



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 2476 / 3
File Number: DEC7481
Duration of Permit: From 6 March 2009 to 6 March 2015

PERMIT HOLDER

Andrew Campbell Marsh

LAND ON WHICH CLEARING IS TO BE DONE

Lot 2623 on Deposited Plan 129960
Lot 2626 on Deposited Plan 129960
Lot 2627 on Deposited Plan 129960
Lot 2629 on Deposited Plan 129960
Lot 3597 on Deposited Plan 229129

AUTHORISED ACTIVITY

Clearing of up to 8.6 hectares of native vegetation within the area solid filled yellow on attached Plan 2476/3.

CONDITIONS

1. Offset

(a) Determination of *offsets*:

- (i) if part or all of the clearing to be done is or may be at variance with one or more of the clearing principles, then the Permit Holder must implement an *offset* in accordance with conditions 1 (a) and 1 (b) of this Permit with respect to that native vegetation;
- (ii) in determining the *offset* to be implemented with respect to a particular area of native vegetation proposed to be cleared under this Permit, the Permit Holder must have regard to the *offset* principles contained in condition 1 (b) of this Permit;
- (iii) once the Permit Holder has developed an *offset proposal*, the Permit Holder must provide that *offset proposal* to the CEO for the CEO's approval prior to undertaking any clearing to which the *offset* relates, and prior to implementing the *offset*;
- (iv) clearing may not commence until and unless the CEO has approved the *offset proposal*;
- (v) the Permit Holder shall implement the *offset proposal* approved under condition 1(a)(iii); and
- (vi) each *offset proposal* shall include a *direct offset*, timing for implementation of the *offset proposal* and may additionally include *contributing offsets*.

(b) For the purpose of this condition, the *offset* principles are as follows:

- (i) *direct offsets* should directly counterbalance the loss of the native vegetation;
- (ii) *contributing offsets* should complement and enhance the *direct offset*;

- (iii) *offsets* are implemented only once all avenues to avoid, minimise, rectify or reduce environmental impacts have been exhausted;
- (iv) the environmental values, habitat, species, *ecological community*, physical area, ecosystem, landscape, and hydrology of the *offset* should be the same as, or better than, that of the area of native vegetation being *offset*;
- (v) a ratio greater than 1:1 should be applied to the size of the area of native vegetation that is offset to compensate for the risk that the *offset* may fail;
- (vi) *offsets* must entail a robust and consistent assessment process;
- (vii) in determining an appropriate *offset*, consideration should be given to ecosystem function, rarity and type of *ecological community*, vegetation *condition*, habitat quality and area of native vegetation cleared;
- (viii) the *offset* should either result in no net loss of native vegetation, or lead to a net gain in native vegetation and improve the *condition* of the natural environment;
- (ix) *offsets* must satisfy all statutory requirements;
- (x) *offsets* must be clearly defined, documented and audited;
- (xi) *offsets* must ensure a long-term (10-30 year) benefit; and
- (xii) an *environmental specialist* must be involved in the design, assessment and monitoring of *offsets*.

2. Records to be kept

The Permit Holder must maintain the following records for activities done pursuant to condition 1:

- (a) the location of any area of *offsets* recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
- (b) a description of the *offset* activities undertaken; and
- (c) the size of the *offset* area (in hectares).

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 6 December 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:

condition means the rating given to native vegetation using the *Keighery scale* and refers to the degree of change in the structure, density and species present in the particular vegetation in comparison to undisturbed vegetation of the same type;

contributing offset/s has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9: Environmental Offsets*, January 2006;

direct offset/s has the same meaning as is given to that term in the Environmental Protection Authority's *Position Statement No.9: Environmental Offsets*, January 2006;

ecological community/ies means a naturally occurring biological assemblage that occurs in a particular type of habitat (English and Blythe, 1997; 1999) – the scale at which ecological communities are defined will depend on the level of detail in the information source, therefore no particular scale is specified;

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;

offset/s means an offset required to be implemented under condition 1 of this Permit; and

offset proposal means an *offset* determined by the Permit Holder in accordance with condition 1 of this Permit;

