GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6566/1
Permit Holder:	Shire of Jerramungup
Duration of Permit:	26 March 2016 – 26 March 2031

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 gravel and sand extraction.

2. **Land on which clearing is to be done**
   Lot 2016 on Deposited Plan 213673, Jerramungup
   Lot 2067 on Deposited Plan 185063, Jerramungup

3. **Area of Clearing**
   The Permit Holder must not clear more than 3.8 hectares of native vegetation within the area cross-hatched yellow on attached Plan 6566/1.

4. **Clearing not authorised**
   The Permit Holder shall not clear any native vegetation after 26 March 2021.

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.

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; and
   (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

7. Avoid, minimise etc.

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. 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) at an *optimal time* within 12 months following completion of extraction, *revegetate* and *rehabilitate* the areas 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;
    (ii) ripping the ground on the contour to remove soil compaction;
    (iii) ripping the pit floor and contour batters within the extraction site; and
    (iv) laying the vegetative material and topsoil retained under condition 8(a) on the cleared areas.
(c) within 24 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 8(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 8(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 8(c)(ii) of this permit, the Permit Holder shall repeat condition 8(c)(i) and 8(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 8(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 8(c)(ii), the CEO may require the Permit Holder to undertake additional *planting* and *direct seeding* in accordance with the requirements under condition 8(c)(ii).

PART III - RECORD KEEPING AND REPORTING

9. 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 size of the area cleared (in hectares);
  (v) the purpose for which clearing was undertaken; and
  (vi) the date the extraction operations ceased.

(b) In relation to the *revegetation* and *rehabilitation* of areas pursuant to condition 8 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.

10. Reporting

(a) The Permit Holder must provide to the CEO on or before 31 December of each year, a written report:
  (i) of records required under condition 9 of this Permit; and
  (ii) concerning activities done by the Permit Holder under this Permit between 1 July to 30 June of the preceding financial year.

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

(c) Prior to 26 December 2030, the Permit Holder must provide to the CEO a written report of records required under condition 9 of this Permit where these records have not already been provided under condition 10(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;

environmental specialist means a person 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, or who is approved by the CEO as a suitable environmental specialist.

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 50 kilometres and the same Interim Biogeographic Regionalisation for Australia (IBRA) subregion 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;

optimal time means the period from April to May for undertaking *direct seeding*, and the period from May to June for undertaking *planting*;

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.

