Department of Environment
Government of Western Australia

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1811/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Bruce and Lois Hensley

1.3. Property details

Property: LOT 7 ON PLAN 12035 (House No. 265 OCEAN FARM NILGEN 6044)
Local Government Area: Shire Of Gingin
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.16		Burning	Horticulture

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 1029: Shrublands; scrub-heath Dryandra-Calothamnus assoc. with B. prionotes on limestone in the northern Swan Region. (Hopkins et al. 2001, Shepherd 2006)	The area under application (0.16ha) is located within Lot 7 (Zoned rural residential), which is a 4.8 hectare property. The proposed clearing is to extend the current cleared area (approximately 0.5ha), which is used for irrigated waxflower production. The vegetation within the area under application includes Calothamnus sp., Dryandra spp., Banksia prionotes, Hibbertia sp., Xanthorrhoea preissii and a few weeds including Lupinus sp. and Oxalis sp.; with areas of limestone outcropping (Site Inspection 2007).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the native vegetation under application was sourced from the Site Inspection (2007).

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 located within Lot 7 (Zoned rural residential), which is a 4.8 hectare property.

The vegetation under application is considered to be in very good condition (Site Inspection 2007). The area to be cleared can be described as closed heath, with the vegetation including Calothamnus sp., Dryandra spp., Banksia prionotes, Hibbertia sp., Xanthorrhoea preissii and a few weeds including Lupinus sp. and Oxalis sp. (Site Inspection 2007).

Given the small area to be cleared (0.16ha) and the presence of some weeds within the area under application, the clearing as proposed is unlikely to comprise a high level of biological diversity.

Methodology Reference:
Site Inspection (2007) (TRIM Ref ED1920)

(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

Carnaby's Black-Cockatoo (Calyptorhynchus latirostris) is the only species of conservation significance known to occur within a 5km radius of the proposed clearing, with the closest record being 1.5km south south-east. This species moves around seasonally in flocks to feeding areas in proteaceous scrubs and heaths and eucalypt woodlands as well as pine plantations. Breeding occurs in winter/spring, mainly in the eastern forests and wheatbelt where they can find mature hollow-bearing trees to nest in.

The area to be cleared (0.16ha) is closed heath, with the vegetation including Calothamnus sp., Dryandra spp., Banksia prionotes, Hibbertia sp., Xanthorrhoea preissii and a few weeds including Lupinus sp. and Oxalis sp. (Site Inspection 2007).

Given the relatively small area under application, it is unlikely that the vegetation applied to be cleared comprises significant nesting or feeding habitat for this or other fauna indigenous to Western Australia. Therefore, the clearing is considered not likely to be at variance to this Principle.

Methodology

References:
Site Inspection (2007) (TRIM Ref ED1920)
DEC Fauna habitat notes.xls February 2007
GIS Databases:
- SAC Bio Datasets 170707

(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 records of Declared Rare Flora (DRF) in the local area (5km radius). The nearest recorded DRF (Eleocharis keigheryi) is located approximately 10.0km north of the area under application, on the same soils, but within a different vegetation type as those under application.

Although these populations occur generally on the same soils, Eleocharis keigheryi typically occurs in winter-wet claypans (Brown et al 1998). Given winter-wet claypans do not occur within the area under application (Site Inspection 2007), it considered unlikely that the vegetation to be cleared includes rare flora. Therefore the clearing is unlikely to be at variance to this Principle.

The following Priority species are known to occur within a 5km radius of the area under application (the closest being located 2.8km east of the area under application):
- Grevillea thelemanniana (Priority 3),
- Stylidium maritimum (Priority 3), and
- Conostylis pauciflora subsp. euryrhipis (Priority 3).

The above Priority flora occur on different soils (except for Grevillea thelemanniana) and within different vegetation types as those under application. Further, DEC's Florabase (WA Herbarium 1998-) identifies Grevillea thelemanniana as occurring on sand, sandy clay; winter-wet low-lying flats.

Given the above, it considered a low possibility of Priority flora occurring within the area under application.

