Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1967/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Ian & Linda Callander and Golden Tiger Meditation Company Pty Ltd**

1.3. Property details

Property: COCKBURN SOUND LOCATION 736 - CROWN RESERVE 32202 (SERPENTINE 6125)

Local Government Area: Shire of Serpentine-Jarrahdale

Colloquial name: Access Road to Lot 481 Kingsbury Drive, Serpentine

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.1		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
Mattiske Vegetation Complex: YG1 Yarragil 1. Open forest of *Eucalyptus marginata subsp. marginata-Corymbia calophylla* on slopes with mixtures of *Eucalyptus patens* and *Eucalyptus megacarpa* on the valley floors in humid and subhumid zones.	The proposal is to clear 0.1 hectares of native vegetation for the purpose of widening a road to access an adjacent property. The road is currently 3m wide and will be widened to approximately 4m, with an additional 4m width for two 50m long passing bays.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Vegetation clearing description based on a site visit conducted by DEC officers on 22 August 2007 and a spring flora survey undertaken by Landcare Solutions (2006).
Dwellingup - Open forest of *Eucalyptus marginata subsp. marginata-Corymbia calophylla* on lateritic uplands in mainly humid and subhumid zones. Beard Vegetation Association: 3 - Medium forest; jarrah - marri 4 - Medium woodland; marri & wandoo (Shepherd 2006)	The vegetation under application comprises open *Eucalyptus marginata/Eucalyptus calophylla* woodland with a shrub layer consisting of Acacia spp. and *Hakea spp.* over a low shrubland of *Hibbertia spp.*, *Grevillea spp.* and *Baumea spp.*		

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 may be at variance to this Principle

The vegetation under application is in excellent condition with a high diversity of species, although no rare flora were identified during the flora survey (Landcare Solutions 2006).

Although the area under application is thin and linear, and is limited to 0.1 hectares, the vegetation is in excellent condition with a high species diversity and therefore considered that the vegetation may comprise a high level of biodiversity.

The proponent has committed to revegetating a section of the adjacent property Lot 481 as part of the Landscape and Vegetation Management Plan which is being developed for the Shire of Serpentine Jarrahdale.

Methodology DEC site visit 22/8/07
Landcare Solutions (2006)

(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**
Within the local area (5km radius) there have been 14 recorded occurrences of significant fauna including the Chuditch (Dasyurus geoffroii), the Quenda (*Isoodon obesulus fusciventer*) and Baudin's Black Cockatoo (*Calyptorhynchus baudinii*). During the DEC site visit Red-tailed Black Cockatoos were observed.

The vegetation under application is in excellent condition and includes understorey and is likely to be utilised by ground dwelling fauna such as Quenda. No hollows were observed during the site inspection that could potentially be utilised as habitat.

Given the area under application is thin and linear, limited to 0.1 hectares, and is adjacent to a nature reserve, it is therefore not considered likely that the vegetation under application comprises significant habitat for indigenous fauna.

Methodology DEC site visit 22/8/07
GIS Database: SAC Bio datasets accessed 20/9/07

(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**
Within the local area (5km radius) there are 14 known populations of the Declared Rare Flora (DRF) *Synaphea sp*. Fairbridge Farm, *Verticordia plumosa* var. *pleiobotrya* and *Lasiopetalum pterocarpum*, with the closest located approximately 3.3km to the west. There are also 13 known populations of Priority flora, with the closest located approximately 2km to the northwest.

Synaphea sp. Fairbridge Farm is generally found near winter-wet flats in low woodland; *V. plumosa* var. *pleiobotrya* is generally found in seasonally inundated swamps; and *L. pterocarpum* is generally found on sloping banks near creeklines (Western Australian Herbarium 1998). In addition, these species are found on the Swan Coastal Plain, and the area under application is located in the Darling Scarp. It is therefore not considered likely that these DRF would be present within the gravely, well drained soils present within the area under application. In addition, no DRF or Priority flora species were identified during the flora survey undertaken by Landcare Solutions (2006).

Given that the habitat within the area under application is not considered likely to be suitable for the DRF found in the local area, and given that no DRF were identified during the flora survey, it is not considered likely that the vegetation under application includes, or is necessary for the maintenance of, rare flora.

Methodology DEC site visit 22/8/07
Landcare Solutions (2006)
Western Australian Herbarium (1998-)
GIS Database: SAC Bio datasets accessed 20/9/07

(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 five known occurrences of Threatened Ecological Communities (TEC) within the local area (5km) located approximately 3.2 km to the northwest. These TEC have been identified as SCP3b - *Eucalyptus calophylla* - *Eucalyptus marginata* woodlands on sandy clay soils, and are located on the Swan Coastal Plain foothills/Pinjarra Plain landform. The area under application is located on gravely soils in the Darling Scarp.

