GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5818/1
Permit Holder:	Shire of Esperance
Duration of Permit:	From 21 June 2014 to 21 June 2019

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 construction and widening.

2. **Land on which clearing is to be done**
   Dalyup Road reserve (PIN 11642267) (Dalyup 6450)
   Griffiths Road reserve (PIN 11644222) (Cascade 6450)

3. **Area of Clearing**
   The Permit Holder must not clear more than 3 hectares of native vegetation within the combined areas shaded yellow on attached Plan 5818/1a and Plan 5818/1b.

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 the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II – MANAGEMENT CONDITIONS

6. **Dieback and weed control**
   When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:
   (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
   (b) ensure that no *dieback* or *weed*-affected soil, *mulch, fill* or other material is brought into the area to be cleared;
   (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared;
   (d) only move soils in *dry conditions*; and
   (e) where *dieback* or *weed*-affected soil, *mulch, fill* or other material is to be removed from the area to be cleared, ensure it is transferred to areas of comparable *soil disease status*.

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

dieback means the effect of *Phytophthora* species on native vegetation;
dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;
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;
soil disease status means soil types either infested, not infested, uninterpretable or not interpreted with a pathogen.
weed/s means any plant -

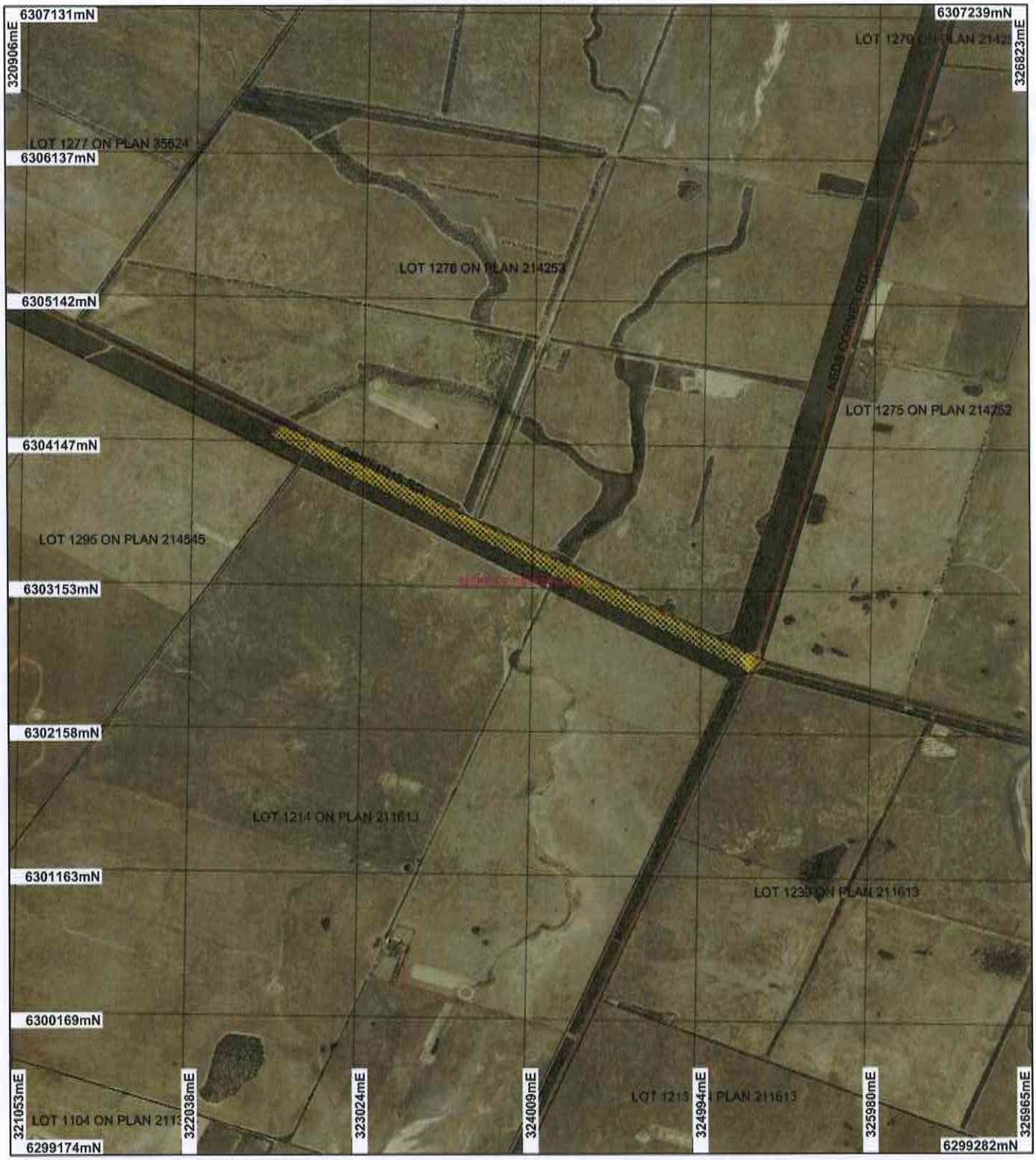
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned.

