Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2475/1

Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: **Shire of Brookton**

1.3. Property details

Property:

ROAD RESERVE (BROOKTON 6306)
LOT 6034 ON PLAN 112622 (House No. 1737 BROOKTON-KWEDA ALDERSYDE 6306)
UNALLOCATED CROWN LAND (ALDERSYDE 6306)
ROAD RESERVE (ALDERSYDE 6306)
ROAD RESERVE (ALDERSYDE 6306)
LOT 4836 ON PLAN 112619 (ALDERSYDE 6306)
LOT 4376 ON PLAN 108906 (ALDERSYDE 6306)
LOT 4376 ON PLAN 108906 (ALDERSYDE 6306)
ROAD RESERVE (ALDERSYDE 6306)
ROAD RESERVE (ALDERSYDE 6306)
ROAD RESERVE (ALDERSYDE 6306)
ROAD RESERVE (ALDERSYDE 6306)
LOT 7423 ON PLAN 118157 (ALDERSYDE 6306)
LOT 7423 ON PLAN 118157 (ALDERSYDE 6306)
LOT 7423 ON PLAN 118157 (ALDERSYDE 6306)
LOT 7423 ON PLAN 118157 (ALDERSYDE 6306)
ROAD RESERVE (ALDERSYDE 6306)
LOT 7359 ON PLAN 118160 (ALDERSYDE 6306)
LOT 7359 ON PLAN 118160 (ALDERSYDE 6306)
LOT 27555 ON PLAN 124926 (ALDERSYDE 6306)
ROAD RESERVE (ALDERSYDE 6306)
CLOSED ROAD (ALDERSYDE 6306)
LOT 4836 ON PLAN 112619 (ALDERSYDE 6306)
CROWN RESERVE 10814 (ALDERSYDE 6306)
LOT 37 ON PLAN 194242 (ALDERSYDE 6306)
LOT 29346 ON PLAN 194242 (ALDERSYDE 6306)
UNALLOCATED CROWN LAND (ALDERSYDE 6306)
LOT 33 ON PLAN 194242 (ALDERSYDE 6306)
LOT 34 ON PLAN 85710 (ALDERSYDE 6306)
LOT 27554 ON PLAN 124926 (ALDERSYDE 6306)

Local Government Area: Shire Of Brookton & Shire Of Pingelly

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.03	10	Mechanical Removal	Road construction or 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: 1023 - Medium woodland; York gum, wandoo & salmon gum (E. salmonophloia)	The proposal is to clear 0.03 hectares of native vegetation and 10 trees over a total distance of approximately 8 km of road reserves for the	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 13 June 2008.

reconstruction and maintenance of road reserves within the Shire of Brookton.

The vegetation under application comprises Eucalyptus species over Allocasuarina fraseriana, Xanthorrhoea preissii and Melaleuca species. The majority of the vegetation under application has no understorey present, with ground cover comprising mainly non-native grasses and is in a degraded condition overall.

Moorumbine Road:

The proposed clearing includes the removal of vegetation on both sides of the road reserve, for the purpose of road widening.

The vegetation comprises Eucalyptus spp, Allocasuarina fraseriana, Xanthorrhoea preissii and Melaleuca species over expanses of bare soil and expanses of non-native grasses. Approximately 8 trees have been targeted for selective removal, and other trees have been identified for the selective pruning of protruding branches. The vegetation is considered to be in degraded condition.

Brookton-Kweda Road:

The proposed clearing includes the removal of vegetation on both sides of the road reserve, for the purpose of road widening to enable the safe passage of heavy transport vehicles. Vegetation within the road reserve comprises individual Eucalyptus species and Allocasuarina species and weed choked understorey and is considered to be in degraded to completely degraded 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 is not likely to be at variance to this Principle

The areas under application are located within a landscape that has been extensively cleared for agriculture. A site visit by DEC officers on 13 June 2008 found the vegetation under application within the two road reserves in the Shire of Brookton, ranged from degraded condition to completely degraded condition. The vegetation within the applied areas comprises Eucalyptus wandoo, Eucalyptus spp, Melaleuca spp. Allocasuarina fraseriana and individual Xanthorrhoea preissii over an understorey comprising non-native grass species.

Within the local area (10km radius) there are 10 known populations of priority flora, the closest Anigozanthos bicolor subsp. exstans (P3) and Eucalyptus exilis (P4) are respectively located 4.8km and 9.5km from the areas under application. Although A. bicolor subsp. exstans is found within the same soil type to that found within the applied areas, neither of the identified priority flora species are found within the same vegetation complex as the

areas under application. Given the above, it is not considered likely that the vegetation under application would provide suitable habitat for the priority flora Anigozanthos bicolor subsp. exstans and Eucalyptus exilis.

