GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 7093/1
Permit Holder:	Shire of Donnybrook - Balingup
Duration of Permit:	17 September 2016 – 17 September 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 road widening and upgrades.

2. **Land on which clearing is to be done**
   Capel Street road reserve (PIN: 11407146), Kirup
   Upper Capel Road reserve (PINs: 11511444, 11511442, 11511445, 11511441, 11511440, 11511439 and 11511443), Brazier and Kirup
   State Forest 21 (PINs 508362, 508386, 508397 and 508363), Brazier and Kirup

3. **Area of Clearing**
   The Permit Holder must not clear more than 0.6 hectares of native vegetation within the area shaded yellow on attached Plan 7093/1.

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

8. **Fauna management**
(a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall engage a *fauna specialist* to conduct a *fauna survey* of the Permit Area to identify *habitat tree/s* being utilised by fauna species listed below:
(i) Carnaby's cockatoo (*Calyptorhynchus latirostis*);
(ii) Baudin's cockatoo (*Calyptorhynchus baudinii*);
(iii) forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*); and
(iv) southern brush-tailed phascogale (*Phascogale tapoatafa* subsp. *tapoatafa*).
(b) Where fauna are identified under condition 8(a) of this Permit, the Permit Holder shall engage a *fauna specialist* to map *habitat tree/s* within the Permit Area.
(c) Prior to undertaking any clearing authorised under this Permit, the Permit Holder shall provide the results of the *fauna survey* in a report to the CEO.
(d) The *fauna survey* report must include the following;
(i) the location of the *habitat tree/s* 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; and
(ii) the location of any fauna species, listed in condition 8(a) if identified, 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; and
(iii) the name and amount of each fauna species identified; and
(iv) the methodology, used to survey the Permit Area; and
(v) a description of the *habitat tree/s* identified.
(e) where fauna are identified under condition 8(b) of this Permit, the Permit Holder shall ensure that:
(i) no clearing within 10 metres of *habitat tree/s* of the identified fauna occurs, unless first approved by the CEO; and
(ii) no taking of identified fauna occurs, unless first approved by the CEO.

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

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;

fauna specialist: means a person who holds a tertiary qualification specializing in environmental science or equivalent, and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the *Wildlife Conservation Act 1950;*

***fauna survey*:** means a field-based investigation, including a review of established literature, of the biodiversity of fauna and/or fauna habitat of the Permit Area. Where conservation significant fauna are identified in the Permit Area, the survey should also include sufficient surrounding areas to place the Permit Area into local context;

