GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 5053/1
Permit Holder:	Shire of Kondinin
Duration of Permit:	14 December 2012 – 14 December 2022

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 expanding two existing gravel pits.

2. **Land on which clearing is to be done**
   Lot 333 on Deposited Plan 218379, Forrestania
   Unallocated Crown land (PIN 642743), Hatter Hill
   Carstairs Road reserve (PIN 1201288), Forrestania

3. **Area of Clearing**
   The Permit Holder must not clear more than 1.7 hectares of native vegetation within the areas hatched yellow on attached Plan 5053/1(a) and Plan 5053/1(b).

4. **Period in which clearing is authorised**
   The Permit Holder shall not clear any native vegetation after 14 December 2017.

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. **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 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.

8. 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.

9. 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 the completion of extractive activities, *revegetate* and *rehabilitate* the area(s) that are no longer required for the purpose for which they were cleared under this Permit 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) ripping the pit floor and contour batters within the extraction site; and
  (iv) laying the vegetative material and topsoil retained under condition 9(a) on the cleared area(s) that are no longer required for the purpose for which they were cleared under this Permit; and

(c) within 24 months of undertaking *revegetation* and *rehabilitation* in accordance with condition 9(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 9(c)(i) of this Permit will not result in a similar species composition, structure and density to that of pre-clearing vegetation types in that area, the Permit Holder must undertake additional *planting* or *direct seeding* of native vegetation in accordance with the requirements of condition 9(b)(v) and (vi) of this Permit.

(d) where additional *planting* or *direct seeding* of native vegetation is undertaken in accordance with condition 9(c)(ii) of this permit, the Permit Holder shall repeat condition 9(c)(i) and 9(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 9(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 9(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 9(c)(ii).

10. Records to 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 or decimal degrees;
   (iii) the date that the area was cleared;
   (iv) the date the extraction operations ceased; and
   (v) the size of the area cleared (in hectares).

(b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 9 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.

11. 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 10 of this Permit; and
   (ii) concerning activities done by the Permit Holder under this Permit between 1 July and 30 June of the preceding year.

(b) Prior to 14 September 2022, the Permit Holder must provide to the CEO a written report of records required under condition 10 of this Permit where these records have not already been provided under condition 11(a) of this Permit.

DEFINITIONS

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

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

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;

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 20 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;

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*;

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

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as 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; and

