GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 6808/1
Permit Holder:	City of Busselton
Duration of Permit:	12 March 2016 to 12 March 2021

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 constructing a mountain bike trail network.

2. **Land on which clearing is to be done**
   Lot 947 on Deposited Plan 240400, Dunsborough
   Lot 272 on Deposited Plan 190994, Dunsborough
   Lot 352 on Deposited Plan 56267, Dunsborough
   Lot 265 on Deposited Plan 218286, Dunsborough
   Lot 351 on Deposited Plan 56267, Naturaliste
   Cape Naturaliste Road reserve (PIN 11410887 and PIN 11410319), Dunsborough
   Sheens Road reserve (PIN 11410321), Dunsborough

3. **Area of Clearing**
   The Permit Holder must not clear more than 2 hectares of native vegetation within the area shaded yellow on attached Plan 6808/1.

4. **Application**
   This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

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

PART II – MANAGEMENT CONDITIONS

6. **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.

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

8. **Fauna management**

The permit holder shall ensure no clearing of *black cockatoo habitat tree/s* occurs, unless first approved by the CEO.

Definitions

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

black cockatoo habitat tree/s: means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 50 centimetres or greater;

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

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

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

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

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

11 February 2016

Plan 6808/1

Legend

- Coastline
- Imagery
- Clearing Instruments Activities
- Local Government Authority

N

0 500m

1:10,167

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

..... Date 11/2/2016

James Widenbar

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.: 6808/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: City of Busselton

1.3. Property details

Property: LOT 352 ON DEPOSITED PLAN 56267, DUNSBOROUGH
LOT 351 ON DEPOSITED PLAN 56267, NATURALISTE
LOT 272 ON DEPOSITED PLAN 190994, DUNSBOROUGH
LOT 265 ON DEPOSITED PLAN 218286, DUNSBOROUGH
ROAD RESERVE - 11410887, DUNSBOROUGH
ROAD RESERVE - 11410321, DUNSBOROUGH
ROAD RESERVE - 11410319, DUNSBOROUGH
LOT 947 ON DEPOSITED PLAN 240400, DUNSBOROUGH
Colloquial name: Cape Naturaliste Road and Sheens Road
Local Government Authority: BUSSELTON, CITY OF
DER Region: Greater Swan
DPaW District: BLACKWOOD
LCDC: Yallingup
Localities: DUNSBOROUGH

1.4. Application

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

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 11 February 2016
Reasons for Decision: The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with s51O of the *Environmental Protection Act 1986*, and it has been concluded that the proposed clearing may be at variance to Principle (h) and is not likely to be at variance to the remaining clearing principles.

Through assessment it has been determined that the clearing may impact the environmental values of the Meelup Regional Park through the direct clearing of native vegetation and through the introduction and spread of weeds and dieback. Weed and dieback management measures will minimise impacts to the environmental values of this conservation area.

The assessment identified that the clearing is long and narrow in nature with clearing being limited to the understory, with the overstorey to be retained. Habitat tree retention measures will assist in mitigating impacts to fauna. The clearing is unlikely to have any other significant environmental impacts.

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 1000 is described as: Mosaic: Medium forest; jarrah-marri / Low woodland; banksia / Low forest; teatree (Melaleuca spp.) (Shepherd et al, 2001).	The proposed clearing of two hectares of native vegetation is for the purpose of constructing a mountain bike trail network.	Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994). To Completely Degraded; No longer intact,	The condition and description of the vegetation was established through the Level 2 Flora and Vegetation Survey's undertaken by Onshore Environmental Pty Ltd in October 2012 and Webb in 2013 (Onshore Environmental Pty Ltd, 2013; Webb, 2013).

Beard vegetation association 3 is described as: Medium forest; jarrah-marri (Shepherd et al, 2001).

Mattiske vegetation Wr complex consists of woodland of *Corymbia calophylla-Eucalyptus marginata* subsp. *marginata* with closed heath of *Myrtaceae-Proteaceae-Papilionaceae* spp. on steep rocky slopes in the hyperhumid zone. (Mattiske and Havel, 1998).

Mattiske vegetation Ww2 complex consists of tall open forest of *Corymbia calophylla-Agonis flexuosa* on flats and valleys in perhumid and humid ones (Mattiske and Havel, 1998).

Mattiske vegetation W2 complex consists of open forest of *Corymbia calophylla-Allocasuarina decussata-Agonis flexuosa* on deeply incised valleys in perhumid and humid zones (Mattiske and Havel, 1998).

completely/almost completely without native species (Keighery, 1994).