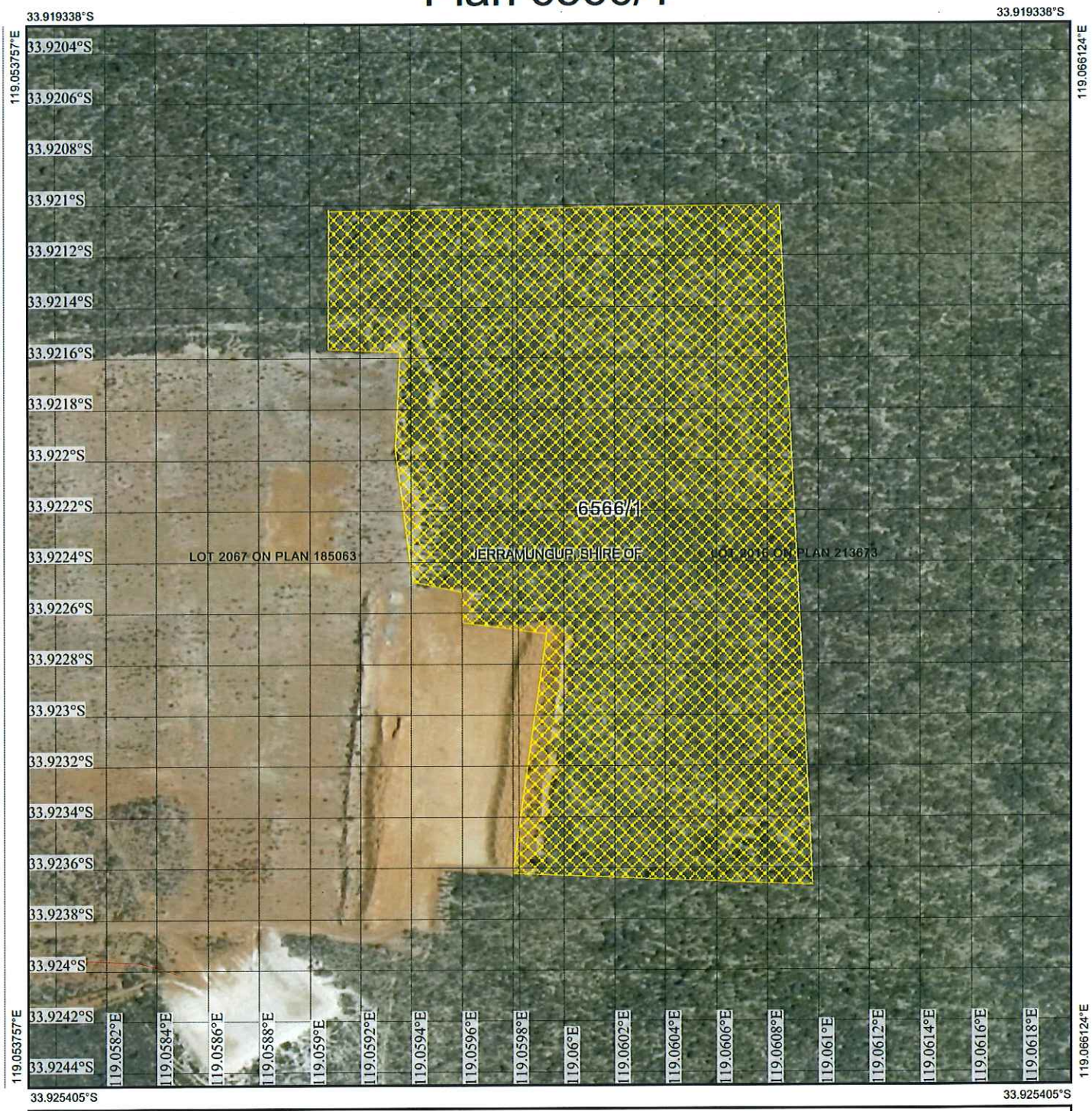
weed/s means any plant:
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned.

J Widenbar
A/SENIOR MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

25 February 2016

Plan 6566/1



Legend

- Roads
- Imagery
- Clearing Instruments Activities
- Local Government Authority
- Cadastre

N

0 100m

1:2,000

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

..... Date 25/2/2016

J Widenbar

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986

GOVERNMENT OF WESTERN AUSTRALIA

Government of Western Australia
Department of Environment Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 6566/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Jerramungup

1.3. Property details

Property: LOT 2067 ON PLAN 185063, JERRAMUNGUP
LOT 2016 ON PLAN 213673, JERRAMUNGUP
Colloquial name: Charmichael Road Recreation and Gravel Reserve
Local Government Authority: JERRAMUNGUP, SHIRE OF
DER Region: South Coast
DPaW District: ALBANY
LCDC: JERRAMUNGUP
Localities: JERRAMUNGUP

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 25 February 2016
Reasons for Decision: The application has been assessed against the clearing principles, planning instruments and other matters in accordance with s.51O of the Environmental Protection Act 1986, and it has been concluded that the proposed clearing is not likely to be at variance to clearing principles (a), (b), (c), (d), (e), (g), (h) and (i) and is not at variance to principles (f) and (j).

Through assessment it has been determined that the proposed clearing may increase the risk of weeds being introduction or spread into the surrounding native vegetation. Weed management measures will minimise impacts to adjacent vegetation.

The purpose of the clearing is consistent with the reservation of the area for gravel. Given the proposed material extraction is a temporary land use, post-extraction rehabilitation will assist in mitigating any long term impacts to environmental values of the area.

State policies and other relevant policies have been taken into consideration in the decision to grant a clearing permit.

