



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Number: 3078/1
File Number: DEC11085
Duration of Permit: From 14 June 2009 to 14 June 2014

PERMIT HOLDER

Shire of Brookton

LAND ON WHICH CLEARING IS TO BE DONE

LOT 456 ON PLAN 221214

AUTHORISED ACTIVITY

Clearing of up to 0.32 hectares of native vegetation within the area hatched yellow on attached Plan 3078/1a.

CONDITIONS

1. Revegetation and Rehabilitation

- (a) The Permit Holder shall retain the vegetative material and topsoil removed by clearing authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) Within 12 months of undertaking the clearing authorised, the Permit Holder must *revegetate* and *rehabilitate* a minimum of 0.7 hectares within the area shaded red on attached Plan 3078/1b by:
 - (i) laying the vegetative material and topsoil retained under condition 1a on the cleared area;
 - (ii) deliberately *planting* and/or *direct seeding* native vegetation that will result in a similar species composition, structure and density of native vegetation to pre-clearing vegetation types in that area; and
 - (iii) ensuring only *local provenance* seeds and propagating material are used to *revegetate* and *rehabilitate* the area.
- (c) Within 12 months of undertaking *revegetation* and *rehabilitation* in accordance with condition 1(b) of this Permit, the Permit Holder must:
 - (i) determine the species composition, structure and density of the area *revegetated* and *rehabilitated*; and
 - (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 1(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must undertake additional *planting* or *direct seeding* of native vegetation in accordance with the requirements of condition 1(b)(ii) and (iii) of this Permit.

2. Records must be kept

In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 1 of this Permit:

- (i) the location of any areas *revegetated* and *rehabilitated*, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (ii) a description of the *revegetation* and *rehabilitation* activities undertaken; and
- (iii) the size of the areas *revegetated* and *rehabilitated* (in hectares) and
- (iv) the species composition, structure and density of the areas *revegetated* and *rehabilitated*.

3. Reporting

- (a) The Permit Holder must provide to the CEO, on or before 30 June of each year, a written report of records required under condition 2 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 07 March 2014, the Permit Holder must provide to the CEO a written report of records required under condition 2 of this Permit where these records have not already been provided under condition 3(a) of this Permit.

Definitions

The following meanings are given to terms used in this Permit:

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

local provenance means native vegetation seeds and propagating material from natural sources within 20 kilometres of the area cleared.

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;



Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

14 May 2009

CPS 3078/1 14 May 2009

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Plan 3078/1



LEGEND

- Clearing Instruments
- Areas Approved to Clear
- Beverley 50cm Orthomosaic
- Landgate 2006



Scale 1:1000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies.

K. Faulkner Date 14/5/09

K. Faulkner
Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

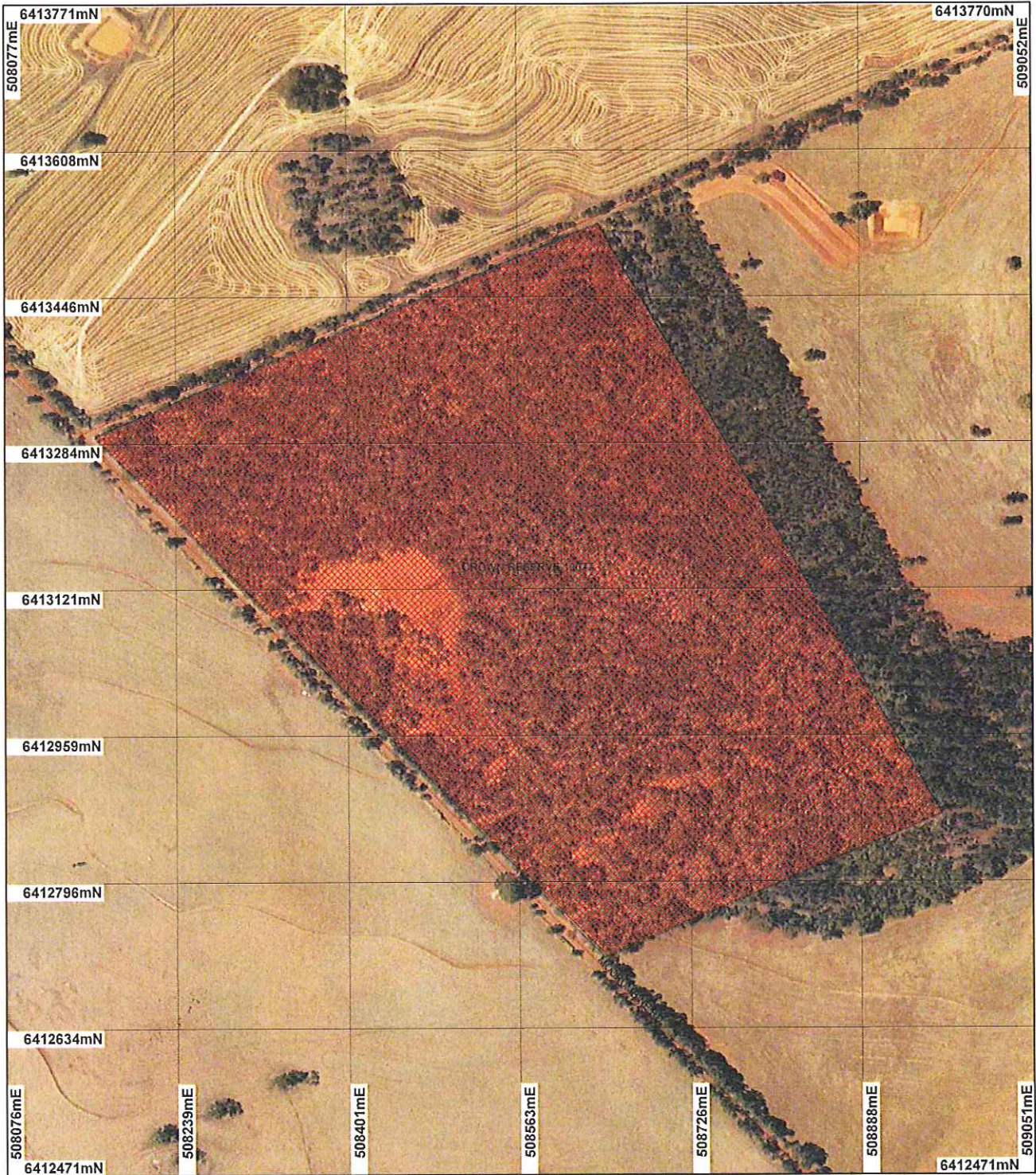
Information derived from this map should be confirmed with the data custodian acknowledged by the agency acronym in the legend.