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; and

weed/s means any plant -

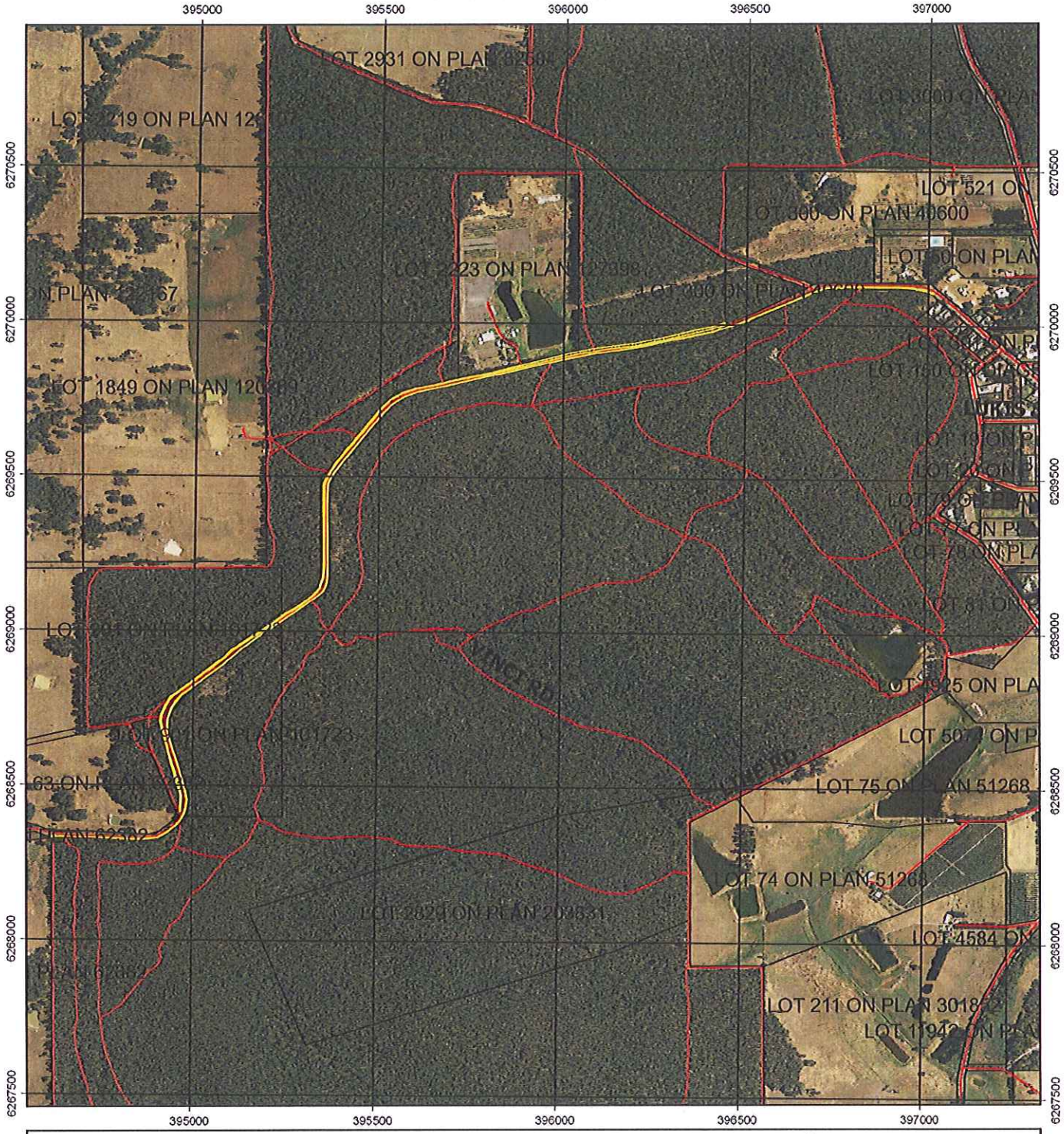
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Parks and Wildlife Regional Weed Rankings Summary, regardless of ranking; or
(c) not indigenous to the area concerned.

Emma Bramwell
A/ MANAGER
CLEARING REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

18 August 2016

Plan 7093/1



Legend

- Clearing Instruments Activities
- Roads
- LGA
- Cadastre

Virtual Mosaic (LGATE-V001)

N

1:11,287

MGA 94
Geocentric Datum of Australia 1994

E Bramwell ..... Date 18/08/16

E BRAMWELL

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.: 7093/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: Shire of Donnybrook-Balingup

1.3. Property details

Property: Capel Street road reserve (PIN: 11407146), Kirup
Upper Capel Road reserve (PINs: 11511444, 11511442, 11511445, 11511441, 11511440, 11511439 and 11511443), Brazier and Kirup
State Forest 21 (PINs 508362, 508386, 508397 and 508363), Brazier and Kirup
Colloquial name:
Local Government Authority: DONNYBROOK-BALINGUP, SHIRE OF
DER Region: Greater Swan
DPaW District: BLACKWOOD
LCDC:
Localities: BRAZIER and KIRUP

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
0.6		Mechanical Removal	Road construction or upgrades

1.5. Decision on application

Decision on Permit Application: Granted
Decision Date: 18 August 2016
Reasons for Decision: The clearing application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*, and it has been concluded that the proposed clearing is at variance to principle (f), may be at variance to principles (b) and (h), and is not likely to be at variance to the remaining principles.

The Delegated Officer determined that the application area includes vegetation growing in association with watercourses, however noted that roadside infrastructure, such as drains and culverts, may minimise impacts to these watercourses. The Delegated Officer determined that the application area may contain habitat for four threatened fauna taxa, and that the proposed clearing may impact the environmental values of Mullalyup State Forest through clearing and the introduction or spread of weeds and dieback.

The clearing permit will include conditions requiring the Permit Holder to identify and check all habitat trees prior to clearing, and to implement weed and dieback management measures.