The application area consists of three primary vegetation associations:

- Vegetation association 1: The majority of the application area (approximately 70 per cent) comprises of a low forest of *Corymbia maculata, Eucalyptus resinifera* and *Eucalyptus comuta* over open low scrub of *Kunzea ciliata, Acacia cyclops* and *Podalyria sericea.*
- Vegetation association 2: Approximately twenty five per cent of the application area consists of a low forest canopy dominated by *Eucalyptus marginata* and *Corymbia calophylla* over an open scrub layer of *Xanthorrhoea preissii* and *Spyridium globulosum* and low shrub layer of *Hibbertia hypericoides* and *Calothamnus sanguineus.*
- Vegetation association 3: The third vegetation association is predominantly devoid of native vegetation and supporting introduced weed species as low shrubs and herbs.

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 applicant proposes to clear up to two hectares of native vegetation within Lot 947 on Deposited Plan 240400, Lot 272 on Deposited Plan 190994, Lot 352 on Deposited Plan 56267, Lot 265 on Deposited Plan 218286, Dunsborough, Lot 351 on Deposited Plan 56267, Naturaliste, Cape Naturaliste Road reserve (PIN 11410887 and PIN 11410319) and Sheens Road reserve (PIN 11410321), Dunsborough, for the purpose of developing a mountain bike trail network. The proposed mountain bike trail network includes approximately 4.4 kilometres of proposed trails with a tread width ranging from 0.9 metres to 1.5 metres (Aurora Environmental Pty Ltd, 2015). Some locations of the network will require the construction of corners/berms, which will require a three metre tread width. In addition, approximately 11.2 kilometres of existing trails will be widened by one metre (Aurora Environmental Pty Ltd, 2015). In order to determine the maximum area of clearing required, a maximum tread width has been applied for the entire length of the proposed trails, resulting in a total clearing area of two hectares. There will be no trees removed during the proposed clearing, only the clearing of understorey vegetation will be required to facilitate the development of the network (Aurora Environmental Pty Ltd, 2015). The proposed works are located within an area of the Meelup Regional Park (zone 6) which has been previously disturbed by gravel extraction, landfill activities and dieback (Aurora Environmental Pty Ltd, 2015; Onshore Environmental Consultants Pty Ltd, 2013).

The vegetation under application has been mapped by Webb (2013) as jarrah (*Eucalyptus marginata)* and marri *(Corymbia calophylla)* open forests that occur on lateritic soils in the uplands and upper slopes. The flora and vegetation survey undertaken by Onshore Environmental Pty Ltd (2013) identified three vegetation associations within the application area. The majority (approximately 70 per cent) of the application area comprises of a low forest of spotted gum (*Corymbia maculata),* red mahogany (*Eucalyptus resinifera)* and yate (*Eucalyptus comuta)* over open low scrub of kunzea (*Kunzea ciliata),* red-eyed wattle (*Acacia cyclops)* and cape satin bush (*Podalyria sericea*) (Onshore Environmental Consultants Pty Ltd, 2013).

The vegetation proposed to be cleared ranges from a completely degraded to excellent (Keighery, 1994) condition, and can be described as a mosaic of intergrading vegetation condition (Aurora Environmental Pty Ltd, 2013). Approximately 70 per cent of the application area is considered to be in a good to degraded (Keighery, 1994) condition, 25 per cent in an excellent to good (Keighery, 1994) condition, and five per cent in a completely degraded (Keighery, 1994) condition (Onshore Environmental Consultants Pty Ltd, 2013).

A collective total of 219 flora taxa from 148 genera and 56 families were recorded during the Level 2 flora and vegetation survey undertaken by Onshore Environmental Consultants Pty Ltd (2013) in October 2012. Webb (2013) recorded an average taxa of 77 native species within the mapped jarrah and marri open forests that occur on lateritic soils. The closest priority flora is '*Acacia lateriticola glabrous variant* (B.R Maslin)' (priority 3) mapped approximately 535 metres north west of the application area. Suitable habitat may occur within the application area given the preferable soil type of this species (lateritic soils) is present on site. The Department of Parks and Wildlife (Parks and Wildlife, 2015a) has advised that the proposed clearing is not likely to adversely affect the long term survival of this species should it occur within the application area. In addition, no priority flora taxa were recorded within the application area during the survey undertaken by Onshore Environmental Consultants Pty Ltd (2013) which was appropriately timed during the optimum flowering period in October 2012.