Given that the vegetation under application is associated with a different land form and soil type to the TEC in the local area, and given the distance to the nearest TEC, it is not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology DEC site visit 22/8/07
GIS Database: SAC Bio datasets accessed 20/9/07

(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**
Mattiske (1998) defines the vegetation under application as Yarragil 1 and Dwellingup complexes, which have representations of 87.9% and 93.0%, respectively, of pre-European extent remaining. The vegetation under application is also defined as vegetation associations 3 and 4, which have representations of 70.0% and 23.3%

respectively, of the pre- European extent remaining (Shepherd 2006).

Although vegetation association 4 (Shepherd et al. 2001) has a representation below the recommended minimum 30% of pre-European extent, Mattiske (1998) vegetation representations are generally accepted as being the preferential figures for the Darling Scarp Bioregion, based on the scale of vegetation mapping and the related accuracy. The identified Mattiske (1998) vegetation types both have representations above the recommended minimum level of 30%, as recognised by both the EPA and the State Government (EPA 2003; Department of Natural Resources and Environment 2002). The proposal is therefore not considered likely to be at variance to this Principle.

	Pre-European (ha)	Current (ha)	Remaining %	Conservation status****	% in reserves
Jarrah Forest	4,506,674	2,426,079	53.8**	Least concern	
Shire of Serpentine-Jarrahdale		90,478	90,478	58.6*	Least concern
Mattiske vegetation complex			***		
Yarragil 1 (Yg1)	800,603	703,654	87.9	Least concern	
Dwellingup (D1)	2,082,806	1,936,288	93.0	Least concern	
Beard vegetation associations					
3	2,661,514	1,863,982	70.0**	Least concern	26.2
4	1,054,316	245,361	23.3**	Depleted	18.2

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

Methodology EPA (2003)
Department of Natural Resources and Environment (2002)
Mattiske (1998
Shepherd (2006)
GIS Databases:
Mattiske Vegetation - CALM 24/3/98
Pre-European Vegetation - DA 01/01

(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**
A number of wetlands are located within a 5km radius of the area under application, with the closest being a Conservation Category Wetland (CCW) located approximately 700m to the southeast. The nearest watercourse is Karnet Brook, which is located approximately 550m to the south.

Given the distance to the nearest wetland, and that no wetland dependent vegetation was observed during the site visit, the proposed clearing is not considered likely to include vegetation growing in, or in association with, a watercourse or wetland.

Methodology DEC site visit 22/8/07
GIS Databases:
Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DOE
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**
Soils within the area under application are described as well drained, shallow to moderately deep gravely brownish sands, pale brown sands and earthy sands overlying lateritic duricrust, and generally have a low risk of land degradation including wind erosion, water logging and water erosion (State of Western Australia 2005). The area under application has a nil risk of salinity and acid sulphate soils.

Although the soil type generally has a low risk of land degradation, it is considered that the removal of vegetation from the gravely soils may result in some water erosion, however given the limited area of clearing it is not considered likely that it would result in appreciable land degradation.

Methodology DEC site visit 22/8/07
State of Western Australia (2005)

(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 at variance to this Principle

The area under application is located within Karnet Nature Reserve, which is vested in the Conservation Commission and is listed on the Register of National Estate for the conservation of flora and fauna.

Given that the applied area is located within the Nature Reserve, it is considered that the proposed clearing will have a direct impact on the environmental values of the adjacent conservation reserve through the removal of vegetation. In addition, the proposed clearing may have an indirect impact through the introduction or spread of dieback and/or weeds. The proposed clearing therefore is at variance to this Principle.

The Conservation Commission has endorsed the proposal to widen the track, which will be dedicated as a road. Conditions have been imposed on the permit to ensure vehicles and construction material are weed and dieback free.

Methodology

DEC site visit 22/8/07
GIS Database:
CALM Managed Lands and 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 nearest watercourse is Karnet Brook, which is located approximately 550m to the south of the area under application.

Soils within the area under application have a low risk of land degradation in general, however the removal of vegetation from the gravely soils may result in water erosion. This is likely to be minimal given the area under application is limited to 0.1ha. Given this, and the distance to the nearest watercourse, it is therefore not considered likely that the proposed clearing would result in water erosion that would cause a deterioration in the quality of surface water.

The area under application has a low risk of salinity and acid sulphate soils and is not located within a Public Drinking Water Source Area (PDWSA). It is therefore not considered likely that the proposed clearing would cause a deterioration in groundwater quality through acid sulphate soils or salinity.