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
The following vegetation types are mapped within the application area. Beard vegetation associations (Shepherd et al. 2001): • **3** is described as medium forest; jarrah-marri; • **1184** is described as medium woodland-fringing; jarrah, marri, *Eucalyptus rudis* and *Agonis flexuosa* (Shepherd et al. 2001). Heddle vegetation 'Dwellingup and Hester	The clearing of 0.6 hectares of native vegetation within Capel Street road reserve (PIN 11407146), Upper Capel Road reserve (PINs 11511444, 11511442, 11511445, 11511441, 11511440, 11511439 and 11511443) and State Forest 21 (PINs 508362, 508386,	Very Good; Vegetation structure altered; obvious signs of disturbance (Keighery, 1994). To Degraded; Structure severely disturbed; regeneration to good condition requires intensive management	The vegetation description and condition was determined via a site inspection undertaken by Department of Environment Regulation (DER) officers on 6 July 2016 (DER 2016). The application area consists of vegetation ranging from degraded to very good (Keighery 1994)

complex in high rainfall - central and south' is comprised of open forest of *Eucalyptus marginata* (jarrah) - *Corymbia calophylla* (marri) (Heddle et al. 1980). Mattiske vegetation complexes (Mattiske and Havel 1998): • **KR** complex consists of open forest of *Eucalyptus marginata* subsp. *marginata* - *Corymbia calophylla* on slopes and woodland of *Eucalyptus rudis* on the valley floor in the humid zone; • **HR** complex consists of tall open forest to open forest of *Eucalyptus marginata* subsp. *Marginata* - *Corymbia calophylla* on lateritic uplands in perhumid and humid zones; • **CC1** complex consists of open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* mixed with *Eucalyptus patens* on slopes, *Eucalyptus rudis* and *Banksia littoralis* on valley floors in the humid zone (Mattiske and Havel 1998). • **BL** complex consists of open forest of *Eucalyptus marginata* subsp. *Marginata* - *Corymbia calophylla* on slopes and woodland of *Eucalyptus rudis* on the valley floor in the humid zone (Mattiske and Havel 1998).	508397 and 508363), Brazier and Kirup is for the purpose of road widening and upgrades.	(Keighery, 1994).	condition (DER 2016). The vegetation predominantly consists of *Corymbia calophylla* and *Eucalyptus marginata* forest. *Podocarpus drouynianus, Pteridium esculentum* and *Macrozamia sp.* were identified within the midstorey and understorey amongst other native shrubs (DER 2016). Some areas under application in a degraded (Keighery 1994) contained very little mid storey or understorey (DER 2016).

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 clearing of 0.6 hectares of native vegetation within Capel Street road reserve (PIN 11407146), Upper Capel Road reserve (PINs 11511444, 11511442, 11511445, 11511441, 11511440, 11511439 and 11511443) and State Forest 21 (PINs 508362, 508386, 508397 and 508363), Brazier and Kirup is for the purpose of road widening and upgrades. The proposed clearing will involve clearing to a maximum of three metres either side of the road.

The application area consists of vegetation ranging from degraded to very good (Keighery, 1994) condition. The vegetation predominantly consists of *Corymbia calophylla* and *Eucalyptus marginata* forest. *Podocarpus drouynianus*, *Pteridium esculentum* and *Macrozamia* sp. were identified within the midstorey and understorey amongst other native shrubs. Some portions of the application area are in a degraded (Keighery, 1994) and contained very little midstorey or understorey (DER, 2016).

According to available databases, no rare flora have been recorded within the local area (10 kilometre radius). Five priority flora species have been recorded within the local area, the closest being a Priority 4 flora species located approximately 1.2 kilometres from the application area. Three of the priority species are Priority 3. Priority 3 species are known from several locations, and do not appear to be under imminent threat, and Priority 4 species are considered to have been adequately surveyed, and are considered not currently threatened or in need of special protection, but could be if present circumstances change. On this basis it is considered that the proposed clearing is unlikely to impact upon the conservation status of Priority 3 or Priority 4 flora species. One Priority 2 flora species has been recorded approximately 7.9 kilometres from the application area. This species is found on red-grey sandy clay over quartzite on steep westerly slopes. The most recent records of this species have identified it within valleys, on slopes and on a ridge (Western Australian Herbarium, 1998-). Suitable habitat for this species was not identified within a site inspection undertaken by Department of Environment Regulation officers (DER, 2016).

Six fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* have been recorded within the local area. The application area contains foraging habitat and potential nesting habitat for the forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and Carnaby's cockatoo (*Calyptorhynchus latirostris*) and may provide suitable habitat for southern brush-tailed phascogale (*Phascogale tapoatafa* subsp. *tapoatafa*), western ringtail possum (*Pseudocheirus occidentalis*) and chuditch (*Dasyurus geoffroii*). However, the local area retains approximately 50 per cent native vegetation and is located adjacent to and within Mullalyup State Forest where a relatively large amount of suitable habitat in similar or better condition to the application area is present. Fauna management practices such as identifying and checking habitat trees prior to clearing will assist in mitigating impacts to black cockatoo species and the southern brush-tailed phascogale.

