

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 7373/1

File Number:

DER2016/001740

Duration of Permit: From 16 May 2017 to 16 May 2019

PERMIT HOLDER

Christian Greig Jodyne May Greig

LAND ON WHICH CLEARING IS TO BE DONE

Lot 21 on Deposited Plan 58512, Namban

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 20 hectares of native vegetation within the area hatched yellow on attached Plan 7373/1.

CONDITIONS

1. 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
- (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.

DEFINITIONS

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

dieback means the effect of Phytophthora species on native vegetation;

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

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

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.

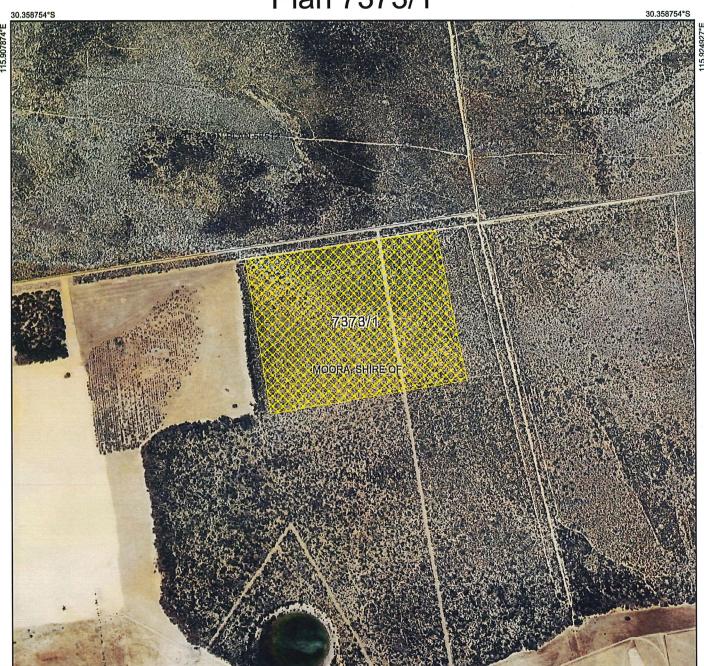
James Widenbar

A/SENIOR MANAGER

CLEARING REGULATION

Officer delegated under Section 20 of the Environmental Protection Act 1986

20 April 2017



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Clearing Instruments Activities

Local Government Authority

Local Government Authority

1:8,684

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Authority

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

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115.907874°E



Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.:

7373/1

Permit type:

Area Permit

1.2. Applicant details

Applicant's name:

Mrs Jodyne May Greig Mr Christian Greig

1.3. Property details

Property:

Localities:

LOT 21 ON DEPOSITED PLAN 58512, NAMBAN

Local Government Authority:

MOORA, SHIRE OF Midwest

DER Region: DPaW District:

MOORA

NAMBAN

1.4. Application

Clearing Area (ha)

No. Trees

Method of Clearing

For the purpose of:

Mechanical Removal

Grazing & pasture

1.5. Decision on application

Decision on Permit Application:

Decision Date:

Reasons for Decision:

Granted 20 April 2017

The clearing permit application was received on 16 November 2016. This application was originally for a 65.7 hectare area which included areas of *Banksia* woodland that the preliminary assessment identified to contain significant habitat for Carnaby's cockatoo, be representative of the *Banksia* Woodlands of the Swan Coastal Plain TEC and may contain rare flora. The applicant requested to amend the application to the current 20 hectare area to avoid potential imapcts.

The amended application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 510 of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing may be at variance to principles (g) and (h) and is not likely to be at variance to any of the remaining clearing principles.

The Delegated Officer determined that the proposed clearing may impact the environmental values of remnant vegetation protected by a conservation covenant (which is contiguous with Watheroo National Park) through the possible introduction or spread of weeds and dieback. Weed and dieback management measures will minimise impacts to this conservation area.