Given that the vegetation under application is mostly in a degraded condition, has low species diversity and is not likely to include rare flora or priority flora species, it is not considered likely that the vegetation under application comprises a high level of biodiversity.

Methodology DEC site visit - 13/06/08
Shepherd (2006)
Soils, Statewide - DA 11/99
SAC BIO datasets - accessed on 25/07/08

(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**
Within the local area (10km radius) there have been ten recorded occurrences of significant fauna species including the following:

- Red-tailed Phascogale (Phascogale calura, EN)
- Western Rosellas inland spp. (Platycercus icterotis xanthogenys, EN)
- White-browed Babbler (Pomatostomus superciliosus ashbyi, P4)
- Quenda (Isoodon obesulus fusciventer, P5)

The vegetation under application is limited to 0.03 hectare and ten trees over approximately 8km of road reserve and is in a degraded condition. There is a lack of understorey within the area under application, which would limit the habitat potential for ground dwelling fauna species such as the Quenda.

The areas under application are located within the distribution range of the Carnaby's Black-Cockatoo (Calyptorhynchus latirostris,EPBC Act Endangered) which breed in the Wheatbelt, nesting in large hollows of Eucalyptus wandoo and other Eucalyptus species (Burbidge, 2004). During the DEC site visit no hollows were observed that could potentially be utilised as nesting habitat for the Carnaby's Black-Cockatoo, with the trees under application not considered to be of hollow bearing age.

Smaller hollows in Eucalyptus trees are used as shelter by the Red-tailed Phascogale (Burbidge, 2004) and as nesting sites by the Western Rosella (Simpson & Day, 2004). The only recorded sighting of the Western Rosella occurred in 1974, approximately 290 metres east of Moorumbine Road, with no further sightings of this species having been recorded within the local area. In addition, the only recorded sighting of the Red-tailed Phascogale has occurred in the Weam Nature Reserve. Given the degraded condition of the vegetation under application, the lack of hollows and the small size (0.03 ha) and linear nature of the road reserves, it is not considered likely that the vegetation under application would provide suitable habitat for these fauna species.

The only recorded sighting of the White-browed Babbler occurred in 2003 on private property located approximately 6km south west of Moorumbine Road. These birds live in Eucalyptus forests and woodlands with a shrubby understorey. Given the degraded condition of the vegetation within the road reserves and the lack of understorey, it is not considered that vegetation under application would provide suitable habitat for the White-browed Babbler.

It is therefore not considered likely that the area under application comprises significant habitat for fauna indigenous to Western Australia.

Methodology DEC site visit - 13/06/08
Burbidge (2004)
DEC (2006)
Simpson & Day (2004)
GIS Databases:
SAC BIO datasets - accessed on 6/06/08

(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 a 10km radius of the areas under application there are 10 recorded populations of rare flora (DRF), the closest of which are:

- Caladenia williamsiae located approximately 4km from Moorumbine Road;
- Banksia ionthocarpa subsp. chrysophoenix located approximately 2.6km from Brookton-Kweda Road;
- Lasiopetalum rotundifolium located approximately 8.9km fromf Moorumbine Road;
- Verticordia fimbrilepis subsp. fimbrilepis located approximately 250 metres from Moorumbine Road.

L. rotundifolium has only been recorded near the towns of New Norcia and Brookton and this species is considered to be Critically Endangered (Brown et al, 1998). According to Brown, et al (1998) "in Brookton, L. rotundifolium generally grows in open wandoo woodlands on the slopes of hills, in gravely brown clayey sand." Given that this rare flora is found within a different vegetation complex and soil type to that found within the areas under application, it is not considered likely that the vegetation under application would include habitat suitable for L. rotundifolium.

C. williamsiae and B. ionthocarpa subsp. chrysophoenix are found within the same vegetation complex and soil types to that found within the areas under application (Western Australian Herbarium, 1998). In particular, C williamsiae and D. ionthocarpa subsp. chrysophoenix are respectively found in red loamy soils and winter-damp sites. Given the above and that the areas under application are found at elevations of between 230m - 300m, it is not considered likely that the vegetation under application would provide suitable habitat for these DRF species.

V. fimbrilepis subsp. fimbrilepis is generally found in heaths on degraded road reserves (Brown et al, 1998). Whilst this identified rare flora species has the potential to occur within the roads under application, given the absence of a heath and shrub layer, it is not considered likely that the vegetation under application would provide suitable habitat for this rare flora species.

