Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2430/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Hanson Construction Materials Pty Ltd**

1.3. Property details

Property: LOT 2 ON DIAGRAM 42706 (Lot No. 2 LILLYDALE NORTH BOYANUP 6237)
Local Government Area: Shire Of Capel
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
12		Mechanical Removal	Extractive Industry

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 1000; Medium Forest; Jarrah-Marri/ Low woodland; Banksia/ Low-Forest; Teatree (Melaleuca sp) and low to medium open forest	Applied area, ca. 12ha, consists of two areas north and south of an existing basalt quarry; application for clearing is for an extension of this quarry. The area under application is typical of a parkland cleared environment.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation Condition assessed from Aerial mapping (Bunbury 50cm Orthomosaic DLI04).

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 not at variance to this Principle

The vegetation within the applied area is in a degraded condition (Keighery, 1994), comprising of a mosaic of vegetation complexes including Medium Forest; Jarrah-Marri/ Low-woodland; Banksia/ Low-Forest; Teatree (Melaleuca sp) and low to medium open forest. The biodiversity value of this area of vegetation is not likely to be great given the condition of the vegetation under application. (Beard et al., 2001)

There are a number of Declared Rare Flora and Declared Threatened Fauna within the local area (10km radius) however the area under application is degraded and there are multiple remnants of vegetation within the local area which would provide a more suited habitat for these flora and fauna.

On this basis, the proposed clearing of the applied area is not at variance to this principle as the vegetation does not contain a high level of biodiversity in a local context.

Methodology

References:
Beard et al. (2001)
Keighery (1994)

GIS Database:
Beard Vegetation Complexes (April 2008)
Bunbury 50cm Orthomosaic (DLI 04) (May 2008)
DEFL08 (April 2008)
Fauna (April 2008)

(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 at variance to this Principle

There are 20 recorded occurrences of Declared Threatened Fauna within the local area (10km radius).

Of these, 5 are associated with coastal or marine environments and are therefore not likely to be impacted by the proposed clearing.

Of the 15 remaining records, only 3 are likely to occur within Beard Vegetation Association 1000 (covering the applied area).

Baudin's Black Cockatoo (Calyptorhynchus baudinii) is declared endangered fauna and favours Marri, Karri and Jarrah habitats. However this cockatoo prefers heavily forested vegetation and will only nest in Karri trees (Saunders, 1979). It is therefore considered unlikely that Baudin's Balck Cockatoo occurs within the application area.

The Forest Red-tailed Black Cockatoo (Calyptorhynchus banksii naso) is a declared vulnerable fauna and favours the Jarrah Forests surrounding Preston River (3.2km East of the applied area) (Nature Base, 2008a). As the application area is in close proximity to the Preston River the presence of the Forest Red-tailed Black Cockatoo within the proposed clearing area is considered likely.

Carnaby's Black Cockatoo (Calyptorhynchus latirostris) is declared endangered fauna and favours Eucalypt woodlands. However this cockatoo prefers uncleared remnant vegetation and principally inhabits Salmon Gums or Wandoo trees (Saunders & Ingram, 1987). It is therefore considered unlikely that Carnaby's Black Cockatoo occurs within the application area as the condition and complex of the vegetation is not consistent with their preferred habitat.

The vegetation proposed to be cleared is in a degraded condition (Keighery, 1994).
While there is 1 fauna species likely to utilize the proposed clearing areas, there are larger areas of similar vegetation within the surrounding areas that are in better condition to be utilized. Therefore the clearing as proposed is not at variance to this principle.

Methodology

References:
Saunders (1979)
Nature Base (2008)
Saunders & Ingram (1987)
Keighery (1994)

GIS Database:
Fauna (April 2008)
Beard Vegetation Complexes (April 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

Within the local area (10km radius) 3 Declared Rare Flora and 17 Priority Flora have been recorded.

The vegetation proposed to be cleared is mapped as a mosaic of vegetation complexes including Medium Forest; Jarrah-Marri/ Low-woodland; Banksia/ Low-Forest; Teatree (Melaleuca sp) and low to medium open forest.

One DRF species, Eleocharis keighery, is not known to occur on the same soils as are present in the application area (Flora Base, 2008a). The Tall Donkey Orchid (Diuris drummondii) typically occurs on low lying depressions or swamps (Flora Base, 2008b) (similar to the area under application) and Caladenia huegelii typically occurs on grey/brown sand or clay loam which may be similar to some niches within the applied area (Flora Base, 2008c).

Of the 17 Priority flora recorded in the local area (10km radius) 10 are known to occur on similar soils to that of the application area.

Despite the high number of rare and priority flora recorded within the local area the proposal is not likely to be at variance to this principle due to the degraded condition (Keighery, 1994) of the vegetation and thus the applied area is not significant for locally identified Declared Rare Flora.

