Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1946/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: **Westminster Estate Pty Ltd**

1.3. Property details

Property: Lot 10 on Plan 12465 (House No. 2469 Marmion Avenue JINDALEE 6036)

Local Government Area: City of Wanneroo

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.29		Mechanical Removal	Miscellaneous

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 Complex: Quindalup Complex - Coastal dune complex consisting mainly of two alliances - the strand and fore-dune alliance and the mobile and stable dune alliance. Local variations include the low closed forest of *Melaleuca lanceolata - Callitris preissii* and the closed scrub of *Acacia rostellifera.* Beard Vegetation Association: 1026 - Mosaic, shrublands of *Acacia rostellifera, A. cyclops* (in the south) and *Melaleuca cardiophylla* (in the north) thicket/shrublands; *Acacia* lasiocarpa & *Melaleuca acerosa* heath.	The proposal is to clear 0.29ha for the purpose of battering along the southern boundary for subdivision works from Lot 12. The vegetation under application has been described by RPS Bowman Bishaw Gorham (2006) as "low closed forest of *Melaleuca lanceolata - Callitris preissii* and closed scrub of *Acacia rostellifera* over tall scrub/heath comprising *Melaleuca cardiophylla, Acacia rostellifera, Spyridium globulosum, Olearia axillaris* and *Acacia saligna* confined to the swales and lower slopes in the area under application."	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	Vegetation clearing description based on desktop assessment and a flora survey conducted by RPS Bowman Bishaw Gorham (2006) The area under application (0.29ha) is located within the southern portion of Lot 10 on Plan 12465 and was subject to a spring flora survey conducted by RPS Bowman Bishaw Gorham (2006) and a fauna survey conducted by Bamford Consulting Ecologists (2006). A summary of the flora and fauna report was provided by RPS Bowman Bishaw Gorham which was used in the assessment of the application. The vegetation under application is considered to be in very good condition (RPS Bowman Bishaw Gorham 2006).

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

During the spring flora survey of Lot 10, which included the area under application, RPS Bowman Bishaw Gorham (2006) recorded a total of 61 plant species, but no Declared Rare Flora (DRF) or Priority species were recorded within the applied area.

During a fauna survey Bamford Consulting Ecologists (2006) reported that the vegetation under application is likely to be utilised by a number of significant fauna species, including a total of 31 bird species which are considered to be of local conservation significance, due to their decline in the Perth region as the result of urban development.

The area under application and surrounding area is zoned urban, with residential development to the southeast and east of the applied area. The vegetation in the area under application is part of a much larger remnant (including the remainder of Lot 10) which extends north and has the potential to support a range of native species. The area under application may be considered to be an area of high biodiversity.

Methodology Bamford Consulting Ecologists (2006)
RPS Bowman Bishaw Gorham (2006)
GIS Databases:
SAC BIO Datasets – accessed 07/08/07

(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**
A desktop assessment undertaken by Bamford Consulting Ecologists (2006) identified 96 bird species, 44 reptile species and 3 amphibian species with the potential to occur in the area under application.

During the field survey a total of 35 bird species were recorded, including the Carnaby's Black-Cockatoo *Calyptorhynchus latirostris* (Endangered). These birds inhabit uncleared or remnant *Eucalyptus* and *Banksia* woodlands, foraging on the seeds or nectar from the flowers of *Banksia* and *Eucalyptus* species (DEC 2006). Given the vegetation in the area under application comprises *Melaleuca spp* and *Acacia* species, the vegetation is unlikely to be suitable for foraging or nesting habitat.

Bamford (2006) advised that of the identified local bird species, the Fairy-wrens (*Malurus spp.*), White-breasted Robin (*Eopsaltria georgiana*) and Thornbills (*Acanthiza spp.*) have a limited distribution range and are particularly sensitive to habitat loss. In addition, Bamford (2006) reported that the area under application may be used as a breeding site for the EPBC Act (Migratory) listed Rainbow Bee-Eater, which nests in burrows excavated in sandy ground during the spring and summer months. Although this species was not observed during the fauna survey, clearing of vegetation during the spring and summer months is likely to destroy any burrows that are present.

The DEC Priority 5 species Quenda (*Isoodon obesulus fusciventer*) has been recorded within a 2km radius of the area under application. Whilst there were no recorded observations of the Quenda during the fauna survey, the dense understorey has the potential to provide suitable habitat for this species (Bamford 2006) and other ground dwelling species such as the Moodit (*Rattus fuscipes*).

