GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS
Area Permit Number: 7768/1
File Number: DER2017/001662
Duration of Permit: From 30 December 2017 to 30 December 2022

PERMIT HOLDER
Scott Nicklaus Dunnet

LAND ON WHICH CLEARING IS TO BE DONE
Lot 5192 on Deposited Plan 229257, Yeagarup

AUTHORISED ACTIVITY
The Permit Holder shall not clear more than 5.4 hectares of native vegetation within the area cross hatched yellow on attached Plan 7768/1.

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.

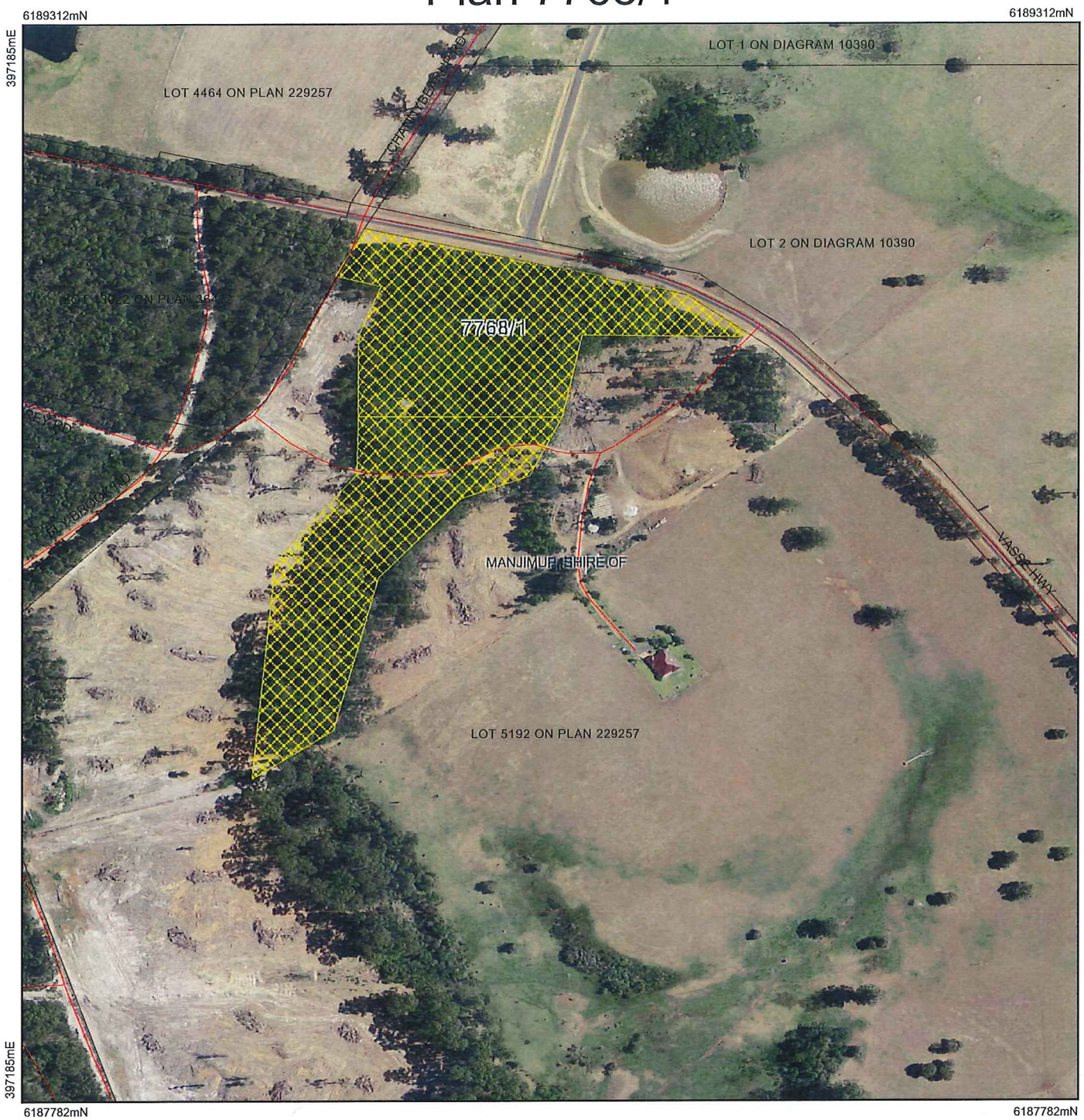
DEFINITIONS
The following meanings are given to terms used in this Permit:
dieback means the effect of *Phytophthora* species on native vegetation;
fill means material used to increase the ground level, or fill a hollow;
mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;
weed/s means any plant -
(a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
(b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking 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*

