on condition or potential habitat value, and areas that may be important for fauna habitat (e.g. rivers and wetlands, or granite outcrops along the alignment).

The 2006 survey determined that the Declared Rare flora taxa Conostylis misera occurs within site 85 of the proposed alignment, and the alignment was subsequently amended to avoid this population so that the area under application is now approximately 100 metres west of this population. Similarly, prior to this realignment the 2006 survey identified Dryandra conferta subsp. parva (Priority 2) at site 84, Leucopogon tamariscinus (Priority 4) at sites 52 and 84, Stenanthemum tridentatum (Priority 4) at site 30, Acacia declinata (Priority 3) at site 83. The alignment was adjusted to avoid these populations, with the closest now being approximately 100 metres from the area under application. Within the current alignment (the area under application), the 2006 survey has identified the Priority flora taxa Acacia declinata (Priority 3) at site 82, Petrophile longifolia (Priority

3) at site 61, Hemigenia platyphylla (Priority 4) at site 34, and Leucopogon denticulatus (Priority4) at site 46.

With respect to 2005 survey site 1, and 2006 flora survey sites 34, 46, 61 and 82, all which have been determined to contain those Priority taxa listed above, a condition has been imposed on the clearing permit to ensure that the populations are not disturbed during clearing and transmission line construction.

Methodology Ecoscape (Australia) Pty Ltd 2005
ENV Australia 2006
GIS datasets
- Flora

(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**
A survey undertaken by Ecoscape (Australia) Pty Ltd in 2005 determined that no Threatened Ecological Communities were identified within 5 kilometres of the proposed alignment. Following amendment of the alignment, a survey undertaken by ENV Australia in 2006 determined that no Threatened Ecological Communities or other significant communities occur along the proposed alignment of the transmission line.

Thus it is unlikely that the proposed clearing will impact on any Threatened Ecological Communities.

Methodology Ecoscape (Australia) Pty Ltd 2005
ENV Australia 2006

(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**
There are 18 Beard vegetation associations, 4 IBRA regions and 6 local governments represented within the area under application. Many of the vegetation associations have less than 30% of their pre-European extent remaining, and many have less than 10% of their original extent protected in DEC-managed reserves.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	Conservation status **	Pre-European % reserve/DEC
land					
IBRA Bioregions: #					
- Avon Wheatbelt ***	8 967 527	924 828	10.3	Endangered	
- Esperance Plains ***	2 520 106	1 144 827	45.4	Depleted	
- Jarrah Forest ***	4 503 156	2 624 301	58.3	Least Concern	
- Mallee ***	4 130 281	806 971	19.5	Vulnerable	
LGAs: #					
- Shire of Albany	383 843	149 341	38.9	Depleted	
- Shire of Broomehill	119 170	11 265	9.5	Endangered	
- Shire of Collie	172 072	161 845	94.1	Least Concern	
- Shire of Gnowangerup	454 958	83 957	18.5	Vulnerable	
- Shire of Kojonup	292 938	44 482	15.2	Vulnerable	
- Shire of Tambellup	141 288	16 966	12.0	Vulnerable	
Beard (1980): *					
- type 3	2 661 514	1 863 982	70.0	Least Concern	58.3
- type 4	1 054 316	245 361	23.3	Vulnerable	6.3
- type 47	1 033 061	367 766	35.6	Depleted	17.5
- type 352	724 296	119 957	16.6	Vulnerable	1.7
- type 516	607 435	343 302	56.5	Least Concern	24.2
- type 931	31 389	13 403	42.7	Depleted	7.7
- type 938	77 553	15 818	20.4	Vulnerable	1.7
- type 940	261 595	106 869	40.9	Depleted	20.1
- type 967	117 858	15 906	13.5	Vulnerable	0.8
- type 968	296 889	97 181	32.7	Depleted	18.4
- type 974	7 217	587	8.1	Endangered	0.0
- type 992	122 053	25 684	21.0	Vulnerable	2.7
- type 1073	18 807	5 436	28.9	Vulnerable	16.4
- type 1075	527 028	62 579	11.9	Vulnerable	5.4
- type 1088	395	141	35.7	Depleted	0.0
- type 1095	1 941	381	19.7	Vulnerable	0.0