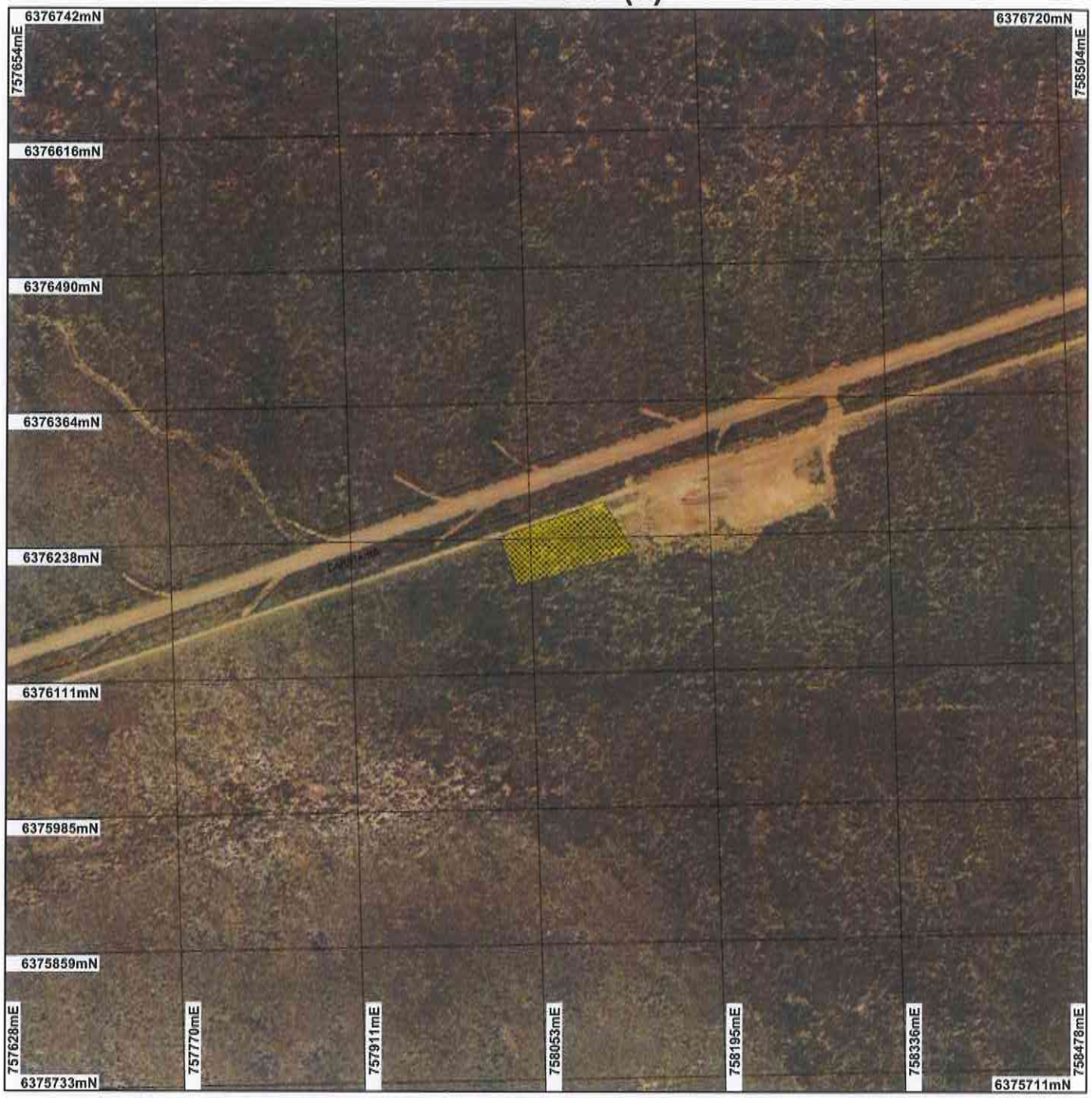
weed/s means a species listed in Appendix 3 of the "Environmental Weed Strategy" published by the Department of Conservation and Land Management (1999), and plants declared under section 37 of the *Agriculture and Related Resources Protection Act 1976*.

M Warnock
A/MANAGER
NATIVE VEGETATION CONSERVATION BRANCH

Officer delegated under Section 20
of the Environmental Protection Act 1986

22 November 2012

Plan 5053/1(a)



LEGEND

Cadastre

- Freehold
- Crown Reserve
- State Forest / Timber Reserve
- Marine Park
- Crown Lease
- Lease / Reserve (cont)
- Lease on State Forest / Timber Reserve
- Public Roads
- Unallocated Crown Land
- Water

Road Centrelines

Perth Metropolitan Central 15cm Orthomosaic - Landgate 2011

Clearing Instruments

- Areas Approved to Clear

Ironcap 2832 Mar 2011 Mosaic

N

0 ~125 m

Scale 1:4803
(Approximate when reproduced at Letter)

