Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 898/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Commissioner of Main Roads**

1.3. Property details

Property:
ROAD RESERVE (BULLSBROOK 6084)
ROAD RESERVE (BULLSBROOK 6084)
ROAD RESERVE (BULLSBROOK 6084)
ROAD RESERVE (BULLSBROOK 6084)
ROAD RESERVE (BULLSBROOK 6084)
ROAD RESERVE (BULLSBROOK 6084)
ROAD RESERVE (UPPER SWAN 6069)
ROAD RESERVE (UPPER SWAN 6069)
ROAD RESERVE (BULLSBROOK 6084)
ROAD RESERVE (BULLSBROOK 6084)

Local Government Area: City Of Swan
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.36		Mechanical Removal	Road 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
Beard vegetation association 4: medium woodland; marri and wandoo (Shepherd et al 2001, Hopkins et al 2001). Heddle vegetation complex Guildford: a mixture of open forest to tall open forest of Eucalyptus calophylla, E. wandoo, E. marginata and woodland of E. wandoo (with rare occurrences of E. lane poolei). Minor components include E. rudis and Maleleuca rhaphiophylla (Heddle et al 1980). Heddle vegetation complex Beermullah: mixture of low open forest of Casuarina obesa and open woodland of E. calophylla, E. wandoo and E. marginata. Minor components include closed scrub of Melaleuca species and occurrence of Actinostrobus pyramiddis (Heddle et al 1980). Mattiske vegetation complex Gu: mosaic of open forest of Corymbia calophylla, E. wandoo, E. marginata subsp marginata and woodland of E. wandoo (Mattiske Consulting 1998). Mattiske vegetation complex Br: low open forest of C. obesa with open woodland of Corymbia calophylla, E. wandoo, E. marginata subsp marginata on direr flats (Mattiske Consulting 1998).	The area under application consists of 1.36ha along the Great Northern Highway. The purpose of the proposed clearing is to widen and upgrade the Highway. Very little native vegetation remains within the road reserve as it has been previously cleared and rehabilitated (revegetated) from previous road works (ATA Environmental 2004). Of the 33 plant species recorded, 19 are native and 14 are introduced or non-native species. There are small sections of scattered marri woodland and Flooded gum woodland. Both of these woodlands are in 'good' condition with one section of Flooded gum/marri woodland in 'very good' condition (ATA Environmental 2004). The most common plant families represented were Myrtaceae and Asteraceae (ATA Environmental 2004). The area under application runs parallel to Ellen Brook as well as the Ellen Brook Nature Reserve. No vegetation from the Ellen Brook Nature Reserve forms part of the area under application (ATA Environmental 2004).	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	The vegetation condition of 'good' was used in this assessment as the vegetation condition ranges from 'very good' to 'degraded'. Information in relation to the Clearing Description was obtained from the EIA document provided by Main Roads (ATA Environmental 2004).

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 area under application is predominantly comprised of 'planted' vegetation as a result of previous rehabilitation work with some sections completely devoid of native vegetation (ATA Environmental 2004). Of the 33 plant species identified within the area under application, 14 (42%) are introduced or non native species (ATA Environmental 2004). The road reserve has been assessed as being poorly vegetated and would not be expected to provide high habitat connectivity (ATA Environmental 2004).

Given the above, in addition to the Ellen Brook Nature Reserve being located immediately adjacent to the area under application, it is unlikely that the clearing as proposed comprises a high level of biological diversity.

Methodology ATA Environmental (2004) (DoE Trim Ref EI4521)

(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 following fauna species of conservation significance are known to occur within the local area (5km radius):
Pseudemydura umbrina (Western Swamp Tortoise) (Rare);
Dasyurus geoffroii (Chuditch) (Threatened);
Galaxiella nigrostriata (Black Stripe Minnow);
Macropus irma (Western Brush Wallaby);
Isoodon obesulus fusciventer (Quenda); and
Macropus eugenii derbianus (Tammar Wallaby)
(CALM 2006).