- type 1114	19 836	13 487	68	Least Concern	49.4
- type 1200	162 788	12 833	7.9	Endangered	1.5

statistics from Shepherd et al 2001 (Technical Report 249)
* statistics from AGWA 2005 (Shepherd et al)
** Department of Natural Resources and Environment 2002
*** within the Intensive Landuse Zone

Mattiske (2002) vegetation mapping is available for part of the area under application, but has not been included in the table above due to it not being available for the whole of the area under application. In summary, 13 Mattiske associations are represented, with 3 being Endangered, 5 being Vulnerable and the remainder undescribed, and all have less than 2% protected within the conservation estate.

Heddle (1980) vegetation mapping is also available but again only for part of the area under application and thus not included in the table above.

A report provided by the proponent entitled "Construction and Operation of a 220 KV Transmission Line from Muja Power Station, Collie, to Proposed Southdown Magnetite Mine, Wellstead" (Western Power, 2007) indicates that an approximate total of 41.2 hectares is to be cleared to facilitate the construction of access tracks and towers, with approximately 23 hectares to be allowed to regenerate following the completion of construction.

Aerial photography indicates that the main vegetation types found within approximately 56 distinct remnants (but not taking into account scattered trees and shrubs throughout the area under application) are representative of Beard (1980) types 3, 4, 47, 352, 516, 938, 967, 992, 1073, 1095, 1114 and 1200. Of these 12 types, only type 1200 has been extensively cleared and is considered to be Endangered with less than 10% of its pre-European extent remaining, and the remainder have more than 20% of their pre-European extent remaining and are thus considered to be Vulnerable, Depleted or Least Concern.

Of the 18 vegetation types described in the table, 7 have greater than 10% protected within the conservation estate, and the remainder are under-represented or not represented at all within the conservation estate.

A survey undertaken by Ecoscape (Australia) Pty Ltd in spring 2005 determined that of the western sites 1-15 (but excluding sites 12 and 13), the Beard vegetation associations described in the table above as having less than 30% of their original extent remaining (Vulnerable or Endangered) are distributed across the survey sites (by site number) as follows:
- type 4: 10 (completely degraded)
- type 967: 14 (degraded)
- type 992: 11 (degraded)
- type 1095: 15 (degraded)

A survey undertaken by ENV Australia in spring 2006 determined that for flora survey sites 11-15, 31, 33-39, 41-49, 54, 56-59, 62-77, 79-82 and 86-88, the Beard vegetation associations described in the table above as having less than 30% of their original extent remaining (Vulnerable or Endangered) are distributed across these sites (by site number) as follows:
- type 4: 11 (good), and 14, 73-74 and 77 (all degraded), and 12-13, 72, 75 and 76 (all completely degraded)
- type 938: 45, 62 and 63 (all degraded)
- type 967: 68-71 (all completely degraded)
- type 1075: 31 and 79-81 (all degraded)
- type 1095: 65 and 66 (both completely degraded)
- type 1200: 64 (degraded)

Although many of the survey sites described above for the 2005 and 2006 surveys are considered to be degraded or completely degraded, and possibly no longer contain a species diversity consistent with distinct vegetation associations, they are still representative of extensively cleared vegetation associations. For this reason a condition to offset the clearing has been imposed on the clearing permit to mitigate the loss of these extensively cleared vegetation associations. Specifically, for vegetation association 1200 (Endangered), the loss of vegetation through clearing must be offset regardless of the condition of the vegetation cleared (corresponding with 2006 flora survey site 64). For vegetation associations 4, 938, 967, 992, 1075 and 1095 (Vulnerable), the loss of good or better condition vegetation must be offset (corresponding with 2006 flora survey site 4).

