Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1812/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Shire of Nannup**

1.3. Property details

Property: ROAD RESERVE (EAST NANNUP 6275)
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Local Government Area: Shire Of Nannup

Colloquial name: Gold Gully Road Reserve

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
1.8		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: Unit 3 - Medium forest; jarrah-marri and Unit 999 - Medium woodland; marri	The vegetation under application is in a completely degraded to degraded condition (Keighery, 1994) with the proposed clearing area consisting predominantly of regrowth and some native understorey species. Other portions of vegetation along the road consist of only exotic pasture species. There are however some large trees (Karri and Marri) which could be important habitat for fauna.	Completely Degraded: No longer intact; completely/almost completely without native species (Keighery 1994)	Vegetation condition established through site visit undertaken by DEC officers on the 24th July 2007.
Mattiske: - Balingup vegetation complex (BL) - Open forest of Eucalyptus marginata subsp. marginata - Corymbia calophylla on slopes and woodland of Eucalyptus rudis on the valley floor in the humid zone. - Lefroy vegetation complex (LF) - Tall open forest of Eucalyptus diversicolor - Corymbia calophylla on slopes and low woodland of Agonis juniperina - Callistachys lanceolata on lower slopes in hyperhumid and perhumid zones.	See above. These vegetation complexes are in the order of travelling west to east along the applied area within the Gold Gully Road Reserve.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	See above.

- Wheatley vegetation complex (WH1) - Tall open forest of Eucalyptus diversicolor - Corymbia calophylla on slopes and tall open forest or Eucalyptus patens on valley floor in pehumid and humid zones. - Yanmah vegetation complex (YN1) - Mixture of tall open forest of Euclayptus diversicolor and tall open forest of Corymbia calophylla - Eucalyptus patens - Eucalyptus marginata subsp. marginata over Agonis flexuosa and Agonis juniperina on valleys in perhumid and humid zones.			
Heddle vegetation associations: - Darling Scarp complex - Dominance of wandoo along the entire length of the Darling Scarp; the admixture of marri; the occurence of rare butter gum (Eucalyptus laeliae) on the northern areas; the occurence of mountain gum (Eucalytpus haematoxylon) on the southern areas. - Balingup Complex in Medium to High Rainfall - The dominant vegetation consists of an open-forest of jarrah-marri with some yarri while along the water course there is a fringing woodland of Eucalyptus rudis - Melaleuca raphiophylla.	See above.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	See above.

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 Shire of Nannup has submitted a clearing application to clear up to 1.8ha of native vegetation across a ten year period with approximately 1km of road works being undertaken each year. The proposal includes minor clearing works of predominantly regrowth but with some large mature trees.

A submission received by the Department raised the issue that "whilst the removal of a small number of trees is usually not considered significant, in this case the removal of large Karri Trees in this area is of concern as this is the most northerly stand of Karri in the South West Region and in this respect is quite unique." However, mapping from Forest Management Branch, DEC shows occurrences of old growth Karri forest north-west of Margaret River and Karri occurrence north-west of Cowaramup as well as other Karri occurences directly north of Gold Gully Road.

The condition of the vegetation ranges from completely degraded to degraded condition (DEC, 2007 & Keighery, 1994) along the length of the Gold Gully Road Reserve within the area under application.

It is not likely that the proposed clearing area is considered to comprise a high level of biological diversity given that the majority of the proposed clearing area has very few native understorey species and a history of high levels of disturbance with some portions having only exotic pasture species.

Gold Gully Road leads into a disease risk area and therefore in order to minimise the spread of Phytophthora (Dieback) as well as weeds it is recommended that conditions for weed management and disease hygiene are placed on the permit should one be granted.

It is concluded that the proposal is not likely to be at variance to this principle.

Methodology DEC (2007)
FMB (2007)
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 may be at variance to this Principle

Nine threatened or priority fauna species have been recorded within the local area (10km radius) of the proposed clearing including the Forest Red-tailed Black Cockatoo (Calyptorhynchus banksii) , Baudin's Black Cockatoo (Calyptorhynchus baudinii) and the Brush-tailed Phascogale (Phascogale tapoatafa).

The area surrounding Gold Gully Road is highly vegetated with much of the vegetation within CALM Managed Lands (Timber reserves and State Forest). These areas are in much better condition than the vegetation along the Gold Gully Road Reserve and therefore are likely to be preferred habitat for indigenous fauna.

There are a number of large mature trees with or potentially with hollows within the area under application that may be utilised by local fauna; the proposed clearing therefore may impact on habitat values and may be at variance to this Principle.

If approved, conditions addressing fauna management are recommended.

Methodology DEC (2007)
Keighery (1994)
GIS Databases:
- SAC Bio datasets - Threatened and Priority Fauna - DEC
- CALM Managed Lands and Waters - CALM 1/07/05

(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

Seventeen rare and priority flora species have been recorded within the local area (10km radius) with the closest being Synaphea otiostigma, a priority 3 species, recorded within 1km of the proposed clearing area.