Although the vegetation in the area under application may provide some foraging habitat for fauna species in the local area, given the lack of hollows, the limited size (0.29ha) of the area under application, it is not considered likely to be significant, especially when compared to conservation reserves in the local area that are in good or better condition.

Methodology Bamford Consulting Ecologists (2006)
DEC - 2006
GIS Databases:
SAC BIO Datasets – accessed 07/08/07

(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 of application) there is one known population of Declared Rare Flora (DRF) *Eucalyptus argutifolia* which is located approximately 4.9km southeast of the area under application. This DRF species is associated with vegetation comprising *Melaleuca huegelii, Acacia rostellifera* and *Spyridium globulosum* in shallow soils over limestone on the slopes or gullies of limestone ridges.

A spring flora survey conducted by RPS Bowman Bishaw Gorham (2006) did not identify any DRF species including *Eucalyptus argutifolia*, or any Priority flora species within the area under application.

Given that no DRF or Priority species were identified during the flora survey, it is not considered likely that the vegetation under application includes, or is necessary for the maintenance of the continued in situ existence of rare flora.

Methodology RPS Bowman Bishaw Gorham (2006)
GIS Databases:
SAC BIO Datasets – accessed 07/08/07

(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 22 known occurrences of Threatened Ecological Communities (TEC) within the local area (5km radius of application) of which 3 are associated within the same vegetation complex and soil type as the area under application.

The closest TEC is located approximately 252m southwest of the area under application and was identified as Floristic Community Type 26a (FCT 26a) which comprises Melaleuca huegelii and *Melaleuca acerosa* shrublands on limestone ridges.

Given that the vegetation in the applied area was identified during a spring flora survey as Floristic Community Type 29a (FCT 29a) which comprises coastal shrublands on shallow sands, it is not considered likely that the vegetation under application would comprise, or be necessary for the maintenance of a TEC.

Methodology

RPS Bowman Bishaw Gorham (2006)
GIS Databases:
SAC BIO Datasets accessed 7/08/07

(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

Heddle et al. (1980) defines the area under application as Quindalup Complex, of which there is 47.1% of pre-European extent remaining and which is described as being of a 'depleted' status for biodiversity conservation (Department of Natural Resources and Environment 2002).

The vegetation under application is also described as Beard vegetation association 1026 which has 89.2% of pre-European extent remaining (Shepherd, 2006) and which is considered to be of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment 2002). In addition the vegetation of the applied area is also within the City of Wanneroo of which there is 57.6% of pre-European extent remaining which is considered to be of 'least concern' for biodiversity conservation (Department of Natural Resources and Environment 2002), (Shepherd et al. 2001).

These vegetation types 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) and the proposal is therefore not considered likely to be at variance with this principle.

	Pre-European (ha)	Current (ha)	Remaining %	Conservation status***	% in reserves
Swan Coastal Plain	1,501,456	571,756	38.1%**	Depleted	
City of Wanneroo	78,809	45,361	57.6%*	Least Concern	
Heddle vegetation complex					
Quindalup Complex	38,238	18,000	47.1%***	Depleted	8.8%
Beard vegetation associations					
1026	70,704	63,068	89.2%**	Least Concern	52.4%

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

Methodology

Department of Natural Resources and Environment, 2002
EPA (2006)
Heddle et al. (1980)
Shepherd (2006)

(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 watercourses or wetlands within the area under application. However, there are a number of wetlands found within a five kilometre radius of the applied area.

The nearest wetland is a Conservation Category Wetland (CCW), Nowergup Lake, which is located approximately 3.8km northeast of the applied area and Carabooda Lake, a resource enhancement wetland, which is situated approximately 3.9km to the northeast.

Given the distance to the nearest wetland or watercourse, and that no wetland dependent vegetation was observed during the flora survey (RPS Bowman, Bishaw Gorham, 2006), the proposed clearing is not considered likely to include vegetation growing in, or in association with, a watercourse or wetland.

Methodology GIS Databases:
Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC
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 may be at variance to this Principle**
Soils within the area under application are part of the Quindalup systems, comprising calcareous sands which have a nil to low risk of salinity and acid sulphate soils (State of Western Australia 2005).

The main land degradation risk associated with this sandy soil type is considered to be nutrient export, water erosion and wind erosion (State of Western Australia 2005). The clearing of native vegetation is not considered likely to impact on the export of nutrients.