Methodology

Beard 1980
Heddle 1980
Mattiske 2002
DAWA 2001
DAWA 2005
EPA Position Statement No. 2
Environment Australia 2001
Ecoscape (Australia) Pty Ltd 2005

ENV Australia 2006
Western Power 2007
GIS Dataset
- Pre-European Vegetation - DA 01/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00
- aerial photography - various 2001-2006

(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

Approximately 26 distinct watercourses and possibly additional minor watercourses are traversed by the area under application. The major watercourses are Arthur River, Wadjekanup River, Gordon River, Pallinup River, Warperup Creek, and Peenebup Creek. These watercourses contain vegetation in degraded to good condition.

A report provided by the proponent entitled "Construction and Operation of a 220 KV Transmission Line from Muja Power Station, Collie, to Proposed Southdown Magnetite Mine, Wellstead" (Western Power, 2007) indicates that the proposal involves the construction of steel lattice towers at 350-450 metre intervals, with total clearing of 50m x 50m for each tower.

A survey undertaken by Ecoscape (Australia) Pty Ltd in 2005 identified one significant wetland within 5 kilometres of the proposed alignment, upstream within Perringillup Nature Reserve. The survey determined that the vegetation within the reserve has been significantly degraded by secondary salinisation. The proposed clearing is not likely to impact on this wetland.

It is suggested that the construction of the towers be undertaken in a manner to avoid the necessity to disturb vegetation growing along or in association with watercourses or wetlands. In the absence of a commitment from the proponent that this will be implemented, this proposal is at variance to this principle.

Methodology

Western Power 2007
GIS datasets:
- aerial photography - various 2001-2006
- Hydrography

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposal may be at variance to this Principle

The dominant soils within the area under application are described as duricrusted plateau on the Yilgarn Block, surfaced with ironstone gravels, dissected towards the east with hard-setting loamy soils (Western Power, 2007). The susceptibility of these soils to wind and water erosion is variable.

Salinity datasets indicate that many of the waterways are already salt-affected to some degree, with a risk of further spread outwards. Acid sulphate soils mapping is not available for the area under application.

Methodology

Western Power 2007
GIS Dataset
- Soils, Statewide - DA 01/01
- Salinity Mapping LM 25m - DOLA 00
- Salinty Risk LM 25m - DOLA 00

(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 more than 50 DEC-managed nature reserves, national parks and other lands within a 50 kilometre radius of the area under application. The closest of these are:
- Towerrinning Nature Reserve: 1.4 kilometres south
- Timber Reserve: 100 metres east
- Un-named Nature Reserve: 3.4 kilometres east
- Peringillup Nature Reserve: 670 metres north
- Greaves Road Nature Reserve: 170 metres west.

The proposed clearing may impact on the Timber Reserve and the Greaves Road Nature Reserve given their close proximity to the area under application.

There are several privately-owned areas of bushland managed for conservation occurring within a 50 kilometre radius of the area under application. The closest of these is located approximately 6 kilometres from the area

under application, and is unlikely to be affected by the proposed clearing.

A report provided by the proponent entitled "Construction and Operation of a 220 KV Transmission Line from Muja Power Station, Collie, to Proposed Southdown Magnetite Mine, Wellstead" (Western Power, 2007) indicates that the proposal involves the construction of steel lattice towers at 350-450 metre intervals, with total clearing of 50m x 50m for each tower.

It is possible that the construction of the towers can be undertaken in a manner to avoid disturbance to nearby conservation areas. However in the absence of assurance from the proponent that this will be the case, this proposal may be at variance to this principle.

Methodology Western Power 2007
GIS datasets
- Topographic Contours, Statewide - DOLA 12/09/02
- CALM Managed Lands and Waters - CALM 01/07/05
- Register of National Estate - EA 28/01/03
- Clearing Regulations - Environmentally Sensitive Areas - DOE 30/05/05
- 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

The area under application impacts on a Public Drinking Water Source Area, being the Wellington Dam Catchment Area.

There are several watercourses that are traversed by the area under application. Salinity datasets indicate that many of the waterways are already salt-affected to some degree, with a risk of further spread outwards.

It is unlikely that the proposed clearing of 50 metre x 50 metre areas at intervals in a lineal pattern will impact on the quality of surface or underground water. In the short term there may be increased sediments and nutrients in surface water as a result of the proposed clearing, however it is not expected that there will be a significant long term impact on the quality of surface water such that the quality of water within these watercourses is detrimentally impacted.

