



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 7217/1
File Number: DER2016/001519
Duration of Permit: From 10 May 2017 to 10 May 2022

PERMIT HOLDER

Joseph Mazzarolo
Leanne Michele Mazzarolo

LAND ON WHICH CLEARING IS TO BE DONE

Lot 8199 on Deposited Plan 201608, Channybearup

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 9.176 hectares of native vegetation within the area cross-hatched yellow on attached Plan 7217/1.

CLEARING NOT AUTHORISED

This Permit does not authorise the Permit Holder to clear native vegetation between 1 May and 30 September of any given year.

CONDITIONS

1. Dieback and weed control

When undertaking any clearing 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.

2. Fauna management

- (a) Prior to undertaking any clearing authorised under this Permit, the area(s) shall be inspected by a *fauna specialist* who shall identify *habitat tree(s)* suitable to be utilised for nesting by Carnaby's cockatoo (*Calyptorhynchus latirostris*) or Baudin's cockatoo (*Calyptorhynchus baudinii*).
- (b) Prior to clearing, any *habitat tree(s)* identified under condition 2(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 2(a).
- (c) Where fauna are identified under condition 2(b) of this Permit, the Permit Holder shall ensure that no clearing of, or within 10 metres of, the identified *habitat tree(s)* occurs, unless approved by the *CEO*.

DEFINITIONS

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

CEO means the Chief Executive Officer of the Department of Environment Regulation;

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

fauna specialist means a person with training and specific work experience in fauna identification or faunal assemblage surveys of Western Australian fauna;

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

habitat tree(s) means trees that have a diameter, measured at 1.5m above the ground, of 50cm or greater, that contain one or more hollows;

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.



Simon Weighell
A/MANAGER
CLEARING REGULATION

*Officer delegated under Section 20
of the Environmental Protection Act 1986*

10 April 2017

Plan 7217/1

34.435697°S

34.435697°S

115.916692°E

115.930035°E







34.441928°S

34.441928°S

115.916692°E

115.930035°E

Legend

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



1:6,496

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

S. Weigl Date *10/4/17*

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



GOVERNMENT OF
WESTERN AUSTRALIA
WA Crown Copyright 2017



1. Application details

1.1. Permit application details

Permit application No.: 7217/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Mrs Leanne Michele Mazzarolo
Mr Joseph Mazzarolo

1.3. Property details

Property: LOT 8199 ON PLAN 201608, CHANNYBEARUP
Local Government Authority: MANJIMUP, SHIRE OF
DER Region: South Coast
DPaW District: DONNELLY
Localities: CHANNYBEARUP

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	For the purpose of:
9.176		Mechanical Removal	Dam construction, an orchard and associated activities.

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 10 April 2017

Reasons for Decision:

The clearing permit application was received on 2 August 2016, and has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986*. It has been concluded that the proposed clearing is at variance to principle (f), may be at variance to principles (a), (b), (g), (h), (i) and (j), and is not likely to be at variance to any of the remaining clearing principles.

Through assessment it has been determined that the proposed clearing may impact the environmental values of Donnelly State Forest through the possible introduction or spread of weeds and dieback. Weed and dieback management measures will minimise impacts to Donnelly State Forest.

Through assessment it has been determined that the proposed clearing may cause appreciable land degradation, in the form of water erosion, causing deterioration of surface water quality. The Delegated Officer considers that the measure to not allow clearing to take place between 1 May and 30 September will ensure that clearing takes place during the dryer months of the year and mitigate the potential risks of water erosion impacts.

Through assessment it has been determined that the vegetation under application has the potential to provide nesting habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*) and Baudin's cockatoo (*Calyptorhynchus baudinii*). To mitigate the potential impact to these species a condition has been placed on the permit requiring the identification of black cockatoo nesting trees prior to clearing and CEO approval to clear within 10 metres of black cockatoo nesting trees.

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 application area is mapped as Beard vegetation association 1 which is described as tall forest; karri (<i>Eucalyptus diversicolor</i>) (Shepherd et al., 2001).	The application proposes to clear 9.176 hectares of native vegetation within Lot 8199 on Deposited Plan 201608, Channybearup, for the purpose of dam construction, an orchard and associated activities.	Degraded; Structure severely disturbed; regeneration to good condition requires intensive management (Keighery, 1994). To	A site inspection undertaken by Department of Environment Regulation officers on 1 September 2016 identified three vegetation types within the application area. Area 1 (western portion of the application area): Tall open <i>Corymbia calophylla</i> ,
The application area consists of three Mattiske vegetation complexes, being (Mattiske and Havel, 1998):			

CRy: Tall open forest of *Corymbia calophylla* with mixture of *Eucalyptus marginata* subsp. *marginata* and *Eucalyptus diversicolor* on uplands in hyperhumid and perhumid zones.