The Delegated Officer determined that the proposed clearing may cause appreciable land degradation in the form of wind erosion. The Commissioner of Soil and Land Conservation advised that the risk of wind erosion can be managed through the combination of timing of operations, provisions of wind breaks, and careful crop and pasture management. The applicant has committed to retaining wind breaks around the application area and it is noted that the application area is surrounded by native vegetation that will insist in minimising risk of wind erosion.

In deciding to grant a clearing permit the Delegated Officer took into consideration measures to avoid impacts, specialist advice and management measures proposed.

2. Site Information

Existing environment and information

2.1.1. Description of the native vegetation under application

Vegetation Description The application area has been mapped as Beard vegetation association 1036 which is described as low woodland; Banksia prionotes (Shepherd et al., 2001).

Clearing Description The applicant proposes to clear 20 hectares of native vegetation within Lot 21 on Deposited Plan 58512, Namban, for the purpose of grazing and grain production.

Vegetation Condition Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994).

To Completely Degraded; No longer intact,

completely/almost

completely without

native species (Keighery, 1994).

Comment

The application area is in a completely degraded to degraded (Keighery, 1994) condition and consists predominately of Callitris pyramidalis. Aerial imagery indicates that this area was cleared pre 1998. The north western corner of the application area is dominated by *Eremaea* pauciflora and Kunzea sp. is dominant in the eastern corner (DER, 2016).

The condition and structure of the vegetation within the application area was determined via a site inspection undertaken by the Department of Environment Regulation (DER) on 14 December 2016 (DER, 2016).

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 applicant proposes to clear 20 hectares of native vegetation within Lot 21 on Deposited Plan 58512, Namban, for the purpose of grazing and grain production. The application area is in a completely degraded to degraded (Keighery, 1994) condition and consists predominately of Callitris pyramidalis (DER, 2016).

Seven priority and three rare flora species have been recorded within the local area (10 kilometre radius). Based of vegetation and soil types mapped and observed within the application area, suitable habitat for the three rare flora species and three of the priority species is not present within the application area.

The remaining four priority flora species are all priority 3. Priority 3 species are generally known from collections from several different localities not under imminent threat.

As discussed in Principle (b), four 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, with habitat for the shield-backed trapdoor spider, malleefowl and bilby not present within the application area.

Given the completely degraded to degraded (Keighery, 1994) condition of the application area it is unlikely to support priority flora or conservation significant fauna.

No priority ecological communities have been recorded within the local area.

On 16 September 2016, the Commonwealth Department of the Environment and Energy (DotEE) listed Banksia Woodlands of the Swan Coastal Plain ecological community as endangered under the Environmental Protection and Biodiversity Conservation Act 1999 (EPBC Act). The mapping of this threatened ecological community (TEC) includes the application area. Given the condition and composition of the vegetation in the application area it is not representative of this TEC.

Given the above, the application area is not likely to comprise a high level of biodiversity and is therefore not likely to be at variance to this Principle.

Methodology

References:

DER (2016) Keighery (1994)

GIS Datasets:

SAC Bio Datasets - accessed December 2016

(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

Four fauna species listed as rare or likely to become extinct under the WC Act have been recorded within the local area (10 kilometre radius), being; Carnaby's cockatoo (Calyptorhynchus latirostris), shield-backed trapdoor spider (Idiosoma nigrum), malleefowl (Leipoa ocellata) and bilby (Macrotis lagotis) (Parks and Wildlife, 2007-).

Carnaby's cockatoo is listed as endangered under the Commonwealth EPBC Act. Black Cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). These species nest in hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powder bark, bullich and blackbutt (Commonwealth of Australia, 2012).

Black Cockatoos have a preference for foraging habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by Proteaceous plant species such as *Banksia* sp., *Hakea* sp. and *Grevillea* sp. (Commonwealth of Australia, 2012).

Given the absence of Proteaceous species within the application area, this area is not significant foraging habitat for Carnaby's cockatoo.

The Shire of Moora is in an important Carnaby's cockatoo breeding area with 39 known breeding sites recorded (Roadside Conservation Committee, 2014).