Methodology

References:
Brown et al (1998)
WA Herbarium (1998-)
GIS Databases:
- SAC Bio Datasets 170707
- Pre-European Vegetation - DA 01/01
- Soils, Statewide - DA 11/99

(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 Threatened Ecological Communities (TECs) located within the local area (5km radius). The nearest recorded Ecological Community, being a Priority Ecological Community (PEC), is located approximately 10.1km north of the area under application. This PEC has been identified as being Claypans with shrubs over herbs.

Given there are no TECs located within close proximity of the area under application, the vegetation applied to be cleared is unlikely to comprise or is necessary for the maintenance of a Threatened Ecological Community. Therefore the clearing as proposed is unlikely to be at variance to this Principle.

Methodology GIS Databases:
- Environmentally Sensitive Areas - DOE 08/03/05
- SAC Bio Datasets 170707

(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 area under application is located within the Intensive Land-use Zone (Shepherd et al. 2001) and is located in the area defined in EPA Position Statement No. 2 (EPA 2000). Significant clearing of native vegetation has already occurred in this area and any further reduction through clearing for agriculture is not supported, unless exceptional circumstances apply, such as clearing for a relatively small area (EPA 2000).

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). The Vegetation Association in the area under application is above the recommended minimum of 30% representation.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	Conservation status***	In secure tenure (%)
IBRA Bioregion					
- Swan Coastal Plain*	1, 501,456	571,758	38.1	Depleted	
Shire of Gingin**	315,560	177,688	56.3	Least Concern	
Vegetation type:					
Beard: Unit 1029*	71,040	53,258	75.0	Least Concern	35.8

* (Shepherd 2006)
** (Shepherd et al. 2001)
*** (Department of Natural Resources and Environment 2002)

Vegetation within the area under application is identified as Beard Vegetation Association 1029, of which there is 75.0% of Pre-European extent remaining and 35.8% in secure tenure (Shepherd 2006). Given the vegetation association is well represented and the area to be cleared is small (0.16ha), the clearing as proposed is not likely to be at variance to this Principle.

Methodology Commonwealth of Australia (2001)
Department of Natural Resources and Environment (2002)
EPA (2000)
Shepherd et al. (2001)
Shepherd (2006)
GIS Databases:
- Pre-European Vegetation - DA 01/01
- Interim Biogeographic Regionalisation of Australia - EA 18/10/00

(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 at variance to this Principle

There are no watercourses or wetlands located within the local area (5km radius) and as such the vegetation within the area under application is not considered to be growing in, or in association with a watercourse or wetland. Therefore, this clearing proposal is not at variance to this Principle.

Methodology GIS Databases:
- Hydrography, linear - DOE 01/02/04
- Geomorphic Wetlands (Mgt 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 landscape of the area under application and surrounds can be described as undulating dune landscape with some steep dune slopes and underlain by aeolianite at depth (Northcote et al. 1960). The chief soils are brown sands and associated soils are siliceous sands on the deeper dunes, especially on the western side of the soil unit; and leached sands on the more subdued dunes, especially on the eastern side of the soil unit (Northcote et al. 1960). The area under application occurs on the western side of the soil unit.

There is a potential risk for land degradation through wind erosion, as the sandy soils within the area under application are considered to be highly erodible. However, given the relatively small area of native vegetation to be cleared (0.16ha), the clearing as proposed is unlikely to cause appreciable land degradation.

Methodology Reference:
Northcote et al. (1960)
GIS Database:
- 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 is not likely to be at variance to this Principle

There is one conservation reserve within close proximity of the area under application, being Nilgen Nature Reserve (also identified as Reserve C 31781, a Systems 1-12 Conservation Reserve), which abuts the southern boundary of Lot 7. In addition, the area under application is located within an area listed on the Register of the National Estate, being Wanagarren and Nilgen Nature Reserves (1976 boundaries). This area of National Significance, which is registered for natural values, extends over 16,000ha and is recognised as having rich flora typical of the lower west coast of the State, one of only a few remaining areas of natural heath in the area (Australian Heritage Council 2007).