PM1: Tall open forest of *Eucalyptus diversicolor* with mixtures of *Corymbia calophylla* on valley slopes and low forest of *Agonis juniperina*-*Banksia seminuda*-*Callistachys lanceolata* on valley floors in the perhumid zone.

CRb: Tall open forest of *Corymbia calophylla*-*Eucalyptus diversicolor* on upper slopes with *Allocasuarina decussata*-*Banksia grandis* on upper slopes in hyperhumid and perhumid zones.

Excellent; Vegetation structure intact; disturbance affecting individual species, weeds non-aggressive (Keighery, 1994).

Eucalyptus marginata, *Eucalyptus diversicolor* forest over *Banksia grandis* and *Macrozamia riedlei* in a very good (Keighery, 1994) condition (DER, 2016).

Area 2 (associated with the watercourse): Tall open *Corymbia calophylla*, *Eucalyptus marginata*, *Eucalyptus diversicolor* forest over *Pteridium esculentum* and wetland sedges in an excellent (near the dam) to degraded (southern portion of the application area) condition (Keighery, 1994). The understorey within this area is very thick (DER, 2016).

Area 3 (eastern portion of the application area – proposed location of dam): Open *Allocasuarina decussata*, *Eucalyptus marginata*, *Eucalyptus diversicolor* forest in a degraded (Keighery, 1994) condition. Little to no understorey is present within this area (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 may be at variance to this Principle

The application proposes to clear 9.176 hectares of native vegetation within Lot 8199 on Deposited Plan 201608, Channybearup, for the purpose of constructing a dam, an orchard and associated activities.

Three distinct vegetation types were observed within the application area. Vegetation adjacent to the dam and growing in association with the watercourses was observed to be in excellent (Keighery, 1994) condition (DER, 2016). The eastern portion of the application area was open forest lacking understorey and was observed to be in degraded (Keighery, 1994) condition (DER, 2016). The western portion of the application area is tall open forest in a very good (Keighery, 1994) condition (DER, 2016).

Five priority flora species have been recorded within the local area (10 kilometre radius). One of these species was mis-identified in the Donnelly District and is therefore not likely to be located within the application area. Three of the species have not previously been recorded within vegetation types PM1, CRy and CRb which are the vegetation types located within the application area and therefore are not likely to be present (Department of Parks and Wildlife (Parks and Wildlife), 2016a).

The fifth species (priority 2) is a macro-fungi (part of the Agarics group - mushrooms with gills) with only one known record in Western Australia collected in 2001. The habitat, in Western Australia, for this species is recorded as "on soil in karri forest under *Eucalyptus diversicolor* and *Corymbia calophylla*". This single record is located approximately five kilometres west of the application area (Parks and Wildlife, 2016b). There is suitable habitat present within the application area in Areas 1 and 2 which are both dominated by *Corymbia calophylla*, *Eucalyptus marginata* and *Eucalyptus diversicolor*. Although this species may occur within the application area, the proposed clearing is not likely to impact on the conservation status of the species given the large tracts of similar habitat, within conservation estate, surrounding the application area.

Area 1, containing vegetation type PM1, has the potential to contain the priority ecological community (PEC) 'Epiphytic Cryptogam of the SW karri forests' (priority 3) (Parks and Wildlife, 2016a). The buffer of one occurrence of this community overlaps the application area and another ten occurrences are recorded within one kilometre (Parks and Wildlife, 2016c). This PEC extends from south Nannup through Karri forest to Northcliffe, ranging 71 kilometres. The majority of occurrences are recorded within State Forest and reserves (Parks and Wildlife, 2016d). Given that the majority of the occurrences of this PEC are within conservation estate the loss of an occurrence on private land would not affect the status, and unlikely to be significant (Parks and Wildlife, 2016d).