No suitable habitat trees (trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 millimetres) were observed within the application area (DER, 2016).

The malleefowl is found in semi-arid to arid shrublands and low woodlands, especially those dominated by mallee and/or *Acacia*. A sandy substrate and abundance of leaf litter are required for breeding (National Malleefowl Recovery Team, 2016).

The bilby once occurred across 70 per cent of mainland Australia, but has now disappeared from up to 90 per cent of its historical range and occurs in fragmented populations in south-western Queensland, drier areas of the Northern Territory, and northern Western Australia (Pavey, 2006; Narayan et al., 2014). The preferred habitat for this species is mulga shrublands and spinifex grasslands.

The shield-backed trapdoor spider typically inhabits clay soils of eucalypt woodlands and *Acacia* vegetation, and relies heavily on leaf-litter and twigs to build its burrow (Main, 1996 and 2003; Threatened Species Scientific Committee, 2013).

Based on the habitat requirements for the above species the application area does not contain significant habitat for these fauna species.

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

Methodology

References:

Commonwealth of Australia (2012)

Main (1996) Main (2003)

Narayan et al.(2014)

National Malleefowl Recovery Team (2016)

Parks and Wildlife (2007-)

Pavey (2006)

Roadside Conservation Committee (2014)

Threatened Species Scientific Committee (2013)

(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

Three rare flora species have been recorded within the local area.

The first species grows on lateritic gravel and is only know from two road side populations in the Shires of Dandaragan and Victoria Plains (Western Australian Herbarium, 1998-).

The second rare flora species is found on skeletal soils over sandstone or laterite, and rocky hillslopes (Western Australian Herbarium, 1998-).

The third rare flora species grows on flat or elevated areas on a variety of sandy/gravelly loam soils. The majority of know populations occur on degraded roadsides (Threatened Species Scientific Committee, 2009).

Based on the known soil and vegetation types observed within the application area none of the abovementioned species are likely to occur within the application area.

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

Methodology

References:

Threatened Species Scientific Committee (2009)

Western Australian Herbarium (1998-)

GIS Datasets:

SAC Bio Datasets - accessed December 2016

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(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

As discussed in Principle (a), the Banksia Woodlands of the Swan Coastal Plain TEC is listed as endangered under the EPBC Act.

The *Banksia* Woodlands ecological community is restricted to areas in and immediately adjacent to the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, including the Dandaragan plateau. This coastal plain stretches from around Jurien Bay in the north, to Dunsborough in the south (DotEE, 2016).

This ecological community has undergone a decline of about 60 per cent in its original extent and almost all of the ecological community that remains, occurs as highly fragmented patches less than 10 hectares in size (DotEE, 2016).

This ecological community has a dominant *Banksia* component, which includes at least one of four key species—*Banksia attenuata* (candlestick banksia), *B. menziesii* (firewood banksia), *B. prionotes* (acorn banksia) and/or *B. ilicifolia* (holly-leaved banksia) (DotEE, 2016).

The ecological community provides habitat for many native plants and animals that rely on *Banksia* Woodlands for their homes and food. Remaining patches of the ecological community provide important wildlife corridors and refuges in a mostly fragmented landscape (DotEE, 2016).

The DotEE mapping of this ecological community includes the application area.

The application area is in a completely degraded to degraded (Keighery, 1994) condition and does not contain banksia species and therefore is not a representative of this ecological community.

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

Methodology

References:

DotEE (2016) Keighery (1994)

GIS Datasets:

SAC Bio Datasets - accessed December 2016

(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 likley to be at variance to this Principle

The application area is located within the Swan Coastal Plain Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 39 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2015).

The application area is mapped as Beard vegetation association 1036. This vegetation association has approximately 37 per cent of its pre-European extent remaining in the Avon Wheatbelt bioregion (Government of Western Australia, 2015). Approximately 51 per cent (16,166 hectares) of this vegetation association is held within conservation estate.