The application area may provide suitable habitat for the forest red-tailed black cockatoo (*Calyptorhynchus banksii subsp. naso*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), Baudin's cockatoo (*Calyptorhynchus baudinii*), western ringtail possum (WRP) (*Pseudocheirus occidentalis*), rainbow bee-eater (*Merops ornatus*) and western false pipistrelle (*Falsistrellus mackenziei*). The proposed clearing is not likely to significantly impact on habitat for these species, given only the understorey vegetation will be removed, and the overstorey vegetation will be retained. In addition, vegetation of a better quality is located adjacent to the application area which provides suitable habitat for these species.

A dieback assessment carried out over the application area in November 2014 identified that *Phytophthora cinnamomi* dieback disease is present in the majority of the proposed clearing area which has likely resulted from extensive gravel extraction (Dieback Treatment Services, 2014).The distribution of dieback was surveyed and mapped during the assessment and mapped the majority of the application area as 'infested' with dieback and a very small percentage mapped as 'uninfested and unprotectable'.The proposed clearing has the potential to spread dieback into adjacent remnant vegetation given the presence of dieback within the application area. The flora survey has noted the presence of several weed species within the application area, which may also spread as a result of the proposed clearing. Weed and dieback management measures will assist in mitigating this risk.

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

Methodology

References:
Aurora Environmental Pty Ltd (2015)
Dieback Treatment Services (2014)
Keighery (1994)
Onshore Environmental Consultants Pty Ltd (2013)
Parks and Wildlife (2015a)
Webb (2013)

GIS Databases:
NLWRA, Current Extent of Native Vegetation
SAC Bio Datasets (Accessed January 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

A total of fifty four conservation significant fauna have been recorded within 10 kilometres of the area under application (Parks and Wildlife, 2007-). A Level 2 fauna survey of the Meelup Regional Park undertaken by NGH Environmental Pty Ltd in 2015 recorded a total of 103 fauna species, with eight species of conservation significance identified during the survey (NGH Environmental, 2015). Of the species recorded, six threatened fauna species listed under the *Wildlife Conservation Act 1950* (WC Act) may utilise the application area for foraging and breeding habitat. These species are; forest red-tailed black cockatoo (*Calyptorhynchus banksii subsp. naso*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and western ringtail possum (WRP) (*Pseudocheirus occidentalis*) listed as rare or likely to become extinct and rainbow bee-eater (*Merops ornatus*) listed as 'protected under international agreement' under the WC Act, and the western false pipistrelle (*Falsistrellus mackenziei)* listed as priority four by Parks and Wildlife.

Carnaby's cockatoo, Baudin's cockatoo and forest red-tailed black cockatoo forage on the seeds, nuts and flowers of a large variety of plants including proteaceous species (banksia, hakea, grevillea), as well as Allocasuarina and Eucalyptus species, marri and a range of introduced species (Valentine and Stock, 2008). The application area contains suitable foraging habitat for all three species of black cockatoos. Although suitable foraging habitat occurs within the area under application, it is not likely to provide significant foraging habitat given the long, narrow nature of the proposed clearing and that higher quality vegetation is located adjacent to the application area within the Meelup Regional Park.

Potential habitat trees for black cockatoo species have a diameter at average adult human chest height of greater than 50 centimetres. Suitable habitat trees generally contain dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna. The fauna survey undertaken by NGH Environmental Pty Ltd (2015) identified that hollow bearing trees suitable for hollow dependent fauna were fairly abundant within the area under application. The proposed clearing is not likely to significantly impact upon breeding habitat for the three species of black cockatoo given clearing is limited to the understorey, and large trees within the application area will be retained (Aurora Environmental Pty Ltd, 2015).

The vegetation under application consists of plant species favourable as WRP habitat including peppermint (*Agonis flexuosa*), jarrah and marri (Shedley and Williams, 2014). The fauna survey undertaken by NGH Environmental Pty Ltd in 2015 identified that the Meelup Regional Park is being actively utilised by WRP, with a total of 93 observations recorded during the survey period. The highest abundances of this species were recorded through the drainage lines and within inland sections of the park where taller, hollow bearing trees were more common and in coastal vegetation where peppermint trees were more dominant. Three WRP's were recorded within or directly adjacent to the application area (NGH Environmental Pty Ltd, 2015). It is not likely the proposed clearing will significantly impact upon habitat for this species, given the large trees within the application area will be retained. In addition, vegetation of a similar or better quality is located adjacent to the application area which would provide suitable habitat for this species.

