GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 2933/1
Permit Holder:	Shire of Mukinbudin
Duration of Permit:	26 March 2009 – 26 March 2014

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. **Purpose for which clearing may be done**
   Clearing for the purpose of road widening

2. **Land on which clearing is to be done**
   Koorda – Bullfinch Road Reserve

3. **Area of Clearing**
   The Permit Holder must not clear more than 10 hectares of native vegetation within the area shaded yellow on attached Plan 2933/1a.

4. **Application**
   This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. **Type of clearing authorised**
   This Permit authorises the Permit Holder to clear native vegetation for activities to the extent that the Permit Holder has the power to clear native vegetation for those activities under the *Local Government Act 1995* or any other written law.

6. **Compliance with Assessment Sequence and Management Procedures**
   Prior to clearing any native vegetation under conditions 1, 2 and 3 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. **Avoid, minimise etc clearing**

   In determining the amount of native vegetation to be cleared for the authorised purpose of this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:
   (a) Avoid the clearing of native vegetation;
   (b) Minimise the amount of native vegetation to be cleared; and
   (c) Reduce the impact of clearing on any environmental value.

8. Weed control

(a) When undertaking any clearing, or other activity pursuant to this Permit the Permit Holder must take the following steps to minimise the risk of introduction and spread of *weeds*:
   (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
   (ii) shall not move soils in wet conditions;
   (iii) ensure that no *weed*-affected soil, *road building material*, *mulch* or *fill* or other material is brought into the area to be cleared; and
   (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

(b) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

9. Revegetation and rehabilitation

(a) The Permit Holder must *revegetate* and *rehabilitate* the area cross-hatched red on attached Plan 2933/1b by:
   (i) establishing and maintaining native vegetation to an average planting density of 2,000 plants per hectare;
   (ii) ensuring the species consist of overstorey, midstorey and understorey species;
   (iii) sourcing seeds and propagating material from within a 50 km radius of the area cleared, and;
   (iv) commencing *planting* before 01 June 2010 and completing *planting* by 31 August 2013.

(b) Within twelve months of undertaking *revegetation* in accordance with condition 9(a) of this Permit, the Permit Holder must:
   (i) determine the species composition, structure and density of the area *revegetated*; and
   (ii) where, in the opinion of an *environmental specialist*, the composition structure and density determined under condition 9(b)(i) of this Permit will not result in a similar species composition, structure and density to that defined under condition 9(a)(i)(ii) of this Permit, the Permit Holder must undertake additional planting or direct seeding of native vegetation in accordance with the requirements of condition 9(a)(i)(ii) and (iii) of this Permit.

PART III – RECORD KEEPING AND REPORTING

10. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, as relevant:
In relation to the clearing of native vegetation undertaken pursuant to this clearing permit:
(a) the species composition, structure and density of the cleared area
(b) the location where the clearing occurred, recorded using a Global Positional System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
(c) the date that the area was cleared; and
(d) the size of the area cleared (in hectares).

11. 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 10 and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.

(b) Prior to 26 December 2013, the Permit Holder must provide to the CEO a written report of records required under condition 10 where these records have not already been provided under condition 11(a).

Definitions

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

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;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;
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 native vegetation in an area such that the species composition and structure consists of overstorey, midstorey and understorey species and the average density is 2,000 plants per hectare, and can involve *regeneration*, *direct seeding* and/or *planting*;

road building materials means rock, gravel, soil, stone, timber, boulders and water;