The Shire of Moora retains approximately 15 per cent (56,295 hectares) native vegetation.

Aerial imagery and available GIS datasets indicate that the local area retains approximately 38 per cent vegetation.

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).

Noting that the Shire of Moora contains less than the recommended threshold level of 30 per cent and given the completely degraded to degraded (Keighery, 1994) condition of the application area, it is not significant as a remnant in an area that has been extensively cleared.

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

	Pre- Europea n (ha)	Current Extent (ha)	Remaining (%)	Extent in Parks and Wildlife Managed Lands (%)
IBRA Bioregion*				
Swan Coastal Plain	1,501,22 2	579,162	39	37
Shire*				
Shire of Moora	375,698	56,295	15	25
Beard Vegetation Association in Bioregion*				
1036	85,526	31,698	37	51

Methodology

References:

Commonwealth of Australia (2001) Government of Western Australia (2015) Keighery (1994)

GIS Datasets:

Remnant vegetation - Mid West

(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 likely to be at variance to this Principle

No watercourses have been recorded within the application area.

A non-perennial lake has been recorded within approximately 550 metres of the application area. The applicant has fenced off this lake to prevent stock access. No riparian vegetation was observed within the application area during the site inspection conducted by DER officers (DER, 2016).

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

Methodology

References:

DER (2016)

GIS Databases: Hydrology, linear

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

Comments

Proposed clearing may be at variance to this Principle

Unpublished Department of Agriculture and Food Western Australia soil and land capability mapping indicates that the application area is largely comprised of Agaton 5 low dune phase, map unit 2222Ag_5a (Commissioner of Soil and Land Conservation (Commissioner), 2017). This map unit consists of low dunes with yellow or pale sands (Commissioner, 2017).

The application area lies to the west of the Darling fault over ancient marine sediments. The risk of salinity occurring as a result of the proposed clearing has been assessed to be low, despite brackish/saline lakes occurring on the property to the east south east of the application area (Commissioner, 2017).

The risk of water erosion is low due to the soil type and short slope lengths (Commissioner, 2017).

The Commissioner has advised that due to the combination of soil type and land forms, the risk of land degradation in the form of wind erosion was assessed to be high to very high once the protective vegetation cover is lost through the proposed clearing (Commissioner, 2017).

It is noted that the application area is surrounded by native vegetation, which will insist in minimising risk of wind erosion.

Given the high risk of wind erosion the proposed clearing may be at variance to this Principle.

The Commissioner has advised that the risk of wind erosion can be managed through the combination of timing of operations, provisions of wind breaks, and careful crop and pasture management (Commissioner, 2017). If these management practices are adopted then the risk of appreciable degradation occurring as a result of clearing will be minimised.

Methodology

References:

Commissioner (2017)

(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 may be at variance to this Principle

Four Department of Parks and Wildlife conservation areas are located within the local area, being;

Watheroo National Park – 3.4 kilometres north and west

Manaling Nature Reserve – 4.9 kilometres south east

Namban Nature Reserve - 5.0 kilometres east

Un-named Nature Reserve - 7.6 kilometres west

A conservation covenant exists over remnant vegetation in the two properties located 20 metres north of the application area. The area covered by this conservation covenant totals 1142.1 hectares and is contiguous with Watheroo National Park.

Given the proximity to the areas covered by the conservation covenant, the disturbance caused by the proposed clearing may increase the risk of weeds and dieback being spread into this conservation area.

The application area will support an ecological linkage which facilitates the movement between conservation reserves and remnants of native vegetation, however the proposed clearing will not sever this linkage as the property would retain approximately 225 hectares post clearing.

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

Methodology

GIS Datasets:

Department of 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

No watercourses have been mapped within the application area. A non-perennial lake has been recorded within approximately 550 metres of the application area. Given the porous nature of the sandy soils within the application area and the retention of a 550 metre buffer to the non-perennial lake, the proposed clearing is not likely to deteriorate the quality of surface water.