The rainbow bee-eater occurs in numerous habitats including open forests and woodlands, shrublands, in cleared or semi-cleared habitats such as areas of human habitation and farmland. It prefers open, cleared or lightly-timbered areas that are often, but not always in close proximity to permanent water (Department of the Environment, 2015). The area under application may provide suitable habitat for this species given the vegetation type and its close proximity to watercourses. However, the proposed clearing is unlikely to impact upon the conservation status of this species given its highly mobile nature and the long, narrow nature of the application area.

Two individuals of western false pipistrelle were recorded during the fauna survey, with the closest record located approximately 50 metres east of the application area (NGH Environmental Pty Ltd, 2015). This species prefered habitat is within wet sclerophyll forest dominated by karri (*Eucalyptus diversicolor*), and in the high rainfall zones of the jarrah and tuart (*Eucalyptus gomphocephala*) forests. Marri, sheoak (*Casuarina heugeliana)* and peppermint trees are often co-dominant at its collection localities (Department of the Environment, 1999). The area under application contains species that are the preferred habitat for this species. However, given the large trees within the application area will be retained, the proposed clearing is not likely to impact on the conservation status of this species.

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

Methodology

References:
Aurora Environmental Pty Ltd (2015)
Department of the Environment (1999)
Department of the Environment (2015)
NGH Environmental Pty Ltd (2015)
Parks and Wildlife (2007-)
Shedley and Williams (2014)
Valentine and Stock (2008)

GIS Databases:
SAC Bio Datasets (Accessed January 2016)

(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 nine rare flora species that have been recorded within the local area (10 kilometre radius), and based on the preferred soil and vegetation characteristics of these species, there is the potential for three of these species to occur within the application area.

Two of the species recorded (Species A and Species B) occur in close proximity to the proposed trails, with Species A being the closest record located approximately 48 metres west of the application area. The preferable habitat for Species A is in marri and peppermint woodlands in well-drained lateritic and sandy soils (Brown et al, 1998-). Suitable habitat may occur within the application area, given the preferable soil and vegetation types of this species at the site. However, no rare flora taxa were recorded during the flora surveys undertaken by Webb (2013) and Onshore Environmental Consultants Pty Ltd (2013) which were conducted at the appropriate time of year for this species.

The closest record of Species B to the application area is located approximately 73 metres west of the site. This species occupies deep sandy soils amongst dense, low shrubs in banksia, jarrah and marri woodlands (Brown et al, 1998-). This species shares similar soil and vegetation types as the vegetation under application, therefore suitable habitat may be present within the application area. However, Parks and Wildlife (2015a) has advised that plants of this species have not been observed in a number of years within close proximity to the application area. Furthermore, no rare flora taxa were recorded during the flora surveys (Webb, 2013; Onshore Environmental Consultants Pty Ltd, 2013).

Species C is a mallee that grows on the crest of a near coastal ridge, in loamy granitic and lateritic soils. This species habitat consists of low, open marri and jarrah woodland, over low scrub of wiry wattle (*Acacia extensa*), balga (*Xanthorrhoea preissii*), honey bush (*Hakea lissocarpha*) and dwarf sheok (*Allocasuarina humilis*). The preferable soil type for this species occurs within the application area, however the preferred vegetation type is different to what was identified during the flora survey undertaken by Onshore Environmental Consultants Pty Ltd (2013). Therefore, it is not likely this species would occur within the area under application.

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

Methodology

References:
Brown et al (1998-)
Onshore Environmental Consultants Pty Ltd (2013)
Parks and Wildlife (2015a)
Webb (2013)

GIS Databases:
SAC Bio Datasets (Accessed January 2016)

(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

Two threatened ecological communities (TEC) have been recorded within the local area (10 kilometre radius). These communities are both listed as vulnerable by the Department of Parks and Wildlife and are described as '*Calothamnus graniticus* heaths on south west coastal granites' and 'marri-jarrah woodlands' on sandy clay soils of the southern Swan Coastal Plain'. A flora and vegetation survey undertaken by Onshore Environmental Consultants Pty Ltd (2013) identified that the vegetation associations under application are not consistent with these mapped TEC's. Therefore, it is not likely the proposed clearing comprises the whole or part of, or is necessary for the maintenance of these TEC's.