The South West Regional Ecological Linkage Technical Report (Molloy et al., 2009) identified a regional ecological linkage located approximately 600 metres west of the application area. As a result of the location of this axis line, the application area is classed as '1a' and '1b' under the report. 1a areas represent native vegetation touching or less than 100 metres from a linkage (Molloy et al., 2009), 1b areas represent native vegetation touching or less than 100 metres from a natural area selected in 1a. These linkages are recognised for their significance in facilitating indigenous fauna movement across the landscape (Molloy et al., 2009). 'The landscape function of an ecological linkage will be considered impaired where a proposed development causes the proximity value of a level 1 patch of remnant vegetation to change to level 2' (Molloy et al., 2009). While the proposed clearing may impact upon vegetation classified 1a and 1b, the proposed clearing along Upper Capel Road is narrow, linear in shape and follows existing road, and it is considered that the proposed clearing is unlikely to have a significant impact on the environmental values of this ecological linkage.

The application area contains vegetation in very good (Keighery, 1994) condition, occurs in a State Forest and contains habitat suitable for conservation significant fauna. However, noting the size and narrow, linear shape of the application area and its location adjacent to an existing road, it is considered that the application area is unlikely to comprise high biological diversity.

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

Methodology

References:
DER (2016)
Keighery (1994)
Molloy et al. (2009)
Parks and Wildlife (2007-)
Western Australian Herbarium (1998-)

GIS Databases:
SAC Bio Datasets – accessed August 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 may be at variance to this Principle

Six fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* have been recorded within the local area (10 kilometre radius) being forest red-tailed black cockatoo (*Calyptorhynchus banksii subsp. naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*), chuditch (*Dasyurus geoffroii*), southern brush-tailed phascogale (*Phascogale tapoatafa subsp. tapoatafa*), western ringtail possum (*Pseudocheirus occidentalis*) and quokka (*Setonix brachyurus*) (Parks and Wildlife, 2007-). Carnaby's cockatoo (*Calyptorhynchus latirostris*) is also known to occur within the local area (Commonwealth of Australia, 2012).

Carnaby's cockatoo is listed as endangered and Baudin's cockatoo and forest red-tailed black cockatoo are listed as vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or former woodland or forest now present as isolated trees, including hollows in live or dead trees of karri, marri, wandoo, tuart, salmon gum, jarrah, flooded gum, York gum, powderbark, bullich and blackbutt. Black cockatoos have a preference for feeding 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).

A site inspection undertaken by Department of Environment Regulation officers identified a number of trees within the application area that fit the criteria for black cockatoo breeding habitat, having a diameter at breast height of more than 50 centimetres. A number of these contained hollows that may provide suitable nesting habitat for the black cockatoos (DER, 2016). The site inspection also identified suitable foraging habitat within the application area for the conservation significant black cockatoo species (DER, 2016). Fauna management practices such as identifying and checking habitat trees prior to clearing will assist in mitigating impacts to black cockatoo species and the southern brush-tailed phascogale.

Western ringtail possum populations in southern forests occur mainly in jarrah or marri dominated forests extending to wandoo forests to the north east of Manjimup (Parks and Wildlife, 2014). The chuditch inhabits most kinds of wooded habitat within its current range including eucalypt forest (especially jarrah), dry woodland and mallee shrublands. In Jarrah forest, chuditch populations occur in both moist, densely vegetated, steeply sloping forest and drier, open, gently sloping forest (Department of the Environment, 2016a). Suitable habitat for these species may occur within the application area, however given the size of the application area and its location along an existing road, it is considered that the proposed clearing is unlikely to impact upon significant habitat for these species.

The southern brush-tailed phascogale inhabits dry sclerophyll forests and open woodlands that contain hollow-bearing trees (DEC, 2012). Suitable habitat may be located in the application area within the larger trees identified as containing hollows.

The quokka's main habitat for mainland populations is dense riparian vegetation (Department of the

Environment 2016b). Minimal riparian vegetation occurs within the application area and therefore significant habitat for this species is not likely to be located within the application area.

