Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 1960/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Water Corporation**

1.3. Property details

Property: LOT 44 ON PLAN 232805 (Lot No. 44 TEMPLE PICTON 6229)
LOT 1 ON DIAGRAM 71887 (Lot No. 1 TEMPLE PICTON 6229)

Local Government Area: Shire Of Dardanup & Shire Of Harvey

Colloquial name: Western Power Stage 1 Works

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
		Mechanical Removal	Infrastructure Maintenance
		Mechanical Removal	Infrastructure 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
Beard vegetation type 6: Medium woodland; tuart & jarrah Beard vegetation type 1000: Mosaic: Medium forest; jarrah-marri / Low woodland; banksia / Low forest; teatree (Melaleuca spp.) Heddle vegetation complexes: Southern River Complex - Open woodland of E. calophylla - E. marginata - Banksia species with fringing woodland of E. rudis - M. rhaphiophylla along creek beds. Karrakatta complex, central and south - KARRAKATTA COMPLEX ? CENTRAL AND SOUTH : Predominantly open forest of E. gomphocephala - E. marginata - E. calophylla and woodland of E. marginata - Banksia species.	There are three seperate clearing areas. The area on Lot 4 is considered to be in very good condition and is diverse system of landforms, wetland and upland vegetation units,habitat and fauna. The other two areas appear to be in very good - excellent condition are likely to have riparian vegetation.	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Condition of vegetation on lot 4 was taken from both a site inspection by DEC and Bulletin 1282 (EPA, 2008). Condition of the other two sites were taken from aerial photography.

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 area proposed to be cleared consists of three separate sections for pipeline construction. Much of the construction will follow existing tracks and verges however it is expected approx 0.54ha of vegetation will need to be removed. Of this amount 0.41 has been identified as being in excellent condition (Keighery, 1994) and

aerial photography suggests the remaining area is on very good - excellent condition.

The southern most section of the proposed clearing is within the Preston Industrial Park. The application area lies within an area the EPA (2008) has categorised as the highest priority for conservation within the Preston Industrial park. This is in part due to the area having five of the six criteria for regionally significant vegetation, being:

* Representation of communities
* Diversity
* Rarity
* Maintenance of processes
* Wetland Protection

The two northern sections do not fall within the Preston Industrial Park, however both areas are in or associated with a conservation category wetland. These areas are considered likely to have a diversity of wetland dependent species.

The area's proposed to be cleared are individually quite small (0.07ha, 0.41ha and 0.062ha) and likely to only cause minimal disturbance, however the areas in which they are located are sensitive and significant. It is therefore considered that the clearing may be at variance to this principle. A condition to revegetate the cleared area will be imposed upon the permit to mitigate the impacts of clearing.

Methodology EPA, 2008
Keighery, 1994
GIS Databases:
Bunbury 50cm Orthomosaic - DLI04

(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**
The vegetation proposed for clearing would provide habitat for local populations of a range of endemic fauna species, including but not limited to specially protected species. The area contains large stands of species including Agonis flexuosa (WA Peppermint) and Banksia attenuata and B.ilicifolia that would provide refuge and feeding habitat for fauna species including the Western Ringtail Possum (Pseudocheirus occidentalis) and Black Cockatoos. Additionally, clearing in the areas alongside the Collie River may provide habitat for wetland dependent species

Bulletin 1282 (EPA 2008) found 14 populations of Western Ringtail Possum within the Preston Industrial Park study area and concluded that connectivity of remnants by ecological linkages is significant in retaining this threatened species.

The area proposed to be cleared is part of the McLarty/ Kemerton/ Twin Rivers/ Preston River/ Gwindinup North South Ecological linkage, as recognised by the EPA (2003). This linkage has been identified in Bulletin 1282 (EPA 2008) as one of the six core criteria for regional significance.

The local area (10km radius) is predominantly cleared with some areas of connecting remnant vegetation. The proposed clearing area is small (3 areas of 0.07ha, 0.41ha and 0.062ha) and the clearing line does follow existing cleared paths in some areas. Although the vegetation within the proposed clearing area is likely to be utilised by native habitat, the small areas intended to be cleared are unlikely to be significant habitat for native fauna.