Seven fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* have been recorded within the local area, being; Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo

(*Calyptorhynchus latirostris*), Margaret River marron (*Cherax tenuimanus*), western mud minnow (*Galaxiella munda*), western ringtail possum (*Pseudocheirus occidentalis*), quokka (*Setonix brachyurus*) and Carter's freshwater mussel (*Westralunio carteri*) (Parks and Wildlife, 2007-).

A site inspection of the application area conducted by DER officers on 1 September 2016 observed a number of large marri, karri and jarrah trees which either contained hollows or had the potential to develop hollows suitable for breeding by black cockatoos. A requirement to check hollows prior to clearing will assist in mitigating the risk of fauna being injured during the clearing process.

The application area contains vegetation in excellent condition, suitable fauna breeding habitat and Areas 1 and 2 may contain a priority 2 flora species and a PEC.

Given the above, the proposed clearing may be at variance to this Principle, however the proposed clearing is unlikely to have an unacceptable impact on the PEC, priority flora or indigenous fauna.

Methodology

References:

DER (2016)

Keighery (1994)

Parks and Wildlife (2007-)

Parks and Wildlife (2016a)

Parks and Wildlife (2016b)

Parks and Wildlife (2016c)

Parks and Wildlife (2016d)

GIS Database:

SAC Bio datasets – Accessed October 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

The local area (10 kilometre radius) retains approximately 75 per cent native vegetation cover, the majority of which is held in conservation estate.

Seven fauna species listed as rare or likely to become extinct under the *Wildlife Conservation Act 1950* have been recorded within the local area, being; Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*), Margaret River marron (*Cherax tenuimanus*), western mud minnow (*Galaxiella munda*), western ringtail possum (*Pseudocheirus occidentalis*), quokka (*Setonix brachyurus*) and Carter's freshwater mussel (*Westralunio carteri*) (Parks and Wildlife, 2007-).

Noting the vegetation types present within the application area (as described under Principle (a)), the limited distributions of the Margaret River marron (TSSC, 2016a) and Carter's freshwater mussel (DotEE, 2016), the habitat requirements of the western mud minnow (TSSC, 2016b), and the habitat requirements of western ringtail possum, the application area is not likely to provide habitat for these species.

Carnaby's cockatoos nest in large hollows of eucalyptus trees and 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, *Corymbia calophylla* and a range of introduced species, especially seeds from cones of *Pinus* species (Shah, 2006; Valentine and Stock, 2008). The Recovery Plan for Baudin's cockatoo states that critical habitat for the survival of important populations of this species comprises all marri, karri and jarrah forests, woodlands and remnants in the south-west of Western Australia receiving more than 600 millimetres of annual average rainfall (DEC, 2008).

Potential nesting trees for black cockatoos are defined as "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". A site inspection of the application area conducted by DER officers on 1 September 2016 observed a number of large marri, karri and jarrah trees which either contained hollows or had the potential to develop hollows suitable for breeding by black cockatoos. The application area may contain significant breeding habitat for Carnaby's and Baudin's cockatoos. A requirement to check hollows prior to clearing will assist in mitigating the risk of fauna being injured during the clearing process.

Noting the vegetation types present within the application area, the application area contains suitable foraging habitat for Carnaby's and Baudin's cockatoos. However given the extent of vegetation in the local area, the application area is not likely to contain significant foraging habitat for these species.

Fauna runnels were observed close to the existing dam in Donnelly State Forest, adjacent to the application area.

The western portion of the application area and mapped watercourse contain understorey species which would provide favourable habitat for ground dwelling fauna such as quokka, however given the extent of vegetation in the local area the application area is unlikely to provide significant habitat for ground dwelling fauna.

An ecological linkage, defined by the South West Regional Ecological Linkage (SWREL) Report (Molloy et al., 2009) is mapped approximately 650 metres west of the application area within Donnelly State Forest. The SWREL report (Molloy et al., 2009) defines an ecological linkage as “A series of (both contiguous and non-contiguous) patches of native vegetation which, by virtue of their proximity to each other, act as stepping stones of habitat which facilitate the maintenance of ecological processes and the movement of organisms within, and across, a landscape”. This mapped ecological linkage follows a large tract of remnant vegetation within conservation estate and therefore the application area is not a significant part of this linkage.

Given the above, the proposed clearing may be at variance to this Principle, however the proposed clearing is unlikely to have an unacceptable impact on habitat for indigenous fauna.