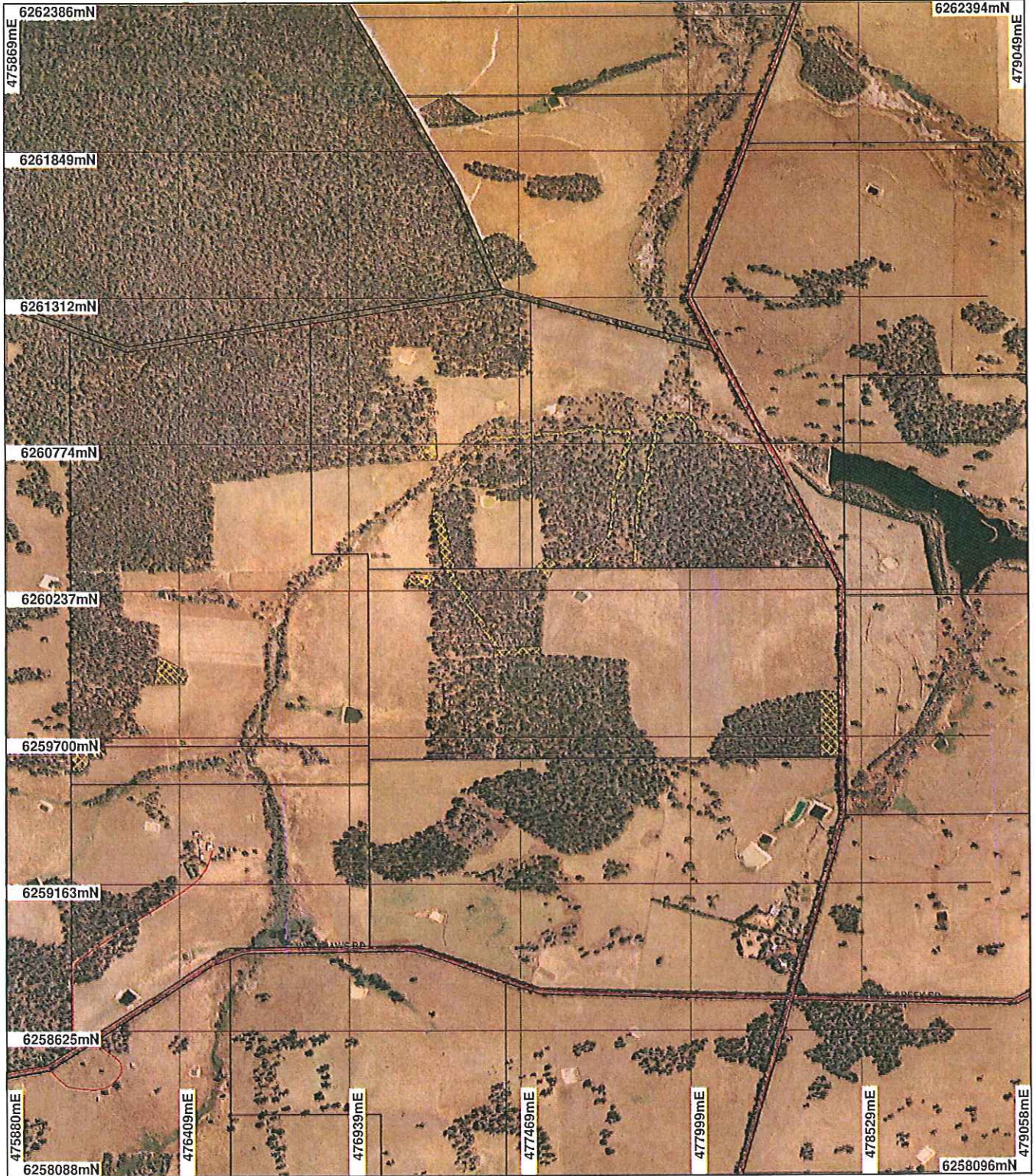


Kelly Faulkner
MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

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

11 February 2010

Plan 2476/3



LEGEND

Clearing Instruments
 Road Centrelines
 Cadastre
 Dinnilup 50cm Orthomosaic -
 Landgate 2004



Scale 1:18877
 (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.