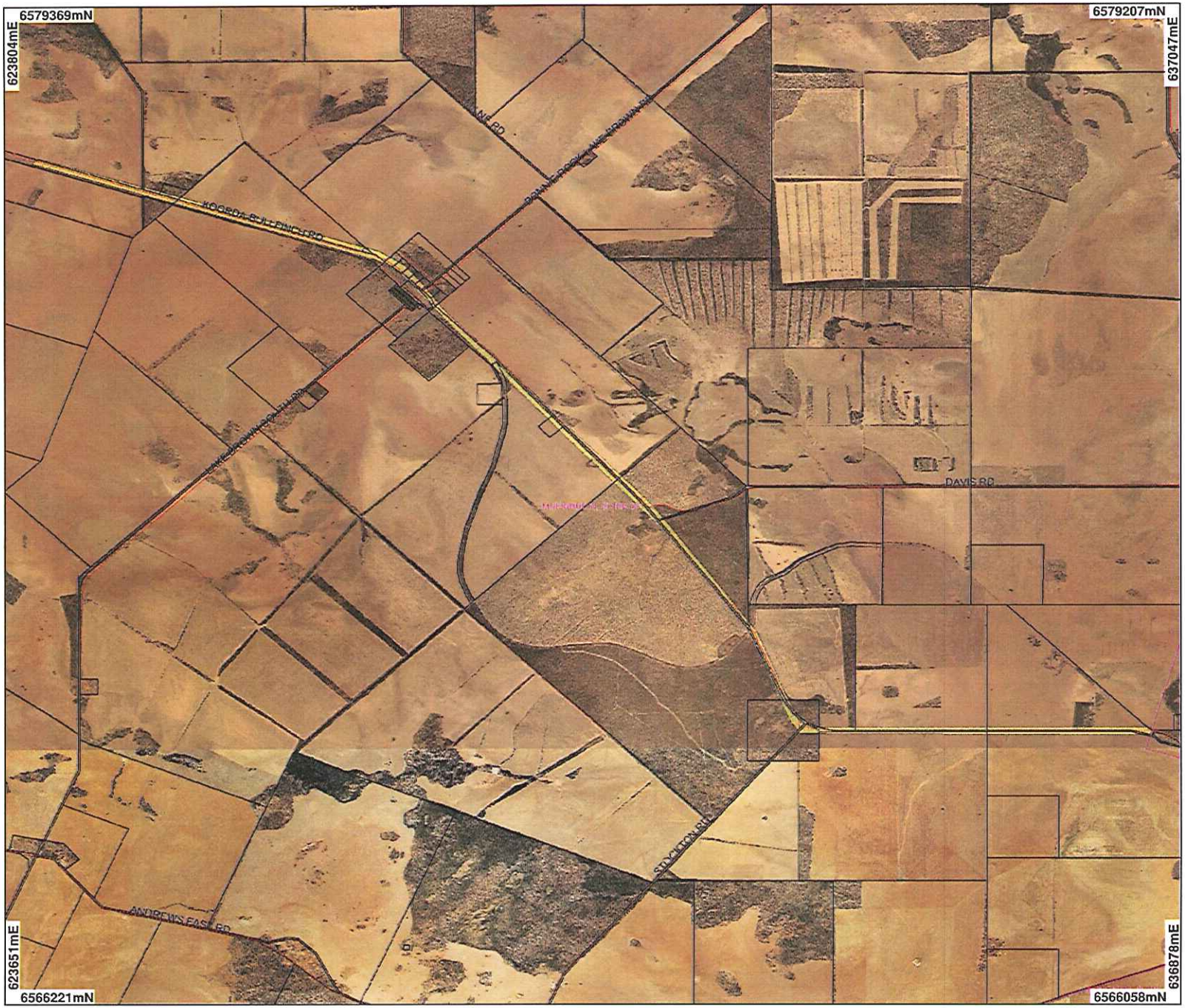
weed means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agricultural and Related Resources Protection Act 1976*.

Keith Claymore
A/ ASSISTANT DIRECTOR
NATURE CONSERVATION DIVISION

Officer delegated under Section 20
of the Environmental Protection Act 1986

26 February 2009

Plan 2933/1a



LEGEND

Clearing Instruments

Areas Approved to Clear

Road Centrelines

Cadastre

Local Government Authorities

Merredin 50cm Orthomosaic - Landgate 2004

Barbalin 1.4m Orthomosaic - Landgate 2003

N

0 ~1.5 km

Scale 1:63564

(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.

Kim Claymore 26/2/09

..... Date .....