The rare flora species, Caladenia harringtoniae, has also been identified within the local area (10km radius) of the proposed clearing on similar soil and vegetation types and topography. DEC district advice (2007) states that "Caladenia harringtoniae does like creekline fringing vegetation so unless some of them (creeklines) are crossed that species is unlikely to be encountered." It was also mentioned that Synaphea otiostigma isn't as selective in terms of preferred habitat. Given that the clearing is directly adjacent to an already existing road, the creeklines which are crossed have already had some disturbance and clearing attributed to the initial road construction.

Given that the condition of the vegetation ranges from completely degraded to degraded (DEC, 2007 & Keighery, 1994) with many sections of the reserve consisting of only exotic pasture species within the understorey or have had a history of clearing and disturbance with predominantly regrowth, it is unlikely that these flora species still remain within the area proposed for clearing. However, a flora survey has not been undertaken on the road reserve and therefore it can not be said for certain that the above mentioned rare and priority flora species do not exist within the applied clearing area given the similar topographies, soil and vegetation types that these species have been recorded on. Therefore, the proposal may be at variance to this principle.

For this reason to ensure all rare and priority flora species are identified and managed accordingly, it should be a condition of the permit, should one be granted, that a survey is to be undertaken by a flora specialist to identify the presence or absence of flora species of conservation significance prior to clearing within the Gold Gully Road Reserve. In the event that declared rare species are identified, the Shire should be required to notify the Department of Environment and Conservation to allow for species confirmation and appropriate measures to be put in place for the protection of the species.

Methodology DEC (2007)
DEC District Advice (2007)
Keighery (1994)
GIS Databases:
- SAC Biodatasets - defl
- SAC Biodatasets - blackwood_waherb

(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 records of Threatened Ecological Communities (TEC), Priority Ecological Communities (PEC) or Threatened Plant Communities (TPC) within the local area (10km radius) of the proposed clearing.

Given the completely degraded to degraded condition (DEC, 2007 & Keighery, 1994) of the vegetation under application as well as there being no communities within the vicinity of the proposal, it is concluded that the vegetation under application does not comprise the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.

Therefore, it is concluded that the proposal is not at variance to this principle.

Methodology

DEC (2007)
Keighery (1994)
GIS Databases:
- SAC Bio datasets - Threatened & Priority Ecological Communities - DEC
- Threatened Plant Communities - DEP 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

The proposed clearing occurs within the Warren IBRA region and the Southern Jarrah Forest sub-region within the Jarrah Forest IBRA region, where the percentages of vegetation remaining are 79.5%, 49.6% and 53.8% respectively (Shepherd, 2006). The proposed clearing area is located in the Shire of Nannup which has 84.4% of its pre-European extent remaining (Shepherd, 2006).

The vegetation within the Gold Gully Road Reserve is a component of two Beard Vegetation Associations, Unit 3 and 999 (Hopkins et al, 2001) as well as a number of Heddle and Mattiske vegetation complexes. The percentages remaining of these complexes and associations can be seen in Table 1 (attached).

Although the majority of the associated vegetation complexes are above the 30% National Objective Target for Biodiversity Conservation (AGPS, 2001), the Mattiske complex Balingup and the Beard Vegetation Unit 999 (across the state and within the Jarrah Forest IBRA region) are below this threshold. However, these complexes are only a small portion of the Gold Gully Road Reserve and given that the amount of clearing along the length of the road will be relatively small (up to 1.8ha) which ranges from completely degraded to degraded condition (DEC, 2007 & Keighery, 1994), it is unlikely that the vegetation proposed for clearing would be considered to be a good representation of these complexes.

It is therefore concluded that the proposal is not likely to be at variance to this principle.

Methodology

AGPS (2001)
DEC (2007)
Hopkins et al (2002)
Keighery (1994)
Shepherd (2006)
GIS Databases:
- Mattiske Vegetation - CALM 24/3/98
- Heddle Vegetation Complexes - DEP 21/06/95
- Pre-European Vegetation - DA 01/01
- Donnelly 50cm Orthomosaic - DLI04

(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 mapped wetlands within the vicinity (10km radius) of the proposed clearing area, there are however a number of watercourses, with the closest watercourse being Gold Creek which runs nearby and beneath Gold Gully Road. Long Gully, the Blackwood River and Barlee Brook are also within a 5km radius of the proposed clearing area.

Although there may be some localised sedimentation into Gold Creek and its tributaries during the road works, the clearing that is proposed is directly adjacent to an existing road and hence the physical impact upon Gold Creek has already occurred as a result of the initial road construction. Culverts and pipes are already in place in required locations along Gold Gully Road and these will be extended as required with the widening of the road. Given that the scale of clearing is relatively small, being 1.8ha across the length of the Gold Gully Road Reserve, it is unlikely that the clearing will cause further depreciation on the nearby watercourses.

It is therefore concluded that the proposal is not likely to be at variance to this principle.