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 940: Mosaic: Shrublands; mallee scrub, black marlock / Shrublands; tallerack mallee-heath (Shepherd et al, 2001)	The application is to clear 3.8 hectares of native vegetation within Lot 2016 on Deposited Plan 213673 and Lot 2067 on Deposited Plan 185063, Jerramungup, for the purpose of extracting gravel and sand. The application has been reduced during the assessment process from 9.8 hectares, comprised of two proposed extraction sites and a new access track. The applicant has removed the second proposed extraction site, approximately 500 metres northwest of the application area, and the access	Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994) To Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994)	The vegetation condition and description was determined from aerial photography and a flora and fauna survey conducted between 22 August and 18 October 2015 (Elson, 2015). The vegetation under application is largely intact with disturbance evident in the form of small tracks that run through the proposed clearing area and a bushfire reported to have occurred in January 2008 (Elson, 2015). The application area is located adjacent and to the east of an existing gravel pit and is approximately 3.8

	track from the application in order to minimise the impact of the proposed clearing on biodiversity and fauna habitat values.	hectares in size. The vegetation is described as being mostly comprised of tallerack mallee shrublands with *Eucalyptus pleurocarpa*, *Hakea corymbosa*, *H. laurina* and *Lambertia inermis* and mallee over heath. The area supports numerous proteaceous species including *Petrophile fastigiata*, *Lambertia inermis*, *Isopogon trilobus*, *Grevillea concinna* as well as *Banksia nutans* and *B. cirsioides* (Elson, 2015). Elson (2015) reported the area is regenerating after a hot intense summer fire in recent years. The tallerack mallee shrubland and mallee over heath vegetation types within the application area are well represented throughout the wider surrounding surveyed area (Elson, 2015).

3. Assessment of application against clearing principles

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

Comments

Proposed clearing is not likely to be at variance to this Principle

The reduced application is to clear 3.8 hectares of native vegetation within Lot 2016 on Deposited Plan 213673 and Lot 2067 on Deposited Plan 185063, Jerramungup, for the purposes of extracting gravel and sand.

The application has been reduced during the assessment process from 9.8 hectares, comprised of two proposed extraction sites and a new access track. The applicant has removed one extraction site and the access track from the application in order to minimise the impact of the proposed clearing on biodiversity and fauna habitat values.

The vegetation under application is considered to be in excellent to good (Keighery, 1994) condition.

Four rare and 15 priority flora species have been recorded within ten kilometres of the area under application (local area). Several of these species have been recorded within the same combination of vegetation and soil types as mapped over the application area. A flora and fauna survey was conducted between 22 August and 18 October 2015 to gather information on habitat structure and individual plant species, as well as to identify and map any conservation significant flora that may occur within or beyond the application area (Elson, 2015). The survey utilised meandering transects and twelve 5 x 5 metre quadrats that covered the original application areas and immediate surroundings (Elson, 2015).

A rare yellow-flowered perennial herb that flowers from September to early October has been recorded nine times within approximately five kilometres of the application area. Four records are within 1.8 kilometres of the application area, within the same tract of vegetation. The nearest record is approximately 1.1 kilometres northeast of the application area, on the same combination of mapped vegetation and soil types as the area proposed to be cleared. The Department of Parks and Wildlife (Parks and Wildlife, 2015) advised this species has been largely recorded from heath and mallee-heath, growing in sandy clay and clay soils. The survey was conducted at an appropriate time of year to identify this species and described the soils of the application area as loamy sand over gravel (Elson, 2015), which is different to the soil types usually associated with this species. Elson (2016) has advised the flora survey was conducted with a key objective to identify listed flora and did not record any populations of this species within the application area. Considering the above, the proposed clearing is considered unlikely to impact upon this rare flora species.

Considering the soils and habitats described within the application area (Elson, 2015), the vegetation proposed to be cleared is unlikely to provide suitable habitat for priority flora species *Chorizema carinatum* (P3), *C. ulotropis* (P4), or *Eucalyptus calyerup* (P1). *C. carinatum* and *C. ulotropis* inhabit different soil types to those described in the application area (Western Australian Herbarium, 1998-) and *E. calyerup* occurs around rock outcrops (Parks and Wildlife, 2015) which is a habitat type not identified in the survey.

Priority flora *Acacia brachyphylla var. recurvata* (P3) and *Desmocladus biformis* (P3) have been recorded from similar habitats to those within the application area (Western Australian Herbarium, 1998-). While the vegetation proposed to be cleared may represent suitable habitat for these species they were not recorded in the flora survey. In addition, the proposed clearing is unlikely to impact upon the maintenance of the range or conservation status of these species.

The flora and fauna survey found the application area to support a low faunal assemblage, suspected to be due to a singular habitat system supporting tallarack over open shrubland and impacts from a fire in 2008 (Elson, 2015). No conservation significant fauna were recorded in this area.