29 November 2017

Plan 7768/1



Legend

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

N

0 200m

1:5,000

(Approximate when reproduced at A4)

UTM Zone 50S

World Geodetic System 1984

E Bramwell Date 29/11/17

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 Water and Environmental Regulation

Clearing Permit Decision Report

1. Application details

1.1. Permit application details

Permit application No.: 7768/1
Permit type: Area Permit

1.2. Applicant details

Applicant's name: Scott Nicklaus Dunnet
Application date: 12 September 2017

1.3. Property details

Property: Lot 5192 on Deposited Plan 229257, Yeagarup
Local Government Authority: Shire of Manjimup

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category
5.4		Mechanical Removal	Dam construction

1.5. Decision on application

Decision on application: Grant
Decision date: 29 November 2017
Reasons for decision: The clearing permit application has been assessed against the clearing principles, planning instruments and other matters in accordance with section 51O of the *Environmental Protection Act 1986* (EP Act). It has been concluded that the proposed clearing is at variance to clearing principle (f), may be at variance to clearing principle (h), and is not likely to be at variance to the remaining clearing principles.

The Delegated Officer determined that the proposed clearing will result in the following impacts:

- the clearing of native vegetation growing in association with approximately 450 metres of a watercourse; and
- the potential to spread weeds and dieback to the adjacent Greater Beedelup National Park.

The Delegated Officer noted that the majority of the watercourse is within State Forest, and that the local area (ten kilometre radius) is highly vegetated, and determined that the proposed clearing is unlikely to result in any significant impacts. The Delegated Officer determined that implementing weed and dieback hygiene measures will address the risk to the adjacent conservation area.

Given the above, the Delegated Officer decided to grant a clearing permit subject to a weed and dieback management condition.

2. Site Information

Clearing Description: The proposed clearing of 5.4 hectares of native vegetation on Lot 5192 on Deposited Plan 229257, Yeagarup, is for the purpose of constructing a dam.

Vegetation Description: A targeted threatened flora and fauna survey of the application area, commissioned by the applicant and undertaken on 31 October 2014 (targeted threatened flora and fauna survey), identified three broad habitats being (Bio Diverse Solutions, 2014):

- Tall open forest of *Corymbia calophylla* (marri), *Eucalyptus patens* (blackbutt) and some *Eucalyptus diversicolor* (karri) on slopes;
- Tall open forest of *Allocasuarina decussata* (karri sheoak) with an open sedge dominated understorey; and
- Tall shrubland of *Taxandria linearifolia* and *Callistachys lanceolata* with a sedge dominated understorey.

The application area intersects two mapped Mattiske vegetation complexes (Mattiske and Havel, 1998):

- Crowea (CRd) – Open forest to tall open forest of *Eucalyptus marginata* subsp. *marginata*-marri on uplands in hyperhumid and perhumid zones; and
- Pemberton (PM1) – Tall open forest of karri with mixtures of marri on valley slopes and low forest of *Agonis juniperina-Banksia seminuda-Callistachys lanceolata* on valley floors in the perhumid zone.