Groundwater salinity within the application area is mapped as 14,000 – 35,000 milligrams per litre (measured as Total Dissolved Solids). This level of groundwater salinity is considered to be highly saline to brine.

The Commissioner has advised that the risk of salinity occurring as a result of the proposed clearing has been assessed to be low, despite brackish/saline lakes occurring on the property to east south east of the application area (Commissioner, 2017).

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

Methodology

References:

Commissioner (2017)

GIS Datasets:

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

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

The chief soils within the application area are mapped as yellow earthy sands (Northcote et al., 1960-68).

Annual rainfall is 500 millilitres and evapotranspiration is 500 millilitres.

Given the porous nature of the soil and relatively low rain fall, the proposed clearing is not likely to cause, or exacerbate the incidence or intensity of flooding.

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

Methodology

References:

Northcote et al. (1960-68)

GIS Databases: Annual rainfall - Statewide Soils, statewide Hydrology, linear

Planning instruments and other relevant matters.

Comments

This application was originally for a 65.7 hectare area which included areas of very good (Keighery, 1994) condition *Banksia* woodland. A DER site inspection identified that the application area had three distinct areas based on vegetation condition and composition. The potential environmental impacts that were identified largely related to Area 2 and Area 3 and no potential environmental impacts were identified with Area 1. Area 3 and potentially 2 contained significant habitat for Carnaby's cockatoo, are representative of the *Banksia* Woodlands of the Swan Coastal Plain TEC and may contain rare flora. In a letter dated 21 March 2017, a Delegated Officer wrote to the applicant advising the preliminary assessment findings. The Delegated Officer requested information demonstrating the applicant's ability to avoid or minimise the impacts identified. In an email of 28 March 2017 the applicant requested to amend the application to the current 20 hectare area, being Area 1.

The application area is located within the Jurien Groundwater Area, which is an area proclaimed under the *Rights in Water and Irrigation Act 1914*. The Department of Water (DoW) advises that the applicants do not have a current groundwater licence, nor do they have an application in progress (DoW, 2016). It is further advised that for the intended land use of grazing and grain production a groundwater licence or a licence to construct a well may not be required (DoW, 2016).

During the site inspection conducted by DER officers on 14 December 2016, cattle were observed grazing within the application area. The applicant advised that there were approximately ten cows within the area. The applicant is advised that the definition of clearing as specified in the *Environmental Protection Act 1986* includes grazing of stock. The applicant should obtain a copy of DER's guideline "A Guide to grazing of native vegetation under Part V Division 2 of the Environmental Protection Act 1986" which sets out the requirements in relation to grazing.

The application was advertised in *The West Australian* newspaper on 5 December 2016 by DER inviting submissions from the public within a 21 day period.

One public submission was received in relation to this application. The submission raised concerns that the application area contains high biodiversity, habitat for Carnaby's cockatoo, the local area has been highly cleared and the proposed clearing may impact on connectivity between nature reserves (Submission, 2016). The issues raised in the submission have been addressed in clearing principles (a), (b), (e) and (h) above.

No Aboriginal Sites of Significance have been recorded within the application area.

Methodology

References: DoW (2016) Submission (2016)

GIS Databases: Aboriginal Register System Sites RIWI Act, Groundwater Areas

4. References

Commissioner of Soil and Land Conservation (Commissioner) (2017) Land degradation assessment report for Clearing Permit Application CPS 7373/1. Department of Agriculture and Food Western Australia (DER Ref: A1363262).

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. Department of Sustainability, Environment, Water, Populations and Communities, Canberra.

Department of Environment Regulation (DER) (2016) Site Inspection Report for Clearing Permit Application CPS 7373/1. Site inspection undertaken 14 December 2016 (DER Ref: A1363764).

Department of Parks and Wildlife (Parks and Wildlife) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed December 2016.

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Government of Western Australia (2015). 2015 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2015. WA Department of Parks and Wildlife, Perth.

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