The survey found the second proposed extraction site, approximately 500 metres northwest of the application

area, to have high floristic diversity and a rich and diverse faunal assemblage, including fauna of conservation significance (Elson, 2015). The survey indicated that the areas of Proteaceae rich communities found in and around this area were the key components in supporting a rich and diverse range of bird species (Elson, 2015) and recommended it not be cleared due to its high conservation values. The applicant removed this area from the original application.

The survey noted that there are several distinct habitat systems including a granite outcrop to the southeast of the application area, which supports healthy populations of western whipbirds (*Psophodes nigrogularis*), shy heathwrens (*Hylacola cauta*) and diverse reptile populations (Elson, 2015). Elson (2015) therefore recommended access to the application area should be via Carmichael Road, down the western side of the reserve, as creating a new pathway from the east may increase disturbance to this area. The applicant removed the new access track from the original application area and has advised access will be via the existing gravel pit.

The survey also found the rehabilitated sites within the core gravel reserve to be an important breeding site for three pairs of western whipbird, with nests located in mature healthy *Banksia alliacea* shrubs growing amongst dense vegetation (Elson, 2015). Malleefowl (*Leipoa ocellata*) were also identified feeding on the fallen seeds of *Acacia cyclops* within the rehabilitated site of the gravel reserve (Elson, 2015).

There have been no priority or threatened ecological communities recorded within the local area.

Given the application area is part of a large (approximately 40,000 hectares) tract of native vegetation that contains areas of high biodiversity value, the proposed clearing may increase the risk of weeds being introduced or spread. Invasive flora species can decrease the biodiversity value of an area, as they out-compete native vegetation for available resources, contribute to land degradation and increase the frequency and intensity of fires (DEC, 2011). Potential impacts to biodiversity nearby to the application area as a result of the proposed clearing may be minimised by the implementation of weed management practices.

Considering the above, the vegetation proposed to be cleared is unlikely to represent high biodiversity value on a local or regional scale and the proposed clearing is not likely to be at variance to this principle.

Methodology

References:
DEC (2011)
Elson (2015)
Elson (2016)
Keighery (1994)
Parks and Wildlife (2007-)
Parks and Wildlife (2015)
Western Australian Herbarium (1998-)

GIS Databases:
-SAC Bio Datasets (Accessed December 2015)

(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

Proposed clearing is not likely to be at variance to this Principle

Five fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* (WC Act) have been recorded within the local area (ten kilometre radius) including chuditch (*Dasyurus geoffroii*), red-tailed phascogale (*Phascogale calura*), malleefowl (*Leipoa ocellata*), Carnaby's cockatoo (*Calyptorhynchus latirostris*) and bilby (*Macrotis lagotis*) (Parks and Wildlife, 2007-).

The application area is within a large tract of remnant vegetation comprising an area of approximately 40,000 hectares. Aerial imagery indicates the majority of this vegetation may be in similar or better condition to the vegetation proposed to be cleared.

Malleefowl occurs in shrublands and low woodlands that are dominated by mallee vegetation (DotE, 2015a). There has been such a significant decline in malleefowl numbers that the species is now listed as vulnerable under the WC Act and vulnerable under the federal *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). This decline has resulted from loss of vegetation due to clearing for agricultural purposes, fox predation and the degradation of habitat by fire (DotE, 2015a). Malleefowl require a sandy substrate and abundance of leaf litter to build mounds for roosting purposes (DotE, 2015a). A flora and fauna survey of the application area and surrounding vegetation was conducted between 22 August and 18 October 2015. It recorded malleefowl feeding on the fallen seeds of *Acacia cyclops* within the rehabilitated site of the gravel reserve and an inactive malleefowl mound was also observed outside of the area proposed to be cleared (Elson, 2015). While the application area may provide supporting habitat for mallefowl, considering the extent of surrounding vegetation in similar or better condition the proposed clearing is unlikely to significantly impact mallefowl use of the area.