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

Methodology

References:
Onshore Environmental Consultants Pty Ltd (2013)

GIS Databases:
SAC Bio Datasets (Accessed January 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 likely to be at variance to this Principle

The local area surrounding the application area (10 kilometre radius) retains approximately 45 per cent native 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).

The application area lies within the Jarrah Forest Bioregion and City of Busselton which retain approximately 54 and 41 per cent of their pre-European vegetation extents respectively (Government of Western Australia, 2014). The vegetation under application has been identified as Beard vegetation associations 3 and 1000 of which there is 67 and 52 per cent of their pre-European vegetation extent remaining respectively within the Jarrah Forest Bioregion (Government of Western Australia, 2014). Mapped Mattiske vegetation complexes W2, Ww2 and Wr retain approximately 32, 38 and 70 percent of their pre-European vegetation extents within the Jarrah Forest Bioregion (Parks and Wildlife, 2015b).

These figures are greater than the above mentioned 30 per cent threshold, therefore the vegetation under application does not occur within an extensively cleared area. Given this, 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*				
Jarrah Forest	4,506,660	2,425,551	54	69
Shire*				
City of Busselton	146,478	60,213	41	69
Beard Vegetation Association in Bioregion*				
3	2,390,591	1,613,658	67	81
1000	5,428	2,821	52	14
Mattiske Vegetation Complex **				
W2:	4,108	1,323	32	2
Ww2:	1,332	506	38	0.5
Wr:	1,110	778	70	12

Methodology

References:
Commonwealth of Australia (2001)
Government of Western Australia (2014)
Parks and Wildlife (2015b)

GIS Databases:
NLWRA, Current Extent of Native Vegetation
Pre-European Vegetation

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

Comments

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

There are no wetlands or watercourses within the application area. The closest waterbody to the application area is a minor perennial watercourse located 15 metres south of the application area.

Given there was no riparian vegetation identified during the flora survey (Onshore Environmental Consultants Pty Ltd, 2013), the proposed clearing is not likely to impact on vegetation growing in association with this watercourse.

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

Methodology

References:
Onshore Environmental Consultants Pty Ltd (2013)

GIS Databases:
Geomorphic Wetlands, Swan Coastal Plain
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 Level 2 flora and vegetation survey undertaken by Onshore Environmental Consultants Pty Ltd (2013) identified three different soil types that support the three vegetation associations recorded under application. Vegetation association 1 which covers the majority of the application area comprises of brown gravelly sandy loams, with laterite and granite, vegetation association 2 consists of orange loam and clay loam with prominent stones and pebbles at the surface, and vegetation association 3 consists of cream to light brown clays at the surface (Onshore Environmental Consultants Pty Ltd (2013).

Given the application area will remain surrounded by vegetation and the clearing is limited to a maximum width of three metres, the proposed clearing is not likely to cause appreciable land degradation in the form of soil, wind or water erosion.

Ground water salinity levels in the local area have been mapped as moderately saline at 1000 to 3000

milligrams per litre total dissolved solids. The proposed clearing is not expected to significantly change salinity levels given the relatively small area being long and narrow in nature.

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

Methodology References:
Onshore Environmental Consultants Pty Ltd (2013)

GIS Databases:
Soils, statewide
Groundwater Salinity, 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 may be at variance to this Principle**
The application area occurs within the Meelup Regional Park which is a 572 hectare A class reserve which is vested for the purpose of conservation and recreation.

The proposed clearing may impact on the environmental values of this reserve through the direct removal of two hectares of vegetation and by increasing edge effects through the spread of weeds and dieback into this conservation area. However, impacts are not likely to be significant given the application area is already weed and dieback infested, the clearing is spread over a long, narrow area, and the widening of existing tracks. Weed and dieback management practices will minimise the environmental impact to this reserve.

Given the above, the proposed clearing may 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**
There are no wetlands or watercourses within the application area. The closest waterbody to the application area is a minor perennial watercourse located 15 metres south of the application area.

Given the long, narrow nature of the application area and that only the understorey vegetation is proposed for clearing, the deterioration of groundwater or surface water quality is likely to be minimal.

Ground water salinity levels in the local area have been mapped as moderately saline at 1000 to 3000 milligrams per litre total dissolved solids. The proposed clearing is not expected to significantly change salinity levels given the relatively small area of clearing and the highly vegetated local area.