Vegetation Condition: Based on a site inspection undertaken by officers of the former Department of Environment Regulation, the application area is in good to very good condition using the Keighery (1994) scale (Department of Environment Regulation, 2014). These condition ratings are described as follows (Keighery, 1994):

- Very Good: vegetation structure altered; obvious signs of disturbance; and
- Good: structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate.

Soil Type: The application area is mapped as soil type 'Uc1' which is described as: steep hilly to hilly dissected lateritic plateau with steep valley side slopes: chief soils are hard, and also sandy, neutral, and also acidic, yellow and yellow mottled soils, with conspicuous but relatively smaller areas of red earths (Northcote et al., 1960-68).

Comment: The local area referred to in the below assessment is defined as the area within a ten kilometre radius of the application area.

3. Assessment of application against clearing principles

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

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

According to available datasets, one rare and six priority (P) flora species have been recorded within the local area:
- *Caladenia harringtoniae* – rare;
- *Dillwynia* sp. Capel – P1;
- *Inocybe redolens* – P2;
- *Rorippa cygnorum* – P2;
- *Actinotus repens* – P3;
- *Poa billardierei* – P3; and
- *Pultenaea pinifolia* – P3.

The closest records to the application area are of *Caladenia harringtoniae* and *Inocybe redolens* which occur approximately two to three kilometres northwest. The targeted threatened flora and fauna survey did not identify any rare or priority flora species within the application area (Bio Diverse Solutions, 2014).

The targeted threatened flora and fauna survey did not identify any significant habitat for conservation significant fauna species within the application area (Bio Diverse Solutions, 2014).

The local area retains approximately 85 per cent cover of remnant native vegetation (approximately 27,000 hectares). Virtually all of this remnant vegetation occurs within lands managed by the Department of Biodiversity, Conservation and Attractions (DBCA). Approximately 6,000 hectares of the local area is mapped as Mattiske vegetation complex PM1 and approximately 400 hectares of the local area is mapped as Mattiske vegetation complex CRd. This vegetation is also expected to be in better condition than that proposed to be cleared given it predominantly occurs in areas managed by DBCA.

Noting the results of the targeted threatened flora and fauna survey and the extent of remnant native vegetation in the local area, the application area is not likely to comprise a high level of biological diversity.

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

References:
Bio Diverse Solutions (2014)

GIS Datasets:
Imagery
NLWRA, Current Extent of Native Vegetation
SAC bio datasets (accessed 24 November 2017)
SW Forests Vegetation Complexes

(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.

Proposed clearing is not likely to 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 (DBCA, 2007-):
- Baudin's cockatoo (*Calyptorhynchus baudinii*);
- Carnaby's cockatoo (*Calyptorhynchus latirostris*);
- Balston's pygmy perch (*Nannatherina balstoni*);
- western ringtail possum (*Pseudocheirus occidentalis*);
- quokka (*Setonix brachyurus*); and
- Carter's freshwater mussel (*Westralunio carteri*).

Four fauna species listed as priority (P) fauna by DBCA have also been recorded in the local area (DBCA, 2007-):
- pouched lamprey (*Geotria australis*) – P1;
- western false pipistrelle (*Falsistrellus mackenziei*) – P4;
- water rat (*Hydromys chrysogaster*) – P4; and
- blue-billed duck (*Oxyura australis*) – P4.

The targeted threatened flora and fauna survey identified five potential habitat trees for cockatoo species (Bio Diverse Solutions, 2014). None of these trees currently contain nesting hollows large enough for Baudin's or Carnaby's cockatoos. There was no evidence found of droppings or feathers and no cockatoos were observed roosting, feeding or in breeding hollows during the survey (Bio Diverse Solutions, 2014). Noting this, and that the local area retains a large extent of remnant native vegetation that is likely to provide similar habitat as found within the application area, no significant impacts to either of these black cockatoo species are expected from the proposed clearing.

Three of the five habitat trees identified within the application area contained small hollows suitable for western false pipistrelle, however no evidence of this species was found within the survey area (Bio Diverse Solutions, 2014). Suitable habitat for this species is likely to occur within the adjacent conservation areas, and no loss of significant habitat for this species is expected as a result of the proposed clearing.

