Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 3219/1

Permit type: Area Permit

1.2. Proponent details

Proponent's name: ABA Civil

1.3. Property details

Property: LOT 1994 ON PLAN 203009 (Lot No. 1994 DOWNS RUABON 6280)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
7.5		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
Heddle Vegetation Type: Abba Complex: A mixture of open forest of E. calophylla, E. marginata, Banksia spp. and woodland of E. calophylla with minor occurrences of E. haematoxylon. Woodland of E. rudis and Melaleuca spp. along creeks and on flood plains (4.9ha) Southern River Complex: Open woodland of E. calophylla, E. marginata, Banksia species with fringing woodland of E.rudis and M. haphiophylla along creek beds (2.6ha). Beard vegetation Association: 1136: Medium woodland; marri with some jarrah, wandoo, river gum and casuarina (7.3 ha) 990: Low forest: peppermint (Agonis flexuosa) (0.2 ha).	The proposal is to clear 7.5ha for the purpose of sand extraction. The vegetation under application consists of open Agonis flexuosa, Banksia illicifolia, Banksia attenuata woodland with scattered Nuytsia floribunda and Corymbia calophylla over grassy weeds in a degraded condition.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Vegetation clearing description based on site visit conducted by DEC officers on the 19 August 2009 (DEC 2009a)

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 at variance to this Principle

The vegetation under application consists of open Agonis flexuosa, Banksia illicifolia, Banksia attenuata woodland with scattered Nuytsia floribunda and Corymbia calophylla over grassy weeds in a degraded (Keighery, 1994) condition (DEC, 2009a).

However, during the site visit, five Western Ringtail Possum dreys and numerous scats were observed within the area under application (DEC 2009a) and the area under application occurs within 'supporting habitat' for the Western Ringtail Possum, as outlined in the Environment Protection and Biodiversity Conservation Act (EPBC Act) Policy Statement 3.10. In addition, clearing of the proposed area will cause fragmentation and significantly reduce the connectivity of the Western Ringtail Possum 'supporting habitat' in an area that is extensively cleared.

Four vegetation types occur within the area under application which retain less than the EPA supported threshold level of pre- European vegetation (30%) recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). Given this, it is considered likely for the vegetation under application to comprises of a high level of biological diversity within a cleared landscape. Therefore the proposed clearing is considered to be at variance to this principle.

Methodology References
-DEC (2009a)
-EPA (2000)
GIS Databases
-SAC Bio Databases (11/08/2009)

(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 at variance to this Principle**
Within the local area (~ 5 km radius) seven species of conservation significant fauna have been recorded including the Quenda (Isoodon obesulus fusciventre), the Carnaby's Black Cockatoo (Calyptorhynchus latirostris), Carpet Python (Morelia spilota imbricata), Water rat (Hydromys chrysogaster), Brush-tailed phascogale (Phascogale tapoatafa ssp.), Western Brush Wallaby (Macropus irma) and the Western Ringtail Possum (Pseudocheirus occidentalis).

The vegetation under application consists of open Agonis flexuosa, Banksia illicifolia, Banksia attenuata woodland with scattered Nuytsia floribunda and Corymbia calophylla over grassy weeds in a degraded condition (DEC, 2009a). During the site visit, five Western Ringtail Possum dreys and numerous scats were observed within the area under application (DEC 2009a). The Western Ringtail Possum occur predominantly in Peppermint (Agonis flexuosa) forest near coastal habitats of the Southern Swan Costal Plain, which is considered important Western Ringtail Possum habitat as it contains the highest know density populations of the species and contains dense and productive peppermint tree habitat (DEWHA 2008). Fauna advice received from DEC (2009b) states that the area under application most likely provides foraging and habitat for the Western Ringtail Possum as the peppermint trees appears to be in a good condition. It was advised that 10 to 20 possums may utilise a 7 ha area (the size of the applied area) (DEC 2009b). It was also confirmed by DEC (2009b) that the area under application provides a corridor for this species to move through the landscape.