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 22/11/12

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

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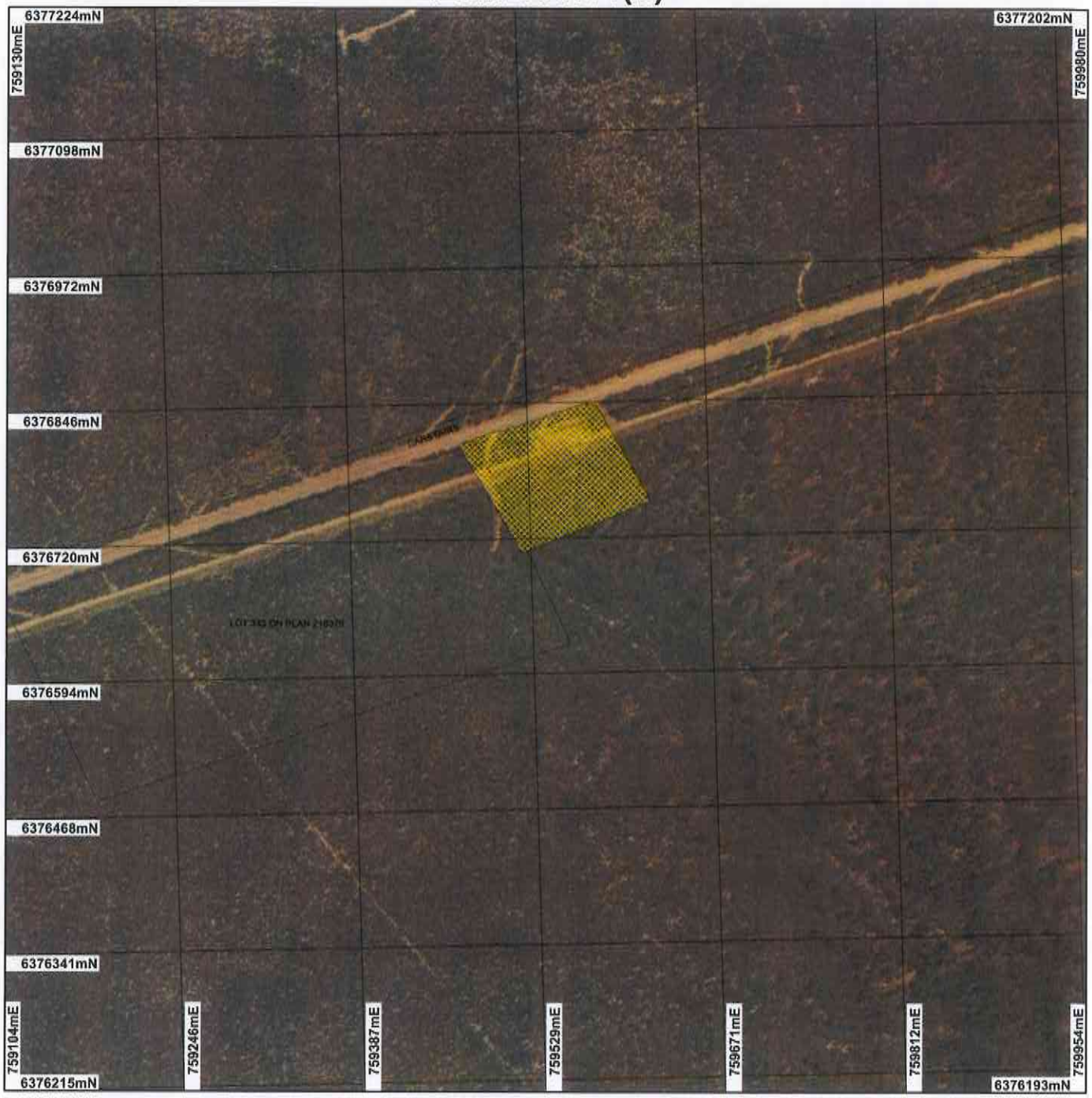
** Project Data. This data has not been quality assured. Please contact map author for details.*

Plan 5053/1(b)



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Department of Environment and Conservation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 5053/1
Permit type: Purpose Permit

1.2. Proponent details

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

1.3. Property details

Property: UNALLOCATED CROWN LAND (HATTER HILL 6356)
LOT 333 ON PLAN 218379 (FORRESTANIA 6359)
ROAD RESERVE (FORRESTANIA 6359)
Local Government Area: Shire of Kondinin
Colloquial name: Carstairs Road reserve

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Grant
Decision Date: 22 November 2012

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 2048 is described as shrublands consisting of scrub heath in the Mallee region. Mapped Beard Vegetation Association 936 is described as medium woodland consisting of Salmon Gum (Shepherd et al, 2001).	This amended application proposes to clear 1.7 hectares of native vegetation within Lot 333 on Deposited Plan 218379, Carstairs Road reserve and unallocated Crown land, Hatter Hill, for the purpose of expanding existing gravel pits. The proposed expansion consists of two pits, 1 and 3. The vegetation community types present within this application area include mixed-species shrublands, mallees and woodlands.	Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery 1994) To Very Good: Vegetation structure altered; obvious signs of disturbance (Keighery 1994)	The condition of the vegetation was established through aerial imagery and a flora report provided with the application (EnviroWorks Consulting, 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 is not likely to be at variance to this Principle

This amended application proposes to clear 1.7 hectares of native vegetation for the purpose of expanding two existing gravel pits 1 and 3. Gravel Pit 1 falls within unallocated Crown land, Hatter Hill and Pit 3 falls within unallocated Crown land, Hatter Hill, Lot 333 on Deposited Plan 218379, Forrestania and Carstairs Road reserve.

