GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5469/1
Permit Holder:	Shire of Esperance
Duration of Permit:	29 March 2013 – 29 March 2023

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 sourcing base material for road construction.

2. **Land on which clearing is to be done**
   Lot 2012 on Deposited Plan 207125 (Reserve 35302), Gibson
   Fleming Grove Road reserve, Gibson (PIN 11645143)

3. **Area of Clearing**
   The Permit Holder must not clear more than 2 hectares of native vegetation within the area shaded yellow on attached Plan 5469/1.

4. **Period in which clearing is authorised**
   The Permit Holder shall not clear any native vegetation after 29 March 2018

5. **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.

6. **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.

7. **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

8. Avoid, minimise etc clearing

In determining the amount of native vegetation to be cleared authorised under 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.

9. 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) shall only move soils in *dry conditions*;
(c) ensure that no *dieback* or *weed*-affected soil, *mulch, fill* or other material is brought into the area to be cleared; and
(d) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

10. Retain vegetative material and topsoil, revegetation and rehabilitation

The Permit Holder shall:

(a) 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 3 months following completion of extractive activities, revegetate and rehabilitate the areas shaded yellow on attached Plan 5469/1 by:
    (i) re-shaping the surface of the land so that it is consistent with the surrounding 5 metres of uncleared land; and
    (ii) ripping the ground on the contour to remove soil compaction; and
    (iii) laying the vegetative material and topsoil retained under condition 10(a) on the cleared areas
(c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 10(b) of this Permit:
    (i) engage an *environmental specialist* to 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 10(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, *revegetate* the area by 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 ensuring only *local provenance* seeds and propagating material are used.
(d) Where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 10(c)(ii) of this permit, the Permit Holder shall repeat condition 10(c)(i) and 10(c)(ii) within 24 months of undertaking the additional *planting* or *direct seeding* of native vegetation.
(e) Where a determination by an *environmental specialist* that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, as determined in condition 10(c)(i) and (ii) of this permit, that determination shall be submitted for the CEO's consideration. If the CEO does not agree with the determination made under condition 10(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 10(c)(ii).

PART III - RECORD KEEPING AND REPORTING

11. Records must be kept

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

(a) In relation to the clearing of native vegetation authorised under this Permit:
  (i) the species composition, structure and density of the cleared area;
  (ii) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  (iii) the date that the area was cleared; and
  (iv) the size of the area cleared (in hectares).

(b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 10 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 or decimal degrees;
  (ii) a description of the *revegetation* and *rehabilitation* activities undertaken;
  (iii) the size of the area *revegetated* and *rehabilitated* (in hectares);
  (iv) the species composition, structure and density of *revegetation* and *rehabilitation*, and
  (v) a copy of the environmental specialist's report.

12. Reporting

(a) The Permit Holder must provide to the CEO on or before 30 June of each year, a written report:
  (i) of records required under condition 11 of this Permit; and
  (ii) concerning activities done by the Permit Holder under this Permit between 1 January to 31 December of the preceding calendar year.

(b) If no clearing authorised under this Permit was undertaken between 1 January to 31 December of the preceding calendar year, a written report confirming that no clearing under this permit has been carried out, must be provided to the CEO on or before 30 June of each year.

(c) Prior to 29 December 2022, the Permit Holder must provide to the CEO a written report of records required under condition 11 of this Permit where these records have not already been provided under condition 12(a) of this Permit.

DEFINITIONS

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

dieback means the effect of *Phytophthora* species on native vegetation;

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;

dry conditions means when soils (not dust) do not freely adhere to rubber tyres, tracks, vehicle chassis or wheel arches;

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;

local provenance means native vegetation seeds and propagating material from natural sources within 30 kilometres of the area cleared.

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;

regenerate/ed/ion means re-establishment of vegetation from in situ seed banks and propagating material (such as lignotubers, bulbs, rhizomes) contained either within the topsoil or seed-bearing *mulch*;

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

weed/s means any plant -

(a) that is declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*; or

(b) published in the Department of Environment and Conservation Regional Weed Assessments, regardless of ranking; or