M Warnock
SENIOR MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

22 May 2014

Plan 5818/1a



LEGEND

- Cadastre for labelling
- Road Centrelines
- Local Government Authorities
- Clearing Instruments

Lort 1.4m Orthomosaic - Landgate 2003

N

0 1 km

Scale 1:35002
(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.

Date 22/5/14

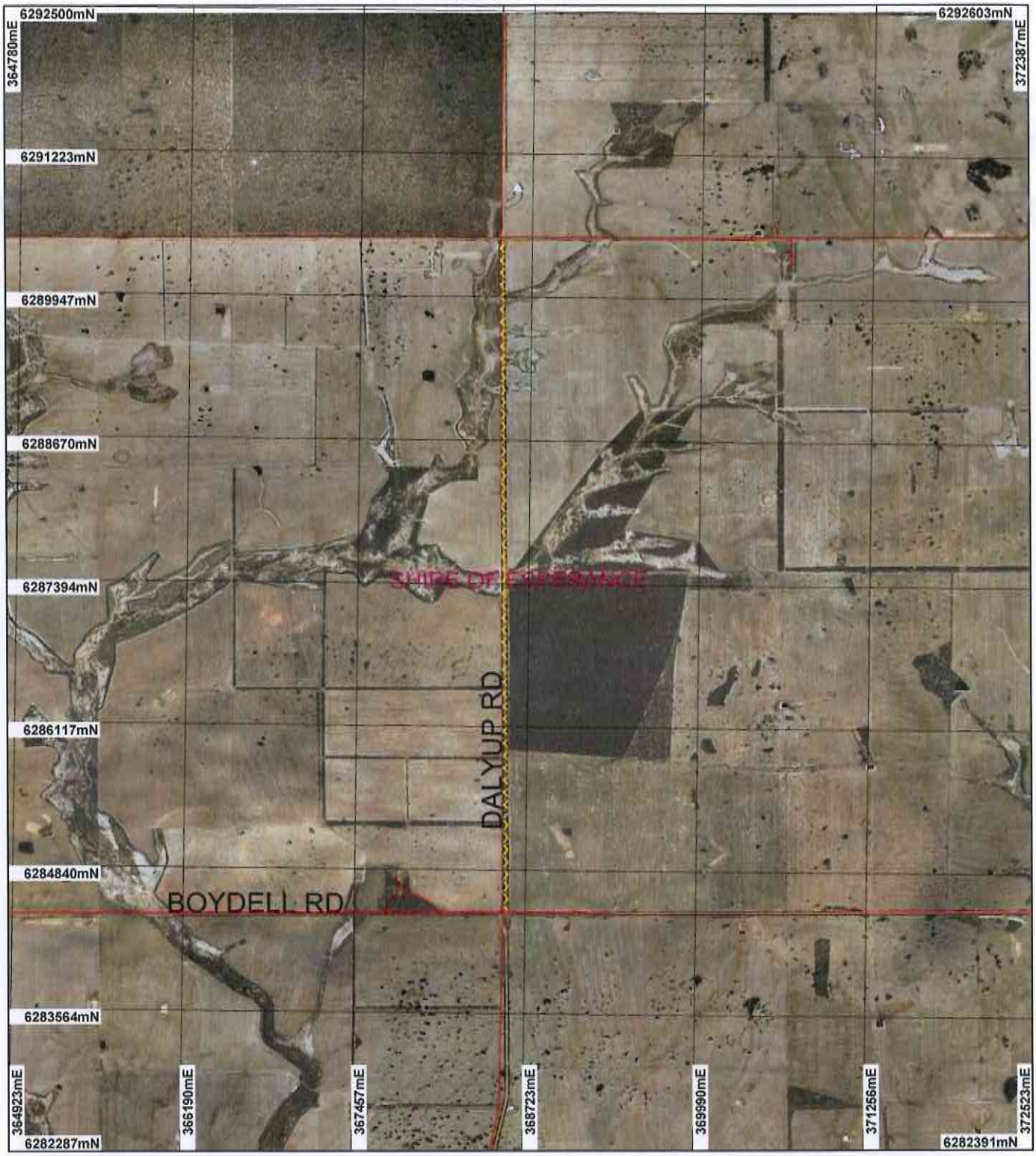
M Warnock

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.

Government of Western Australia
Department of Environment Regulation

Plan 5818/1b



LEGEND

- Cadastre for labelling
- Road Centrelines
- Local Government Authorities
- Clearing Instruments
- Areas Approved to Clear

Esperance Causeway 50cm Orthomosaic - Landgate 2007

N

0 ~1.25 km

Scale 1:45000
(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.

Date 22/5/14

M Warnock

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.

Government of Western Australia
Department of Environment Regulation

GOVERNMENT OF WESTERN AUSTRALIA

Clearing Permit Decision Report

Government of Western Australia
Department of Environment Regulation

1. Application details

1.1. Permit application details

Permit application No.:	5818/1
Permit type:	Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property:	ROAD RESERVE (DALYUP 6450) ROAD RESERVE (CASCADE 6450)
Local Government Area:	Shire of Esperance
Colloquial name:	Griffiths Road reserve and Dalyup Road reserve

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
3		Mechanical Removal	Road construction or maintenance

1.5. Decision on application

Decision on Permit Application:	Grant
Decision Date:	22 May 2014

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
