Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.:	5050/1
Permit type:	Area Permit

1.2. Proponent details

Proponent's name:	Van Vuong Dong and Thi Thuy Hong Dinh

1.3. Property details

Property:	LOT 63 ON PLAN 3830 (Lot No. 63 SAUNDERS HENLEY BROOK 6055)
Local Government Area:	City of Swan
Colloquial name:	

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
4.5		Mechanical Removal	House and market garden

1.5. Decision on application

Decision on Permit Application:	Refuse
Decision Date:	8 March 2013

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
Mapped Beard vegetation association 1018 is described as Mosaic: Medium forest; jarrah-marri / Low woodland; banksia / Low forest; teatree / Low woodland; Casuarina obesa (Shepherd et al, 2001). Heddle vegetation complex Southern River Complex - Open woodland of Corymbia calophylla (Marri) - Eucalyptus marginata (Jarrah) - Banksia species with fringing woodland of Eucalyptus rudis (Flooded Gum) - Melaleuca rhaphiophylla (Swamp Paperbark) along creek beds (Heddle et al, 1980).	The proposed clearing of 4.5 hectares is for the purpose of constructing a house and market garden. The majority of the western portion of the application area (2.5ha) consists of Banksia attenuata, Banksia menziesii open woodland over native shrubs and sedges including Dasypogon sp. and Patersonia sp. in very good to good (Keighery 1994) condition. Scattered Marri (Corymbia calophylla) also occurr. Towards to southwest corner Jarrah (Eucalyptus marginata) and Marri woodland over Banksia attenuata become more prevalent. There is evidence of historic clearing within the centre of the property which is in a degraded (Keighery 1994) condition (1.13ha). Vehicle tracks and grassy weeds were also observed in this area. Melaleuca preissiana closed woodland in excellent (Keighery 1994) condition occurs within the eastern portion (0.87ha) of the application area. Open water was observed within a small portion of the wetland. Evidence of small scale grazing was observed (DEC 2012).	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994) Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The condition of the vegetation was established through a site visit conducted by Department of Environment and Conservation (DEC) officers on 14 June 2012.

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 majority of the western portion of the application area consists of Banksia attenuata, Banksia menziesii open woodland over native shrubs in very good to good (Keighery 1994) condition. Towards the southwest corner Jarrah (Eucalyptus marginata) and Marri woodland over Banksia attenuata become more prevalent. There is evidence of historic clearing within the centre of the property which is in a degraded (Keighery 1994) condition. Melaleuca preissiana closed woodland in excellent (Keighery 1994) condition occurs within the eastern portion of the application area (DEC 2012).

The application area contains a conservation category wetland (CCW) which supports a high level of ecological values and functions (Water and Rivers Commission, 2001). This wetland area may contain significant habitat for local fauna.

The western portion of the application area (2.5ha) provides feeding habitat for threatened black cockatoo species. The application area is important as a part of an ecological linkage that facilitates fauna movement across a highly cleared area. Therefore, the proposed clearing is at variance to this Principle.

Methodology

References
-Keighery (1994)
-DEC (2012)
-Water and Rivers Commission (2001)
GIS Databases
-SAC Bio datasets (18 May 2012).

(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

The majority of the western portion of the application area consists of Banksia attenuata, Banksia menziesii open woodland over native shrubs and sedges in very good to good (Keighery 1994) condition. Scattered Marri (Corymbia calophylla) also occurred. Towards to southwest corner Jarrah (Eucalyptus marginata) and Marri woodland over Banksia attenuata become more prevalent (2.5ha). There is evidence of historic clearing within the centre of the property which is in a degraded (Keighery 1994) condition (1.13ha). Melaleuca preissiana closed woodland in excellent (Keighery 1994) condition occurs within the eastern portion of the application area (DEC 2012) (0.87ha).

Calyptorhynchus latirostris (Carnaby's Cockatoo) and Calyptorhynchus baudinii (Baudin's Cockatoo) have been recorded within the vicinity of the application area. Surveys of black cockatoo populations and their feeding and roosting habits show that the Northern Region of the Swan Coastal Plain appears to be an important area for black cockatoos (Shah 2006). Important native food for this species include Banksia attenuata, B. menziesii, B. grandis, B. ilicifolia, B. sessilis, B. prionotes, Corymbia calophylla and Eucalyptus marginata (Valentine and Stock 2008). Evidence of feeding by black cockatoos on Marri nuts was found within the property and approximately 10 Carnaby's cockatoos were observed roosting on a dead tree within the centre of the property (DEC 2012).

The local area (10 km radius) has been extensively cleared with 20 per cent of vegetation remaining. The western portion of the application area (2.5ha) consists of significant feeding habitat for threatened black cockatoo species.