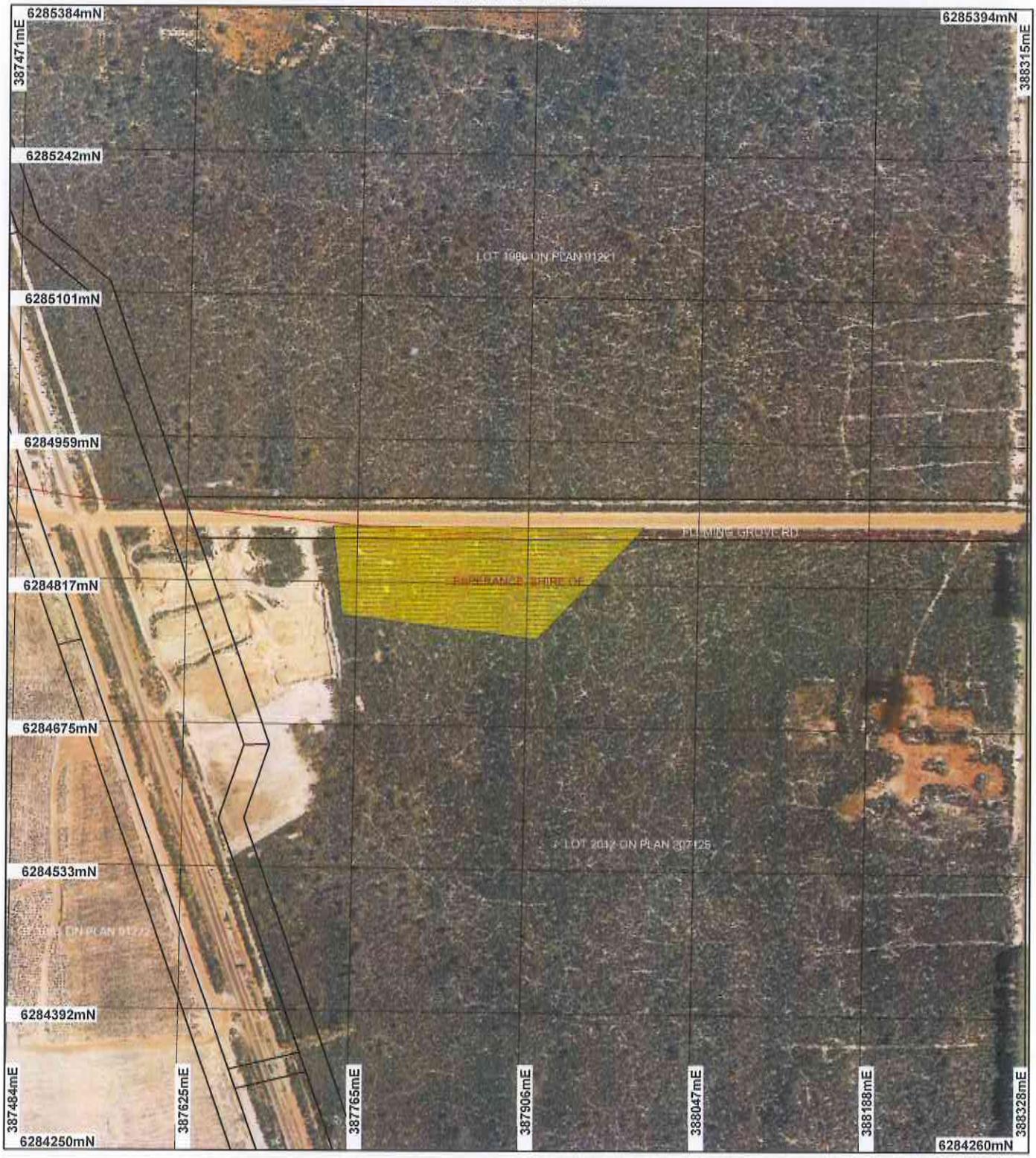
(c) not indigenous to the area concerned.

M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

7 March 2013

Plan 5469/1



LEGEND

- Road Centrelines
- Cadastre
- Local Government Authorities

Esperance Causeway 50cm Orthomosaic - Landgate 2007

Clearing Instruments

- Areas Approved to Clear

N

0 — 125 m

Scale 1:5000
(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.

M Warnock ..... Date 7/3/13

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

Our environment, our future

Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5469/1
Permit type: Purpose Permit

1.2. Proponent details

Proponent's name: Shire of Esperance

1.3. Property details

Property: LOT 2012 ON PLAN 207125 (GIBSON 6448)
ROAD RESERVE (GIBSON 6448)
Local Government Area: Shire of Esperance
Colloquial name:

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
2		Mechanical Removal	Extractive Industry

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 7 March 2013

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: 47 - Shrublands; tallerack mallee-heath (Shepherd et al. 2001).	The application is to clear 2 hectares of native vegetation within Lot 2012 on Deposited Plan 207125 (Reserve 35302) and Fleming Grove Road reserve, Gibson, for the purpose of sourcing base material for road construction. The vegetation under application consists mainly of Nuytsia open mixed heath. The canopy is dominated by low open Eucalyptus uncinata and low open Nuytsia floribunda, with an open heath mid layer of Lambertia inermis, Adenanthos cuneatus, Banksia armata var armata, and Taxandria spathulata and a ground cover of Thysanotus, Anarthria, Anigozanthos, Patersonia, Caustis dioica, and Desmocladus asper (Massenbauer 2012). An approximately 0.2 ha area consists of Eucalyptus pleurocarpa open mallee Nuytsia mixed open heath (Tallerack heath). The canopy is dominated by very sparse Eucalyptus pleurocarpa, with a mid-dense open heath dominated by a mix of various Banksia, Hakeas, Verticordia, Petrophile, Allocasuarina, Isopogon, Melaleuca, Taxandria, and Micromyrtus. The ground cover is made up of a sparse mix of Thysanotus, Lepidobolus, Anarthria, Anigozanthos, Patersonia, Caustis dioica, Desmocladus asper, Banksia repens, Banksia obtusa, and mixed herbs (Massenbauer 2012).	Excellent: Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery 1994)	Vegetation description and condition were determined through aerial imagery and supporting documentation provided by the applicant (Massenbauer 2012).