Mapped Beard vegetation association 512 is described as shrublands; mallee scrub, Eucalyptus eremophila & Forrest's marlock (E. forrestianna) (Shepherd et al 2001). Mapped Beard vegetation association 516 is described as shrublands; mallee scrub, black marlock (Shepherd et al 2001).	The clearing of three hectares of native vegetation within Griffiths Road reserve, Cascade and Dalyup Road reserve, Dalyup is for purpose of road widening, maintenance and upgrades.	Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994) To Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	The description and condition of the vegetation under application was determined from vegetation reports provided by the applicant (Shire of Esperance 2013). Dalyup road reserve consists of a narrow strip of Mallee Eucalypts on both sides of the road with some weeds. The vegetation is in a very good (Keighery 1994) condition (Shire of Esperance 2013). Griffiths Road reserve consists of small mallees in an excellent (Keighery 1994) condition (Shire of Esperance 2013).

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 application is to clear three hectares of native vegetation within Griffiths Road reserve, Cascade and Dalyup Road reserve, Dalyup for the purpose of road widening, maintenance and upgrades.

The vegetation under application is located within two road reserves which consist of vegetation in a very good to excellent (Keighery 1994) condition. Dalyup road reserve consists of a narrow strip of Mallee Eucalypts on both sides of the road with some weeds. The vegetation is in a very good (Keighery 1994) condition (Shire of Esperance 2013). Griffiths Road reserve consists of small mallees in an excellent (Keighery 1994) condition (Shire of Esperance 2013).