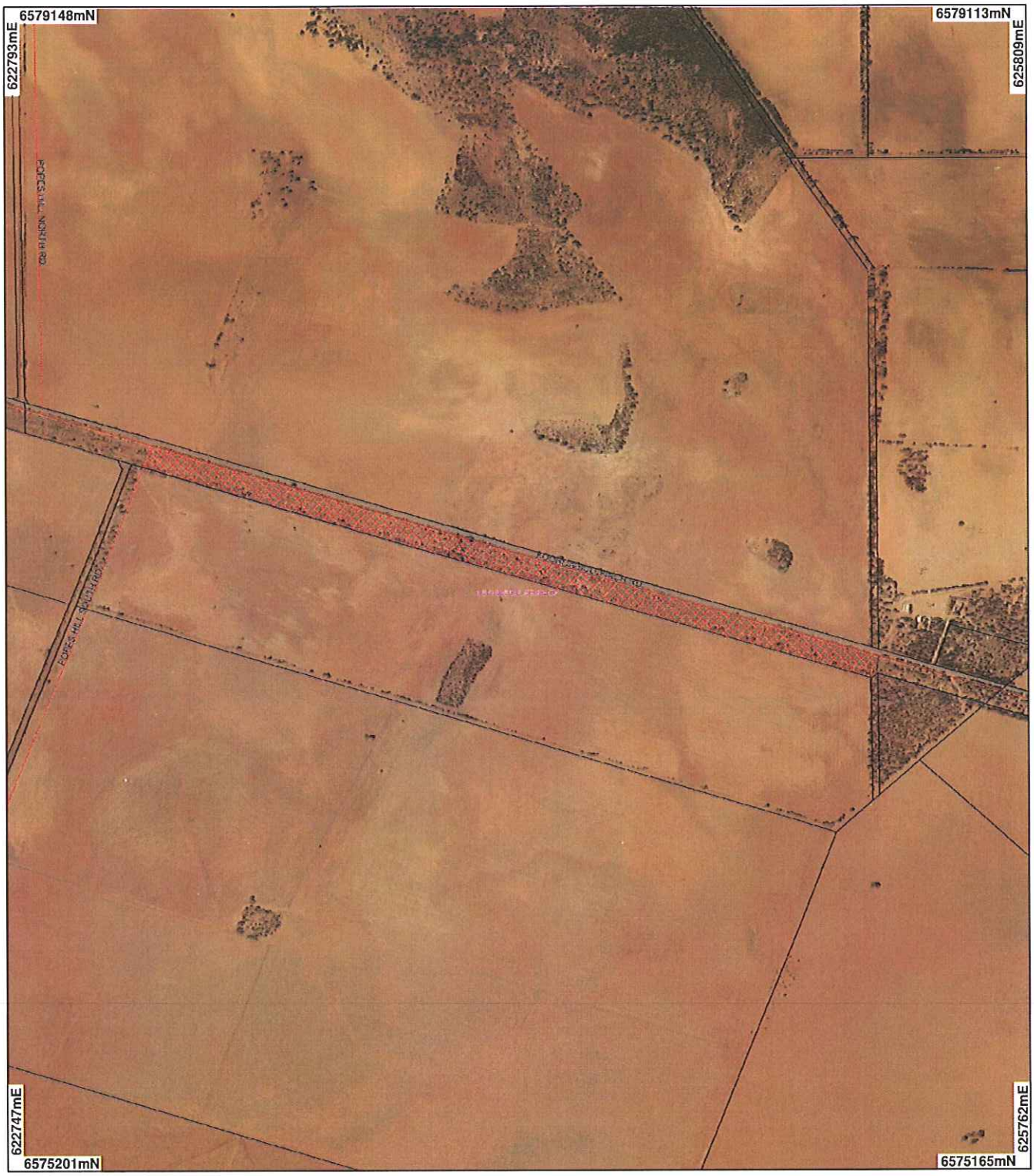
K Claymore

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 acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Plan 2933/1b



LEGEND

Clearing Instruments
- Areas Subject to Conditions

Road Centrelines
- Cadastre

Local Government Authorities

Barbalin 1.4m Orthomosaic - Landgate 2003

N

0 ~500 m

Scale 1:17538
(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.

Keith Claymore 26/2/09

K Claymore ..... Date .....

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 acknowleged by the agency acronym in the legend.

Department of Environment and Conservation

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 2933/1
Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property: ROAD RESERVE (LAKE BROWN 6479)
Local Government Area: Shire Of Mukinbudin & Shire Of Nungarin
Colloquial name: Koorda - Bullfinch Road Reserve

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
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 Vegetation Associations: 8-Medium woodland; salmon gum & gimlet; 1413-Shrublands, acacia, casuarina and melaleuca thicket. (SAC Bio Datasets 18/02/2009; Shepherd, 2007)	The proposed clearing consists of up to 10 ha (3.8m-7.0m wide) along 15 km of the south side of the Koorda-Bullfinch Road Reserve for proposed road widening. Vegetation within the area under application can be described as open Eucalyptus (mallee) Woodland with an intact shrub layer in good condition.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994)	Description and condition of the vegetation under application was determined from the site visit (DEC, 2008).