Given that suitable habitat for L. rotundifolium, C. williamsiae, B. ionthocarpa subsp. chrysophoenix and V. fimbrilepis subsp. fimbrilepis are not present within the areas under application, it is therefore not considered likely that the vegetation under application includes, or is necessary for the continued existence of rare flora.

Methodology

DEC site visit - 13/06/08
Brown et al (1998)
Western Australian Herbarium 19/06/06
GIS Databases:
SAC BIO datasets - accessed on 25/07/08

(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 no known occurrences of Threatened Ecological Communities (TEC) within a 10km radius of the areas under application. The closest TEC is located approximately 25km north west of Moorumbine Road and is associated with a perched wetland with extensive stands of Casuarina obesa and Melaleuca strobophylla.

Given that the vegetation under application comprises individual Eucalyptus and Allocasuarina trees associated with ironstone gravel and sandy soils, and given the distance, it is not considered likely that the vegetation under application comprises, or is necessary for the maintenance of, a TEC.

Methodology

DEC site visit - 13/06/08
GIS Databases:
SAC BIO Datasets - accessed on 6/06/08

(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 under application is described as Beard vegetation association 1023, of which there is 5.7% of pre-European extent remaining (Shepherd 2006). The proposed clearing occurs within the Avon Wheatbelt IBRA Region, of which there is 16% of pre-European extent remaining. In addition, there is 15.6% of pre-European extent remaining in the Shire of Brookton (Shepherd et al 2001) and approximately 18% of pre-European extent remaining in the local area.

The proposed clearing is within the Intensive Land-use Zone (Shepherd et al, 2001) and is located in the area defined in EPA Position Statement No. 2 (EPA, 2000). Significant clearing of native vegetation has already occurred within this area and 'from an environmental perspective the EPA is of a view that it is unreasonable to expect to be able to continue to clear native vegetation from land within the agricultural area' (EPA, 2000).

The State Government is committed to the National Objectives and Targets for Biodiversity Conservation which includes a target that prevents the clearance of ecological communities with an extent below 30% of that present Pre-European settlement (Commonwealth of Australia, 2001).

Given that there is 16% of pre-European extent remaining in the Bioregion and 5.7% of pre-European extent remaining of the Beard vegetation type, the clearing as proposal is considered to be at variance to this Principal.

Pre-European (ha)	Current (ha)	Remaining %	% in reserves

Avon Wheatbelt*	9,578,995	1,536,296	16.0	10.3
Shire of Brookton**	161,283	25,207	15.6	
Local Area (~10km radius)	~62,800	~11,806	~18.0	
Beard vegetation associations*				
1023	1,601,636	103,064	5.7	1.2

Shepherd (2006)*
Shepherd (201)**
EPA (2006)***

Methodology Commonwealth of Australia (2001)
EPA (2006)
Shepherd (2006)
Shepherd (2001)
GIS Databases:
Interim Biogeographic Regions of Australia EA 18/10/00
NLWRA, Current Extent of Native Vegetation
SAC BIO datasets - 22/07/08

(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 wetlands recorded within a 10km radius of the areas under application. The closest watercourses Nalyaring Gully and the Avon River are respectively located approximately 100m west and 750m north of the Brookton-Kweda Road. In addition Weam Gully and Avon River South are respectively located approximately 3.5km east and 4.8km west of Moorumbine Road.

Although Nalyaring Gully has been identified as being within an Environmentally Sensitive Area (ESA), the identified watercourse is situated approximately 100 metres west of the Brookton-Kweda Road. Given that the proposed clearing is outside the ESA buffer zone and that no wetland dependant vegetation was observed growing in the immediate vicinity, it is unlikely to be impacted by the proposed clearing

Given the distance to the nearest watercourses, and that no wetland dependant vegetation was observed during the site visit, the vegetation under application is not considered likely to include vegetation growing in, or in association with, an environment associated with a watercourse or wetland.

Methodology DEC site visit - 13/06/08
GIS Databases:
Clearing Regualtions - Environmentally Sensitive Areas - DOE 30/5/05
Hydrography, linear (hierarchy) - DOW
SAC BIO datasets - accessed 25/07/08

(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

The areas of vegetation under application are identified as containing three main soil types. The majority of the soils on Brookton-Kweda Road are defined as hard yellow soils underlain by lateritic clays, with the exception of the soils in the western portion which are described as yellow mottled soils containing ironstone gravels (Northcote et al 1968).