Numerous priority flora species have been recorded within the local area (10 kilometre radius) for both road reserves. The closest record to Dalyup Road reserve is a Priority 3 flora species located approximately 6.5 kilometres west of the application area. A Priority 3 and Priority 4 flora species have been recorded within 3.9 and 3.1 kilometres respectively of the area under application within Griffiths Road reserve. The application area may provide suitable habitat for these priority flora species however, if these species did occur within the

application area, the taking a small number of individuals would be unlikely to have an impact on the conservation status of these species (Parks and Wildlife 2013).

Numerous fauna species listed as rare or likely to become extinct have been recorded within the Shire of Esperance (DEC 2007-). Given the excellent to very good (Keighery 1994) condition of the vegetation under application, suitable habitat for ground dwelling fauna maybe located within the areas under application. The vegetation located within the two road reserves may provide a linkage to larger remnants within the Shire of Esperance. However, Dalyup Road reserve currently retains approximately 10 metres of native vegetation on each side of the road reserve and Girffiths Road reserve currently retains approximately 160 metres of vegetation on one side and 20 metres of vegetation on the other side of the road reserve. The Shire of Esperance proposes to widen the roads by approximately one to two metres and therefore the clearing proposed within these road reserves will not have a significant impact on the linkage provided by the road reserve.

The clearing proposed may indirectly impact adjacent remnant vegetation through the spread of weeds and dieback. Weed and dieback management practices will help mitigate this risk.

The areas under application contain vegetation in excellent to very good (Keighery 1994) condition, however they are narrow and linear in shape and are not likely to contain significant habitat for fauna, rare or priority flora. Therefore the clearing proposed is not likely to comprise of a high level of biological diversity.

Given the above, the proposed clearing is not likely to be at variance to this principle.

Methodology

References:
- DEC (2007-)
- Parks and Wildlife (2013)
- Keighery (1994)
- Shire of Esperance (2013)
- Western Australian Herbarium (1998-)

GIS Database:
- SAC Bio Datasets November 2013

(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

Numerous fauna species listed as rare or likely to become extinct under the Wildlife Conservation Act 1950 have been recorded within the Shire of Esperance, including Carnaby's Cockatoo (Calyptorhynchus latirostris), Chuditch (Dasyurus geoffroii), Malleefowl (Leipoa ocellata), Black-flanked Rock-wallaby (Petrogale lateralis), Recherche Black-footed Rock-wallaby (Petrogale lateralis subsp. hacketti) and Black-flanked Rock-wallaby (Petrogale lateralis subsp. lateralis) (DEC 2007-).

Carnaby's cockatoo is listed as endangered under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999. Carnaby's cockatoo nest in large hollows of eucalyptus trees and forages on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (Banksia, Hakea, Grevillea), as well as Allocasuarina and Eucalyptus species, Corymbia calophylla and a range of introduced species, especially seeds from cones of Pinus species (Shah, 2006). The areas under application consist of mallee vegetation and therefore significant habitat for this species is not likely to be located within the application area.

The Chuditch inhabits most kinds of wooded habitat including eucalypt forest, dry woodland and mallee shrublands (Department of the Environment 2013). The vegetation within the areas under application within Dalyup and Griffiths road reserves consist of mallee vegetation, therefore the Chuditch may utilise these areas under application as a corridor for movement between remnant vegetation. However given the narrow, linear shape of the areas under application the vegetation proposed to be cleared is not likely to comprise of significant habitat for this species.

The vegetation located within the two road reserves may provide a linkage for fauna movement between larger remnants within the Shire of Esperance. However, Dalyup Road reserve currently retains approximately 10 metres of native vegetation on each side of the road reserve and Girffiths Road reserve currently retains approximately 160 metres of vegetation on one side and 20 metres of vegetation on the other side of the road reserve. The Shire of Esperance proposes to widen the roads by approximately one to two metres and therefore the clearing proposed within these road reserves will not have a significant impact on the linkage provided by the road reserve.

Given the above the clearing as proposed is not likely to be at variance to this principle.