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
During the site inspection (DEC, 2008) the area under application was observed to range in condition from degraded to very good with weeds at low density within the area under application. The vegetation retains its structural integrity with relatively high floristic diversity in the areas of good or better condition.

Given the above, the proposal may be at variance to this principle.

Methodology Reference:
- DEC (2008)

(b) Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia.

Comments

Proposal is not likely to be at variance to this Principle
Six fauna species of conservation significance have been recorded within the local area (20km radius), of which the closest records are the White-browed Babbler (western wheatbelt) located ~6km east, the Shield-backed Trapdoor Spider (Idiosoma nigrum) located ~9km north and the Chuditch (Dasyurus geoffroii) located ~10km west of the area under application.

During site inspection (DEC 2008) the area under application was observed to support an open Eucalyptus (mallee) Woodland with an intact shrub layer in good condition. The vegetation on the south side of the road is

approximately 70 metres wide and provides an important ecological linkage across the landscape. However given the limited clearing proposed within this area the proposed clearing is not considered likely to significantly impact this linkage.

Given the area under application is relatively long and linear and will not significantly impact the ecological linkage provided within the road reserve, the vegetation is not likely to provide significant habitat for native fauna.

Methodology Reference:
- DEC (2008)
GIS Database:
- SAC Bio Datasets 19/02/2009

(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**
Eight species of rare flora are known to occur within the local area (20km radius) with the nearest rare flora being Stylidium merrallii located ~600m west of the northern area under application and Eremophila virens located ~600m west of the southern section under application. DEC Regional office (DEC, 2009) advised that it is unlikely that these two rare flora species will be impacted.

During site inspection (DEC, 2008) the area under application was observed to support an open Eucalyptus (mallee) Woodland with an intact shrub layer in good condition.

Of the eight species of rare flora, Eremophila virens, Stylidium merrallii and Acacia lobulata occur on the same soils and within the same vegetation types as the area under application. DEC Regional office (DEC, 2009a) advised that it is unlikely that these two rare flora species would occur within the area under application. Therefore, the clearing as proposed is not likely to be at variance to this principle.

Methodology References:
- DEC (2008)
- DEC (2009)
- DEC (2009)
GIS Database:
- SAC Bio Datasets 19/02/2009

(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 threatened ecological communities within the local area (20km radius) with the closest known occurrence located approximately 200km south-west of the area under application.

Therefore, the clearing as proposed is not likely to be at variance to this principle.

Methodology GIS Database:
- SAC Bio Datasets18/02/2009

(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 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 Objective Targets for Biodiversity Conservation, which includes targets that prevent the clearing of ecological communities with an extent below 30% of that present pre-1750 (Commonwealth of Australia 2001).

Beard vegetation types 8 and 1413 have less than the recommended 30% minimum of Pre-European extent remaining within Western Australia (9.54% and 24.74% remaining). The Shire of Mukinbudin has only 14% of Pre-European vegetation extent remaining in the Intensive Land-use Zone and the wider Wheatbelt bioregion has only 15.2% vegetation extent remaining (Shepherd 2007).

Considering the extent of clearing that has occurred within the Shire of Mukinbudin (Intensive Land-use Zone) and the greater Wheatbelt bioregion, the vegetation under application is considered to be significant as a remnant of native vegetation. A revegetation condition will be imposed on the permit to mitigate this variance.

	Pre-European (ha)	Current extent (ha)	Remaining (%)
IBRA Bioregion*			
Avon Wheatbelt	9,517,109	1,443,690	15.2
Shire of Mukinbudin*	343,017	102,458	29.8
Shire of Mukinbudin^	278,129	39,021	14.0
Beard vegetation types*			
8	694,638	349,614	9.54
1413	1,679,917	135,264	24.74

* (Shepherd, 2007)
^ (Shepherd et al, 2001) Area within Intensive Land Use Zone

Methodology

References:
- Shepherd et al (2001)
- Shepherd (2007)
- Commonwealth of Western Australia (2001)
- EPA (2000)

GIS Databases:
- Pre-European Vegetation
- Interim Biogeographic Regionalisation of Australia
- EPA Position Paper No 2 Agriculture Region
- SAC Bio Datasets 19/02/2009

(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 is one minor non perennial watercourse that traverses the southern section of the area under application. The nearest major watercourse (Muka River) is located ~5km east of the area under application.

During a site inspection (DEC, 2008) the area under application was an open Eucalyptus (mallee) Woodland with an intact shrub layer in good condition.