The soils in the northern portion of Moorumbine Road are described as yellow mottled soils containing ironstone gravels, with the remainder of the soils on the identified road being described as hard red soils (Northcote et al 1968). The applied areas are associated with a low to nil risk of salinity and a low to nil risk of acid sulphate soils.

The main land degradation risk associated with the removal of vegetation on the identified soils is generally considered to be water erosion and water logging. The vegetation under application is of low density and is contained within narrow, linear road reserves spread over approximately 8km. Given the limited size of the clearing (0.03 hectares), it is not considered likely that the proposed clearing would result in appreciable water erosion and/or water logging.

Given the above, it is not considered likely that the proposed clearing would result in appreciable land degradation.

Methodology Northcote et al (1968)

GIS Databases:
Acid Sulfate Soil Risk Map, Swan Coastal Plain - DEC
Salinity Risk LM 25m - DOLA 00
Soils, Statewide - DA 11/99

(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 six areas reserved for conservation purposes within a 10km radius of the areas under application, including Goodenough Nature Reserve, Home Nature Reserve, Kulyalling Nature Reserve, Murnanying Nature Reserve, Pingecully Nature Reserve and Weam Nature Reserve. The closest is Pingeculling Nature Reserve which is located approximately 1.2km east of Moorumbine Road.

The areas under application are situated in a landscape which has been extensively cleared for agriculture and have been isolated from local conservation reserves. The areas of vegetation within the applied areas, are thin and linear in nature and are in a degraded to completely degraded condition. Aerial photography of the Shire of Brookton indicates the road reserves under application are not likely to provide ecological linkages to or between nearby conservation reserves.

Given the distance and the lack of connectivity to these reserves, it is not considered likely that the proposed clearing would have a direct or indirect impact on the environmental values of any nearby conservation reserves.

Methodology

GIS Databases:
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 closest watercourses are Nalyaring Gully which is located approximately 100 metres west of Brookton-Kweda Road and the Avon River which is located approximately north of the Brookton-Kweda Road. The areas under application are within the Swan Avon Catchment and the Avon River Management Area, but are not located within a Public Drinking Water Source Area.

The areas under application have a nil to low risk of salinity and acid sulphate soils and it is not considered likely that the proposed clearing would cause salinity or acid sulphate soils resulting in deterioration in the quality of underground water.

The main land degradation risks associated with the removal of vegetation on the identified soils is considered to be water erosion and water logging. This is likely to be minimal, given that the proposed clearing is for road construction and maintenance and is limited to narrow, linear sections of road reserves spread over 8kms. It is therefore, not considered likely to result in water erosion and/or water logging causing deterioration in surface water quality.

Given the above, it is therefore not considered likely that the proposed clearing would cause deterioration in the quality of surface or underground water.

Methodology

DEC Site visit - 13/06/08
GIS Databases:
Acid Sulphate Soil Risk Map, Swan Coastal Plain - DEC
Hydrographic Catchments - Catchments - DOW
Hydrography. Linear (hierarchy) - DOW
Public Drinking Water Source Areas (PDWAs) - DOW
Salinity Mapping 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 proposed clearing is contained within existing road reserves and adjacent to land cleared historically for agriculture, at elevations between 230m and 300m. Flooding impacts are not likely to occur as a result of the proposed clearing due to the low density of the applied vegetation in sections over approximately 8km total length of road.

Given that the areas under application are distributed over narrow, linear area of road reserves, it is not considered likely that the proposed clearing would have an impact on peak flood height or duration.

Methodology

DEC site visit - 13/06/08

GIS Databases:
Hydrography linear (hierarchy) - DOW
Topographic Contours, Statewide - DOLA 12/09/02

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

Comments

The areas under application are located within a Native Title Claim area. The applied areas are contained within existing road reserves that are managed by, or invested in the Shire of Brookton. Therefore the clearing as proposed should not fall under the future acts process under the Native Title Act 1993.

Methodology GIS Databases:
Native Title Claims - DIA

4. Assessor's comments

Comment

The assessable criteria have been addressed and the proposed clearing is at variance to Principle (e).

5. References

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

Burbidge, A. (2004) Threatened Animals of Western Australia, Department of Conservation and Land Management, Perth, Western Australia.

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

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

DEC (2008) Site Inspection Report for Clearing Permit Application CPS 2475/1, Various Road Reserves, Shire of Brookton. Site inspection undertaken 13/06/2008. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC58813).

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.

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.

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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.

Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. http://florabase.calm.wa.gov.au/ (Accessed 25/07/2008).

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)