The proposed clearing initially involved the expansion of four gravel pits (7 hectares) whereby two of the proposed gravel pits (2 and 4) occurred within, or within close proximity to, the mapped priority 3 ecological community 'Ironcap Hills Vegetation Complexes'. The assessment of this initial proposal concluded that the proposed clearing was at variance to principles (a) and (c) and was not likely to be at variance to the remaining Principles.

The applicant was notified of these issues and asked to modify the application. In response the applicant has reduced the clearing footprint of one of the proposed gravel pits (Pit 1) to avoid priority flora and removed gravel pits 2 and 4 from the application to avoid the mapped priority 3 ecological community.
The following assessment is for the amended areas of gravel pits 1 and 3.

Gravel pits 1 and 3 are not likely to contain vegetation that is representative of the abovementioned priority 3 ecological community 'Ironcap Hills Vegetation Complexes'.

The amended gravel pit areas no longer contain rare or priority flora species. One priority (P1) flora species has been recorded within 50m of proposed Gravel Pit 1 (EnviroWorks Consulting, 2012).

The local area (10 km radius) is well vegetated with approximately 80 per cent vegetation remaining.

A fauna habitat survey of the application areas indicates that habitat for fauna of conservation significance is not present within the application areas due to a lack of large trees and food resources (EnviroWorks Consulting, 2012).

Two weed species were recorded within the application areas during the flora survey (EnviroWorks Consulting, 2012). Removal of native vegetation and soil disturbance associated with clearing increases the risk of weeds being spread or introduced into new areas. Weed and dieback management practices will assist in minimising the effects of clearing.

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

Methodology

References:
-EnviroWorks Consulting (2012)
-Keighery (1994)

GIS Databases:
-Pre-European Vegetation
-SAC Bio Datasets - Accessed July 2012
-NLWRA, Current Extent of Native Vegetation

(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
Ten conservation significant fauna species have been recorded in the local area (10km radius) including Calyptorhynchus latirostris (Carnaby's Cockatoo), Dasyurus geoffroii (Chuditch), Falco peregrinus (Peregrine Falcon), Hylacola cauta subsp. whitlocki (Shy Heathwren), Leipoa ocellata (Malleefowl), Macropus irma (Western Brush Wallaby), Oreoica gutturalis subsp. gutturalis (Crested Bellbird), Paroplocephalus atriceps (Lake Cronin Snake), Platycercus icterotis subsp. xanthogenys Pomatostomus and superciliosus subsp. ashbyi (White-browed Babbler).

The local area (10 km radius) is well vegetated with approximately 80 per cent vegetation remaining.

A thorough fauna search has not been conducted over the application area, however a Level 1 Flora Survey and Fauna Habitat Assessment reported that habitat for fauna of conservation significance was not present within the application areas (EnviroWorks Consulting, 2012). No fauna of conservation significance were observed in this survey.

Considering the amount of vegetation remaining in the local area, the proposed clearing of 1.7 hectares of native vegetation is not likely to be at variance to this Principle.

Methodology

References:
-EnviroWorks Consulting (2012)
-Keighery (1994)

GIS Databases:
-NatureMap

(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
There were no rare flora species identified within proposed gravel pits 1 and 3 in a vegetation survey undertaken by EnviroWorks Consulting (2012).

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

Methodology

References:
-EnviroWorks Consulting (2012)

GIS Databases:
-SAC Bio Datasets - accessed July 2012

(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 were no threatened ecological communities recorded within the local area (10km radius).

The proposed clearing is not likely to be at variance to this Principle.

Methodology

GIS Databases
-SAC Bio Datasets - accessed July 2012

(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 local area (10 km radius) is well vegetated with approximately 80 per cent vegetation remaining.

The areas under application are mapped as Beard Vegetation Associations 2048 and 936. These vegetation associations have approximately 49 and 77 per cent of their pre-European extent remaining in the Mallee bioregion respectively (Government of Western Australia, 2011).

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The Region, Shire and Vegetation complexes shown above all retain greater than 30 per cent native vegetation.