The South West Regional Ecological Linkage Technical Report (Molloy et al., 2009) identified a regional ecological linkage located approximately 600 metres west of the application area. As a result of the location of this axis line, the application area is classed as '1a' and '1b' under the report. 1a areas represent native vegetation touching or less than 100 metres from a linkage (Molloy et al., 2009), 1b areas represent native vegetation touching or less than 100 metres from a natural area selected in 1a. These linkages are recognised for their significance in facilitating indigenous fauna movement across the landscape (Molloy et al., 2009). 'The landscape function of an ecological linkage will be considered impaired where a proposed development causes the proximity value of a level 1 patch of remnant vegetation to change to level 2' (Molloy et al., 2009). While the proposed clearing may impact upon vegetation classified 1a and 1b, the proposed clearing along Upper Capel Road is narrow, linear in shape and follows existing road and therefore the proposed clearing is not likely to have a significant impact on the environmental values of this ecological linkage.

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

Methodology

References:
Commonwealth of Australia (2012)
DEC (2012)
DER (2016)
Department of the Environment (2016a)
Department of the Environment (2016b)
Molloy et al. (2009)
Parks and Wildlife (2007-)
Parks and Wildlife (2014)

GIS Databases:
SAC Bio Datasets – accessed August 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
According to available databases, no rare flora species have been recorded within the local area (10 kilometre radius). On this basis it is considered that the application area is unlikely to include or be necessary for the continued existence of rare flora.

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

Methodology

GIS Databases:
SAC Bio Datasets – accessed August 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
According to available databases, there are no threatened ecological communities (TEC) recorded within the local area (10 kilometre radius). The application area is not likely to comprise or be necessary for the maintenance of a threatened ecological community.

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

Methodology

GIS Databases:
SAC Bio Datasets – accessed August 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 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 local area (10 kilometre radius) retains approximately 50 per cent native vegetation. The application area is located within the Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion and within the Shire of Donnybrook-Balingup, which retain approximately 54 per cent and 56 per cent respectively of their pre-European vegetation extents (Government of Western Australia, 2015).

The application area is mapped as Beard vegetation associations 3 and 1184, Heddle vegetation complex 'Dwellingup and Hester' complex, and Mattiske complexes BL, CC1, HR and KR, all of which retain more than

30 per cent of their pre-European vegetation extents within the Jarrah Forest IBRA bioregion (Government of Western Australia, 2015; Parks and Wildlife, 2015).

Noting the vegetation representations outlined above, it is considered that the application area is unlikely to comprise a significant remnant located within an extensively cleared area.

Given 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				
Jarrah Forest	4 506 660	2 425 551	54	69
Local government authority				
Shire of Donnybrook-Balingup	156 004	87 696	56	83
Beard Vegetation Association in Bioregion*				
3	2 390 591	1613 657	67	81
1184	63,562	25,212	40	58
Heddle Vegetation Complex**				
Dwellingup and Hester Complex	247,965	210,836	85	80
Mattiske Complex Associations in Bioregion**				
BL	59,447	17,686	30	15
CC1	27,385	16,857	61	55
D1	208,515	181,200	87	82
HR	32,250	23,781	74	67
KR	3,459	2,039	59	36

Methodology

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

GIS Databases:
Mattiske Vegetation Complexes
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 at variance to this Principle

Two minor non perennial watercourses intersect the application area. The closest major watercourse 'Capel River South' is located approximately two kilometres south of the application area, the most northern watercourse intersecting the application area is a tributary of this major watercourse.

Given that two watercourses intersect the application area, the native vegetation subject of the proposed clearing, is considered to be growing in association with a watercourse. However, noting the size and linear shape of the application area and its location along a road reserve, it is considered that the proposed clearing is unlikely to have a significant impact on the environmental values of this watercourse.

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

Methodology

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 is not likely to be at variance to this Principle

The application area is mapped within soil type Tf5 which is described as dissected lateritic plateau of a generally hilly relief: chief soils on the slopes are hard acidic, and also neutral, yellow mottled soils containing moderate to large amounts of ironstone gravels (Northcote et al., 1960-68).

Given the soil types present within the application area the proposed clearing is not likely to cause wind erosion. Two watercourses intersect the application area, however noting that the purpose of the proposed clearing is for road widening and upgrades, it is considered that existing culverts are likely to manage surface water flow and prevent water erosion.

Given the size and linear shape of the application area and its location along an existing road reserve, it is considered that the proposed clearing is unlikely to cause appreciable land degradation.