According to the EPBC Act referral guidelines for Western Australia's three threatened black cockatoo species, the application area is within the breeding range for Carnaby's cockatoo (SEWPAC, 2012). This species is listed as endangered under the WC Act and EPBC Act. There is a confirmed Carnaby's cockatoo breeding area mapped approximately 25 kilometres northwest of the application area and the species has been recorded in the local area. This species forages on 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 (Valentine and Stock, 2008). Based on the mapped vegetation type present within the proposed clearing area, the vegetation under application is likely to provide suitable foraging habitat for Carnaby's cockatoo and the flora and fauna survey recorded the presence of this species in the rehabilitated gravel pit areas and outside of the application area (Elson, 2015). No potential breeding trees were reported within the surveyed area. While the application area may represent suitable feeding habitat for Carnaby's cockatoo, considering the extent of surrounding vegetation in similar or better condition the proposed clearing is unlikely to significantly impact this species.

It is estimated that less than 10,000 chuditch remain in the wild (DEC, 2012). Approximately 75 per cent of these occur in varying densities in jarrah (*Eucalyptus marginata*) forests and woodlands in the south-east corner of Western Australia, and in woodlands, mallee shrublands and heaths along the south coast, east of the Ravensthorpe area (DEC, 2012). Given the vegetation types and condition, the application areas may provide suitable habitat for this species, however the flora and fauna survey did not record evidence of its presence (Elson, 2015). Considering the extent of surrounding vegetation in similar or better condition the proposed clearing is unlikely to significantly impact this species.

Bilbies were formerly known to occupy habitat ranging from eucalyptus and acacia woodlands in the Wheatbelt of Western Australia to triodia grasslands in the desert regions (DotE, 2015b). Bilbies are now only found in areas where foxes do not occur or are not abundant; these include the driest and least fertile parts of their former range (DotE, 2015b). The area under application is outside of the known range of the current bilby population (DotE, 2015b).

The red-tailed phascogale now persists only in the far southwest of Western Australia, typically in remnant woodlands where mature wandoo (*Eucalyptus wandoo*) and rock sheoak (*Allocasuarina huegeliana*) are adjacent, as these habitats provide an abundance of hollows and a continuous canopy (Short et al., 2011). The application area is outside of the known range of the red-tailed phascogale and, based on the mapped vegetation types present, it is unlikely to comprise suitable habitat for this species.

Elson's (2015) survey found the application area to support a low faunal assemblage, with nests of only three of the 53 bird species recorded nesting in the survey area found in this area. It proposed the low faunal assemblage in the application area to be due to a singular habitat system supporting tallarack over open shrubland and impacts from a fire in 2008 reducing the quality of habitat (Elson, 2015).

The flora and fauna survey found the rehabilitated sites within the core gravel reserve to be an important breeding site for three pairs of western whipbird (*Psophodes nigrogularis*), with nests located in mature healthy *Banksia alliacea* shrubs growing amongst dense vegetation (Elson, 2015).

The survey reported the second proposed extraction site, approximately 500 metres northwest of the application area, provides habitat for a diverse range of fauna, including conservation significant species: Carnaby's cockatoo, malleefowl, western whipbird and western brush wallaby (*Macropus irma*, P4) (Elson, 2015). The survey indicated that the areas of Proteaceae rich communities found in and around this area were the key components in supporting a rich and diverse range of bird species (Elson, 2015). Elson (2015) therefore recommended this area not be cleared due to its high conservation values. The applicant removed this area from the original application.

Elson (2015) noted that there are several distinct habitat systems including a granite outcrop to the southeast of the application area, which supports healthy populations of western whipbirds, shy heathwrens (*Hylacola cauta*, not listed) and diverse reptile populations. Elson (2015) therefore recommended access to the application area should be via Carmichael Road, down the western side of the reserve, as creating a new pathway from the east may increase disturbance to this area. The applicant removed the access track from the original application and has advised the area will be accessed via the existing gravel pit.

Given the above, the vegetation proposed to be cleared is unlikely to represent significant habitat for native fauna and the proposed clearing is not likely to be at variance to this principle.

Methodology

References:
DEC (2012)
DotE (2015a)
DotE (2015b)
Elson (2015)
Parks and Wildlife (2007-)
SEWPAC (2012)
Short et al. (2011)
Valentine and Stock (2008)

GIS Databases:
-SAC Bio Datasets (Accessed December 2015)

(c) Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, rare flora.

Comments

Proposed clearing is not likely to be at variance to this Principle
There are records of four rare flora species within the local area (ten kilometre radius).