Methodology EPA 2008
EPA 2003
GIS Databases:
- SAC Biodatasets re-accessed 5 May 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**
A floristic survey conducted in relation to the Preston Industrial Park survey (EPA, 2008) found no species of Declared Rare Flora within the proposed clearing area. Additionally, a survey carried out by the proponents consultant, GHD found no declared rare flora. It is therefore unlikely that the proposed clearing is at variance to this principle.

Methodology EPA, 2008
GHD, 2007
DEC Site Visit (2007)(TRIM Ref: DOC38659);
GIS Databases:
- SAC Bio datasets - 5/6/07 - reaccessed 5 May 2008

- Bunbury 50cm ORTHOMOSAIC - DLI04

(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 Preston Industrial Park Survey with Bulletin 1282 (EPA, 2008) has not identified any Threatened Ecological Communities (TEC), however, the report does state that further floristic analysis is required to confirm this. The report advises that those areas recommended for retention, which includes the proposed clearing area, are the most likely to have a TEC occurrence.

Given that no communities have, as yet, been recorded in the proposed clearing area and habitat characteristics are not obviously identifiable as possible TEC occurrences, the proposed clearing is not likely to be at variance to this principle.

Methodology

EPA, 2008
GIS Databases:
- SAC Bio datasets - 5/6/07 - re accessed 5 May 2008
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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 may be at variance to this Principle

The State government is committed to the National Objective Targets for Biodiversity Conservation, which includes targets that prevent the clearing of ecological communities with an extent below 30% of that present pre-1750 (EPA 2000).

Vegetation within the area under application is identified as a component of Beard Vegetation Association 1000 and 6, and Heddle Vegetation Complex Southern River Complex and Karrakatta Complex (central and south). These vegetation communities are all below the 30% threshold referred to above.

	Pre-European	Current area (ha)	Remaining % extent (ha)	% in reserves/DEC-managed land
Swan Coastal Plain	1,529,235	657,450	38.1*	-
Shire of Dardanup	53,995	28,182	52.2*	-
Beard vegetation association				
6 56343 14756 26.2			12.7%	
1000	275,380	32,451	24.6**	8.9
Heddle vegetation complex				
Southern River Complex	57,979	11,501	19.8***	1.9
Karrakatta Complex (central and south)	49935	13331	26.7%	8.4%

** (Shepherd 2006)
*** (EPA, 2006)

The proposed clearing of 0.58 ha is within the McLarty/ Kemerton/ Twin Rivers/ Preston River/ Gwindinup North South Ecological linkage, as recognised by the EPA (2003). Surrounding vegetation is between 70-80% cleared. Vegetation within the main clearing area (0.41 ha) is considered to be in excellent condition (Keighery, 1994).

Some vegetation within the proposed clearing area's have been identified as being of conservation significance in EPA Bulletin 1282 (2008) on the Preston Industrial Park. The Bulletin states that vegetation within the application area is recommended to be retained as it meets 5 categories for regionally significant vegetation, namely representation of communities, diversity, rarity, maintenance of ecological processes and wetland processes. However, the area applied to be cleared is small (0.58ha) so it is considered that the proposed clearing may be at variance to this principle. A condition will be placed upon the permit to revegetate the cleared area to mitigate the impacts of clearing.

Methodology

EPA (2000)
EPA (2003)
EPA (2006)
EPA (2008)
Keighery, 1994
Shepherd (2006);
Heddle et al. (1980);
GIS databases:
- Heddle Vegetation Complexes - DEP 21/06/95

- SAC Bio datasets - accessed 5 May 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

One of the areas proposed to be cleared lies entirely within a Conservation Category Wetland (CCW) and the other two proposed clearing areas are within the buffer area for CCW's. The proposed clearing is therefore at variance to this principle. A condition to revegetate the cleared area will be placed upon the permit to help mitigate this impact.

Methodology

DEC Site Visit (2007) (TRIM Ref: DOC38659);
GIS Databases:
- Hydrography, Linear - DoE 1/2/04;
- Geomorphic Wetlands (Classification), Swan Coastal Plain - DEC;
- Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain - DEC;
- EPP Lakes - DEP 28/7/03;
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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

Two of the proposed clearing areas are mapped as having moderate to high risk of Acid Sulfate Soils with the third area mapped with low moderate risk.