Given the area under application does not support creek line dependant vegetation the clearing as proposed is not considered likely to be at variance to this principle.

Methodology

Reference:
- DEC (2008)

GIS Databases:
- Hydrography, linear
- Hydrography, linear (hierarchy)

(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 vegetation under application lies predominately within soils associated with gently undulating to rolling terrain with some ridges and uneven slopes with chief soils being hard alkaline yellow mottled soils and hard alkaline red soils(Northcote et al. 1960-68). The landscape can also be described as broad flat valleys with chief soils being hard alkaline red soils; gently sloping to gently undulating plateau areas or uplands with chief soils being sandy yellow earths containing some ironstone gravels; and broken terrain characterized by rock outcrops with shallow and often stony or gritty sandy soils (Northcote et al. 1960-68).

Soils within the area under application may be prone to both wind and water erosion; however, given the proposed clearing is long and linear, wind erosion is considered to be minimal, and water erosion will be seasonal and reduced through the installation of roadside infrastructure such as table drains and culverts. Therefore, the clearing as proposed is not likely to cause appreciable land degradation.

Methodology

References:
- DEC (2008)
- Northcote et al (1960-68)

GIS Database:
- Soils, Statewide

(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

Weira Nature Reserve (85ha of bushland) is located immediately adjacent to a section of the area under application (~1.7km section). The area under application is located within Koorda-Bullfinch Road Reserve and does not form part of Weira Nature Reserve.

The proposed clearing has the potential to indirectly impact the environmental values of the adjacent reserve through the spread or introduction of weed species, by machinery. There are consequences associated with the spread of exotic species into areas reserved for conservation, including the potential decline or local extinction of species.

Given the potential impact on the adjacent reserve through the potential indirect impact on the reserve through the spread or introduction of weeds, the clearing as proposed may be at variance to this principle.

A condition has been placed on the permit to ensure that plant material and soils are removed from machinery prior to operating in the location adjacent to the Weira Nature Reserve.

Methodology

GIS Databases:
- CALM Managed Lands and Waters
- Road Centrelines

(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

There is one minor non perennial watercourse that traverses the southern section of the area under application. The nearest major watercourse (Muka River) is located ~5km east of the area under application.

The area under application is located in an area at low risk of developing salinity.

Although, the area under application supports deep rooted perennial vegetation the area is relatively long and linear and roadside infrastructure such as table drains and culverts are to be installed. Therefore, the clearing as proposed is not considered likely to affect groundwater quality or the quality of water flowing into the minor watercourse.

Methodology

Reference:
- DEC (2008)

GIS Databases:
- Salinity Risk LM 25m - DOLA 00
- Hydrography, linear (hierarchy)

(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

There is one minor non perennial watercourse that traverses the southern section of the area under application. The nearest major watercourse (Muka River) is located ~5km east of the area under application.

Given the relatively long and linear area under application and the distance to the nearest major watercourse, the clearing as proposed is not likely to cause or exacerbate the incidence of flooding.

Methodology

GIS Database:
- Hydrography, linear (hierarchy)

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

Comments

DEC Regional office (DEC, 2009) recommend that the Shire of Mukinbudin ensure that when working in the vicinity of the Weira Nature Reserve there will be no disturbance of a physical or visual nature within the reserve and adjacent road reserve from machinery use and stockpiling of aggregate.

Koorda-Bullfinch Road Reserve is labelled as a public road, which is maintained by the Shire of Mukinbudin.

Methodology

References:
- DEC (2009)
- Shire of Mukinbudin (2008)

GIS Databases:
- Cadastre

4. Assessor's comments

Comment

The assessable criteria have been addressed and the clearing as proposed is may be at variance to Principles (a), (e) and (h).

5. References

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

DEC (2008). Koorda-Bullfinch Road - Observations from site visit undertaken on Tuesday 11 November 2008. Department of Environment and Conservation (DEC). Perth, Western Australia.

DEC (2009) Koorda-Bullfinch Road - DEC Wheatbelt Regional advice. Department of Environment and Conservation (DEC). Perth, Western Australia. TRIM Ref DOC77054

DEC (2009a) Koorda-Bullfinch Road - DEC Wheatbelt Regional advice-Personal Communication. Department of Environment and Conservation (DEC). Perth, Western Australia.

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.

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.

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.

Shire of Mukinbudin. (2008). Application for clearing permit, Koorda-Bullfinch Road. TRIM Ref. DOC72682.

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)