Methodology References:
DEC (2008)
DER (2016)
DotEE (2016)
Molloy et al. (2009)
Parks and Wildlife (2007-)
Shah (2006)
Valentine and Stock (2008)
TSSC (2016a)
TSSC (2016b)

(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

One rare flora species has been recorded within the local area (10 kilometre radius).

This species is an orchid that is known from populations between Nannup and Albany. It usually inhabits paperbark (*Melaleuca* spp.) and flooded gum (*Eucalyptus rudis*) swamps and flats, which are inundated for several months of the year, but may also be found along creeklines in jarrah (*Eucalyptus marginata*) and karri (*Eucalyptus diversicolor*) forest (Brown et al., 1998).

This species has not previously been recorded within vegetation types PM1, CRy and CRb, which are present within the application area, and is therefore not likely to be present (Parks and Wildlife, 2016a).

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

Methodology References:
Brown et al. (1998)
Parks and Wildlife (2016a)

GIS Database:
SAC Bio datasets – Accessed October 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

No threatened ecological communities (TEC) have been recorded within the local area (10 kilometre radius). The closest TEC is located approximately 40 kilometres north west of the application area and is associated with the Scott River Ironstone Association.

The application area is not likely to comprise of, or be necessary for the maintenance of a TEC.

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

Methodology GIS Database:
SAC Bio datasets – Accessed October 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 application area is located within the Warren Interim Biogeographic Regionalisation of Australia (IBRA) bioregion. This IBRA bioregion has approximately 79 per cent of its pre-European vegetation extent remaining (Government of Western Australia, 2015).

The application area is mapped as Beard vegetation association 1, which has approximately 78 per cent of its pre-European extent remaining in the Warren IBRA bioregion (Government of Western Australia, 2015). Approximately 84 per cent of this vegetation association is held within conservation estate.

The application area is also mapped as Matisse vegetation complexes CRb, CRy and PM1, which retain approximately 86, 73 and 65 per cent of their pre-European extents, respectively. Approximately 82, 66 and 58 per cent of these complexes are held in conservation estate, respectively (Parks and Wildlife, 2015).

Aerial imagery indicates that the local area (10 kilometre radius) retains approximately 75 per cent native vegetation. The local area retains approximately 220,855 hectares of native vegetation and therefore the proposed clearing of 9.17 hectares equates to approximately 0.004 per cent of this area.

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). All vegetation types mapped within the application area retain more than the 30 per cent recommended threshold.

The application area contains vegetation in excellent (Keighery, 1994) condition, suitable fauna breeding habitat and Areas 1 and 2 may main contain a priority 2 flora species and a priority ecological community. Therefore, Areas 1 and 2 may be a significant remnant. However, given the extent of vegetation remaining in the local area the application area is not likely to be a significant remnant in 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*				
Warren	833,986	660,311	79	85
Local government authority*				
Shire of Manjimup	697,368	586,852	84	94
Beard Vegetation Association in Bioregion*				
1	69,118	53,822	78	84
Matisse Vegetation Complex **				
CRb	52,753	45,392	86	82
CRy	33,765	24,498	73	66
PM1	25,801	16,731	65	58

Methodology References:
 Commonwealth of Australia (2001)
 Government of Western Australia (2015)*
 Keighery (1994)
 Parks and Wildlife (2015)**

GIS Databases:
 Imagery
 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**
 The closest mapped wetland is a palusplain (seasonally waterlogged flat) wetland located approximately five kilometres south west of the application area.

A minor, perennial watercourse flows through the application area into a dam located within Donnelly State Forest. This watercourse is a tributary to Fly Brook, which is located approximately 1.7 kilometres downstream of the application area. Vegetation growing in association with this watercourse is proposed to be cleared.

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

Methodology GIS Databases:
 Geomorphic Wetlands, Augusta to Walpole
 Hydrography, linear
 Hydrography, hierachy

(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

The soils within the majority of the application area have been mapped as the Pemberton Subsystem which are described as red or yellow gradational soils, not calcareous with some red duplex soils. The remainder of the application area is mapped as Crowea, yellow duplex phase which is described as gravelly yellow soils (Schoknecht et al., 2004)

The application area is mapped in the following land degradation risk categories (Schoknecht et al., 2004):