The western ringtail possum has a preference for habitat dominated by *Agonis flexuosa* (peppermint) near coastal areas, swamps, watercourses or floodplains. The northern portion of the application area particularly adjacent to the watercourse contains *Agonis flexuosa* within the midstorey. The targeted threatened flora and fauna survey did not identify any evidence of western ringtail possums utilising the vegetation within the application area (Bio Diverse Solutions, 2014). Given the local area retains approximately 85 per cent vegetation cover and the application area is adjacent to conservation areas consisting of vegetation in a better condition, it is unlikely that the application area provides significant habitat for this species.

The targeted threatened flora and fauna survey identified active quokka runnels within the north western corner of the application area adjacent to the Greater Beedelup National Park (Bio Diverse Solutions, 2014). There was no evidence of recent use of these runnels by quokkas, and faecal material found within the runnels and in the broader survey area was attributed to the common brushtail possum (*Trichosurus vulpecula* subsp. *vulpecula*), suggesting that the runnels are being maintained by the common brushtail possum (Bio Diverse Solutions 2014). Suitable habitat for the quokka is likely to occur within the adjacent conservation areas, and no loss of significant habitat for this species is expected as a result of the proposed clearing.

The application area contains a watercourse which may provide suitable habitat for these species. The application area occurs at a local high point in the landscape near the source of the watercourse, and extends for approximately 450 metres of the length of the watercourse. The following 900 metres of the watercourse occurs on Lot 5192 and has been modified through the construction of a dam. The remaining 1.9 kilometres of the watercourse is vegetated and occurs within the Donnelly State Forest, and enters Fly Brook approximately 2.8 kilometres downstream of the application area. Noting this, the application area is unlikely to provide significant habitat for Balston's pygmy perch, Carter's freshwater mussel, the pouched lamprey, water rat or blue-billed duck.

Given the above the proposed clearing is not likely to impact upon significant habitat for fauna indigenous to Western Australia. The proposed clearing is not likely to be at variance to this clearing principle.

References:
Bio Diverse Solutions (2014)
DBCA (2007-)

GIS Datasets:
DPaW Tenure
Hydrography, linear
Imagery
NLWRA, Current Extent of Native Vegetation
Topographic Contours, Statewide

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

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

According to available datasets, one rare flora species (*Caladenia harringtoniae*) has been recorded within the local area.

This species typically inhabits paperbark (*Melaleuca* species) and *Eucalyptus rudis* (flooded gum) swamps and flats which are inundated for several months of the year. This species may also be found along creek lines in *Eucalyptus marginata* (jarrah) and karri forest (Brown et al., 1998).

The application area consists of jarrah, marri and karri forest in good to very good (Keighery, 1994) condition. In addition a watercourse intersects the application area (Department of Environment Regulation, 2014). Noting this, the application area may contain suitable habitat for *Caladenia harringtoniae*.

The targeted threatened flora and fauna survey did not identify any rare flora species (Bio Diverse Solutions, 2014). Given this, it is considered that the application area is unlikely to support rare flora.

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

References:
Bio Diverse Solutions (2014)
Brown et al. (1998)
Department of Environment Regulation (2014)
Keighery (1994)

GIS Datasets:
SAC bio datasets (accessed 24 November 2017)

(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.

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

According to available datasets, no threatened ecological communities (TECs) are mapped within the local area.

The vegetation proposed to be cleared is not likely to comprise the whole or a part of, or be necessary for the maintenance of a TEC.

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

References:

GIS Datasets:
SAC bio datasets (accessed 24 November 2017)

(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.

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

The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (i.e. pre-European settlement) (Commonwealth of Australia, 2001).

As indicated in Table 1, the Warren Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, the Shire of Manjimup, and the two mapped Mattiske vegetation complexes all retain greater than 30 per cent of their pre-European extents.