Soil mapping indicates that soils are predominantly sandy, with one of the proposed areas having sand with some clayey flats.

As all three proposed clearing areas are small (none greater than 0.41) it is unlikely that the clearing as proposed will cause land degradation.

Methodology

DEC Site Visit (2007) (TRIM Ref: DOC38659);
Northcote et al. (1960-68);
GIS Databases:
- Soils, Statewide - DA 11/99;
- Acid Sulphate Soil risk map, Swan Coastal Plain, DEC

(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

DEC managed lands located within 10 km of the proposed clearing include several small and isolated Nature Reserves and Timber Reserves.

Based on the small (0.58ha) scale of the proposed clearing, it is considered unlikely to impact on the values of nearby conservation reserves.

However, the Preston Industrial park (PIP) study coordinated by DEC has identified that the area proposed to be cleared is of high conservation significance (EPA 2008). Due to this they have recommended that the area be set aside as Regional Open Space and managed for conservation.

Methodology

EPA, 2008
GIS Databases:
- CALM Managed Lands and Waters - CALM 1/6/04;
- System 6 Conservation Reserves - DEP 6/95;
- Bunbury 50cm ORTHOMOSAIC - DLI04

(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

As one of the proposed clearing areas is located within a Conservation Category Wetland (CCW) it is likely that there will be a slight increase in the sedimentation to the surface water quality of that wetland. The other two proposed clearing areas are situated within the buffer of CCWs, and clearing in those areas may have a short term low impact effect in sedimentation increase into the wetlands.

Methodology

Northcote et al. (1960-68);

GIS Databases:
- Hydrography, linear - DOE 01/02/04;
- Hydrography, linear (hierarchy) - DOW;
- Hydrographic Catchments, Sub-catchments - DOE 01/07/03;
- Public Drinking Water Source Areas (PDWSAs) - DOW;
- Evaporation Isopleths - BOM 09/98;
- Isohyets - BOM 09/98;
- 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 proposed to be cleared consists of 3 small areas of 0.07ha, 0.41ha and 0.062ha. Given the small size of clearing it is unlikely that flooding will be caused or exacerbated by the proposed clearing.

Methodology GIS Databases:
- Hydrogeology, Statewide
- Topographic contours, statewide

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

Comments

The proposed clearing is for construction of a pipeline in relation to a water treatment facility, funded project by the Water Corporation. The facility will be the second in the area to enable a greater capacity of water to be treated for use by the surrounding residents (GHD, 2007).

Part of the area applied to be cleared has been identified as regionally significant and identified as a future conservation area (EPA, 2008). Within Bulletin 1282 the EPA recommends that the area of proposed clearing be retained due to the significance of vegetation.

There is one Registered Site of Aboriginal Significance recorded within the area under application.

There is no required RIWI Act Licence or EP Act Licence that affects the area under application. A Development Approval is required from the Shire of Dardanup and the Shire of Harvey.

No public submissions have been received for the proposal.

The vesting of reserves extinguishes Native Title under s.33 of the Land Act 1933.

The Water Corporation operate under the Water Agencies (Powers) Act 1984 (WA). This gives the Water Corporation power of entry onto land not tenured with the Water Corporation.

Methodology

4. Assessor's comments

Comment

The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986, and the proposed clearing is at variance to Principles (a), (b) and (e); and may be at variance to Principles (h).

5. References

DEC Site Visit (2007). Department of Environment and Conservation, Western Australia. TRIM Ref: DOC38659.

EPA (2003) Greater Bunbury Region Scheme (Bulletin 1108). Environmental Protection Authority. Perth, WA.

EPA (2008) Advice on areas of conservation significance in the Preston Industrial Park (Bulletin 1282). Environmental Protection Authority. Perth, WA.

GHD (2007). Report for Eaton No.2 WTP and Associated Pipeline Route: biological survey, Perth. Information supplied by applicant. TRIM Ref: DOC27534.

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.

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.

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)