Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2763/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: Telstra Corporation Ltd c/- Allerding and Associates

1.3. Property details

Property: LOT 1 ON DIAGRAM 34033 (House No. 620 GNANGARA LANDSDALE 6065)

Local Government Area: City Of Swan & City Of Wanneroo

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3.8	1526	Mechanical Removal	Hazard reduction or fire control

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: 1001 - Medium very sparse woodland; jarrah, with low woodland; banksia & casuarina. (Shepherd 2007; SAC Bio datasets 25/11/2008) Heddle Vegetation Complex: Bassendean Complex Central and South - Vegetation ranges from woodland of E. marginata - C. fraseriana - Banksia spp. to low woodland of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of E. marginata to E. todtiana in the vicinity of Perth. (Heddle et al. 1980)	The vegetation to be cleared includes: - 3.8ha or all native vegetation within 40m of structures; - 856 native trees and tall shrubs within 40-70m of structures; and - 670 native trees and tall shrubs within 70-150m of structures The total proposed clearing is 1,526 native trees and tall shrubs, and 3.8ha over 63.7ha; located within Lot 1 (a 286.9 ha property). The proposed clearing is for fire hazard reduction. The areas under application have been identified as four vegetation habitat types: - Banksia woodlands/low forest; - Marri/jarrah/banksia woodland/tall woodland; - Melaleuca woodland (including some marri) over heath; and - Heath with occasional emergent tree (melaleuca, nuytsia, banksia) (BSD Consultants, 2002).	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the native vegetation under application was sourced from the Consultant's report (BSD Consultants, 2002). The vegetation was considered to be very to excellent 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 may be at variance to this Principle

The vegetation under application was identified as being in very good to excellent condition and comprises four vegetation types (BSD Consultants, 2002).

A flora survey within Lot 1, which includes the applied areas, was conducted by BSD Consultants (2002) in Spring 2001. The flora survey recorded a total of 178 species and did not identify any rare flora or priority flora, but identified populations of Verticordia nitens, which is considered significant as it is close to the southern limit of the distribution range for this species.

The proposed clearing involves selectively thinning 1,526 native trees/tall shrubs and clearing another 3.8 ha of native vegetation (Allerding and Associates, 2008); this vegetation may be considered as significant habitat for ground dwelling fauna such as Quenda and significant feeding habitat for avifauna such as Carnaby's Black-Cockatoo.

Even though the proposed clearing is primarily limited to eight species of native vegetation or 1,526 individual trees and tall shrubs, another 3.8 ha will be cleared of all vegetation; and populations of the significant species Verticordia nitens and 178 species of native vegetation have been recorded within Lot 1; therefore, the vegetation applied to be cleared is considered to may be comprise a high biological diversity.

Methodology

References:
- Allerding and Associates (2008)
- BSD Consultants (2002)

GIS Database:
- Swan Coastal Plain North 20cm Orthomosaic - DLI06

(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 may be at variance to this Principle

There are 24 records of four fauna species of conservation significance within the local area (5km radius). The closest records are Quenda (Isodon obesulus fusciventer), Western Brushtail Wallaby (Macropus irma) and Carnaby's Black Cockatoo (Calyptorhynchus latirostris), located approximately 1.5 km from the applied areas.

Surveys of Carnaby's populations and their feeding and roosting habits show that native species such as Banksia spp and Eucalyptus spp play a significant role in the ecology of the Carnaby's Cockatoos on the Swan Coastal Plain (Shah, 2006). The accelerated rate of clearing of feeding habitat on the Swan Coastal Plain for urban development poses a significant threat to the long term survival of Carnaby's Cockatoos (Shah, 2006). Further studies are required to determine detailed patterns of habitat use, and suggest methods for mitigating the impact of urbanisation and development on Carnaby's Cockatoos (Shah, 2006). In the interim, the precautionary principle should be observed because this study shows that the cockatoos use the entire landscape of the Swan Coastal Plain during the course of the non-breeding season (Shah, 2006).

The proposed clearing involves selectively thinning 1,526 native trees/tall shrubs and clearing another 3.8 ha of native vegetation (Allerding and Associates, 2008); this vegetation may be considered as significant habitat for ground dwelling fauna such as Quenda and significant feeding habitat for avifauna such as Carnaby's Black-Cockatoo.

The 3.8 ha and 1,526 trees/tall shrubs, which include 887 banksia trees and 413 eucalyptus trees, proposed to be cleared may provide significant foraging habitat for Carnaby's Black-Cockatoo. Therefore, the clearing as proposed may be at variance to this Principle.