Methodology

References:
Keighery (1994)
Northcote et al. (2001)

Flora Base (2008a)
Flora Base (2008b)
Flora Base (2008c)

GIS Database:
Beard Vegetation Complexes (April 2008)
Soils, Statewide (April 2008)
DEFL feb08 (April 2008)

(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 19 Threatened Ecological Communities (TEC) within a 10km radius of the applied area.

Of the 19 recorded TECs none occur on similar soils and vegetation as the application area.

There are no Priority Ecological Communities (PEC) within a 10km radius of the applied area.

The clearing as proposed is not likely to be at variance to this principle as the condition of the application area is degraded and while there are 19 TECs recorded in the local area none are on similar soils and/or vegetation types.

Methodology

References:
SAC Biodiversity Datasets TEC Database (Accessed 02/05/2008)

GIS Database:
- Sac Bio Datasets (TEC and PEC points) (May 2008)
- Sac Bio Datasets (buffers 08) (May 2008)
- Beard Vegetation Complexes (May 2008)
- Soils, Statewide (April 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 at variance to this Principle

The vegetation within the application area is comprised of Beard Vegetation Association 1000 (Hopkins et al. 2001) of which there is approximately 28.7 % of the pre-European extent remaining (Shepherd, 2006).

The local area (Shire of Capel) is moderately vegetated (34.3% of pre-European vegetation remaining), of which 7.1% are in DEC managed lands. (Shepherd, 2006)

As the vegetation is below the EPA threshold level of 30% according to EPA Position Statement No 2 (2000) further clearing in this area is not support.

Given the pre-European extent remaining of the aforementioned vegetation association and the relatively low proportion of vegetation remaining within the local area (10km radius) the clearing as proposed is considered to be at variance to this principle.

Methodology

References:
Hopkins et al (2001)
Shepherd (2006)
EPA (2000)

GIS Database:
Beard Vegetation Complexes (May 2008)
Local Government Authorities (May 2008)
CALM Managed Lands (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 not at variance to this Principle

The area under application (AUA) is located within the Leschenault Estuary and Preston River catchment. The application area includes 1 artificial drain dissecting the northern area.

No wetlands occur within the AUA; no wetlands occur within a 10km radius of the AUA, however the area is classified as Dampland.

The clearing as proposed is not at variance to this principle as the applied area will not impact on any wetland or watercourse systems.

Methodology

GIS Database:
ANCA Wetlands (May 2008)
Ramsar Wetlands (May 2008)
Hydrogeographic Catchments (Catchment) (May 2008)
Hydrology, linear (May 2008)
Geomorphic Wetlands Swan Coastal Plain (May 2008)

(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

The area under application (AUA) occurs within the Leschenault Estuary and Preston River catchment which is moderately cleared (~ 34.3 %(Shepherd, 2006).

The groundwater salinity is mapped as 500 to 3000 TDS/mg/L. The annual rainfall is 900 mm and evaporation is 700 mm.

The application area is 20-25m ADH.

The property has not been mapped for salinity risk.

There are two soil types mapped for the area;
Cb38: described as sandy dunes with intervening sandy and clayey swamp flats: chief soils are leached sands, sometimes with a clay D horizon below 5 ft, on the dunes and sandy swamps. Associated are various soils in the clayey swamps
Cb39: described as subdued dune-swale terrain: chief soils are leached sands on the low dunes. Associated are small areas of other sand soils
(Northcote et al, 2001)

The soils described are at a moderate risk of wind erosion following clearing due to the dominance of sand in the soil profile.

Clearing of 37ha may incrementally contribute to erosion of the surface soils if not managed correctly.

The proposed clearing therefore may be at variance to this principle as clearing may cause appreciable land degradation.

Methodology

References:
Northcote et al (2001)
Shepherd (2006)

GIS Database:
Hydrogeographic catchments (Catchment) (May 2008)
Beard Vegetation Complexes (May 2008)
Groundwater Salinity, statewide (May 2008)
Rainfall, annual (May 2008)
Evapotransporation, Areal Actual (May 2008)
Topography, statewide (May 2008)
ANCA Wetlands (May 2008)
RAMSAR Wetlands (May 2008)
Salinity Risk, statewide (May 2008)
Soils, Statewide (May 2008)

(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 2 conservation areas near the application area namely Boyanup State Forest (11.8km, SE) and Dardanup Conservation Park (10.5km ESE).

The clearing as proposed is not likely to be at variance to this principle due to the distance of the conservation area to the application area and lack of connectivity.

Methodology

GIS Database:

CALM Managed Lands

(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 is part of the Leschenault Estuary and Preston River catchment which is moderately cleared (~ 34.3 %) (Shepherd, 2006).

The groundwater salinity is mapped as 500 to 3000 TDS/mg/L. The annual rainfall is 900 mm and evaporation is 700 mm.