The area under application is a part of a largely continuous corridor of bushland/ wetland areas (Government of Western Australia 2001) and may be important as a part of an ecological linkage that facilitates fauna movement across a highly cleared area and therefore may provided significant habitat for local fauna. Frogs, kangaroos and birds were observed using the application area during the site visit (DEC 2012).

The proposed clearing is at variance to this Principle.

Methodology

References
-Keighery (1994)
-DEC (2012)
GIS Databases
-SAC Bio datasets (18 May 2012).

(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

Eleven rare flora species have been recorded within the local area (10km radius).

The application area does not contain the preferred habitat for these rare flora species.

The proposed clearing is not likely to be at variance to this Principle.

Methodology

GIS Databases
-Soils, statewide
-Pre-European vegetation
-SAC Bio datasets (18 May 2012).

(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 closest mapped Threatened Ecological Communities (TEC) are Communities of Tumulus Springs (Organic Mound Springs, Swan Coastal Plain) and Muchea Limestone - shrublands and woodlands on Muchea Limestone.

Both of these TEC's occur on different vegetation types to the area under application. The application area does not contain habitat for these TECs as it consists of Banksia open woodland with Marri (Corymbia calophylla) and Melaleuca preissiana closed woodland (DEC 2012)

Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References
-DEC (2012)
GIS Databases
-SAC Bio datasets (18 May 2012)

(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

The application area consists of the Beard Vegetation Association 1018 and the Heddle Vegetation Southern River complex which have approximately 19.6 per cent, and 21.1 per cent of pre European vegetation remaining, respectively.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The Environmental Protection Authority (EPA, 2006) recognises the Perth metropolitan Region as a constrained area, providing for the reduction of vegetation complexes to a minimum of 10 per cent of the pre-European extent. The three mapped vegetation associations are all above this 10 per cent minimum and occur within this constrained area.

However, the area under application occurs within a local area that has been highly cleared with approximately 20 per cent pre- European vegetation remaining. In addition, the application area contains a portion of a conservation category wetland, provides significant feeding habitat for threatened fauna species and is a part of a continuous or largely continuous corridor of bushland/ wetland areas (Government of Western Australia 2001). Therefore, the application area it is considered a significant remnant of vegetation in a highly cleared area.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,209	587,889	39.1	33.3
Shire*				
City of Swan	104,248	45,327	43.5	27.6
Beard Vegetation Association in Bioregion*				
1018	14,059	2,756	19.6	3.29
Heddle Vegetation Complex **				
Southern River Complex	57,171	12,059	21.1	1.6

* Government of Western Australia (2011)
** Shepherd, 2009

Methodology

References
-Government of Western Australia (2011)
-Shepherd (2009)
-Commonwealth of Australia (2001)
-EPA (2006)
GIS Databses
-SAC Bio datasets (18 May 2012)
-Pre-European vegetation
- NLWRA, current extent of vegetetation

(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

A conservation category wetland (CCW) (Rookwood St wetland) is mapped within the eastern portion of the application area.

During the site inspection (DEC 2012) a wetland area containing wetland dependent vegetation in an excellent (Keighery 1994) condition was identified within the area under application. This wetland consisted of Melaleuca preissiana closed woodland. Open water was observed within a small portion of the wetland.

CCWs support a high level of ecological values and functions and are the highest priority wetlands for protection (Water and Rivers Commission, 2001). There should be no further loss or degradation of CCWs and their protection also requires the retention of an adequate buffer (Government of Western Australia, 1997).

The minimum recommended buffer distance for wetlands is 50 m which is designed to protect wetlands from deleterious impacts while helping safeguard and maintain ecological processes and functions (Water and Rivers Commission, 2001). The application area occurs on the Bassendean sands which have a very low capacity to retain phosphorous which can readily leach into the low water table under these soils and flow into adjacent water bodies or into rivers many kilometres away (McPharlin et al. 1990). The proposed clearing of deep-rooted native vegetation and replacement with vegetable crops is likely to result in increased nutrient loss from the soil profile (McPharlin et al, 1990). To protect the wetland within the application area from nutrient inputs and other deleterious impacts from the proposed clearing a 100 m buffer is required (Water and Rivers Commission, 2001).

Given that the area contains wetland dependent vegetation, the proposed clearing is considered to be at variance to this Principle.

Methodology

References
-DEC (2012)
-Water and Rivers Commission (2001)
-Government of Western Australia (2007)
-Keighery (1994)
-McPharlin et al. (1990)
GIS Databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear

(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

Chief soils of the application area are leached sands (Northcote et al 1960-68).

Given the sandy soils there is some risk of wind erosion if the proposed clearing is not managed (Commissioner of Soil and Land Conservation 2012).

In addition, the proposed clearing may contribute incrementally towards eutrophication of the nearby Henley Brook (1 km down gradient) and Swan River (1.7km down gradient) due to the soil type it occurs on (Commissioner of Soil and Land Conservation 2012).