Methodology

DEC site visit 22/8/07
State of Western Australia (2005)
GIS Database:
Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC
Hydrography, linear (hierarchy) - DOE 13/4/05
Public Drinking Water Source Areas (PDWSAs) - DOE 07/02/06
Salinity Risk LM 25m - 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 550m from Karnet Brook at an elevation of 255 metres. The applied area is located on well-drained soils with a low risk of water logging (State of Western Australia 2005). It is therefore not considered likely that the removal of vegetation from site would have an impact on peak flood height or duration.

Methodology

DEC site visit 22/8/07
State of Western Australia (2005)
GIS Databases:
Hydrography, linear (hierarchy) - DOW
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The area under application is located with a Native Title Claim area; and is contained within a Crown Reserve vested in the Conservation Commission for the conservation of flora and fauna. The Conservation Commission has endorsed the widening of the track, which will be dedicated as a road reserve pending realignment of Firns Road.

A submission received did not oppose the clearing, however suggested that the landholders be required to

collect seed from the property to allow future revegetation of the site.

"The proponent is the owner of Lot 481 Kingsbury Drive, however access to the site has been an issue of concern for though the lot has a gazetted unmade road reserve joining the lot from Kingsbury Drive to the south east corner of Lot 481 this is considered unsuitable for development. This unmade road reserve dissects Lot 1438 and the SJ Shire has deemed that 'it is not advisable to construct the road due to the steep terrain, dense forest growth, the resource enhancement wetland that needs to be crossed and the potential environmental damage any construction activities may cause.' The proponent agreed with this decision and does not wish to cause unnecessary environmental impact as part of securing gazetted access to their lot.

The lot is however currently accessed by an existing track that runs off Firns Road. This track has been historically used to access the lot and is a trafficable all season structure that is 3m wide, except for two sharp bends where it is 5m wide.

Liaison between the proponent, SJ Shire and the Department of Environment and Conservation (DEC) has suggested that it is desirable to continue to use this access track and that it be gazetted as a road reserved provided it follows the existing alignment to the minimum width allowed. The Council recognised that this represented the most environmental responsible option and stated that 'there would be a requirement for some clearing for construction of a roadway from the existing 3m to 3.6m width to allow for truck and horse float access. There would be minimal cleared of ground storey vegetation for the proposed road width and some lopping of branches'.

Under the delegated authority of the SJ Shire Council the proposed subdivision of Lot 481 was endorsed subject to ten recommended conditions by the SJ Council on 15 February 2006. The conditions that relate to the road access to the lot in question include gazettal of the access track to a road.

Subsequent liaison between the proponent and the SJ Shire has determined the access track must be a minimum of 3.6m to allow for safe passage of vehicles and emergency service traffic. The proponent undertook a road alignment survey with the route designed to avoid significant trees and minimise clearing (Landcare Solutions 2006)."

On 5 October 2006 SJ Shire requested to DEC that a portion of Karnet Nature Reserve be excised for the purpose of being dedicated as a public road to provide access to Lot 481.

The Shire of Serpentine Jarrahdale advised on 6 July 2007 of their support for the proposed clearing for the road construction.

In 2007 the Department for Planning and Infrastructure (DPI) advised that the Minister for Lands will agree to dedicate as a road portions of Reserves 26079 and 32202 subject to agreed payments. The gazettal of the road however is dependent on Firns Road being realigned, as it is currently misaligned and therefore this process is not likely to be finalised for some time.

The applicant has advised they are proposing extensive revegetation works on Lot 481, which will offset the vegetation cleared for the widening of the access track. Revegetation works will include fencing, weed control, ripping, relocating topsoil and vegetation cleared to provide seed and mulch, planting seedlings and seed. Works will be undertaken to the satisfaction of the SJ Shire as per the Landscape and Vegetation Management Plan submitted to the Shire.

Methodology Landcare Solutions (2006)
GIS Database:
Native Title Claims - DLI

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Road construction o maintenance	Mechanical Removal	0.1	The assessable criteria have been addressed and the proposed clearing is at variance to Principle h.

5. References

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 (2006) Guidance for the Assessment of Environmental Factors -level of assessment of proposals affecting natural areas within the System 6 region and Swan Coastal Plain portion of the System 1 Region. Report by the EPA under the Environmental Protection Act 1986. No 10 WA.

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of

WA (Inc). Nedlands, Western Australia.

Landcare Solutions (2006) Environmental Impact Statement - Proposed widening of the access track to Lot 481 - Golden Tiger Meditation Company Pty Ltd. DEC TRIM ref. DOC28102.

Shepherd (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 Visit 22/8/07, Department of Environment and Conservation (DEC), Western Australia. TRIM ref DOC34517.

State of Western Australia (2005) Agmaps Land Manager CD Rom.

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)