To mitigate any impacts from the proposed clearing an offset condition will be imposed on this permit.

Methodology

References:
- Allerding and Associates (2008)
- Shah (2006)

GIS Database:
-SAC Bio Datasets accessed 25/11/2008

(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 two known records of rare flora in the local area (5km radius), Caladenia huegelii and Pityrodia axillaris. C. huegelii and P. axillaris are located approximately 2.4km north-west of the applied areas. Both species occur on the same soils and within the same heddle vegetation complex as the applied areas.

C. huegelii is a tuberous, perennial, herb that flowers during September and October; and P. axillaris is a diffuse shrub that flowers from July to December (Brown et al., 1998).

A flora survey within Lot 1, which includes the applied areas, was conducted by BSD Consultants (2002) in Spring 2001. The flora survey did not identify any rare flora.

Given that no rare flora was identified during the spring flora survey, it is not considered likely that the vegetation under application includes, or is necessary for the existence of a rare flora. Therefore, the proposed clearing is not likely to be at variance to this Principle.

Methodology

References:
- BSD Consultants (2002)
- Brown et al. (1998)

GIS Databases:
- Heddle Vegetation Complexes
-SAC Bio Datasets accessed 25/11/2008
-Soils, Statewide

(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 16 Known occurrences of Threatened Ecological Communities (TECs) within the local area (5km radius). Five of the 16 TECs exist within Lot 1, with the closest occurrence being approximately 170m south of the areas under application. This TEC has been identified as Floristic Community Type (FCT) 20a, Banksia attenuata woodlands over species rich dense shrubland (Gibson et al. 1994).

An adequate buffer of between 50-100m is required to protect a TEC from such impacts as edge effects of weed invasion, increased wind speed and increased drying of surface soils (DEC, 2008).

A flora survey within Lot 1, which includes the applied areas, was conducted by BSD Consultants (2002) in Spring 2001. The flora survey did not infer FCT 20a for any of the community types within applied areas.

Given the vegetation under application is located approximately 170m, at the closest point, to the TEC, which is outside of the recommended TEC buffer, and that FCT 20a was not inferred; the vegetation under application is not considered to comprise a TEC or be necessary for the maintenance of a TEC.

Methodology

References:
- BSD Consultants (2002)
- DEC (2008)
- Gibson et al. (1994)

GIS Databases:
-SAC Bio Datasets accessed 25/11/2008

(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 is not likely to be at variance to this Principle

The vegetation within the areas under application are identified as a component of Beard vegetation type 1001, and Heddle Bassendean Complex Central and South, of which there is 25.3% and 27.0% of Pre-European extent remaining respectively (Shepherd, 2007; EPA, 2006).

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents a clearance of ecological communities with an extent below 30% of that present pre-European settlement (Commonwealth of Australia 2001). Both of the mapped vegetation complexes associated within the area under application are below the State Government's biodiversity conservation target of 30%. However, the EPA (2006) recognises the Perth Metropolitan Region as a constrained area, providing for the reduction of vegetation complexes to a minimum of 10% of the Pre-European extent.

Given the current representation levels of the Heddle complex and Beard vegetation associations, that there 44% and 49.7% of remnant vegetation remaining within the Cit of Swan and the City of Wanneroo and part of a larger 293ha remnant listed as bushforever; it is not considered likely that the vegetation under application is significant as a remnant in an area that has been extensively cleared.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				
Swan Coastal Plain^	1,501,208	583,140	38.8	
City of Swan*	104,246	45,925	44.0	
City of Wanneroo *	67,697	33,637	49.7	
Beard vegetation type*				
1001	57,410	14,545	25.3	5.1
Heddle vegetation complex**				
Bassendean Central & South	87,477	23,624	27.0	0.7

* (Shepherd, 2007)
*** (EPA, 2006)
^ Area within Intensive Land Use Zone

Methodology References
-Commonwealth of Australia (2001)
-EPA (2006)
-Shepherd (2007)
GIS Databases:
-Heddle Vegtation Complexes
-Interim Biogeographic regionalisation of Australia
-SAC Bio Datasets accessed 25/11/2008

(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

Approximately, 15 ha of the areas under application are located within a Conservation Category Wetland (CCW), which covers an area of approximately 74 ha. CCWs are the highest priority wetlands which support a high level of ecological attributes and functions (WRC, 2001). There should be no further loss or degradation of CCWs and their protection also requires the retention of an adequate buffer (WRC, 2001).