The high water erosion potential is due to the low permeability of these soils and without appropriate vegetation cover on exposed surfaces, the proposal may result in erosion causing land degradation. Given that the area under application is small (0.29ha) and has surrounding vegetation, it is considered that the redistribution of mulched vegetation over the site would reduce the risk of water erosion.

The high wind potential is due to the sandy nature of the soils and without appropriate vegetation cover, windbreaks or adequate dust suppression on exposed surfaces, the proposal may result in appreciable land degradation and may be at variance to this Principle. The risk of wind erosion can be adequately managed and minimised by stabilising the soil through the application of dust suppressants and the redistribution of mulched vegetation over the site and by maintaining a vegetated buffer zone to reduce wind velocity.

Methodology State of Western Australia (2005)
GIS Databases:
Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC
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**
There are five areas reserved for conservation purposes within a 5km radius of the area under application, the closest being Bush Forever site 397 which is located approximately 283m west of the western applied area.

The proposal is to clear 0.29ha for the purpose of battering along the southern boundary for subdivision works from Lot 12. Given the 283m buffer between the applied area and the Bush Forever site which transcends the western length of Lot 10, it is not considered likely that the proposed clearing would directly impact on its environmental values and its connectivity as a corridor.

Given the small area under application (0.29ha) and given the distance to the nearest reserve and other reserves in the local area, it is not considered likely that the proposed clearing would impact on the environmental values of any nearby conservation reserves.

Methodology GIS Databases:
Bushforever - MFP 07/01
CALM Managed Lands and Waters - CALM 1/07/05

(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 area under application has a nil to low risk of salinity and acid sulphate soils and is not located within a Public Drinking Water Source Area (PDWSA). The proposed clearing is therefore not considered likely to have an impact on groundwater quality.

The nearest watercourses are Bennett Brook which is located approximately 28km southeast of the eastern applied area and Lake Nowergup situated approximately 3.8km northeast of the eastern area under application. Whilst the identified soil type is considered to have a high nutrient export risk, the removal of 0.29ha is not considered likely to have an impact on the surface quality entering these water bodies.

Methodology GIS Databases:
Acid Sulphate Soils Risk Map, Swan Coastal Plain - DEC

Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC
Hydrography, linear (hierarchy) - DOW
Public Drinking Water Sources Areas (PDWSAs) - DOW
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 soils identified within the applied area are described as Quindalup sands which have a low risk of water logging.

Given the distance to the nearest watercourse (28km) and waterbody (3.8km) and the free-draining nature of the sandy soil, the proposed clearing of 0.29ha of vegetation is not likely to cause or exacerbate the incidence or intensity of flooding.

Methodology

State of Western Australia
GIS Databases:
Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC
Hydrography, linear (hierarchy) - DOW
Public Drinking Water Source Areas (PDWSAs) - DOW
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

No submissions received.

The area under application is not part of a Native Title Claim

Located within Lot 10 on Plan 12465 is an Aboriginal site of significance which is situated approximately 50m north of the area under application. This Aboriginal site (20772) has been listed on the Interim Register. Given the proximity of this site to the applied area, it is considered that consultation should be considered for the area under application.

Lot 10 is currently zoned Urban under the Metropolitan Region Scheme (MRS) and Urban Development under the City of Wanneroo District Planning Scheme 2. Planning approvals for the proposed battering along the southern boundary is covered through the subdivison approval for Lot 12.

Note that CPS 1949/1 is on the same location (Lot 10 Marmion Avenue, Jindalee) and by the same proponent (Westminster Estate Pty Ltd).

Methodology

GIS Databases:
Aboriginal Sites of Significance - DIA
Native Title Claims - DLI_1

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Miscellaneous	Mechanical Removal	0.29	The assessable criteria have been addressed, and the proposed clearing: may be at variance to principles (a) and (g).

5. References

Bamford Consulting Ecologists (2006) Jindalee Fauna Assessment. Unpublished report prepared for RPS Bowman Bishaw Gorham.

DEC (2006) Naturebase Fauna Species Profile, Carnaby's Black-Cockatoo http://www.naturebase.net/plants_animals/birds_cockatoo.html.accessed on 13/04/2007

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.

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.

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.

RPS Bowman Bishaw Gorham (2006) Flora and Fauna Assessment for Lot 10 Marmion Avenue, Jindalee. Unpublished report.

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.

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)