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 application is to clear 2 hectares of native vegetation within Lot 2012 on Deposited Plan 207125 (Reserve 35302) and Fleming Grove Road reserve, Gibson, for the purpose of sourcing base material for road construction. The vegetation is in excellent (Keighery 1994) condition (Massenbauer 2012).

The majority of the vegetation under application consists of Nuytsia open mixed heath. The canopy is dominated by low open Eucalyptus uncinata and low open Nuytsia floribunda, with an open heath mid layer of Lambertia inermis, Adenanthos cuneatus, Banksia armata var armata, and Taxandria spathulata and a ground cover of Thysanotus, Anarthria, Anigozanthos, Patersonia, Caustis dioica, and Desmocladus asper (Massenbauer 2012).

An approximately 0.2 hectare area consists of Eucalyptus pleurocarpa open mallee Nuytsia mixed open heath (Tallerack heath). The canopy is dominated by very sparse Eucalyptus pleurocarpa, with a mid-dense open heath dominated by a mix of various Banksia, Hakeas, Verticordia, Petrophile, Allocasuarina, Isopogon, Melaleuca, Taxandria, and Micromyrtus. The ground cover is made up of a sparse mix of Thysanotus, Lepidobolus, Anarthria, Anigozanthos, Patersonia, Caustis dioica, Desmocladus asper, Banksia repens, Banksia obtusa, and mixed herbs (Massenbauer 2012).

The vegetation under application within the Fleming Grove Road reserve has medium/high to high conservation value, a result of the condition and intact nature of the vegetation, the high species diversity and low weed infestation (RCC 2002).

There are numerous records of priority flora within the local area (10 kilometre radius). A level 1 vegetation and flora survey conducted over the application area identified one individual of a priority four flora species (Massenbauer 2012). The proposed clearing of one individual plant of a priority four species is unlikely to impact upon the conservation status of this species.

There is one mapped priority ecological communities within the local area (10 kilometre radius). This is a scrub heath on Esperance Sandplain: Scrub heath on deep sand with Banksia and Lambertia, and Banksia scrub heath on sandplain community (priority 3).

The disturbance caused by the proposed clearing will increase the risk of weeds and dieback being introduced into surrounding areas of vegetation. Weed and dieback management practices will assist in mitigating this risk.

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

Methodology

References:
Keighery 1994
Massenbauer 2012
RCC 2002
GIS Databases:
- Esperance Causeway 50cm Orthomosaic - Landgate 2007
- Pre European Vegetation
- SAC Biodatasets
- Soils, Statewide

(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 14 records of fauna species within the local area (10 kilometre radius) (DEC 2007-). The only species of conservation significance is Carnaby's cockatoo (Calyptorhynchus latirostris; rare or likely to become extinct, Wildlife Conservation Act 1950; endangered, Environment Protection and Biodiversity Conservation Act 1999). The proposed clearing occurs within the non-breeding range of Carnaby's cockatoo habitat (Commonwealth of Australia 2012).

One understorey species identified within the area under application may provide feeding habitat for Carnaby's cockatoo (Valentine and Stock 2008).

Given the application area is surrounded by vegetation in excellent condition, the proposed clearing is not likely to be at variance to this principle.

Methodology

References:
DEC 2007-
Commonwealth of Australia 2012
Valentine and Stock 2008

(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

The closest record of a rare flora species is located approximately 5.2 kilometres from the application area. This species does not occur on the same vegetation type as the application area.

A level 1 vegetation and flora survey conducted over the application area did not identify any rare flora (Massenbauer 2012).

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

Methodology

References:

Massenbauer 2012
GIS Databases:
- SAC Biodatasets

(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 records of threatened ecological communities within the local area (10 kilometre radius).

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

Methodology

GIS Databases:
- SAC Biodatasets

(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 may be at variance to this Principle
Aerial photography indicates the local area (10 kilometre radius) is approximately 15 percent vegetated.

The IBRA Bioregion (Esperance Plains) and the local government agency (Shire of Esperance) retain approximately 51 percent and 71 percent of their respective pre-European extents (Government of Western Australia 2011).