Land Degradation Risk Category	Pemberton Subsystem (75 per cent of application area)	Crowea Subsystem (25 per cent of application area)
Water Erosion	30-50% of map unit has a high to extreme water erosion risk	10-30% of map unit has a high to extreme water erosion risk
Wind Erosion	<3% of the map unit has a high to extreme wind erosion risk	10-30% of the map unit has a high to extreme wind erosion risk
Waterlogging	3-10% of map unit has a moderate to very high waterlogging risk	<3% of map unit has a moderate to very high waterlogging risk
Flooding	3-10% of the map unit has a moderate to high flood risk	<3% of the map unit has a moderate to high flood risk
Phosphorus export	30-50% of map unit has a high to extreme phosphorus export risk	10-30% of map unit has a high to extreme phosphorus export risk

The application area has an elevation that ranges from 155 metres to 135 metres. Given the slope of the application area and the mapped water erosion risk, the proposed clearing may cause appreciable land degradation in the form of water erosion. The Department of Water (DoW) advised that to minimise the risk of water erosion, the proposed clearing should take place during the dry period for the year, when flows are at their lowest and erosion is least likely (DoW, 2016).

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

Methodology References:
DoW (2016)
Schoknecht et al. (2004)

GIS Databases:
Soils, Statewide
Topography

(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

Donnelly State Forest is located adjacent to the north eastern edge of the application area, and surrounds the application area within 500 metres. Warren National Park, Hawke National Park and Greater Beedelup National Park are all recorded within five kilometres of the application area.

The local area (10 kilometre radius) retains approximately 75 per cent vegetation.

An ecological linkage, defined by the South West Regional Ecological Linkage (SWREL) Report (Molloy et al., 2009) is mapped approximately 650 metres west of the application area within Donnelly State Forest. The SWREL report (Molloy et al., 2009) defines an ecological linkage as "A series of (both contiguous and non-contiguous) patches of native vegetation which, by virtue of their proximity to each other, act as stepping stones of habitat which facilitate the maintenance of ecological processes and the movement of organisms within, and across, a landscape".

This mapped ecological linkage follows a large tract of remnant vegetation within conservation estate, and the application area is not a significant part of this linkage.

The disturbance caused by the proposed clearing may increase the risk of weeds and dieback being spread in Donnelly State Forest. Hygiene management practices will assist in mitigating this risk.

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

(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 may be at variance to this Principle**
A watercourse occurs on the property and flows through the application area.

The proposed clearing has the potential to increase water erosion and consequently increase sedimentation and turbidity of the watercourse. DoW advised that to minimise the risk of water erosion, the proposed clearing should take place during the dry period for the year, when flows are at their lowest and erosion is least likely (DoW, 2016).

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

Methodology References:
DoW (2016)

GIS Databases:
Hydrography, linear
Hydrography, hierachy
Geomorphic Wetlands, Augusta to Walpole

(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 may be at variance to this Principle**
The application area consists of hard red soils and has an elevation that ranges from 155 metres to 135 metres. Given these two factors the proposed clearing will increase run off which will pool in the depression associated with the watercourse. The proposed clearing may cause minor, localised flooding, however it is noted that the purpose of the proposed clearing includes creating a dam.

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

Methodology GIS Databases:
Annual Rainfall, Statewide
Soils, Statewide

Planning instruments and other relevant matters.

Comments The application is to clear 9.176 hectares of native vegetation within Lot 8199 on Deposited Plan 201608, Channybearup, for the purpose of dam construction, an orchard and associated activities.

The application area is located within the Donnelly River System Surface Water Area, which is an area proclaimed under the *Rights in Water and Irrigation Act 1914*, and any interference with the watercourse or its riparian zone requires a 'permit to interfere bed and banks'. DoW advised that the applicant has been issued a 'permit to interfere bed and banks' and a licence 'to take' surface water.

DoW advised that the proposed clearing occurs over steeply sloping land that is within the riparian zone of a tributary of Lefroy Brook, which flows into the Warren River (DoW, 2016). DoW advised that the proposed clearing has the potential to result in erosion, sediment transport and associated turbidity, particularly when carried out at the riparian section during the rainy period of the year when flows are highest (DoW, 2016). DoW advised that to minimise impacts associated with the proposed clearing and land use:

- clearing should take place during the dry periods of the year, when flows are at their lowest and erosion is least likely; and
- the use of fertilisers and pesticides related to land use should follow best management practices such as application during the dry period of the year in accordance with the manufacturer's instructions; and use slow release fertilisers and low environmental impact pesticides/herbicides (DoW, 2016).