Department of Environment and Conservation

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Plan 3078/1b



LEGEND

- Clearing Instruments
- Area Subject to Conditions
- Road Centrelines
- Cadastre for labelling

Brookton 80cm
Orthomosaic - Landgate
2005



0 150 m

Scale 1:6000

(Approximate when reproduced at A4)

Geocentric Datum Australia 1994

Note: the data in this map have not been projected. This may result in geometric distortion or measurement inaccuracies

K. Faulkner Date 14/5/09

K. Faulkner
Officer with delegated authority under Section 20 of
the Environmental Protection Act 1986

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Environment and Conservation

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1. Application details

1.1. Permit application details

Permit application No.: 3078/1
Permit type: Area Permit

1.2. Proponent details

Proponent's name: Shire of Brookton

1.3. Property details

Property: LOT 456 ON PLAN 221214 (BROOKTON 6306)
Local Government Area: Shire Of Brookton
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.32		Mechanical Removal	Dam 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 Vegetation Association: 352 - Medium woodland; York gum (Shepherd 2007; SAC Bio datasets 9/04/2009).	The proposal is to clear up to 0.32 hectares of native vegetation for the construction of a catchment dam. The vegetation under application comprises Eucalyptus wandoo, E. accedens, E. maculata, Allocasuarina spp over an understorey of Xanthorrhoea preissii, Melaleuca spp, Hakea spp, Gastrolobium spp, Daviesia spp, Burchardia spp, Acacia species, Mistletoe, sedges and grasses. The vegetation under application ranged from completely degraded to good condition, with an overall average of good condition.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Vegetation clearing description based on DEC site visit on 30/04/2009. The condition of the vegetation ranged from completely degraded to degraded to good condition, with an average of good condition overall.
	The degraded areas were largely confined to sections in the central area of the applied area and at the edges of vegetated areas.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	
	The dominant species in these localities were Gastrolobium spp, Acacia species, non- native grasses and a row of planted Eucalyptus maculata.		
	Completely degraded areas	Completely Degraded:	

were restricted to areas of bare soil on the eastern edge of the applied area and the portion of an access track adjacent to the planted *Eucalyptus maculata* in the south eastern portion of the area under application.

No longer intact; completely/almost completely without native species (Keighery 1994)

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 area under application is located within a landscape which has been extensively cleared for agriculture. A site inspection conducted by DEC officers on the 30 April 2009 observed that the vegetation under application as ranging from completely degraded through to good condition, with immature *Eucalyptus* trees over an understorey dominated by *Gastrolobium* species.

Although the vegetation under application may have the potential to support some local ground dwelling fauna and passerine bird species, given the small size (0.32 ha) of the area under application, it is not considered likely that the vegetation under application represents an area of high biological diversity.