Methodology References:
- Department of the Environment (2013).
- DEC (2007-)
- Keighery (1994)
- Shah (2006)

GIS Database:
- SAC Bio Datasets November 2013

(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**
No rare flora species have been recorded within the local area (10 kilometre radius) of either Dalyup or Griffiths Road reserves.

The application area is narrow and linear and given the above the proposed clearing of 3 hectares of native vegetation over two road reserves is not likely to include or be necessary for the continued existence of rare flora.

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

Methodology GIS Databases:
- Geomorphic wetlands, Wheatbelt
- SAC Biodata sets - accessed November 2013
- Soils, statewide

(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 at variance to this Principle**
No threatened ecological communities (TEC) have been recorded within 10 kilometres of the areas under application. The closest TEC is 'Russell Range mixed thicket vegetation complexes' located approximately 175 kilometres east of the application area.

Given the distance to the closest TEC the clearing as proposed is not at variance to this principle.

Methodology GIS Databases:
- SAC Biodata sets - accessed November 2013

(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 not likely to be at variance to this Principle**
The areas under application are located within the Mallee Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 57 per cent of its Pre European vegetation extent remaining (Government of Western Australia 2013).

The vegetation under application is mapped as Beard Vegetation Associations 512 and 516, which have approximately 26 and 55 per cent of their Pre-European extent remaining respectively within the Mallee bioregion (Government of Western Australia 2013).

The National Objectives and Targets for Biodiversity Conservation include a target that prevents the clearance of ecological communities with an extent below 30 per cent of that present pre-European settlement (Commonwealth of Australia, 2001).

Digital imagery indicates that the local area (10 kilometre radius) surrounding the of the areas under application retain approximately 25 per cent vegetation cover and therefore the vegetation proposed to be cleared may be considered to be located within an extensively cleared area.

However, given the area under application is contained within a narrow, linear road reserve, is not likely to contain high biodiversity or significant fauna habitat, the vegetation under application is not likely to represent a significant remnant.

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

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Mallee	7,395,894	4,185,989	57	30
Shire*				
Shire of Esperance	4,459,670	3,211,034	72	30
Beard Vegetation Association in Bioregion*				
512	237,886	62,809	26	9
516	606,923	334,315	55	44

* Government of Western Australia (2013)

Methodology

References:
- Commonwealth of Australia (2001)
- Government of Western Australia (2013)

GIS Databases:
- Lort 50cm Orthomosaic - Landgate 2008
- Esperance Causeway 50cm Orthomosaic - Landgate 2007
- Local Government Authorities - Landgate
- Pre-European Vegetation

(f) Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.

Comments

Proposal is at variance to this Principle

A minor watercourse intersects each of the application areas.

Given the above the vegetation proposed to be cleared within Griffiths and Dalyup road reserves are considered to be growing in association with a watercourse. However, the proposed clearing of three hectares of native vegetation over two road reserves in a linear shape is not likely to have a significant impact on the environmental values of the two watercourses.

Therefore the clearing as proposed is at variance to this principle.

Methodology

GIS Databases:
- Geomorphic wetlands, Wheatbelt
- Hydrology, linear

(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

Two soil types have been recorded within the areas under application:

SI30: Gently undulating pediments with narrow ironstone gravel ridges; some swamps and lakes: chief soils are hard, and sandy, alkaline yellow and yellow mottled soil. Associated are narrow ironstone gravelly ridges of variable frequency and soil composition (Northcote et al 1960 - 1968).

Xd1: Gently undulating plain or plateau at low elevation with small granitic hills, some flats, seasonal swamps and talus; and some more strongly undulating land where dissection has begun: chief soils are sandy neutral yellow mottled soils containing variable amounts of ironstone gravel in the surface sand, with leached sands sometimes containing ironstone gravel and underlain by clay substrate at depths of 3-5 ft (Northcote et al 1960 - 1968).

The proposed clearing of 3 hectares in a linear shape over two road reserves is not likely to cause appreciable land degradation (Northcote et al 1960 - 1968).

Given the above the clearing as proposed is not likely to be at variance to this principle.