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

Methodology GIS Databases:
Groundwater Salinity Statewide
Hydrography linear

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

Comments **Proposed clearing is not likely to be at variance to this Principle**
The proposed clearing is not expected to cause flooding given the narrow nature of the application area and that no large trees will be removed during the proposed clearing.

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

Methodology GIS Databases:
Hydrography linear

Planning instruments and other relevant matters.

Comments

The application area falls within a Native Title Claimant area. The claimants, the Single Noongar Claim (Area 2), South West Boojarah #2 people and Harris Family, and their representing bodies, Clayton Utz Lawyers, Roe Legal Services Pty Ltd and the South West Aboriginal Land and Sea Council, have been notified of this application. A response was received from the South West Aboriginal Land and Sea Council (SWALSC, 2015), on behalf of the South West Boojarah #2 Working Party advising that they were unable to provide comments within the specified timeframe and that comments will be made at the nearest practicable opportunity. To date, no comments have been received.

Parks and Wildlife (2015a) has advised that there is currently an informal bike trail located directly adjacent to a known population of rare flora. Parks and Wildlife (2015a) has raised concern that the proposed formal trail located in the south east extent of the application area will encourage the continual use of this informal trail resulting in increased traffic moving further south past this population and potentially impacting this species. Parks and Wildlife (2015a) has recommended that the applicant construct a fence at the termination of the proposed formal trail to prevent use of the informal trail and ensure that the population of the rare flora is protected.

There are no Aboriginal Sites of Significance recorded in the application area.

The clearing permit application was advertised on 16 November 2015 by the Department of Environment Regulation inviting submissions from the public. No submissions from the public were received.

Methodology

References:
Parks and Wildlife (2015a)

GIS Databases:
Aboriginal Sites of Significance

4. References

Aurora Environmental Pty Ltd (2015) Native Vegetation Clearing Application, Management Zone 6, Meelup Regional Park prepared for the City of Busselton. Dunsborough, Western Australia (DER Ref: A989783).

Brown A., Thomson-Dans C. and Marchant N.(1998). Western Australia's Threatened Flora, Department of Conservation and Land Management, Western Australia.

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

Department of the Environment (1999) The Action Plan for Australian Bats. Taxon summary: Western False Pipistrelle, Department of the Environment, Canberra.

Department of the Environment (2015) Merops ornatus in Species Profile and Threats Database, Department of the Environment, Canberra.

Dieback Treatment Services (2014) Dieback Interpretation Report Meelup Regional Park. Unpublished report prepared for the Meelup Regional Park Management Committee (DER Ref: A989783).

Government of Western Australia (2014) 2014 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of June 2014. WA Department of Parks and Wildlife, 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.

Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

NGH Environmental Pty Ltd (2015) Level 2 Fauna Survey – Meelup Regional Park. V20150115. Unpublished report prepared for the Meelup Regional Park Management Committee. New South Wales, Australia (DER Ref: A989783).

Onshore Environmental Consultants Pty Ltd (2013) Flora and Vegetation Survey – Zone 6 Meelup Regional Park. Unpublished report prepared for Cape Mountain Bikers. Yallingup, Western Australia (DER Ref: A989783).

Parks and Wildlife (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed 27/01/2016

Parks and Wildlife (2015a) Advice for Clearing Permit Application CPS 6808/1. Department of Parks and Wildlife. Western Australia (DER Ref: A1036920).

Parks and Wildlife (2015b) 2015 South West Forest and Swan Coastal Plain Vegetation Complex Statistics: a report prepared for the Department of Environment Regulation. Current as of March 2015. Department of Parks and Wildlife, Perth, Western Australia.

Shedley, E and Williams, K (2014) An assessment of habitat for Western Ringtail Possum (*Pseudocheirus occidentalis*) on the southern Swan Coastal Pain (Binningup to Dunsborough). Unpublished report for the Department of Parks and Wildlife, Bunbury, Western Australia.

Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) Native Vegetation in Western Australia, Extent, Type and Status. Resource Management Technical Report 249. Department of Agriculture, Western Australia.

South West Aboriginal Land and Sea Council (2015) Advice for Clearing Permit Application CPS 6808/1. Western Australia. (DER Ref: A1023205)

Valentine, L.E. and Stock, W. (2008) Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy Study Area. Edith Cowan University and Department of Environment and Conservation. December 2008.

Webb, A (2013) The Flora and Vegetation of the Meelup reserve system. An unpublished report for the Meelup Park Management Committee (DER Ref: A989783).