



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

### PERMIT DETAILS

Area Permit Number: CPS 7905/1

File Number: DER2017/002147

Duration of Permit: From 2 January 2019 to 2 January 2021

### PERMIT HOLDER

Alexander Ailakis

Mary Ailakis

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 8679 on Deposited Plan 201627, Meerup

Lot 8892 on Deposited Plan 201641, Meerup

Lot 8893 on Deposited Plan 201641, Meerup

### AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 26.6 hectares of native vegetation within the area cross hatched yellow on attached Plan 7905/1.

### CONDITIONS

#### 1. Avoid, minimise and reduce the impacts and extent of 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.

#### 2. 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.

#### 3. 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*), forest red-tailed black cockatoo (*Calyptorhynchus banksii subsp. naso*) or Baudin's cockatoo (*Calyptorhynchus baudinii*).

(b) Prior to clearing, any *habitat tree(s)* identified under condition 3(a) shall be inspected by a *fauna specialist* for the presence of fauna listed in condition 3(a).

(c) Where fauna are identified under condition 3(b) of this Permit, the Permit Holder shall ensure that no clearing of, or within 10 metres of, the identified *habitat tree(s)* occurs.

#### 4. Records must be kept

The Permit Holder must maintain the following records for activities done pursuant to this Permit, in relation to the clearing of native vegetation authorised under this Permit:

- (a) In relation to the clearing of native vegetation authorised under this Permit:
  - (i) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
  - (ii) the date that the area was cleared; and
  - (iii) the size of the area cleared (in hectares).
- (b) Actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 1 of the Permit.
- (c) Actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 2 of the Permit.
- (d) In relation to fauna management pursuant to condition 3 of this Permit:
  - (i) the location of each black cockatoo 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 species name of each black cockatoo identified.

#### 3. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 4 of this Permit, when requested by the *CEO*.

#### DEFINITIONS

***black cockatoo habitat tree/s***: means trees that have a diameter, measured at 1.5 metres from the base of the tree, of 30 centimetres or greater that contain hollows suitable for nesting by Carnaby's cockatoo, Baudin's cockatoo or forest red-tailed black cockatoo;

***CEO*** means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

***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*;

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

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

***weed/s*** means any plant -

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



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Ryan Mincham  
MANAGER  
NATIVE VEGETATION REGULATION

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

3 December 2018

# Plan 7905/1

34.614888°S

34.614888°S

116.06257°E

116.067719°E






34.621751°S

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## Legend

-  Imagery
-  Clearing Instruments Activities
-  Local Government Authority



1:7,359

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

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



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WESTERN AUSTRALIA  
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# Clearing Permit Decision Report

## 1. Application details

### 1.1. Permit application details

Permit application No.: 7905/1  
Permit type: Area Permit

### 1.2. Applicant details

Applicant's name: Alexander Thomas and Mary Ailakis  
Application received date: 7 December 2017

### 1.3. Property details

Property: LOT 8679 ON PLAN 201627, MEERUP  
LOT 8892 ON PLAN 201641, MEERUP  
LOT 8893 ON PLAN 201641, MEERUP  
Local Government Authority: SHIRE OF MANJIMUP  
Localities: MEERUP

### 1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category:
26.6		Mechanical Removal	Pasture establishment

### 1.5. Decision on application

Decision on Permit Application: Grant  
Decision Date: 3 December 2018

Reasons for Decision: The clearing permit application was received on 7 December 2017 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 Principle (b), is not at variance to principles (e) and (h) and is not likely to be at variance to the remaining clearing Principles.

The application area may include foraging or some breeding habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*), Baudin's cockatoo (*Calyptorhynchus baudinii*) or forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*). However it is considered that the younger composition and structure of the eucalyptus woodland of the application may not comprise suitable black cockatoo habitat compared to the better quality vegetation elsewhere on the property and local area. Potential impacts to black cockatoo breeding habitat can be managed through a fauna management permit condition.