There is a recording of the Western Swamp Tortoise within 350m of the area under application (CALM 2006). The existing alignment of the Great Northern Highway is being shifted eastward (by 10m) to minimise potential impacts (ATA Environmental 2004). In addition, the drainage in this particular section has been designed to maintain the existing hydrological regime and CALM (2006) considers this strategy is likely to minimise the potential impact to the Tortoise and the Ellen Brook Nature Reserve (CALM 2006).

Although the area under application adjoins the eastern perimeter of the Bush Forever and Ellen Brook Nature Reserve, it is considered that the realignment of the relevant section of the road, in addition to the lack of substantial native vegetation within the area under application, the proposed clearing is unlikely to have a significant impact on fauna habitat.

Methodology CALM (2006) Land Clearing Proposal Advice (DoE Trim No IN25453)
ATA Environmental (2004) (DoE Trim No EI4521)

(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

The following Declared Rare Flora (DRF) species are known to occur in the local area (5km radius):
Caladenia huegelii;
Grevillea curviloba subsp surviloba;
Elocharis keigheryi;
Thelymitra manginiorum ms;
Grevillea curviloba subs incurva;
Hudatella diocia;
Acacia anomala; and
Centrolepis caespitose
(CALM 2006).

In addition, 19 Priority species are also known to occur in the local area (CALM 2006).

Given that the vegetation of the site is comprised of predominantly planted trees, the present condition of the area under application provides little evidence to suggest the presence of DRF or Priority species (CALM 2006). In addition, no species of conservation significance were identified from the visual survey conducted for the Environmental Impact Assessment document (ATA Environmental 2004).

Methodology CALM (2006) Land Clearing Proposal Advice (DoE Trim Ref IN25453)
ATA Environmental (2004) (DoE Trim Ref EI4521)

(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

The following Threatened Ecological Communities (TECs) are known to occur in the local area (5km radius):
SCP3C - Eucalyptus calophylla - Xanthorrhoea preissii Woodlands;
Muchea Limestone - Shrublands and Woodlands on Muchea Limestone;
Mound Springs SCP - Communities of Tumulus Springs; and
SCP15 - Forest and Woodlands of Deep Seasonal Wetlands
(CALM 2006).

Given that the proposed vegetation to be cleared consists predominantly of planted trees (ATA Environmental 2004), there is unlikely to be sufficient naturally occurring vegetation to be able to distinguish any TECs (CALM 2006).

Methodology

CALM (2006) Land Clearing Proposal Advice (DoE Trim Ref IN25453)
ATA Environmental (2004) (DoE Trim Ref EI4521)

(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 State Government is committed to the National Objectives and Standards that includes a target that prevents clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Department of Natural Resources and Environment 2001, EPA 2000).

In relation to this application, all vegetation complexes are below this 30% standard (Shepherd et al 2001, Hopkins et al 2001, Heddle et al 1980, Mattiske Consulting 1998). However, given that the majority of the vegetation under application is comprised of plantings and most of the original vegetation has been cleared previously (ATA Environmental 2004), it is considered that the vegetation under application is not an accurate representation of these vegetation complexes. As such, the clearing as proposed is not likely to be at variance to this Principle.

Methodology

Department of Natural Resources and Environment (2001)
EPA (2000)
Shepherd et al (2001)
Hopkins et al (2001)
Heddle et al (1980)
Mattiske Consulting (1998)
ATA Environmental (2004)

(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 may be at variance to this Principle

The Ellen Brook runs parallel to the proposed clearing, but does not encroach into the area under application (ATA Environmental 2004). The Martyn Reserve Wetland is a Conservation Category Wetland (CCW) that does cross and occur within the area under application. As such, a small section of this wetland would have to be cleared in order for the road to be widened. A mitigation plan in relation to this wetland (and another wetland in an additional section of the Great Northern Highway upgrade) was submitted to the EPA Services Unit as part of the environmental impact assessment process. The EPA Services Unit determined that the direct and indirect offsets (monetary contribution to CALM) would result in a net environmental benefit.