It is not known what impact the construction of foundations for the transmission line is likely to have. It is possible that acid sulphate soils may be encountered, especially near watercourses. Acid sulphate soils mapping is not available for the area under application.

Methodology GIS datasets
- Salinity Mapping LM 25m - DOLA 00
- Salinity Risk LM 25m - DOLA 00
- Topographic Contours, Statewide - DOLA 12/09/02
- Public Drinking Water Source Areas (PDWSAs) - DOW

(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 annual average rainfall ranges between 800 millimetres (western) to 400 millimetres (wheatbelt) per annum, with annual evapotranspiration rates of approximately the same.

It is unlikely that the proposed clearing of 50 metre x 50 metre areas at intervals in a lineal pattern will impact on the intensity of flooding.

Methodology GIS datasets
- Rainfall, Mean Annual - BOM 30/09/01
- Evapotranspiration, Areal Actual - BOM 30/09/01
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

No submissions were received following the advertising of this proposal.

This proposal was submitted to the Environmental Protection Authority (EPA) in May 2007 by the proponent for assessment as it is likely to have significant environmental impacts. The EPA's recommendation on 16 August 2007 is "Not Assessed - Managed under Part V of the EP Act (Clearing)" with a scribbled note "Energy Operators (Powers) Act is capable of managing _ep___tion of power line from people".

The proponent sought advice from the Department of Water. Advice was received in October 2006, expressing concern over the impacts of the powerline to riparian vegetation. The proponent has committed to implement a setback of steel lattice towers from watercourses wherever possible.

Consultation was also undertaken with the ex-Department of Environment, ex-Department of Conservation and Land Management, Department of Planning and Infrastructure, Department of Environment and Conservation, affected landowners and communities, and other stakeholders. The alignment of the proposed transmission line was altered as a result to ensure the most favourable outcome.

There is a risk of fauna mortality associated with collision with transmission lines following construction, particularly with respect to avian fauna. The 2005 survey report (Ecoscape (Australia) Pty Ltd) indicates that it is generally recognised that birds with large body size, large wingspan, young age, fast flight, low flight, low agility, flocking behaviour and migratory habit are at high risk. The 2006 survey report (ENV Australia) recommends that bird diverters are employed near Lake Towerrinning. The species known to occur within the area under application that are potentially at high risk are Carnaby's Black-Cockatoo, Baudin's Black-Cockatoo and Red-tailed Black-Cockatoo (predominantly associated with sites 1-8 of the 2005 survey), and water birds (predominantly associated with sites 12 and 14 of the 2005 survey, and sites 5 and 8 of the 2006 survey).

Methodology Ecoscape (Australia) Pty Ltd 2005

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Infrastructure Maintenance	Mechanical Removal	41.2	The assessing officer suggests that a clearing permit be granted with the following conditions imposed: - fauna management - flora management - dieback and pathogen management - weed management - offsets

5. References

AGPS (2001) The national objective and targets for biodiversity conservation 2001-2005. Commonwealth of Australia, Canberra.

Ecoscape (Australia) Pty Ltd (2006). Environmental Assessment - Collie to Wellstead Transmission Lines. Unpublished report for Western Power.

ENV. Australia (2007). Muja Power Station to Southdown Transmission Line - Biological Assessment. Unpublished report for Western Power.

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.

Heddle, E. M., Loneragan, O. W., and Havel, J. J. (1980) Vegetation Complexes of the Darling System, Western Australia. In Department of Conservation and Environment, Atlas of Natural Resources, Darling System, Western Australia.

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

Mattiske Consulting (1998) Mapping of vegetation complexes in the South West forest region of Western Australia, CALM.

Schoknecht N. (2002) Soil Groups of Western Australia. A simple guide to the main soils of Western Australia. Resource Management Technical Report 246. Edition 3

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).

Western Power (May 2007). Construction and Operation of a 220 KV Transmission Line from Muja Power Station, Collie, to Proposed Southdown Magnetite Mine, Wellstead.

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)