The local area retains approximately 85 per cent (approximately 27,000 hectares) native vegetation cover. The application area represents approximately 0.017 per cent of this current extent.

Given the above, the application area is not likely to be significant as a remnant of native vegetation in an area that has been extensively cleared.

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

Table 3: Vegetation extent statistics

	Pre-European extent	Current extent remaining		Current extent remaining in DBCA managed lands	
	(ha)	(ha)	(%)	(ha)	(%)
IBRA bioregion*					
Warren	833,986	660,310	79	557,880	84
Local Government Authority*					
Shire of Manjimup	697,368	586,852	84	550,340	94
Mattiske vegetation complex**					
CRd	1,904	1,482	78	1,359	71
PM1	25,801	16,710	65	14,973	58

References:
Commonwealth of Australia (2001)
*Government of Western Australia (2016)
**Government of Western Australia (2017)

GIS Datasets:
IBRA Australia
Imagery
Local Government Authority
Pre-European Vegetation
NLWRA, Current Extent of Native Vegetation
SW Forests Vegetation Complexes

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

Proposed clearing is at variance to this principle

According to available datasets, the application area is intersected by a minor perennial watercourse. A watercourse and associated riparian vegetation was identified in the application area during a site inspection (Department of Environment Regulation, 2014). Given this, the proposed clearing is at variance to this clearing principle.

As discussed under clearing principle (b), the application area extends for approximately 450 metres of the length of the watercourse, the following 900 metres of the watercourse has been modified through the construction of a dam, and the remaining 1.9 kilometres of the watercourse is vegetated and occurs within Donnelly State Forest.

Given the majority of the length of the watercourse is vegetated and within State Forest, and noting the extent of native vegetation cover in the local area, no significant impacts to riparian vegetation are expected from the proposed clearing.

References:
Department of Environment Regulation (2014)

GIS Datasets:
DPaW Tenure
Hydrography, linear
Imagery
NLWRA, Current Extent of Native Vegetation
Topographic Contours, Statewide

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

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

A site inspection undertaken by the former Department of Agriculture and Food Western Australia (DAFWA) within Lot 5192 identified areas prone to eutrophication and waterlogging located along the watercourse located within the centre of the application area (Commissioner of Soil and Land Conservation, 2012).

The Commissioner of Soil and Land Conservation advised that the proposed clearing of riparian vegetation may result in a greater inflow of nitrates into the waterway, and that due to the soils present within the application area the risk of eutrophication is not expected to increase significantly (Commissioner of Soil and Land Conservation, 2012). The Commissioner of Soil and Land Conservation advised that the risk of waterlogging is unlikely to increase as the soil type is generally associated with waterway, groundwater discharge and shallow soils, and that further clearing is unlikely to increase the risk of waterlogging (Commissioner of Soil and Land Conservation, 2012).

The Commissioner of Soil and Land Conservation advised that no salinity onsite was observed and it is considered unlikely for the proposed clearing to cause salinity (Commissioner of Soil and Land Conservation, 2012).

The proposed clearing is not likely to cause or exacerbate wind or water erosion given the soil types present (Commissioner of Soil and Land Conservation, 2012).

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

References:
Commissioner of Soil and Land Conservation (2012)
Northcote et al. (1960-68)

GIS Datasets:
Soils, Statewide

(h) Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.

Proposed clearing may be at variance to this principle

Numerous conservation areas are located within the local area, the closest being Donnelly State Forest and Greater Beedelup National Park located adjacent to the western side of Lot 5192. The proposed clearing is located approximately 20 metres from the Greater Beedelup National Park.

Given the proximity of the application area to Greater Beedelup National Park, the proposed clearing may indirectly impact the conservation area through the spread of weeds and dieback. The proposed clearing may be at variance to this clearing principle.

It is considered that weed and dieback hygiene management practices will address the risk of significant impacts to conservation areas.

GIS Datasets:
DBCA 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.

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

According to available datasets, the application area is intersected by a minor perennial watercourse. A watercourse and associated riparian vegetation was identified in the application area during a site inspection (Department of Environment Regulation, 2014).