[Signature] Date 11/2/10

Kelly 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
 Our environment, our future
 WA Crown Copyright, 2002



1. Application details

1.1. Permit application details

Permit application No.: 2476/3
Permit type: Area Permit

1.2. Proponent details

Proponent's name: MR Andrew Marsh

1.3. Property details

Property: LOT 2623 ON PLAN 129960 (KULIKUP 6244)
LOT 2627 ON PLAN 129960 (KULIKUP 6244)
LOT 2629 ON PLAN 129960 (KULIKUP 6244)
LOT 2626 ON PLAN 129960 (KULIKUP 6244)
LOT 3597 ON PLAN 229129 (KULIKUP 6244)
LOT 3599 ON PLAN 131328 (KULIKUP 6244)
LOT 2624 ON PLAN 130956 (KULIKUP 6244)

Local Government Area:

Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
8.6		Mechanical Removal	Fence Line 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
Mattiske Vegetation Complex: Farrar 2 (Fa2) Woodland of Eucalyptus wandoo over Acacia acuminata with some Eucalyptus marginata subsp. marginata and Corymbia calophylla on milder slopes with some Eucalyptus rudis on lower slopes in the arid zone. Farrar 4 (Fa4) Woodland of Eucalyptus rudis on slopes and tall shrubland of Melaleuca viminea on lower slopes in the arid zone. Kulikup (KU2) Open forest of Eucalyptus marginata subsp. marginata-Corymbia calophylla with some Eucalyptus wandoo and occasional Eucalyptus astringens fs24 (near breakaways) over Acacia microbotrya on undulating uplands in the semiarid zone.	Vegetation comprises Jarrah-Wandoo woodland and Xanthorrhoea preisii. Rocky outcrops of granite present. The area is being grazed by cattle which has resulted in a disturbed under and middle storey.	Degraded: Structure severely disturbed; regeneration to good condition requires intensive management (Keighery 1994)	Condition of vegetation proposed to be cleared was ascertained during a DEC Site Visit in 2007 and a Department of Agriculture and Food (DAFWA) site visit 2007.

Beard Vegetation Type:

3: Medium forest; jarrah-marri

4: Medium woodland; marri

3. Assessment of application against clearing principles

(a) Native vegetation should not be cleared if it comprises a high level of biological diversity.

Comments **Proposal may be at variance to this Principle**

The clearing proposal of 8.6 hectares is for a series of access roads and fencing throughout the property. The lot under application has been impacted by salinity, however drainage programs are currently being introduced to manage the salinity problems.

The local area (10km radius) is highly cleared with approximately 15% vegetation remaining; much of this is not in secure tenure. The application area consists of Wandoo, Jarrah and Marri woodland with grass trees (*Xanthorrhoea preissii*) and prickly moses (*Acacia pulchella*). Landscape and vegetation units within the application area are diverse due to the changing elevation, soil types, rocky outcrops and watercourse areas.

Historical management practices, i.e. heavy ring-barking, poison-grubbing and long grazing regimes, has resulted in limited native understorey and species diversity; however, some of the native vegetation under application comprises large, mature trees (DEC 2007) that are likely to be utilised by local fauna for shelter and food source

The species diversity is lower than could be expected, however in comparison to surrounding area the biodiversity value is relatively high.

It is considered that the clearing may be at variance to this principle.

Methodology DAFWA, 2007
DEC, 2007
GIS Databases:
- Dinninup 50cm Orthomosaic - DLI2004
- Hydrography, linear
- CALM Managed Lands and Waters
- Cadastre
- SAC Biodatasets - accessed 2 July 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 may be at variance to this Principle**

The area proposed to be cleared is in 'degraded - good' (Keighery, 1994) condition and contains an overstorey of Wandoo, Jarrah and Marri with some grass trees (*Xanthorrhoea preissii*) and prickly moses (*Acacia pulchella*) middle storey (DEC, 2007). The area is currently, and has historically, been grazed which has resulted in very little remaining understorey.

The surrounding area (10km radius) is highly cleared with few areas of remnant vegetation remaining.

Numerous trees within the application area are large with hollows suitable for fauna habitat. There are also many dead logs and hollow branches on the ground which would provide suitable shelter for many native species. The stream running through the property does provide diversity to the landscape which may attract more native species.