Of the four species identified, one has been recorded within the same combination of soil and vegetation type as mapped over the application area. This species is listed as vulnerable under the *Wildlife Conservation Act 1950* (WC Act) and the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). It is a tuberous perennial herb, with yellow flowers, growing between 0.15-0.25 metres high (Western Australian Herbarium, 1998-). This species has been recorded flowering from September to early October (Parks and Wildlife, 2015).

This species has been recorded nine times within approximately five kilometres of the application area, all of which are on the same mapped vegetation type as the application area. Four records are within 1.8 kilometres and within the same tract of vegetation as the application area. The nearest record of this species is approximately 1.1 kilometres northeast of the application area, on the same combination of mapped vegetation and soil types as the area proposed to be cleared. Parks and Wildlife (2015) advised this species has been largely recorded from heath and mallee-heath, growing in sandy clay and clay soils.

A flora and fauna survey was conducted between 22 August and 18 October 2015 to gather information on habitat structure and individual plant species, as well as to identify and map any priority listed flora that may occur within or beyond the application area (Elson, 2015). The survey utilised meandering transects and twelve 5 x 5 metre quadrats that covered the application areas and immediate surroundings (Elson, 2015). Elson (2016) has advised that the flora survey was conducted with a key objective to identify listed flora and did not record any populations of this species within the application area.

The survey was conducted at an appropriate time of year to identify this species and described the soils of the application area as loamy sand over gravel (Elson, 2015), which is different to the usual soil types associated with this species. Therefore, the proposed clearing is considered unlikely to impact upon this rare flora species.

Considering the habitat requirements of the remaining three species of rare flora, the application area does not represent suitable habitat for these species.

Considering the above, the proposed clearing is unlikely to impact upon rare flora and is not likely to be at variance to this principle.

Methodology

References:
Elson (2015)
Elson (2016)
Parks and Wildlife (2015)
Western Australian Herbarium (1998-)

GIS Databases:
-SAC Bio Datasets (Accessed December 2015)

(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

Proposed clearing is not likely to be at variance to this Principle
There are no threatened ecological communities mapped within the local area (ten kilometre radius). A flora and fauna survey (Elson, 2015) did not indicate the presence of any threatened ecological communities within or surrounding the application area.

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

Methodology

References:
Elson (2015)

GIS Databases:
-SAC Bio Datasets (Accessed December 2015)

(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

Proposed clearing is not likely to be at variance to this Principle
The vegetation type mapped within the application area is Beard vegetation association 940 which has 43 per cent of its pre-European extent remaining within the Esperance Plains bioregion (Government of Western Australia, 2014). Aerial imagery indicates there is approximately 35 per cent native vegetation remaining within the local area (ten kilometre radius).

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). Beard vegetation association 940 is well represented within the bioregion and is above the target level of 30 per cent. The Shire of Jerramungup retains approximately 45 per cent of its pre-European vegetation and is therefore also above the recommended threshold.

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 Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Esperance Plains	2,899,940	1,508,057	52	54
Shire*				
Shire of Jerramungup	648,536	291,057	45	48
Beard Vegetation Association in Bioregion*				
940	260,761	113,525	43	46

Methodology

References:
Commonwealth of Australia (2001)
Government of Western Australia (2014)

GIS Databases:
-NLWRA, Current Extent of Native Vegetation
-SAC Bio Datasets (Accessed December 2015)

(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

Proposed clearing is not at variance to this Principle

The nearest mapped watercourse is a minor, non-perennial watercourse approximately 185 metres to the east of the application area.

There are no wetlands mapped in the vicinity of the application area and a flora and fauna survey (Elson, 2015) did not identify riparian vegetation within or surrounding the vegetation proposed to be cleared.

Given the above, the proposed clearing will not impact upon vegetation growing in association within a watercourse or wetland and is not at variance to this clearing principle.

Methodology

References:
Elson (2015)

GIS Databases:
-Hydrography, Linear
-Hydrography, Hierarchy

(g) Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.

Comments

Proposed clearing is not likely to be at variance to this Principle

The soils within the application area are mapped as brown, grey cracking clays and similar shallow soils on the more rolling areas, with a complex association of soils often containing some ironstone gravels (Northcote el al, 1960-68).

Significant wind erosion is unlikely to occur from the proposed clearing given the extensively vegetated surrounding area.