The application was advertised in *The West Australian* newspaper on 22 August 2016 and again on 12 September 2016 (to advertise a change in purpose) by the Department of Environment Regulation, inviting submissions from the public within a 21 day and seven day period, respectively. No submissions were received in relation to this application.

The Shire of Manjimup advised that the land is zoned as 'Priority Agriculture' and that planning approval for clearing of native vegetation is not required in this zone (Shire of Manjimup, 2016). The Shire of Manjimup advised that if the edge of the dam and/or dam wall is to be situated less than 20 metres from the lot boundary, Shire planning approval will be required (Shire of Manjimup, 2016). In a letter dated 22 March 2017 the applicant confirmed that the dam wall will not be located within 20 metres of the property boundary.

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

Methodology References:
DoW (2016)
Shire of Manjimup (2016)

GIS Databases:
Aboriginal Sites of Significance
RIWI, Surface Water Areas
CAWSA Areas

4. References

- 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 Environment and Conservation (DEC) (2008) Forest Black cockatoo (Baudin's cockatoo) (*Calyptorhynchus baudinii*) and forest red-tailed back cockatoo (*Calyptorhynchus banksii naso*) Recovery Plan. Department of Environment and Conservation, Perth, Western Australia.
- Department of the Environment and Energy (DotEE) (2016) Species nominations not prioritised for assessment. www.environment.gov.au/biodiversity/threatened/nominations/species-not-prioritised-assessment. Accessed 10 October 2016
- Department of Environment Regulation (DER) (2016) Site Inspection Report for Clearing Permit Application CPS 7217/1. Site inspection undertaken on 1 September 2016. Department of Environment Regulation, Western Australia (DER Ref: A1175566).
- 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 05/10/2016
- Department of Parks and Wildlife (Parks and Wildlife) (2015) 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.
- Department of Parks and Wildlife (Parks and Wildlife) (2016a) Regional advice for clearing permit application CPS 7217/1 (DER Ref: A1177238).
- Department of Parks and Wildlife (Parks and Wildlife) (2016b) Species and Communities flora advice for Clearing Permit Application CPS 7217/1 (DER Ref: A1183231).
- Department of Parks and Wildlife (Parks and Wildlife) (2016c) Species and Communities priority ecological community advice for Clearing Permit Application CPS 7217/1 (DER Ref: A1184848).
- Department of Parks and Wildlife (Parks and Wildlife) (2016d) Species and Communities additional priority ecological community advice for Clearing Permit Application CPS 7217/1 (DER Ref: A1185476).
- Department of Water (DoW) (2016) *Rights in Water and Irrigation Act 1914* advice for Clearing Permit Application CPS 7217/1 (DER Ref: A1165086).
- 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.
- 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.
- Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) South West Regional Ecological Linkages Technical Report. DEC, WALGA and Planning South West.
- Schoknecht, N., Tille, P. and Purdie, B. (2004) Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs' Resource Management Technical Report No. 280. Department of Agriculture.
- Shah, B. (2006) Conservation of Carnaby's Black-Cockatoo on the Swan Coastal Plain, Western Australia. December 2006. Carnaby's Black-Cockatoo Recovery Project. Birds Australia, 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.
- Shire of Manjimup (2016) Planning advice for Clearing Permit Application CPS 7217/1 (DER Ref: A1161325).
- Threatened Species Scientific Committee (TSSC) (2016a) Advice to the Minister for the Environment and Heritage from the Threatened Species Scientific Committee on Amendments to the list of Threatened Species under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). www.environment.gov.au/system/files/pages/6317dafb-2378-4187-8dda-19166647fc2a/files/cherax-tenuimanus-listing.pdf. Accessed 10 October 2016.
- Threatened Species Scientific Committee (TSSC) (2016b) Advice to the Minister for the Environment and Heritage from the Threatened Species Scientific Committee on Amendments to the list of Threatened Species under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) www.environment.gov.au/system/files/pages/d11008c5-6d1a-429a-a0a9-3bfc4078a95d/files/galaxiella-munda-advice.pdf. Accessed 10 October 2016.
- Valentine, L.E. and Stock, W. (2008) Food Resources of Carnaby's Black Cockatoo (*Calyptorhynchus latirostris*) in the Gngangara Sustainability Strategy Study Area. Edith Cowan University and Department of Environment and Conservation. December 2008.