Although the proposed clearing does not provide structured vegetation or denser areas of shelter, it may still be providing significant habitat given the lack of vegetation in the surrounding area (10km radius). It is considered that the proposed clearing may be at variance to this principle and an offset condition will be placed upon the permit to mitigate the impact of clearing.

Methodology Keighery, 1994
DEC, 2007
GIS Databases:
- SAC Biodatasets - accessed 2 July 2008
- Dinninup 50cm Orthomosaic - DLI2004

(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**

One population of rare flora, the aquatic freshwater sedge *Eleocharis keigheryi*, has been identified 3.7 km from the proposed clearing. Given the vegetation under application is not associated with aquatic species (mainly jarrah-marri-wandoo on uplands; DEC, 2007); this species is unlikely to occur within the area under application.

There are no other records of threatened flora within the local area (10 km radius).

The proposal is unlikely to be at variance to this Principle.

Methodology Brown et al, 1998
DEC, 2007
SAC biodatasets - accessed 24 November 2008
GIS Databases:
- Dinninup 50cm Orthomosaic - DLI2004

(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 the local area (10 km radius).

The area under application does not share any habitat characteristics with likely TEC occurrences, and clearing is not likely to be at variance to this principle.

Methodology Site Visit report, 2007
GIS database:
SAC Biodatasets - accessed 24 November 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

Pre-European	Current extent (ha)	Remaining (ha)	(%)
IBRA Bioregions*			
Jarrah Forest	4,506,654	2,405,331	53.4
Shire*			
Boyup Brook	282,610	114,071	40.4
Mattiske Vegetation Complex**			
Fa2	23,449	3,828	16.3
Fa4	8,489	1,401	16.5
KU2	227,429	44,855	19.7
Beard Vegetation Complex in IBRA Bioregion*			
3	2,390,590	1,657,274	69.32
4	1,022,712	247,941	24.24

* (Shepherd, 2007)

**Mattiske and Havel, 1998)

The area proposed to be cleared lies within the boundaries defined in EPA Position Statement No.2. This position statement advises that clearing for the purposes of agriculture is not supported, where the biodiversity or environmental values of the land may be impacted. However, the proposal is for fencing and track access, and would be exempt for up to 1 ha per financial year under the regulations.

The predominant portion of clearing is within Mattiske complex Fa2 which retains approximately 16.3% of its vegetation. This is below the 30% threshold level supported by the EPA and recommended in the National Objectives Targets for Biodiversity Conservation; below which species loss appears to accelerate exponentially at an ecosystem level (EPA, 2000).

Vegetation within the proposed clearing area is in degraded-good (Keighery, 1994) condition and is currently, and historically, grazed by stock (DEC, 2007). Given the disturbance to the proposed clearing area biodiversity values are relatively low, with predominantly only upper storey species and grass trees (*Xanthorrhoea preisii*) present. However, in comparison to the highly cleared landscape, biodiversity would be considered to be above average.

The vegetation under application is part of significant remnant in a highly cleared landscape, and if cleared may compromise these remnants and the connectivity they provide. Given this and the above factors it is considered that the proposed clearing is at variance to this principle. An offset condition will be placed upon the permit to

mitigate the loss of vegetation.

Methodology Keighery, 1994
EPA, 2000
DEC, 2007
Shepherd 2007
Mattiske and Havel 1998
GIS Databases:
- Dinninup 50cm Orthomosaic - DLI2004
- Mattiske Vegetation
- SAC Biodatasets - accessed 24 November 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 likely to be at variance to this Principle**
There are no wetlands within a 10km radius; however a minor, non-perennial watercourse intersects the lot under application.

The proposed clearing does not involve clearing any vegetation associated with the watercourse; therefore the proposal is not likely to be at variance to this Principle.

Methodology GIS Databases:
- Dinninup 50cm Orthomosaic - DLI2004
- 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 at variance to this Principle**
A report from the Commissioner of the Soil and Land Conservation Act (2009) has advised that salinity and water logging is occurring on the property. Salinity levels were measured, and shown to be increasing downstream, with water leaving the property being more saline than water entering the property.

EPA Position Statement no.2 (2000) states that clearing in areas known for salinisation cannot be supported, given the predictable and rapid rise in salinity following clearing.