Considering the above 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	7,395,896	4,114,884	56	30
Shire				
Shire of Kondinin	741,967	389,344	52	6
Beard Vegetation Association in Bioregion				
2048	313,728	152,412	49	15
936	77,221	59,643	77	14

Government of Western Australia (2011)

Methodology

Reference:
-Government of Western Australia (2011)
-Commonwealth of Western Australia (2001)

GIS Databases:
-NLWRA, Current Extent of Native 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 not likely to be at variance to this Principle
There are numerous minor perennial watercourses within the local area (10km radius). The closest of these is located approximately 1.3 km north of proposed Gravel Pit 3.

A vegetation survey of the application areas did not identify any vegetation growing in, or in association with, a watercourse or wetland (EnviroWorks Consulting, 2012).

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

Methodology

References:
-EnviroWorks Consulting (2012)

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

A flora and fauna survey over the application areas described the soils as gravelly lateritic loams and clays, in a landscape of flats and gentle slopes (EnviroWorks Consulting, 2012). Given the well drained soil types of the application area, water erosion is unlikely.

Considering the size of the area to be cleared (1.7 hectares over two areas) in relation to the amount of vegetation remaining in the surrounding area (80 per cent within a 10km radius), the proposed clearing is not likely to cause appreciable land degradation in the form of wind erosion.

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

Methodology

References:
-Northcote et al. (1960-68)
-EnviroWorks Consulting (2012)

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

The Lake Jackson Class 'A' Nature Reserve is the closest conservation reserve to the application areas, located approximately 9.5km south west of proposed Gravel Pit 1.

Given the high level of vegetation remaining within the local area, the proposed clearing is unlikely to impact upon the conservation values of this reserve.

Given the above 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 numerous minor perennial watercourses within the local area (10km radius). The closest of these is located approximately 1.3 km north of proposed Gravel Pit 3.

The groundwater salinity within the application area is approximately 14,000 - 35,000 mg/L (highly saline). Considering the size of the area to be cleared (1.7 hectares) and there is approximately 80 per cent native vegetation remaining in the local area (10 km radius), it is not likely the proposed clearing will increase groundwater salinity.

The application area is located within a semi arid, warm Mediterranean environment with an average annual rainfall of 400 millimetres. Given this, and the distance to the closest watercourse, it is unlikely the proposed clearing will result in significant changes to surface water flows.

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

Methodology

GIS Databases
-Hydrography, linear
-Groundwater Salinity
-NWLRA, Current Extent of Native Vegetation
-Mean Annual Rainfall

(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 an average annual rainfall of 400 millimetres.

A flora and fauna survey over the application area described the soils as gravelly lateritic loams and clays, in a landscape of flats and gentle slopes (EnviroWorks Consulting, 2012).

Considering the above and the size of the area to be cleared (1.7 hectares) in relation to the amount of vegetation remaining in the surrounding area (80 per cent within a 10km radius), the proposed clearing is not likely to increase the potential for flooding and is not likely to be at variance to this Principle.

Methodology References:
-EnviroWorks Consulting (2012)

GIS Databases:
-Mean Annual Rainfall
-Topographic Contours, Statewide

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

Comments

The application area is partially located on Lot 333 on Deposited Plan 218379 (Reserve 42908) which is reserved to the Shire of Kondinin for the purpose of gravel.

The application area is within the Ballardong People's registered native title claim area. Notification of this clearing permit application was made to the Ballardong People and their representatives, the South West Aboriginal Land and Sea Council (SWALSC).

It has been advised that impacts on priority flora species Acacia sp. be reduced through the utilisation of fresh overburden and topsoil from new clearing in the rehabilitation of older worked areas.

No submissions from the public have been received.

Methodology References:
GIS Databases:
-Native Title Claims Registered with the NNTT

GIS Databases:
-Native Title Claims Registered with the NNTT

4. References

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

EnviroWorks Consulting (2012) Level 1 Flora Survey and Fauna Habitat Assessment - Gravel Pits, Forrestania. Additional information for CPS 5053/1 - Shire of Kondinin. DEC Ref A503291.

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.

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., Beeston, G.R., and Hopkins, A.J.M. (2001), Native Vegetation in Western Australia. Technical Report 249. Department of Agriculture Western Australia, South Perth.

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)