The area under application occurs within 'supporting habitat' for the Western Ringtail Possum, as outlined in the Environment Protection and Biodiversity Conservation (EPBC) Act Policy Statement 3.10. 'Supporting habitat' is habitat that buffers key local populations from threats as well as providing foraging, breeding and dispersal opportunities (DEWHA 2008). The area under application is part of a remnant of vegetation that is ~ 20 ha in size and is connected through continuous vegetation to the Ruabon Townsite Reserve which is also considered 'supporting habitat' within the EPBC Act Policy Statement 3.10. Clearing of the proposed area will cause fragmentation of this remnant from the Ruabon Townsite Reserve and significantly reduce the connectivity of Western Ringtail Possum 'supporting habitat' in an area that is extensively cleared.

The area under application may also provide nesting habitat for Black Cockatoos as two Agonis flexuosa trees containing large hollows were identified during the site visit (DEC 2009a).

It is also considered likely that the area under application contributes to an east west ecological linkage between Tuart Forest National Park, Ruabon Townsite Nature Reserve and Millbrook State Forest. This ecological linkage may facilitate fauna and flora movement across a cleared landscape and between these conservation reserves.

Given this and the relatively large area proposed to be cleared (7.5 ha), the proposed clearing is considered to be at variance to this Principle.

Methodology References
- DEC (2009a)
-DEC (2009b)
-DEWHA (2008)
GIS Databases
-SAC Bio Databases (11/08/2009)

(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 14 rare flora species within the local area (~ 5km radius). These include, Chamelaucium roycei, Grevillea elongata, Caladenia huegelii, Banksia nivea subsp. uliginosa, Verticordia densiflora var. pedunalata, Verticordia plumosa var. vassensis, Tetraria australiensis, Drakaea elastica and Verticordia plumosa var.

ananeotes which all occur within 1 km of the area under application. Petrophile latericola, Banksia squarrosa subsp. argillacea occur within 2.5 km of the area under application and Darwinia sp. Willamson, Grevillea maccutcheonii and Lambertia echinata subsp. occidentalis occur 5 km south of the area under application.

The area under application contains vegetation in a completely degraded (Keighery, 1994) condition and is dominated by exotic grassy weeds. In addition, the area is being grazed by cattle (DEC 2009a). Given this, it is not considered likely for the proposed clearing to be at variance to this Principle.

Methodology References
- DEC (2009a)
- Keighery (1994)
GIS Databases
-SAC Bio Databases (11/08/2009)

(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**

Two Threatened Ecological Communities (TECs) have been recorded in the local area (~5 km radius) including Floristic Community Type (FCT) 10b: Shrublands on southern ironstone, FCT10a: Shrublands on dry clay flats and FCT 07: Herb rich saline shrublands in clay pans. All of these TECs occur within the same Heddle vegetation type as the area under application (Heddle, 1980).

The soils within the area under application are mapped as leached sands on the sandy dunes with intervening sandy and clayey swamp flats (Northcote et al 1960-68). Site visits established that the area under application as containing sandy white and grey soils (DEC 2009a; DAFWA, 2009). Given this, the area under application does not contain the preferred habitat for FCT 10a, FCT 07 or FCT 10b. In addition, the vegetation is described as being in a degraded condition (DEC 2009a).

The proposed clearing is unlikely to be at variance to this Principle.

Methodology References
-DAFWA (2009)
-DEC (2009a)
- Heddle (1980)
-Northcote et al. (1960-68)
GIS Databases
-SAC Bio Databases (11/08/2009)

(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 seriously at variance to this Principle**

Heddle et al. (1980) defines the vegetation under application as consisting of the Abba Complex and Southern River Complex, of which there is 6.0% and 19.8% of pre-European extent remaining, respectively (EPA 2006). The vegetation under application is also described as Beard vegetation association 1136 and 990, of which there is 6.7 and 14.4% of pre-European extent remaining, respectively (Shepherd 2007).

The area under application is located within the Shire of Busselton, within which there is 42.15% of pre-European vegetation extent remaining and there is approximately 38% of pre-European vegetation remaining in the local area (~5km radius).