The proposal to clear fence lines and access tracks may result in an increase to the area affected by salinity on the property, however is unlikely to alter salinity levels in the catchment (Commissioner of the Soil and Land Conservation Act , 2009). An offset condition will be placed on the permit to mitigate the impact.

The proposal is for small areas of clearing (<3 hectares) over a larger area, with sandy gravely soils (Commissioner of the Soil and Land Conservation Act , 2007). It is unlikely that the clearing will result in wind or water erosion.

It is considered that the proposal is at variance to this principle.

Methodology EPA, 2000
Commissioner of the Soil and Land Conservation Act , 2009
Commissioner of the Soil and Land Conservation Act , 2007
GIS Databases:
- Hydrography, linear
- Topographic Contours, Statewide
- Dinninup 50cm Orthomosaic - DLI2004

(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 lot under application abuts Red Hill Nature Reserve and lies approximately 2km from an unnamed nature reserve to the south.

The proposal to clear fence lines and access tracks may result in an increase to the area affected by salinity on the property, however is unlikely to alter salinity levels in the catchment (DAFWA, 2009). This increase in salinity may have indirect effects upon the nature reserve. An offset condition will be placed on the permit to mitigate the impact.

Clearing vegetation in an area that is highly cleared reduces fauna habitat and lessens the availability of genetic

propagation sources. This may impact upon the nature reserve by increasing habitat competition and reducing genetic diversity of flora and fauna species.

The clearing as proposed may be at variance to this principle.

Methodology DAFWA, 2009
GIS Databases:
- CALM Managed Lands and Waters
- Dinninup 50cm Orthomosaic - DLI2004
- SAC Biodatasets - accessed 24 November 2008

(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 at variance to this Principle

A report from the Commissioner of the Soil and Land Conservation Act (2007) has advised that salinity and water logging is occurring on the property. Salinity levels were measured and shown to be increasing downstream, with water leaving the property being more saline than water entering the property.

The proposal to clear fence lines and access tracks may result in an increase to the area affected by salinity on the property, however is unlikely to alter salinity levels in the catchment (Commissioner of the Soil and Land Conservation Act, 2009). An offset condition will be placed on the permit to mitigate the impact.

The clearing as proposed is at variance to this principle.

Methodology Commissioner of the Soil and Land Conservation Act, 2009
GIS Databases:
- Topographic Contours, Statewide
- Soils, Statewide
- Rainfall, Mean Annual

(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 within an area that has medium relief; experiences low average annual rainfall; and contains soil types that have high infiltration rates. However, there are current water logging issues within the property (Commissioner of the Soil and Land Conservation Act, 2009).

The clearing is mainly in small sections spread over a larger area and is unlikely to result in increased surface water runoff.

Some short term localised flooding may occur in a high rainfall event however flooding associated with the removal of vegetation as proposed, is unlikely to occur.

Methodology Commissioner of the Soil and Land Conservation Act (2009)
GIS Databases:
- Topographic Contours, Statewide
- Soils, Statewide
- Rainfall, Mean Annual

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

Comments

The original application was for an increased amount (from CPS 2476/2) of 11.1 ha. The applicant has amended the area to the reduced amount of 8.6 hectares.

The land is zoned Rural pursuant to the Shire of Boyup Brook TPS.

A submission was received (DOC53695) and the concerns raised regarding Principles (b) and (e) have been addressed under these respective Principles.

The area proposed to be cleared lies within the boundaries outlined in EPA Position Statement No.2. This position statement does not support further clearing for agriculture where biodiversity and environmental values may be impacted, particularly in areas already subject to salinisation. The proposed clearing is for fencing and track access, not for broadscale agricultural clearing.

Methodology

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 the assessment recommendation is that the clearing is at variance to principle (e), (g) and (i), maybe at variance to principle(a), (b), and (h) and is not likely to be at variance to the remaining principles.

5. References

- Commissioner of the Soil and Land Conservation Act (2007) Land degradation assessment report. Department of Agriculture and Food Western Australia. DEC TRIM ref DOC33380.
- Commissioner of the Soil and Land Conservation Act (2009), TRIM ref DOC 74643 and DOC 75733
- DEC (2007) Site Visit Report TRIM ref DOC37523
- 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.
- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment 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.
- 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 (now DEC)
DMP	Department of Mines and Petroleum (ex DoIR)
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)