The application area is mapped as Beard Vegetation Association 47, which retains approximately 338 257 hectares (35 percent) of its pre-European extent within the Esperance Plains IBRA Bioregion.

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 percent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia 2001).

Beard Vegetation Association 47 retains above the nationally recommended threshold level. However, given the application area is in excellent condition and the local area has less than 30 percent vegetation remaining, the vegetation under application may be a significant remnant. At a landscape catchment scale, only eight per cent of Tallerack heath on sandplain vegetation remains in the Esperance Lakes catchment area (DAFWA 2007).

Revegetation of the cleared area post extraction will assist in mitigating impacts associated with the proposed clearing.

Therefore, the proposed clearing may be at variance to this principle.

	Pre-European (ha)	Current Extent (ha)	Remaining (%)	Extent in DEC Managed Lands (%)
IBRA Bioregion*				
Esperance Plains	2 899 950	1 489 289	51	54
Shire*				
Shire of Esperance	4 459 701	3 187 495	71	30
Beard Vegetation Association in Bioregion*				
47	959 938	338 257	35	51

* Government of Western Australia 2011

Methodology

References:
Commonwealth of Australia 2001
DAFWA 2007
Government of Western Australia 2011
GIS Databases:
- Esperance Causeway 50cm Orthomosaic - Landgate 2007
- NLWRA, Current extent of Native Vegetation
- Pre-European Vegetation
- SAC Biodatasets

(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 numerous watercourses and non-perennial lakes within the local area (10 kilometre radius). The nearest watercourse is a perennial lake, located approximately 580 metres from the application area.

The vegetation under application is not growing in association with a watercourse or wetland, therefore the proposed clearing is not likely to be at variance to this principle.

Methodology GIS Databases:
- Hydrography, 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**
The application area has been mapped as soil type Xd1, which Northcote et al. (1960-1968) describes as 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.

The application area has a mean annual rainfall of 500mm.

The main land degradation risk associated with this sandy soil type is wind erosion. However, the presence of gravel within the soil reduces the likelihood of wind erosion. Given the porous nature of the soil, significant water erosion is unlikely to occur. The proposed clearing is not likely to cause appreciable land degradation.

Therefore, the application is not likely to be at variance to this principle.

Methodology References:
Northcote et al. 1960-1968
GIS Databases:
- Mean annual rainfall

(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 is one nature reserve within the local area (10 kilometre radius). The Speddingup Nature Reserve is located approximately 6 kilometres from the application area. Given the distance to the nearest conservation area the proposed clearing is not likely to impact upon the environmental values of this reserve.

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

Methodology GIS Databases:
- DEC 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**
There are no watercourses or wetlands located within the application area, therefore surface water quality is unlikely to be impacted by the proposed clearing.

The groundwater salinity within the application area is 7000 - 14000 milligrams per litre of Total Dissolved Solids. This level of groundwater salinity is considered to be saline/highly saline. Given the application area is surrounded by remnant vegetation, the clearing is unlikely to significantly increase groundwater salinity.

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

Methodology GIS Databases:
- Groundwater Salinity, Statewide
- Hydrography, 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 application area has been mapped as soil type Xd1, which Northcote et al. (1960-1968) describes as 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.

Given the low annual rainfall (500mm) and the porous nature of the soil mapped over the application area, the

proposed clearing is not likely to increase the incidence or intensity of flooding.

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

Methodology References:
Northcote et al. 1960-1968
GIS Databases:
- Mean annual rainfall
- Soils, Statewide

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

Comments

Lot 2012 on Deposited Plan 207125 (Reserve 35302), Gibson is vested with the Shire of Esperance for the purpose of gravel.

No public submissions have been received in relation to this application.

Methodology

4. References

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

Commonwealth of Australia (2012) EPBC Act referral guidelines for three threatened black cockatoo species, Canberra.

DAFWA (2007) Esperance Lakes: CATCHMENT APPRAISAL 2007 Resource Management Technical Report 316. Department of Agriculture and Food, Western Australia.

DEC (2007 -) NatureMap: Mapping Western Australia's Biodiversity. Department of Environment and Conservation. URL: http://naturemap.dec.wa.gov.au/. Accessed 18/02/2013.

Government of Western Australia (2011); 2011 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). WA Department of Environment and Conservation, 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.

Massenbauer (2012) Fleming Grove Road Gravel Extraction Site - Level 1 Flora and Vegetation Survey. Tilo Massenbauer, Western Australia (DEC REF: A596538).

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.

RCC (2002) Roadside Vegetation and Conservation Values in the Shire of Esperance. Roadside Conservation Commitee, 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.

Valentine, L.E. & Stock, W. (2008) Food resources of Carnaby's black cockatoo (Calyptorhynchus latirostris) in the Gnangara sustainability strategy study area. Edith Cowan University and Department of Environment and Conservation, Western Australia.

5. 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)