All four vegetation types under application retain less than the EPA supported threshold level (30%) recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000). The area under application does not occur within a constrained area.

It is noted that both Beard type 1136 and Heddle vegetation type: Abba Complex, have less the 3500 ha remaining. Further, it is also noted that there is only 3.7% of Beard's Vegetation Association 1136, 1.5% of the Southern River Complex and even less (0.1%) of Heddle's Abba Complex in secure tenure.

	Pre-European (ha)	Current extent (ha)	Remaining %	Conservation Status
IBRA Bioregion				
Swan Coastal Plain*	1,501,208	583,141	38.84	32.55
Shire of Busselton*	146 450	61 734	42.15	65.9
Local Area (~5km radius)	7850	~3051.6	~38.0	

Heddle vegetation complex**				
Abba Complex:	53 302	3199	6.0	0.1
Southern River Complex	57 979	11501	19.8	1.5
Beard type in Bioregion*				
1136	48 118	3236	6.7	3.7
990	1948	281	14.4	13.16

* (Shepherd 2007)
**(EPA, 2006)

In addition, the area under application may also contribute to an east west ecological linkage between the Tuart Forest National Park, Ruabon Townsite Nature Reserve and Millbrook State Forest.

Given this, and the relatively large area to be cleared (7.5ha) within an extensively cleared landscape, it is considered likely for the proposed clearing to be seriously at variance to this Principle.

Methodology References
-EPA (2006)
- EPA (2000)
-Shepherd (2007)
GIS Databases
-DEC managed lands
-SAC Bio Databases (11/07/2009)
-Heddle Vegetation Complexes
-NLWRA, Current Extent of Native Vegetation

(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**
A Multiple Use Wetland surrounds the area under application. The nearest watercourse is the Ludlow River occurring 2.4 km north of the area under application.

Multiple Use Wetlands are wetlands that have few important ecological attributes and functions remaining (Waters and Rivers Commission, 2001).

During the site visit no wetland dependent vegetation was observed within the area proposed to be cleared, however, Banksia illicifolia was identified (DEC 2009a). This species can be found growing in dryland vegetation that grows on low lying flats (Western Australian Herbarium 1998-). In addition, the area under application occurs within the 50m buffer of a Multiple Use Wetland and is therefore considered to be at variance to this principle.

Methodology References
-DEC (2009a)
-Waters and Rivers Commission (2001)
-Western Australian Herbarium (1998-)
GIS Databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear

(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 is comprised of leached sands (Northcote et al. 1960-68), which are considered to have a high risk of wind erosion (Department of Agriculture, 2005). There is low salinity risk within the area under application and it is not considered likely that the proposed clearing would result in an increase in salinity.

Given the relatively large area (7.5 ha) and the sandy soils of the area under application, the proposed clearing has the potential to cause appreciable land degradation through soil erosion, eutrophication and waterlogging (DAFWA, 2009). Appropriate ground cover on exposed surfaces is required to prevent wind erosion and the risk of eutrophication and waterlogging is low if the excavation of pits is kept above current water table level (DAFWA, 2009).

Methodology References
-DAFWA (2009)

-Department of Agriculture (2005)
-Northcote et al. (1960-68)
GIS Databases
-Soils, Statewide
-Salinity Risk

(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

The closest conservation reserves to the area under application are Ruabon Townsite Nature Reserve occurring 490 m south, Coolilup State Forest occurring 1.8k north, Tuart Forest National Park occurring 3.6 km west, Ludlow State Forest occurring 3.6 km west and Millbrook State Forest occurring 6 km east of the area under application.

From aerial photography, the area under application may contribute to an east west ecological linkage between Tuart Forest National Park, Ruabon Townsite Nature Reserve and Millbrook State Forest. This ecological linkage facilitates fauna and flora movement across a cleared landscape and between these conservation reserves.

Given this, the proposed clearing may impact on the environmental values of nearby conservation areas.