Methodology References:
- DEC (2009)
GIS Datasets:
- SAC BIO Datasets 30/04/2009

(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 not likely to be at variance to this Principle**

There are four fauna species of conservation significance which have been recorded within the local area (10km radius) including the Quenda (*Isodon obesulus fusciventer*, P5), Southern Death Adder (*Acanthohis antarcticus*, P3), Red-tailed Phascogal (*Phascogale calura*, EN) and the Western Rosella (*Platycercus icterotis xanthogenys*, VU), the closest being the Southern Death Adder which was recorded 450m north-west of the applied area.

The area under application is 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 inspection no large 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 9.6km east of the of the applied area, 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 occurred in the Weam Nature Reserve which is located 8.6km south east of the area under application. Given the limited size (0.32ha) of the applied area, it is not considered likely that the vegetation under application would provide suitable or significant habitat for these fauna species.

The vegetation under application comprises *Eucalyptus wandoo*, *E. accedens*, *E. maculata*, *Allocasuarina* spp over an understorey of *Xanthorrhoea preissii*, *Melaleuca* spp, *Hakea* spp, *Gastrolobium* spp, *Daviesia* spp, *Burchardia* spp, *Acacia* species, Mistletoe, sedges, grasses over pockets of dense leaf litter. During the DEC site inspection, a number of passerine birds were heard on site and the vegetation under application includes suitable feeding habitat which may be utilised by local foraging bird species (DEC, 2009).

Whilst the vegetation and areas of dense leaf litter within the under application may provide some foraging habitat for ground dwelling fauna species including the Quenda and Southern Death Adder, it is not considered to be significant habitat given the lack of hollows, the limited size (0.32ha) of the area under application and the adjacent vegetation which was observed to be in the same condition as that found within the applied area.

Methodology References:
- Burbidge, A (2004)
- DEC (2009)
GIS Databases:
- SAC BIO datasets - accessed on 9/05/2009

(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

Within the local area (10km radius) there are 8 known occurrences of rare flora, *Lasiopetalum rotundifolium*, *Thomasia montana* and *Hakea aculeata*; the closest of which *Lasiopetalum rotundifolium* is located approximately 2.8km from the area under application.

Of the identified rare flora species, *L. rotundifolium* and *T. montana* are found within a different vegetation complex to that found within the applied area and occur higher up in the landscape on lateritic sandy gravelly soils (Brown et al, 1998). Given this, the area under application is not considered likely to be representative of the habitat requirements of these species.

Although, *H. aculeata* occurs within the same vegetation complex and soil type to that found within the area under application, it too is found higher in the landscape; and as such the vegetation under application is unlikely to provide suitable habitat for this species.

Given the above, it is not considered likely that the vegetation under application includes, or is necessary for the continued existence of, rare flora.

Methodology References:

- DEC (2009)
- Brown et al (1998)
- Western Australian Herbarium (1998)

GIS Databases:

- Soils, Statewide - DA 11/99
- SAC BIO Datasets 7/05/2009

(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

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 18km north-west of the applied area and is associated with a perched wetland with extensive stands of *Casuarina obesa* and *Melaleuca strobophylla*.

Given the distance to the TEC and that it is found within a different vegetation complex to that found within the area under application and is associated within a perched wetland; it is not considered likely that the vegetation under application comprises, or is necessary for the maintenance of a TEC.

Methodology References:

- DEC (2009)
- GIS Databases:**
- Heddle Vegetation Complexes
 - Soils, Statewide - DA 11/99
 - SAC BIO Datasets - accessed 7/05/2009

(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 at variance to this Principle

The area under application is part of the Avon Wheatbelt IBRA Region which has a current pre-European representation of 17.17% (Shepherd, 2007). The vegetation under application is also described as Beard vegetation association 352 of which there is 16.63% of pre-European extent remaining (Shepherd, 2007).

The area under application is located within the Shire of Brookton, within which there is 15.77% of pre-European extent remaining.

The State Government is committed to the National Objectives Targets for Biodiversity Conservation which includes a target that prevents clearance of ecological communities with an extent below 30% of that present pre-1750 (Commonwealth of Australia, 2001).

The vegetation under application is within the town site adjacent to the existing oval and housing. Given the Beard vegetation association (Shepherd, 2007) representation is below the recommended minimum 30 % of pre-European extent, the clearing of 0.32ha may be at variance to this principle. An revegetation condition has been imposed to mitigate the impacts of the proposed clearing.