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

Methodology

References
- Commissioner of Soil and Land Conservation (2012)
-Northcote et al (1960-68)
GIS Databases
-Soils, statewide
-Hydrography, linear

(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

The closest conservation areas to the area under application area the Gnangara-Moore River State Forest occurring 3.1km northwest of the application area and Bush Forever sites occurring 3km south, 2.4km west, 3.5km north and 1.67km east of the application area.

The area under application is part of a largely continuous corridor of bushland/ wetland areas (Government of Western Australia 2001) and occurs within a highly cleared area with 20 per cent of pre-European vegetation

remaining.

Clearing 4.5ha as proposed, in a largely cleared landscape, is likely to contribute to the degradation of this north-south ecological linkage, and therefore impact on the environmental values of the nearby conservation reserves.

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

Methodology References
-Government of Western Australia (2001)
GIS Databases
-DEC Managed Lands
-Bush Forever sites

(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 at variance to this Principle**
A conservation category wetland (CCW) (Rookwood St wetland) is mapped within the eastern portion of the application area.

During the site inspection (DEC 2012) a wetland area containing wetland dependent vegetation in an excellent (Keighery 1994) condition was identified within the area under application. This wetland consisted of Melaleuca preissiana closed woodland. Open water was observed within a small portion of the wetland.

The proposed clearing of 0.87 ha of this wetland area is likely to cause sedimentation of surface water during clearing.

The proposed clearing may contribute incrementally towards eutrophication of the nearby Henley Brook (1 km down gradient) and Swan River (1.7km down gradient) due to the soil type it occurs on (Commissioner of Soil and Land Conservation 2012).

Given this, the proposed clearing is considered likely to cause deterioration to the quality of surface water in this wetland and may contribute towards eutorphication of nearby rivers.

The proposed clearing is at variance to this principle.

Methodology References
- Commissioner of Soil and Land Conservation (2012)
-DEC (2012)
-Keighery (1994)
GIS databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear

(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**
A conservation category wetland (CCW) (Rookwood St wetland) is mapped within the eastern portion of the application area.

The proposed clearing of 0.87 ha of wetland is considered likely to cause water logging given the soil type within that area (Commissioner of Soil and Land Conservation 2012). Although clearing the area under application may cause water logging it is not likely to increase the incidence and intensity of flooding.

The proposed clearing is not likely to be at variance to this principle.

Methodology References
-Soil and Land Conservation Commissioner (2012)
GIS databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear

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

Comments

The proposed clearing of 4.5 hectares is for the purpose of constructing a house and market garden.

The application area occurs within a Rights In Water and Irrigation Act 1914 groundwater area and a groundwater licence is required for the purpose of horticulture.

The City of Swan (2012) has advised that planning approval is required for the purpose of the proposed clearing (house and horticulture) and that no application for planning approval has been received for Lot 63 on Plan 3830 Henley Brook.

The area under application is zoned General Rural under the Metropolitan Regional Scheme and Rural under the City of Swan's Town Planning Scheme.

A clearing permit on the neighbouring property (CPS 4603/1) was granted for 2.9 hectares for the purpose of horticulture, however the clearing avoided the buffer to the Conservation Category Wetland and involved the clearing of Banksia trees in a degraded (Keighery, 1994) condition.

Methodology

References
-City of Swan (2012)
- Keighery (1994)

4. References

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

City of Swan (2012) Planning advice foc clearing application CPS 5050/1 - Lot 63 Rookwood Street Henley Brook. DEC ref A511821

Commissioner of Soil and Land Conservation (2012); Land Degradation Advice and Assessment Report for clearing permit application CPS 5050/1 received 22 June 2012; Department of Agriculture and Food Western Australia (DEC ref A516727).

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

DEC (2012) Site Inspection Report for Clearing Permit Application CPS 5050/1, Lot 63 Rookwood Street, Henley Brook. Site inspection undertaken 13/6/2012. Department of Environment and Conservation, Western Australia (DEC ref A514457).

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.

Government of Western Australia (1997) Wetlands Conservation Policy for Western Australia, Department of Conservation and Land Management and the Water and Rivers Commission, Perth WA.

Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, Perth.

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.

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McPharlin, I., Delroy, N., Jeffrey, B., Dellar, G. and Eales, M. (1990) Phosphorous retention of sandy horticultural soils on the Swan Coastal Plain, W.A. Journal of Agriculture, Volume 31, 1990.

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.

Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia.

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.

Water and Rivers Commission (2001) Position Statement: Wetlands, Water and Rivers Commission, Perth.

5. Glossary

Term	Meaning
DAFWA	Department of Agriculture and Food
DEC	Department of Environment and Conservation
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)