The application area is 20-25m ADH.

The property has not been mapped for salinity risk.

The proposed clearing is unlikely to exacerbate salinity and increased runoff in this moderately cleared (~ 34.3%) catchment. The proposed clearing is not likely to be at variance with this Principle.

Methodology

References:
Shepherd (2006)
Northcote et al. (2001)

GIS Database:
Hydrogeographic catchments (Catchment) (May 2008)
Beard Vegetation Complexes (May 2008)
Groundwater Salinity, statewide (May 2008)
Rainfall, annual (May 2008)
Evapotransporation, Areal Actual (May 2008)
Topography, statewide (May 2008)
ANCA Wetlands (May 2008)
RAMSAR Wetlands (May 2008)
Soils, Statewide (May 2008)

(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 vegetation under application is located on two soil types:

Cb38: described as sandy dunes with intervening sandy and clayey swamp flats: chief soils are leached sands, sometimes with a clay D horizon below 5 ft, on the dunes and sandy swamps. Associated are various soils in the clayey swamps;

Cb39: described as subdued dune-swale terrain: chief soils are leached sands on the low dunes. Associated are small areas of other sand soils (Northcote et al, 2001).

These soils usually have a low water logging risk.

The Leschenault Estuary and Preston River catchment (of which this application is a part) is moderately cleared (~ 34.3 %) (Shepherd, 2006).

Further clearing and the soil types in this area are not likely to increase the incidence and/or intensity of flooding.

Methodology

References:
Northcote et al (2001)
Shepherd (2006)

GIS Database:
Soils, Statewide (May 2008)
Hydrogeographic Catchments (Catchment) (May 2008)
Beard Vegetation Complexes (May 2008)

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

Comments

ICMS No. 4929: Complainant reported earth tremor followed by a loud bang originating from the Quarry for which this application will expand. (2005; Closed)

The proponent has an Extractive Industry Licence. (Provided: Trim Ref DOC49217)

The proponent has a DEC licence. (Provided: Trim Ref DOC49217)

There is currently a registered claim of native title over the application area for the Gnaala Karla Booja Peoples, however the land is freehold and thus all native title claims are extinguished.

Methodology GIS Database:
ICMS Points (DEC current) (May 2008)
Native Title Claims (April 2008)

4. Assessor's comments

Purpose	Method	Applied area (ha)/ trees	Comment
Extractive Industry	Mechanical Removal	12	Clearing as proposed has been assessed against the clearing principles as: - At variance to Principle E - Maybe at variance to Principle G - Is not likely to be at variance to Principles C, D, H, I and J - Is not at variance to Principles A, B & F

5. References

EPA (2000) Environmental protection of native vegetation in Western Australia. Clearing of native vegetation, with particular reference to the agricultural area. Position Statement No. 2. December 2000. Environmental Protection Authority.

Flora Base (2008a) Flora Species Profile: Eleocharis keigheryi viewed electronically from http://florabase.dec.wa.gov.au/browse/profile/17605 accessed 28/04/2008

Flora Base (2008b) Flora Species Profile: Diuris drummondii viewed electronically from http://florabase.dec.wa.gov.au/browse/profile/10796 accessed 28/04/2008

Flora Base (2008c) Flora Species Profile: Caladenia huegelii viewed electronically from http://florabase.dec.wa.gov.au/browse/profile/1596 accessed 28/04/2008

Hopkins, A.J.M., Beeston, G.R. and Harvey J.M. (2001) A database on the vegetation of Western Australia. Stage 1. CALMScience after J. S. Beard, late 1960's to early 1980's Vegetation Survey of Western Australia, UWA Press.

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

Nature Base (2008) Karrak-watch: The Forest Red Tailed Black Cockatoo viewed electronically from www.naturebase.net/content/view/2384/482 accessed on 28/04/2008

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.

Sac Biodiversity Datasets: TEC Database (2008) Department of Environment and Conservation, Threatened Ecological Communities, computer software, accessed 02/05/2008

Saunders, D.A., & Ingram, J.A., (1987) Factors affecting survival of breeding populations of Carnabys Black Cockatoo Calyptorhynchus funereus latirostris in remnants of native vegetation. In Fauna Species Prifile: Carnabys Black Cockatoo viewed electronically from www.naturebase.net/component/option,com_docman/task,cat_view/Itemid,1288/gid,371/orderby,dmdatecounter/ascdesc,DESC/ accessed on 28/04/2008

Saunders, D.A., (1979) Distribution & Taxonomy of the White tailed and Yellow tailed Black Cockatoos Calyptorhynchus ssp. EMU 70: 215 to 227, viewed electronically in Species Profile & threats database: Baudnis Black Cockatoo from www.environment.gov.au/cgi_bin/sprat/public/publicspecies.pl?taxon_id=769 accessed on 24/04/2008

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)