Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2705/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Waroona

1.3. Property details

Property: ROAD RESERVE (McCLURE ROAD, HAMEL 6215)

Local Government Area: Shire Of Waroona

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.42		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
Heddle Vegetation Complexes: Dardanup Complex: Mosaic of vegetation types characteristic of adjacent vegetation complexes such as Serpentine River, Southern River and Guildford.	The proposal is to clear a total of 0.4 hectares of native vegetation over approximately 1 km road reserve for the reconstruction and maintenance of the McClure Road to allow a 9 metre wide sealed road surface to be constructed.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation clearing description based on site visit conducted on 12 October 2008 and site photos provided by the Shire of Waroona (Webb, 2008).
Beard Vegetation Association: 968 - Medium woodland; jarrah, marri & wandoo	The vegetation under application comprises Melaleuca rhaphiophylla, Eucalyptus marginata, Corymbia calophylla and Acacia decurrens (introduced species) over an understorey comprising individual Xanthorrhoea preissii and large expanses of invasive non-native grasses and weed species and is considered to be in a degraded to completely degraded condition, with an average of degraded condition.		

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 vegetation under application along McClure Road in the Shire of Waroona is contained within a narrow, linear road reserve spread over a total distance of approximately 1km. The vegetation on site primarily comprises Acacia decurrens (introduced species) and Eucalyptus marginata, Corymbia calophylla, and Melaleuca spp over an understorey of Xanthorrhoea preissii and introduced grasses and other weed species; and is considered to be in a degraded condition (DEC, 2008).

Although the priority flora species Conostylis pauciflora (P4) has been recorded approximately 2.2km from the

area under application, it is found within a different vegetation complex and soil type to that found within the applied area. Therefore, the vegetation under application is unlikely to include habitat that is suitable for C. pauciflora.

Given the low species diversity and degraded condition of the area under application, it is not considered likely that the vegetation under application comprises a high level of biodiversity.

Methodology

References:
- DEC (2008)
- Webb, Site Photos (2008)
- Northcote et al (1968)

GIS Databases:
- SAC BIO Datasets - accessed 6/11/2008

(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 vegetation under application is limited to 0.42 hectares spread over approximately 1km of road reserve and comprises individual Eucalyptus trees, Melaleuca rhaphiophylla and Acacia Decurrens (introduced species) over a weedy understorey. During the DEC site inspection no hollows were seen that could potentially be used for habitat and the trees under application were not considered to be of hollow bearing age.

There is one fauna species of conservation significance which has been recorded within the local area (5km radius) being the Water Rat (Hydromys chrysogaster, P4), which is located approximately 2km south of the area under application. The Water Rat occupies habitat in the vicinity of permanent water and given the proximity of the irrigation channel and table drain, the vegetation under application may provide suitable habitat for the Water Rat. In addition, the grassy understorey and woody debris present may provide some habitat for ground dwelling fauna such as the Quenda (Isoodon obesulus fusciventer, P5).

Although the weedy understorey may provide some habitat potential for the identified ground dwelling fauna species, given the lack of hollows and limited size of the area under application, it is not considered likely that the vegetation under application would be considered significant habitat for indigenous fauna.

Methodology

References:
- DEC (2008)
- Webb, Site Photos (2008)

GIS Databases:
- SAC Bio Datasets ? accessed 6/11/2008

(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

There are no known occurrences of rare flora within a 5km radius of the area under application. The closest rare flora, Synaphea stenoloba is located approximately 5.2km from the applied area and is found within a different vegetation complex and soil type to the area under application.

Given the absence of rare flora in the local area and that suitable habitat is not likely to be present for S. stenoloba, it is not considered likely that the vegetation under application includes, or is necessary for the continued existence of, rare flora.

Methodology

References
- Brown et al (1998)
- DEC (2008)
- Northcote et al (1968)

GIS Databases:
- Heddle Vegetation Complexes - DEP 21/06/95
- Soils Statewide - DA 11/99
- SAC Bio Datasets ? accessed 6/11//2008

(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

There are no known occurrences of Threatened Ecological Communities (TEC) within a 5km radius of the area under application. The closest TEC is located approximately 5.4km southeast of the applied area and is identified as Floristic Community Type 20b ? Banksia attenuate and/or Eucalyptus marginate of the eastern side of the Swan Coastal Plain.

Given that the vegetation under application is Eucalyptus woodlands found in the Wheatbelt and that the nearest TEC is found on a different landform being the Swan Coastal Plain, it is not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology GIS Database:
- Heddle Vegetation Complexes - DEP 21/06/95
- Soils Statewide
- SAC Bio Datasets 24/09//2008

(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 may be at variance to this Principle

Heddle et al (1980) defines the vegetation under application as Dardanup Complex of which there is 7.9% of pre-European extent remaining. The vegetation under application is also described as Beard vegetation associations 968 of which there is 33.3% of pre-European extent remaining (Shepherd, 2007).

The area under application is located within the Shire of Waroona of which there is 57.6% of pre-European extent remaining (Shepherd, 2007). The vegetation under application is also within the Swan Coastal IBRA Region of which there is 38.1% of pre-European vegetation remaining.

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents the clearance of ecological communities with an extent below 30% of that present pre-European settlement (Commonwealth of Australia, 2001).