Methodology

ATA Environmental (2004) (DoE Trim Ref EI4521)
Information provided by the proponent (DoE Trim Ref CRN206443)
GIS Databases: Geomorphic Wetlands (Mgmt Categories) SCP - DOE 15/09/04

(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 under application consists of yellow sandy soils that could potentially be susceptible to soil erosion. In addition, the proposed clearing intersects a number of minor tributaries of the Ellen Brook. The proponent has incorporated surface water management into its design scheme in order to maintain existing hydrology (ATA Environmental 2004). The area under application also has a Class 2 (Low risk) and Class 3 (No known risk) risk of Acid Sulphate Soils. Given the narrow, linear nature of the proposed clearing and the intended landuse, it is considered unlikely that the clearing as proposed would cause significant on or off site land degradation.

Methodology

ATA Environmental (2004) (DoE Trim Ref EI4521)
GIS Databases:

- Soils, Statewide - DA11/99
- Acid Sulphate Soil risk map, SCP - DOE 01/02/04

(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 Ellen Brook Nature Reserve (Bush Forever site 301) occurs immediately adjacent to a section of the proposed clearing. No vegetation associated with the conservation areas is within the area under application. This Nature Reserve provides critical habitat for the Rare Western Swamp Tortoise (CALM 2006). The alignment of the Great Northern Highway has been shifted eastwards (10m away from Nature Reserve) and the drainage associated with this area has been designed to maintain the existing hydrological regime (ATA Environmental 2004). CALM (2006) advises that this strategy appears to minimise the impact to the Reserve.

The Walyunga National Park occurs within the local area (5km radius) of the proposed clearing. However it is unlikely that the proposed clearing would have a significant impact on this conservation reserve as it does not provide a buffer to the reserve, and the lack of vegetation present would be unsuitable as corridor for fauna movement (ATA Environmental 2004).

Methodology

CALM (2006) Land Clearing Proposal Advice (DoE Trim Ref IN25453)
ATA Ennvironmental (2004) (DoE Trim Ref EI4521)

(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 Ellen Brook is located immediately adjacent to a section of the proposed clearing and runs parallel for the remainder of the area under application. A number of minor tributaries of the Ellen Brook do intersect the proposed clearing at various points. CALM have provided 'in principle' support for the realignment and upgrade in relation to the surface water drainage immediately adjacent to the Ellen Brook Nature Reserve (ATA Environmental 2004). In addition, an existing drain on the western side of the proposed clearing will be retained (ATA Environmental 2004).

Given the lack of native vegetation within the area under application (ATA Environmental 2004), it is considered unlikely that the clearing as proposed would significantly impact surface or groundwater hydrology.

Methodology

ATA Environmental (2004) (DoE Trim Ref EI4521)
GIS Databases:
- Hydrology, linear - DOE 01/02/04

(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 clearing as proposed consists of a long and linear shape which is comprised of sandy soils. The drainage associated with this project has been designed to maintain the existing hydrological regime (ATA Environmental 2004). In addition, the existing drains will be retained (ATA Environmental 2004). As such, it is considered that the clearing as proposed would exacerbate the incidence of intensity of flooding.

Methodology

ATA Environmental (2004) (DoE Trim Ref EI4521)
GIS Databases:
- Soils, Statewide - DA 11/99

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

Comments

There is no RIWI Act licence, Works Approval or EP Act licence that will affect the area covered under this application

Methodology

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Road construction o maintenance	Mechanical Removal	1.36	**Grant**	The Principles have been addressed and the clearing as proposed may be at variance to Principle f. However, in relation to Principle f, a wetland mitigation plan has been developed and considered by the EPA Services Unit in the determination of the level of assessment for this project. The EPA Services Unit determined that the direct and indirect offsets

(monetary contribution to CALM) would result in a net environmental benefit.

In addition, the proponent has liased with CALM in order to develop a surface water management strategy that would maintain the existing hydrology of the Ellen Brook Nature Reserve to reduce the impact on the Western Swamp Tortoise.

Given the above, the assessing officer recommends that this permit be granted.

5. References

ATA Environment (2004) Environmental Impact Assessment Great Northern Highway Section 3A: 14.77 - 19.23 SLK. Prepared for Main Roads. DoE Trim Ref EI4521

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 IN25453.

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, BJ (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
CALM	Department of Conservation and Land Management
DAWA	Department of Agriculture
DEP	Department of Environmental Protection (now DoE)
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 DoE)