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

Methodology References:
Northcote et al. (1960-68)

GIS Databases:
Soils, statewide
Hydrography, linear

(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 is located within and adjacent to Mullalyup State Forest (State Forest 21). The proposed clearing may directly impact this conservation area through the removal of vegetation. However, noting that the application area is located along approximately 3.5 kilometres of Upper Capel Road reserve, it is considered that the proposed clearing is unlikely to have a significant impact on the environmental values of the conservation area.

The proposed clearing may impact this conservation area through the spread of weeds and dieback. Weed and dieback management practices will assist in mitigating this risk.

The South West Regional Ecological Linkage Technical Report (Molloy et al., 2009) identified a regional ecological linkage located approximately 600 metres west of the application area. As a result of the location of this axis line, the application area is classed as '1a' and '1b' under the report. 1a areas represent native vegetation touching or less than 100 metres from a linkage (Molloy et al., 2009), 1b areas represent native vegetation touching or less than 100 metres from a natural area selected in 1a. These linkages are recognised for their significance in facilitating indigenous fauna movement across the landscape (Molloy et al., 2009). 'The landscape function of an ecological linkage will be considered impaired where a proposed development causes the proximity value of a level 1 patch of remnant vegetation to change to level 2' (Molloy et al., 2009). While the proposed clearing may impact upon vegetation classified 1a and 1b, the proposed clearing along Upper Capel Road is narrow, linear in shape and follows existing road and therefore the proposed clearing is not likely to have a significant impact on the environmental values of this ecological linkage.

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

Methodology References:
Molloy et al. (2009)

GIS Databases:
Parks and Wildlife, Tenure
SWREL

(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

Two minor non perennial watercourses intersect the application area. The closest major watercourse 'Capel River South' is located approximately two kilometres south of the application area, the most northern watercourse intersecting the application area is a tributary of this major watercourse. The proposed clearing may increase sedimentation and runoff into theses watercourses, however the impacts are likely to be minimal and short term. Further, noting that the purpose of the proposed clearing is for road widening and upgrades, it is considered that existing culverts are likely to manage surface water flow and prevent deterioration in the quality of surface water.

Groundwater salinity is mapped between 500-1,000 milligrams per litres total dissolved solids, which is considered to be marginal. Noting the low salinity levels and the size and narrow, linear shape of the application area, it is considered that the proposed clearing is not likely to impact upon the quality of underground water.

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

Methodology GIS Databases:
Groundwater Salinity
Hydrology, 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

Noting the size of and soil types present within the application area, it is considered that the proposed clearing is unlikely to cause or exacerbate the incidence or intensity of flooding.

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

Methodology

Planning instruments and other relevant matters.

Comments

The Department of Parks and Wildlife (Parks and Wildlife, 2016) has advised that they give in principle authority to the Shire of Donnybrook-Balingup to conduct clearing within State forest 21 on the provision of:

- vegetation survey and recommendations;
- fauna survey inclusive of black cockatoo habitat and recommendations;
- *Phytophtora cinnamomi* survey;
- heritage survey; and
- excision of required land from Conservation Park.

The Department of Water (DoW) advised that approximately one kilometre of the Upper Capel Road is within the Kirup Dam Catchment Area, that is a Priority 1 (P1) Public Drinking Water Source Area (PDWSA) (DoW, 2016). Furthermore the proposed clearing occurs over the Capel River, which flows into the Kirup Dam, a public drinking water supply dam. P1 areas are defined to ensure that there is no degradation of the water source, and they are declared over land where the provision of high quality, public drinking water is the prime beneficial land use. P1 areas are protected in accordance with the objective of risk avoidance.

DoW (2016) advised that the main risks associated with the proposed clearing include erosion, mobilisation of sediments into the Capel River and turbidity within the public drinking water supply Kirup Dam. The main risk association with the proposed land use includes: fuel and chemical spills, erosion and stormwater run-off, litter, weed control, potential herbicide contamination and direct contact with roads which cross the primary stream. To manage these risks, the applicant should refer to DoW's *Water Quality Protection Note* (WQPN) *44* – Roads near sensitive water resources which provides for a number of measures.

The application area is located within the Capel River System Surface Water Area as proclaimed under the *Rights in Water and Irrigation Act 1914.* Any taking or diversion of surface water in this proclaimed area can be subject to licensing. Any interference of the watercourse will require a permit to interfere with the bed or banks from the department (DoW, 2016).

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

This application was advertised in *The West Australian* newspaper on 4 July 2016 with a seven day submission period. No submissions were received in relation to this application.

Methodology

References:
DoW (2016)
Parks and Wildlife (2016)

4. References

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