The proposed clearing within and adjacent to the watercourse has the potential to result in changes to surface water quality (e.g. through erosion and subsequent turbidity and sedimentation).

As discussed under clearing principle (b), the application area extends for approximately 450 metres of the length of the watercourse, the following 900 metres of the watercourse has been modified through the construction of a dam, and the remaining 1.9 kilometres of the watercourse is vegetated and occurs within Donnelly State Forest.

Given the relatively minor nature of the watercourse, and that the majority of the length of the watercourse downstream is vegetated and within State Forest, no significant impacts to surface water quality are expected from the proposed clearing.

In relation to groundwater quality, noting the size of the application area and the extent of native vegetation cover in the local area, the proposed clearing is not expected to result in changes to groundwater levels or quality given the extent of native vegetation remaining in the local area.

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

References:
Department of Environment Regulation (2014)

GIS Datasets:
DPaW Tenure
Hydrography, linear
Imagery
NLWRA, Current Extent of Native Vegetation
Topographic Contours, Statewide

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

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

Noting the size of the application area and the extent of native vegetation cover in the local area, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.

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

Planning instruments and other relevant matters.

The application was advertised on the Department of Water and Environmental Regulation's website for a 21 day public comment period closing 30 October 2017. No public submissions were received.

The application area is located within the Donnelly River System Surface Water Area proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act). A permit 'to interfere with bed and banks' of the watercourse is required under the RIWI Act and has been obtained by the applicant.

The Shire of Manjimup advised that the land is zoned by Local Planning Scheme No. 4 as 'Priority Agriculture' and planning approval for clearing of vegetation is not required in this zone (Shire of Manjimup, 2017). The Shire of Manjimup advised that if the edge of the dam and/or dam wall is to be less than 20 metres from any lot boundary, planning approval for the dam works will be required (Shire of Manjimup, 2017). It is understood that the dam/dam wall will not be less than 20 metres from any lot boundary.

References:
Shire of Manjimup (2017)

GIS Datasets:
RIWI Act, Surface Water Areas and Irrigation Districts

4. References

Bio Diverse Solutions (2014). Targeted Threatened Flora and Fauna Survey - Lot 5192 on Deposited Plan 229257, Yeagerup CPS6018-1. Unpublished report prepared for Scott Dunnet, 11 November 2014. DWER Ref: A833233.

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.

Commissioner of Soil and Land Conservation (2012). Land Degradation Assessment Report for CPS 5218/1. Department of Agriculture and Food, Western Australia. DWER Ref: A561044.

Department of Biodiversity, Conservation and Attractions (DBCA) (2007-). NatureMap: Mapping Western Australia's Biodiversity. Department of Biodiversity, Conservation and Attractions. URL: http://naturemap.dpaw.wa.gov.au/. Accessed 24 November 2017.

Department of Environment Regulation (2014). Site Inspection Report for Clearing Permit Application CPS 6108/1. Site inspection undertaken 4 June 2014. Department of Environment Regulation, Western Australia. DWER Ref: A780622.

Government of Western Australia (2016). 2016 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of October 2016. WA Department of Parks and Wildlife, Perth.

Government of Western Australia (2017). 2016 South West Vegetation Complex Statistics. Current as of December 2016. 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.
Northcote, K.H. with Beckmann, G.G., Bettenay, E., Churchward, H.M., van Dijk, D.C., Dimmock, G.M., Hubble, G.D., Isbell, R.F., McArthur, W.M., Murtha, G.G., Nicolls, K.D., Paton, T.R., Thompson, C.H., Webb, A.A. and Wright, M.J. (1960-68): 'Atlas of Australian Soils, Sheets 1 to 10, with explanatory data'. CSIRO and Melbourne University Press: Melbourne.
Shire of Manjimup (2017). Advice for Clearing Permit CPS 7768/1. Western Australia. DWER Ref: A1540578.