Although the vegetation representation within the Dardanup complex is less than 10% of pre-European extent, given the degraded condition of the vegetation on site which is contained within a narrrow, linear road reserve, the proposed clearing may be at variance to this Principle.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Swan Coastal Plain^	1,501,456	571,758	38.1	
Shire of Waroona**	78,809	45,361	57.6	
Heddle vegetation complex***				
Dardanup Complex	9,504	754	7.9	
Beard vegetation type*				
968	296,877	98,987	33.3	

* (Shepherd, 2006)
** (Shepherd et al, 2001)
*** (EPA, 2006)
^ Area within Intensive Land Use Zone

Methodology GIS Databases:
- Commonwealth of Australia (2001)- EPA (2006)
- EPA (2006)
- Shepherd (2007)

GIS Databases:
- Heddle Vegetation Complexes - DEP 21/06/95
- Interim Biogeographic regionalisation of Australia

(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 located within a multiple use wetland. In addition, there is a Conservation Category Wetland (CCW) located approximately 2km to the east of the applied area and three EPP Lakes, the closest of which is located approximately 1.8km east of the applied area.

Furthermore, the closest watercourse Samson South Drain, is located approximately 593m to the south of the area under application and a irrigation channel and table drain run parallel along the length of McClure Road. The vegetation under application comprises Melaleuca rhaphiophylla, a species which only grow in association with swamps and watercourses (Western Australian Herbarium 1998). A portion of the vegetation follows the

table drain and has fringing riparian vegetation comprising M. rhaphiophylla which is directly associated with the table drain.

Given the area under application is located within a multiple use wetland and along a drain and comprises wetland dependant vegetation, the current proposal in its current form is considered to be at variance to this Principle.

Methodology References:
- DEC (2008)
- Webb, Site Photos (2008)

GIS Databases:
- EPP, Lakes
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrography, linear (hierarchy)

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

Comments

The soils within the area under application are described as dark, porous loamy soils (Northcote et al, 1968). These soils are associated with a low risk of salinity and have a low to moderate risk of acid sulphate soils. Given that the clearing as proposed does not involve the deep excavation of the soils, it is therefore not considered likely that it would have an impact on salinity.

The main land degradation risk associated with the removal of vegetation on the identified soil type is considered to be water erosion and water logging. However given the area under application is limited to 0.42 hectares, within a narrow, linear road reserve spread over a distance of approximately 1km, it is not likely to result in appreciable water erosion and water logging.

Given the above, it is not considered likely that the proposed clearing would result in appreciable land degradation.

Methodology References:
- DEC (2008)
- Northcote et al. (1960-68)

GIS Databaese:
- Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC
- Salinity Risk LM 25m - DOLA 00
- Soils, Statewide

(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

There are two areas reserved for conservation purposes within a 5km radius of the area under application, being Hamel State Forest, which is located approximately 500m east of the applied area. In addition, the Buller Nature Reserve is located approximately 5km west of the area under application.

The area under application is situated in a landscape which has been extensively cleared for agriculture and has been isolated from local conservation reserves. However, given the surrounding land use and the degraded condition of the vegetation under application, the proposed clearing is not considered likely to impact on the environmental values of any nearby conservation area.

Methodology Reference:
- DEC (2008)

GIS Databases:
- CALM Managed Lands and Waters

(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 has a nil to low risk of salinity and is not located within a Public Drinking Water Source Area (PSWSA). Given that the clearing as proposed does not involve the deep excavation of the soils, it is not considered likely that the proposed clearing would cause salinity resulting in the deterioration in the quality of underground water.

The applied area is located within a multiple use wetland and the nearest watercourse is Samson South Drain, which is located approximately 590m to the south of the area under application. In addition, a irrigation channel and table drain are located immediately adjacent to the McClure Road reserve. Given the close proximity of

the identified drains, the proposed clearing and associated road construction may cause a temporary deterioration in the quality of surface water through sedimentation.

Given the above, the proposed clearing may be at variance to this Principle.

Methodology Reference:
- DEC (2008)

GIS Databases:
- Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC
- Hydrographic, linear (hierarchy) ? DOW
- Public Drinking Water Source Areas (PDWSAs) ? DOW
- Salinity Mapping LM 25 ? DOLA 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**

The area under application is located approximately 590m to the north of the Samson South Drain at an elevation between 20-30 metres. Given the area under application is limited to 0.42 hectare contained within a narrow, linear road reserve, it is not considered likely that the proposed clearing of the vegetation would impact on peak flood height or duration.

Methodology GIS Databases:
- Geomorphic wetlands (Mgt Categories) - Swan Coastal Plain - DEC
- Hydrography, linear (hierarchy) - DOW
- Soils, Statewide
- Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

In a submission, the Executive Officer of DEC Roadside Conservation Committee advised that McClure Road had not been surveyed for conservation value scores and given that area under application is located within an extensively cleared landscape, it is recommended that the clearing should only occur on one side of the road to provide a vegetated corridor linkage between the east and west. TRIM ref: DOC64433.

Given the close proximity of a concrete irrigation channel and a table drain on either side of McClure Road, clearing is not able to be contained to only one side of the road.

Methodology GIS Databases:
- Native Title Claims - DIA

4. Assessor's comments

Comment

The assessable criteria have been addressed and the proposed clearing is at variance to Principle (f) and may be at variances to Principle (e) and (i).

5. References

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

Commonwealth of Australia (2001) National Targets and Objectives for Biodiversity Conservation 2001-2005, AGPS, Canberra.

DEC (2008) Site Inspection Report for Clearing Permit Application CPS 2705/1, McClure Road, Hamel. Site inspection undertaken 12/10/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC67749).

EPA (2006) Guidance for the Assessment of Environmental Factors - Level of Assessment for Proposals Affecting Natural Areas Within the System 6 Region and Swan Coastal Plain Portion of the System 1 Region. Guidance Statement No 10. Environmental Protection Authority, Western Australia.

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.

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. (2007). 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.

Webb, P. (2008) Shire of Waroona, Site Photos for McClure Road, Hamel. TRIM ref: DOC67186

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)