Methodology

GIS Database:
-DEC Managed lands
-Donnybrook 50cm Orthomosaic - Landgate 2004
-Busselton 50cm Orthomosaic - Landgate 2004

(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 wetland to the area under application is a Multiple Use Wetland that surrounds the applied area. The nearest watercourse is the Ludlow River occurring 2.4 km north of the area under application.

The area under application is not within a Priority Drinking Water Source Area (PDWSA) and has a low salinity risk. Therefore, it is unlikely for the proposed clearing to cause deterioration to the quality of underground water.

In addition, Multiple Use Wetlands are wetlands that have few important ecological attributes and functions remaining (Waters and Rivers Commission, 2001). The majority of the area surrounding the area under application has been previously cleared (38% remaining in ~ 5km radius); given this and the degraded condition of the vegetation, it is not considered likely that a further 7.5 ha of clearing would result in a deterioration of surface water quality.

Therefore, the proposed clearing is considered unlikely to be at variance to this Principle.

Methodology

References
-Water and Rivers Commission (2001)
GIS Databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear
-NLWRA, Current Extent of Native Vegetation
-Priority Drinking Water Source Area (PDWSA)
-Salinity Risk

(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 nearest wetland to the area under application is a Multiple Use Wetland that surrounds the applied area. The nearest watercourse is the Ludlow River occurring 2.4 km north of the area under application.

Multiple Use Wetlands are wetlands that have few important ecological attributes and functions remaining (Waters and Rivers Commission, 2001).

The majority of the area surrounding the area under application has been previously cleared (38% remaining in ~ 5km radius), given this and the degraded condition of the vegetation it is not considered likely that a further 7.5 ha of clearing would result in an increase of flooding in the local area.

Methodology References
-Waters and Rivers Commission (2001)
GIS Databases
-Geomorphic Wetlands (Mgt Categories), Swan Coastal Plain
-Hydrography, linear
-NLWRA, Current Extent of Native Vegetation

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

Comments

The proposal is to clear 7.5 ha of native vegetation for sand extraction.

The area under application is zoned General Rural under the Shire of Busselton's Town Planning Scheme.

Extractive Industry Licence and Development Approval are outstanding for the area under application.

The area under application occurs within 'supporting habitat' for the Western Ringtail Possum, as outlines in the Environment Protection and Biodiversity Conservation (EPBC) Act Policy Statement 3.10.

Direct Interest Submission (2009) stated that they consider that the subject vegetation most likely has habitat and ecological linkage values that should be considered important in the context of the landscape even though the understorey is degraded. A fauna survey may be required to help determine the area's importance.

Methodology References
-Direct Interest Submission (2009)
GIS Databases
-Town Planning Scheme Zones

4. Assessor's comments

Comment

The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the Environmental Protection Act 1986 and has found:

- Principle (e) is seriously at variance
- Principles (a), (b) & (f) are at variance
- Principles (g) & (h) may be at variance
- All other principles are not likely to be at variance

5. References

DEC (2009a) Site Inspection Report for Clearing Permit Application CPS 3219/1, Lot 1994 Downs Rd, Ruabon. Site inspection undertaken 19/08/2009. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC95487).

DEC (2009b) Department of Environment. Advice from Species and Communities Branch (DEC TRIM Ref: DOC95887).

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.

Department of Agriculture and Food (2009) Advice. Commissioner of Soil and Land Conservation. DEC TRIM Ref: DOC98031

DEWHA (2008) Background Paper to EPBC Act Policy Statement 3.10 - Nationally Threaterned Species and Ecological Communities. Significant impact guidelines for the vulnerable western ringtail possum (Pseudocheirus occidentalis) in the southern Swan Coastal Plain, Western Australia. Department of the Environment, Water, Heritage and the Arts.

Direct Interest Submission (2009) Shire of Busselton CPS 3219/1 - Lot 1994 Downs Rd, Ruabon. TRIM Ref DOC95604

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, Western Australia.

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.

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. (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.

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

Western Australian Herbarium (1998?). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.dec.wa.gov.au/ (Accessed 28/08/2009).

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)