There is an existing cleared area (approximately 0.5ha) adjacent to the area under application that inhibits connectivity from the vegetation under application to Nilgen Nature Reserve. Further, given the relatively small area to be cleared (0.16ha) the clearing of the vegetation under application is unlikely to impact the adjacent conservation reserve.

Methodology Reference:
Australian Heritage Council (2007)
Site Inspection (2007) (TRIM Ref ED1920)
GIS databases:
- DEC Managed Lands and Waters - CALM 01/07/05
- Register of National Estate - EA 28/01/03
- System 1-5 and 7-12 Areas - DEP 06/95

(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

There are no watercourses or wetlands located within the local area (5km radius) and as such the clearing of the area under application is unlikely to cause the deterioration in surface water quality.

The area under application is not located in a Public Drinking Water Source Area or EPP area. The ground water within the local area is considered to have fresh water quality (500-1000mg/L). Considering the relatively small size of the proposed clearing (0.16ha) and the magnitude of the Perth Groundwater Province (4,660,026ha), the proposed clearing is unlikely to have an impact on regional groundwater quality.

Methodology GIS Databases:
- Hydrography, linear - DOE 01/02/04
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain DEC
- Public Drinking Water Source Areas (PDWSAs) - DOW
- EPP Areas - DEP 06/95
- Groundwater Salinity, Statewide - DOW
- Groundwater Provinces - WRC 98

(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 at variance to this Principle

With an average annual rainfall of approximately 600-700mm and an annual evaporation rate of approximately 2,000mm there is little surface flow during normal seasonal rains. It is only during major rainfall events that there is a likelihood of flooding. However, given the relatively small area under application (0.16ha), clearing as proposed is unlikely to cause or exacerbate the incidence of flooding.

Methodology GIS Databases:
- Evaporation Isopleths - BOM 09/98
- Isohyets - BOM 09/98

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

Comments

In May 2005, an occurrence of alleged illegal clearing within Lot 7 Ocean Farm Road was reported to the Department. The Department's Local Environmental Enforcement Group determined that the Department will not be taking legal action in respect to the 0.5 hectare of native vegetation that had been cleared (TRIM Ref ED1864).

On 24 March 2005 the Shire of Gingin provided planning consent for 2.5 hectares of irrigated horticulture (wax flowers), with associated conditions (TRIM Ref ED1954). Further, the Shire of Gingin (2007) advised that the Council raises no objection to the clearing proposed on Lot 7 for the purpose of horticulture, as the land use is consistent with Town Planning Scheme No.8.

The area under application is within the Proclaimed Groundwater Area of Gingin. Therefore any abstraction of groundwater would require a licence. On 26 April 2005 Mr & Mrs Hensley submitted an application to renew groundwater licence GWL152027 (28,800kL/annum) for Lot 7 Ocean Farm Road for irrigation of 3.2 hectares of native plants. The Department renewed the groundwater licence GWL152027 from December 2005 (TRIM Ref ED1864); however the area was reduced to 2.5 hectares (27,000kL/annum) for irrigation of native flowers to be commensurate with the Shire approval. The area currently cleared for irrigation is approximately 0.5ha and the area applied to be cleared is 0.16ha.

There is no other RIWI Act Licence, Works Approval or EP Act Licence that affects the area under application.

Methodology

Reference:
Shire of Gingin (2007) (TRIM Ref DOC23510)
GIS databases:
- RIWI Act, Groundwater Areas - DOW
- RIWI Act, Surface Water Areas - DOW

4. Assessor's recommendations

Purpose	Method	Applied area (ha)/ trees	Decision	Comment / recommendation
Horticulture	Burning	0.16		The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986. The clearing as proposed is not at variance and not likely to be at variance to the Principles.

5. References

Australian Heritage Council (2007) Australian Heritage Database. Australian Heritage Council. http://www.ahc.gov.au/ (Accessed 19/07/2007).

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.

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, 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.

Site Inspection (2007) Site Inspection Report, Department of Environment and Conservation (DEC), Western Australia. TRIM Ref ED1920.

Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.calm.wa.gov.au/ (Accessed 19/04/2007).

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)