Methodology

References:
- Northcote et al (1960-1968)

GIS Databases:
- 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 is not likely to be at variance to this Principle

Numerous conservations areas are located within 10 kilometres of the areas under application. The closest being Griffiths Nature reserve located approximately 5.1 kilometres east of the application area.

The vegetation located within the two road reserves may provide a linkage to conservation areas within the Shire of Esperance. However, Dalyup Road reserve currently retains approximately 10 metres of native vegetation on each side of the road reserve. Girffiths Road reserve currently retains more approximately 160 metres of vegetation on one side and 20 metres of vegetation on the other side of the road reserve. The Shire of Esperance proposes to widen the roads by approximately one to two metres and therefore the clearing proposed within these road reserves will not have a significant impact on the linkage provided by the road reserve.

Given the distance to the closest conservation area, and the long linear nature of the application area, the clearing proposed is not likely to have an impact on the environmental values of conservation areas within the local area (10 kilometre radius).

Given the above the clearing as proposed is not likely to be variance to this principle.

Methodology

GIS Databses:
- DPaW, Tenure.

(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

A minor watercourse intersects each of the application areas.

Given the above, the clearing as proposed may increase sedimentation into watercourses located within the areas under application. However sedimentation will be minor and short term, and given the proposed clearing is for road widening and construction there are likely to be culverts in place to manage surface water flow. Therefore the clearing proposed is not likely to cause deterioration in the quality of surface water.

Groundwater salinity ranges from 7000 to more than 35000 mg/L which is considered to be Saline to Brine. The proposed clearing of three hectares over two road reserves is not expected to cause a measurable deterioration in the quality of underground water.

Given the above the clearing as proposed is not likely to be at variance to this principle.

Methodology

GIS Databases:
- Geomorphic wetlands, Wheatbelt
- Hydrology, linear.

(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 of three hectares of native vegetation within a larger footprint area over two road reserves is not likely to cause or exacerbate the incidence or intensity of flooding.

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

Methodology

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

Comments

The applicant amended the application from 15 hectares of native vegetation within 10 road reserves to the clearing of three hectares of native vegetation within Dalyup and Griffiths Road reserves

No Submissions have been received in relation to this application.

The Goldfield Land and Sea Council (2013) has advised that they and The Esperance Nyungars are concerned about the potential impact of land clearing and ground disturbing work on Aboriginal Heritage sites. The Goldfield Land and Sea Council works with proponents to ensure that these sties area preserved and protected. There are a number of Aboriginal heritage sites in the Esperance Nyungar claim area, many of these sites are found in areas of untouched native vegetation which have never been recorded (Goldfield Land and Sea Council 2013). The applicant will be notified of their obligation under the Aboriginal Heritage Act 1972.

Methodology

References:
- Goldfield Land and Sea Council (2013)

4. References

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

Department of the Environment (2013). Dasyurus geoffroii in Species Profile and Threats Database, Department of the Environment, Canberra. Available from: http://www.environment.gov.au/sprat. Accessed Thu, 28 Nov 2013

Department of Water (2013) Advice for Clearing Permit application CPS 5818/1 - Gibson Rd, Gibson. Western Australia (DER Ref: A691324)

DPaW (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dec.wa.gov.au/. Accessed November 2013

DPaW (2013) Species and Communities Advice for Clearing Permit Application CPS 5818/1 - Flora Advice. Department of Parks and Wildlife. Western Australia. (DER Ref: A700761).

Government of Western Australia (2013) 2012 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2012. WA Department of Environment and Conservation, Perth.

Johnstone, R.E. and Storr, G.M. (1998). Handbook of Western Australian Birds, Volume I, Non-passerines (Emu to Dollarbird). Western Australian Museum, Perth.

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.

Saunders, D.A. (1990). Problems of survival in an extensively cultivated landscape: the case of Carnaby's cockatoo Calyptorhynchus funereus latirostris. Biological Conservation. 54: 277-290.

Saunders, D.A. and Ingram, J.A. (1998). Twenty-eight years of monitoring a breeding population of Carnaby's cockatoo. Pacific Conservation Biology. 4: 261-270.

Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, Western Australia

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.