Approximately, 2 ha of the areas under application are located within a Resource Enhancement Wetland (REW). REWs are priority wetlands which may have been partially modified but still support substantial ecological attributes and functions and have the potential to be restored to conservation category (WRC, 2001).

In addition, 196 individual Melaleuca preissiana trees, a wetland dependant species, are proposed to be cleared (Allerding and Associates, 2008). There is no watercourse within the areas under application, the nearest watercourse is Bennett Brook located approximately 2.7 km south-east of the areas under application.

Given that some of the areas under application occur within a Conservation Category Wetland and Resource Enhancement Wetland; and that wetland dependant vegetation is proposed to be cleared, the vegetation under application is considered to be growing in an environment associated with wetlands that have significant environmental values. Therefore, the clearing as proposed is at variance to this Principle.

To mitigate any impacts from the proposed clearing an offset condition will be imposed on this permit.

Methodology Reference:
- Allerding and Associates (2008)
GIS Databases:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrogology, linear

(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 applied area are predominantly Bassendean sands (quartz sands) with smaller of swamp and lacustrine deposits (peat, peaty sands and clay). These sandy soils have a high risk of wind erosion and phosphorus export and low risk of surface water runoff (Department of Agriculture, 2005).

The main land degradation risks are considered to be phosphorous export and wind erosion. Given the proposed clearing involves selectively thinning 1,526 native trees/tall shrubs and clearing another 3.8 ha of native vegetation over approximately 63.7 ha; it is not considered that the proposed clearing is likely to cause appreciable land degradation.

Methodology

Reference:
- Department of Agriculture (2005)

GIS Database:
- Surface Geology

(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 areas under application are located within Bush Forever site 196 (Gnangara Road Bushland), which is encompasses the 286.9 ha property (Lot 1, Gnangara Road). Immediately north of Lot 1 is site 193 (Gnangara Lake and adjacent bushland), and immediately south of Lot 1 is site 198 (Beechboro Road Bushland).

The proposed clearing is likely to impact on the environmental values of this conservation area through direct removal of vegetation within Bush forever and the spread or introduction of weed species or dieback by machinery. The consequences associated with the spread of such exotic species into areas reserved for conservation, include the significant degradation of the reserve and the potential local extinction of species.

In addition, the proposed clearing involves selectively thinning 1,526 native trees/tall shrubs and clearing another 3.8 ha of native vegetation over approximately 63.7 ha (Allerding and Associates, 2008). This clearing may alter the structure of the remaining native vegetation and result in otherwise shaded low shrubs and groundcover being exposed to additional sunlight, encouraging weed growth in the areas. This could result in an indirect impact of further degradation of the vegetation communities where the clearing is proposed.

Given the areas under application are located within a conservation area, which will directly impact the area through the removal of native vegetation and the spread of weeds and dieback it is considered the proposal at variance to this Principle.

To mitigate any impacts from the proposed clearing weed control, dieback and offset conditions will be imposed on this permit.

Methodology

Reference:
- Allerding and Associates (2008)

GIS database:
- Bushforever

(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

Approximately, 15 ha of the areas under application are located within a Conservation Category Wetland (CCW), which covers an area of approximately 74 ha. CCWs are the highest priority wetlands which support a high level of ecological attributes and functions (WRC, 2001). There should be no further loss or degradation of CCWs and their protection also requires the retention of an adequate buffer (WRC, 2001).

Approximately, 2 ha of the areas under application are located within a Resource Enhancement Wetland (REW). REWs are priority wetlands which may have been partially modified but still support substantial ecological attributes and functions and have the potential to be restored to conservation category (WRC, 2001).

There is a risk of eutrophication occurring, due to sandy soils contained within the applied area having low phosphorus retention ability, and the removal of deep-rooted perennials is likely to result in increased nutrient loss from the soil profile (McPharlin et al, 1990).

The areas under application are located within a Public Drinking Water Source Area (PSWSA) being, Gnangara Underground Water Pollution Control Area, which is a Priority 1 (P1) area. The P1 classification areas are defined to ensure that there is no degradation of the water source; P1 areas are declared over land where the provision of the highest quality public drinking water is the prime beneficial land use (Department of Environment, 2004). In addition, the areas under application are considered to have low salinity risk.

Given the proposed clearing is partly within a wetland and completely within a PDWSA, it is considered that it may cause deterioration in the quality of surface water or ground water through eutrophication. Therefore, the proposed clearing may be at variance to this Principle.