Methodology GIS Databases:
- Hydrography, linear - DoE 1/2/04
- hydrography, linear (hierarchy) - DoW

(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 topography within the area of Gold Gully Road is of a medium relief ranging from approximately 110m AHD at the western end to 245m AHD at the eastern end of the proposed clearing area. The purpose of the clearing is for the widening and sealing of an already established road. The majority of the road side vegetation under application is within a low salinity risk area with the exception of a medium and high risk area within close vicinity to Gold Creek which flows under Gold Gully Road.

Although the proposal may cause some short term soil erosion during the works, given the small amount and linear nature of the clearing that is required for this proposal, it is not likely that this proposal would be at variance to this principle.

Methodology GIS Databases:
- Topographic Contours, Statewide - DOLA 12/09/02
- Salinity 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 is not likely to be at variance to this Principle**

A number of DEC managed lands exist within the local area (10km radius) of the proposed clearing area with the western end being directly adjacent to a Class C timber reserve. The Milyeannup State Forest (Class A Reserve) is 1.2km north west of the western end of the applied clearing area on the opposite side of the Vasse Highway.

There is also one Register of National Estate approximately 9.4km north west of the proposed clearing which is the Donnybrook Sunklands Area.

Given that the proposal will only require a small area of vegetation to be cleared, adjacent to an existing road, that is in a completely degraded to degraded condition (DEC, 2007 & Keighery, 1994), it is unlikely that the proposal will impact upon the environmental values of any adjacent or nearby conservation areas.

It is therefore concluded that the proposal is not likely to be at variance to this principle.

Methodology DEC (2007)
Keighery (1994)
GIS Databases:
- CALM Managed Lands & Waters - CALM 1/07/05
- Register of National Estate - EA 28/01/03

(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 is not likely to be at variance to this Principle**

The proposed clearing area lies within the Hardy Estuary_Blackwood River Hydrographic Catchment. The road is of a medium relief ranging in topography from 110m AHD from the western end of the proposed clearing area to 245m AHD at the eastern end of the proposed clearing area.

The groundwater salinity for the area is 500-1000mg/L (total dissolved solids) with the majority of the road area being mapped as a low salinity risk with the exception of a small medium and high risk area associated with Gold Creek which flows under Gold Gully Road.

Given the close proximity of the road to Gold Creek there may be some localised sedimentation into the watercourse during the road works. However, given that the proposed clearing will be minimal (up to 1.8ha) and directly adjacent to an existing road as well as the fact that culverts are already in place, requiring only extensions in relation to the widening of the road, it is unlikely that the clearing will cause further deterioration in the quality of surface or groundwater within the local area.

It is therefore concluded that the proposal is not likely to be at variance to this principle.

Methodology GIS Databases:

- Hydrographic Catchments - Catchments - DOW
- Topographic Contours, Statewide - DOLA 12/09/02
- Hydrography, linear- DoE 1/2/04
- Hydrography, linear (hierarchy) - DOW
- Groundwater Salinity, Statewide - 22/02/00

(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

Despite the proposed clearing area being in very close proximity to a number of watercourses, due to the completely degraded to degraded condition (DEC, 2007 & Keighery, 1994) of the vegetation under application and the small scale of clearing proposed across the length of the road reserve it is highly unlikely that the removal of the vegetation is likely to cause, or exacerbate the incidence or intensity of flooding.

It is therefore concluded that the proposal is not likely to be at variance to this principle.

Methodology

DEC (2007)
Keighery (1994)
GIS Databases:
- Hydrography linear - DoE 1/2/04
- Hydrography, linear (hierarchy) - DoW

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

Comments

The proposed clearing area is within a designated Public Road Reserve.

A submission was received by the Department on the 8th August 2007 which raised the issue that "whilst the removal of a small number of trees is usually not considered significant, in this case the removal of large Karri Trees in this area is of concern as this is the most northerly stand of Karri in the South West Region and in this respect is quite unique." This issue has been addressed within Principle a.

Methodology

GIS Databases:
- Cadastre

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Road construction o maintenance	Mechanical Removal	1.8	The assessment has found that this proposal may be at variance to principles b and c, not likely to be at variance to principles a, e, f, g, h, i and j and not at variance to principle d. It is recommended that should a permit be granted that conditions be imposed relating to fauna management, flora surveys to be conducted prior to clearing and disease and weed prevention and hygiene.

5. References

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

DEC (2007) Site visit report, Department of Environment and Conservation, Western Australia. TRIM ref DOC36306.

DEC District Advice (2007) Flora advice received from Blackwood District Office, Department of Environment and Conservation, Western Australia. TRIM ref DOC38678.

FMB (2007) Karri Forest Occurence - Gold Gully Road, Forest Management Branch, Department of Environment and Conservation, Western Australia. TRIM ref DOC36069.

Havel, J.J. and Mattiske Consulting Pty Ltd (2002) Review of management options for poorly represented vegetation complexes, Conservation Commission.

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.

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.

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

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.

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)