The area under application is relatively flat with little change in elevation across the area. Considering this it is unlikely the proposed clearing will cause land degradation in the form of water erosion.

As there are no wetlands or significant watercourses within the application area, land degradation in the form of waterlogging is unlikely to result from the proposed clearing. Additionally, the proposal is for sand and gravel extraction therefore the soils present within the applied area are permeable and unlikely to hold moisture.

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

Methodology

References:
Northcote et al. (1960-68)

GIS Databases:
-Hydrography, Linear
-Hydrography, Hierarchy
-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

Proposed clearing is not likely to be at variance to this Principle

The Fitzgerald River National Park is located approximately 4.2 kilometres east of the application area. Considering this separation distance it is unlikely the proposed clearing will impact on the environmental values of the National Park.

The application area is unlikely to act as a corridor or linkage to facilitate the movement of fauna between areas of vegetation as large areas of remnant vegetation in an equal or better condition remain within the surrounding area.

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

Methodology

GIS Databases:
-Parks and Wildlife 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

Proposed clearing is not likely to be at variance to this Principle

The closest major watercourse to the application area is the Gairdner River situated approximately 4.6 kilometres to the west. There is a minor, non-perennial watercourse mapped approximately 185 metres to the east of the application area, however a flora and fauna survey (Elson, 2015) did not identify riparian vegetation within or surrounding the application area. There are several other minor, non-perennial watercourses mapped within the local area (ten kilometre radius).

The application area is within a large tract of remnant vegetation comprising an area of approximately 40,000 hectares. Aerial imagery indicates the majority of this vegetation may be in similar or better condition to the vegetation proposed to be cleared.

The proposal is for sand and gravel extraction therefore the soils present within the applied area are permeable and unlikely to hold moisture.

Considering the above the proposed clearing of 3.8 hectares is unlikely to impact ground or surface water quality and the proposed clearing is not likely to be at variance to this principle.

Methodology

References:
Elson (2015)

GIS Databases:
-Hydrography, Hierarchy
-Hydrography, Linear
-Rainfall, Mean Annual
-Salinity, Groundwater

(j) Native vegetation should not be cleared if clearing the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

Comments

Proposed clearing is not at variance to this Principle

The closest major watercourse to the application area is the Gairdner River situated approximately 4.6 kilometres west. There is a minor, non-perennial watercourse mapped approximately 185 metres to the east of the application area, however a flora and fauna survey (Elson, 2015) did not identify riparian vegetation within or surrounding the application area. There are several other minor, non-perennial watercourses mapped within the local area (ten kilometre radius).

The application area is within a large tract of remnant vegetation comprising an area of approximately 40,000 hectares. Aerial imagery indicates the majority of this vegetation may be in similar or better condition to the vegetation proposed to be cleared.

The proposal is for sand and gravel extraction therefore the soils present within the applied area are permeable and unlikely to hold moisture.

Considering the above the proposed clearing of 3.8 hectares will not alter the local hydrology or cause or exacerbate the incidence or intensity of flooding.

The proposed clearing is not at variance to this principle.

Methodology

References:
Elson (2015)

GIS Databases:
-Hydrography, Linear
-Hydrography, Hierarchy

Planning instruments and other relevant matters.

Comments

The application has been reduced during the assessment process from 9.8 hectares, comprised of two extraction sites and a new access track. The applicant removed proposed extraction Site 2 and the access track from the original application area in order to minimise the impact of the proposed clearing on biodiversity and fauna habitat values.

Lots 2016 and 2067 are reserved for gravel.

The area under application is subject to three native title claims. The claimants and their representing bodies have been notified of the proposed clearing. A response has been received from the South West Aboriginal Land and Sea Council (2015) who represents two of the native title claimants. The Council noted that the area is a culturally sensitive area in terms of Aboriginal Heritage for its clients and requested that an Aboriginal Heritage survey be conducted over the application area and monitors be present during the clearing process (South West Aboriginal Land and Sea Council, 2015). The Council advised that monitoring the clearing process is important as there is a possibility that Aboriginal remains, artefacts or other items may be disturbed during the course of the clearing (South West Aboriginal Land and Sea Council, 2015). The applicant has been advised to contact the South West Aboriginal Land and Sea Council to discuss this further.

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

Methodology

References:
South West Aboriginal Land and Sea Council (2015)

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