	Pre-European (ha)	Current extent (ha)	Remaining (%)	In secure tenure (%)
IBRA Bioregion*				

Avon Wheatbelt [^]	9,517,109	1,443,960	15.17	11.06
Shire of Brookton**	160,119	25,243	15.77	
Local Area (~10km radius)	31,400	12,948	24.25	
Beard vegetation type*				
352 (Within AW IBRA Region)	630582	88397	14.0	11.45

* (Shepherd, 2007)

** (EPA, 2006)

[^] Area within Intensive Land Use Zone

Methodology References:
- Commonwealth of Australia (2001)
- EPA (2006)
- Government of Western Australia (2000)
- Shepherd et al (2007)
GIS Databases:
- Pre-European Vegetation
- Heddle Vegetation Complexes
- Interim Biogeographic Regionalisation of Australia
- SAC BIO Datasets - accessed 9/03/09

(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 area under the application. The closest watercourses are the Avon River South which is located approximately 900m east of the area under application and a minor drain which is located approximately 285m west of the applied area.

Given the distance to the nearest watercourses, and that no wetland dependant vegetation was observed during the site inspection, 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 References:
- DEC (2009)
GIS Databases:
- Hydrography, linear (hierarchy)
- Hydrography, linear_1

(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 soils within the area under application are described as sandy, yellow mottled soils containing ironstone gravels (Northcote et al, 1968) which generally have a low risk of land degradation through wind erosion and a low risk of salinity.

Although generally there is a low salinity risk associated with the identified sandy soils, salinity risk mapping has identified a small pocket of high salinity in the eastern portion of the applied area. However, given the limited size (0.05ha) of the area identified as being at risk, it is not considered likely that the proposed clearing would result in any significant increase in salinity on or off site.

The main land degradation risk associated with the removal of vegetation on the identified soil type is considered water erosion. However, the slope of the land should enable water run off to flow into the proposed dam.

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

Methodology References:
- DEC (2009)
- Northcote et al (1960-1968)
GIS Databases:
- 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 three areas reserved for conservation purposes within a 10km radius of the area under application, including Boyagin Nature Reserve, Wean Nature Reserve and Pingeculling Nature Reserve. The closest is Wean Nature Reserve which is located approximately 8.6km south east of the applied area.

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 References:

- DEC (2009)
- GIS Databases:
 - CALM Managed Land and Waters
 - Beverley 50cm Orthomosaic - Landgate 2006

(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 the Avon River South which is located approximately 900m west of the area under application and a minor drain which is located approximately 285m west of the applied area. The area under application is located within the Swan Avon Catchment, but is not located within a Public Drinking Water Source Area.

The area under application is generally associated with a low risk of salinity. However, salinity risk mapping has identified a small portion (0.05ha) within the applied area as having a high salinity risk due to its position lower in the landscape. Although the groundwater salinity in the local area is >35000 mg/L (high salinity level), given the limited size (0.05ha) of the area identified as being at risk, it is not considered likely that the proposed clearing would cause deterioration in the quality of the underground water.

The main land degradation risk associated with the removal of vegetation on the identified soil type is considered to be water erosion. However, given the limited size (0.32ha) of the area under application and given the distance to the nearest watercourse, it is not considered likely that proposed clearing would cause water erosion resulting in the 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 GIS Databases:

- Groundwater Salinity, Statewide
- Hydrographic Catchments - Catchments - DOW
- Hydrographic, linear (hierarchy) - DOW
- Public Drinking Water Source Areas (PDWSAs) - DOW
- Salinity Mapping LM 25 - DOLA 00
- Topographic Contours, Statewide- DOLA 12/09/02

(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 is located approximately 900m west from the Avon River South at an elevation of between 240 - 250 metres. Given the distance to the nearest watercourse and the limited size of the applied area (0.32ha), it is not considered likely that the proposed removal of vegetation would impact on peak flood height or duration.

Methodology References:

- DEC (2009)
- GIS Databases:
 - Hydrography, linear (hierarchy) - DOW
 - Topographic Contours, Statewide

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

Comments

Lot 456 on Plan 221214 is vested in the Shire of Brookton for the purpose of recreation, tourism, health, civic and community purposes.

Methodology No Submissions received.
GIS Databases:
- Cadastre

4. Assessor's comments

Comment

The assessable criteria have been addressed, and the proposal is at variance to principle (e) and not likely to be at variance to the other Clearing Principles.

5. References

- Brown, A., Thomson-Dans, C. and Marchant, N. (1998) Western Australia's Threatened Flora. Department of Conservation and Land Management. Perth, 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 (2009) Site Inspection Report for Clearing Permit Application CPS 3078/1, Construction of Catchment Dam. Site inspection undertaken 30/04/2009. Department of Environment and Conservation, Western Australia (TRIM Ref. DOC84362).
- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, 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.
- Western Australian Herbarium (1998-). FloraBase - The Western Australian Flora. Department of Environment and Conservation. <http://florabase.calm.wa.gov.au/> (Accessed 29/04/2009).

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)