Methodology

References:
- Department of Environment (2004)
- McPharlin et al (1990)

GIS Databases:
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
- Hydrogology, linear
- Public Drinking Water Source Areas (PDWSAs)
- 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 predominantly comprises leached Bassendean sands, which are generally considered to have high infiltration rates and therefore a low risk of water logging.

Given the high infiltration rates of the soil mapped within the area under application and the relatively limited vegetation proposed to be cleared, the proposal is not considered likely to cause, or exacerbate, the incidence or intensity of flooding.

Methodology

GIS Database:
- Surface Geology

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

Comments

A submission (2008) for the proposed clearing of the areas under application was received. The submission considered biodiversity issues including that the vegetation under application has a high level of biodiversity of flora and fauna and is mostly in excellent condition and the applied area to be cleared is within an area identified in the MOU as a development area and the issues raised have been addressed under the relevant principles.

The areas under application are located in a Public Drinking Water Source Area, being Gnangara Underground Water Pollution Control Area, which is a Priority 1 (P1) area. The P1 classification areas are defined to ensure that there is no degradation of the water source; P1 areas are declared over land where the provision of the highest quality public drinking water is the prime beneficial land use (Department of Environment, 2004). The Department of Environment (2004) policy states that existing approved land use/activities can continue at their presently approved level provided they operate lawfully (Department of Environment, 2004).

The areas under application have primarily moderate to low acid sulphate soil (ASS) risk with the western area within the wetland having a high to moderate ASS risk. It is not considered likely that the proposed clearing would significantly disturb these soils so that management would be required.

Strategic Biodiversity Planning (SBP) (DPI, 2008), Incorporating Bush Forever, advised that there is a draft Memorandum of Understanding between Telstra and the Western Australian Planning Commission (WAPC). Development Approval from WAPC is required for this clearing.

The City of Wanneroo (2008a) provided a submission regarding fauna within Lot 1 which was considered as during the assessment. In addition, City of Wanneroo (2008b) advised that the Community Fire Manager supports the proposed vegetation clearance within the high fire risk area.

Lot 1 on Diagram 34033 is freehold land and is zoned Public Purposes (Special Uses) under the Metropolitan Regional Scheme.

Methodology References:
- City of Wanneroo (2008a)
- City of Wanneroo (2008b)
- Department of Environment (2004)
- DPI (2008)
- Submission (2008)

GIS databases:
- Acid Sulphate Soil risk map, Swan Coastal Plain
- Cadastre
- Metropolitan Regional Scheme

4. Assessor's comments

Comment
The assessable criteria have been addressed and the clearing as proposed is at variance to Principles (f) and (h), and may be at variance to Principles (a), (b) and (i).

5. References

Allerding and Associates (2008) Clearing application and supporting documentation and further information, Allerding and Associates. TRIM Ref DOC63169 and DOC69850

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

BSD Consultants (2002) Telstra PITC, Landsdale Environmental Management Plan, prepared for Telstra; BSD Consulting Pty Ltd, Western Australia. TRIM Ref 43893

City of Wanneroo (2008a) Direct Interest Submission for CPS 2763/1. TRIM Ref DOC67144

City of Wanneroo (2008b) Direct Interest Submission for CPS 2763/1 (email). TRIM Ref DOC67705

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

DEC (2008) DEC Species and Communities Branch - Threatened Ecological Community advice for CPS 2666/1. Department of Environment and Conservation (DEC), Western Australia. TRIM Ref DOC67555

DEC (2008a) Site Inspection 17 November 2008 on Lot 1 Gnangara Road, Landsdale; CPS 2763/1; Department of Environment and Conservation (DEC), Western Australia. TRIM Ref DOC69251

Department of Agriculture (2005) AgMaps Land Manager CD-rom for the Shires of Serpentine-Jarrahdale, Kwinana, Rockingham, Mandurah, Murray, Boddington, Waroona and Harvey. Department of Agriculture, Western Australia. ISSN: 1448-235X.

DPI (2008) Strategic Biodiversity Planning -advice for Lot 1 on Diagram 53380 Gnangara, Landsdale, Department of Planning and Infrastructure (DPI), Western Australia. TRIM Ref DOC69102

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.

Gibson N., Keighery B., Keighery G., Burbidge A. and Lyons M. (1994). A Floristic Survey of the Southern Swan Coastal Plain. Western Australian Department of Conservation and Land Management and the Western Australian Conservation Council.

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.

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. (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.

Submission (2008) Direct Interest Submission for CPS 2763/1. TRIM Ref DOC66974

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

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)