The Delegated Officer noted the degraded to good (Keighery, 1994) condition of the application area; the previous and current landuse and that the applicant avoided and minimised impacts through removing 7.4 hectares from the original clearing application that is in a very good (Keighery, 1994) or better condition (DWER, 2018b).

In determining to grant a clearing permit subject to avoid and minimise, weed and dieback, fauna management and reporting conditions, the Delegated Officer determined that the proposed clearing is unlikely to lead to any unacceptable impact to the environment.

## 2. Site Information

**Clearing Description** The application is to clear 26.6 hectares (ha) of native vegetation within the three land parcels listed in section 1.3 above, for the purpose of expanding pasture (figure 1).

**Vegetation Description** The application area covers three mapped South West Forest vegetation complexes:

- Collis 1- COy1: Tall open forest to woodland of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla*-*Banksia grandis*-*Allocasuarina fraseriana* on low hills and with *Allocasuarina decussata* on slopes in perhumid and humid zones.
- Collis - COb: Tall open forest of *Eucalyptus diversicolor*-*Corymbia calophylla* on crests of hills arising above the southern coastal plain in the hyperhumid zone.
- S4: Low woodland of *Eucalyptus marginata* subsp. *marginata*-*Nuytsia floribunda* with some *Melaleuca preissiana* and closed heaths of *Myrtaceae* spp. on broad drainage lines in hyperhumid and perhumid zones (Mattiske et al, 1998).

A Department of Water and Environmental Regulation (DWER) site inspection noted the vegetation under application comprises a mix of *Eucalyptus diversicolor* (karri) and

*Corymbia calophylla* (marri), tall open forest to woodland of *Eucalyptus marginata* (jarrah) - *Corymbia calophylla* (marri) - *Allocasuarina* sp and *Melaleuca* sp. The upper-storey appears to be of a predominately younger composition. The mid-storey is either absent or comprised of *Allocasuarina* and *Acacia* species and the ground cover comprises either scattered native shrubs or introduced weeds and pasture on the periphery. The majority of the application area shows historic impacts from timber thinning activities, weed incursion and associated edge effects resulting from the surrounding grazing/pastoral activities (DWER, 2018a).

#### Vegetation Condition

Based on the site inspection, the vegetation within the application area is in the following condition:

- Degraded: The basic vegetation structure is severely impacted by disturbance; there is scope for regeneration but not to a state approaching 'Good' condition without intensive management; to
- Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate (Keighery, 1994).

#### Soil type/Landform

The vegetation under application covers two soil types and landforms:

- Collis yellow duplex Phase – described as duplex sandy gravels, yellow-brown deep sandy duplexes, loamy gravels and stony soils gravelly yellow duplex soils associated with jarrah-marri forest. This soil unit comprises low hills or low hilly terrain with smooth flanking slopes with local relief less than 20 metres; and
- Collis brown gravelly duplex Phase – described as loamy gravels and brown deep loamy duplexes associated with jarrah-marri-karri forest. This soil unit comprises low hills or low hilly terrain with smooth flanking slopes with local relief less than 20 metres (DPIRD, 2017)

#### Comment

The local area is defined as a 10 kilometre radius from the perimeter of the application area. The local area retains approximately 70 per cent vegetation cover.

The condition of the vegetation within the application area was determined by a site inspection conducted by DWER officers on 23 March 2018 (DWER, 2018a).

Figures 2 – 8 below were obtained during the DWER site inspection.



Figure 1: Application area



Figure 2



Figure 4



Figure 3



Figure 6



Figure 5



Figure 7



Figure 8

### 3. Minimisation and mitigation measures

Following a DWER site inspection (DWER, 2018a) in which sections of the original application area were considered to be in a very good (Keighery, 1994) or better condition and worthy of retention, the applicant agreed to exclude these sections and reduce the amount of clearing by retaining 4.5ha of native vegetation on Lot 8892 and 2.9ha on Lot 8893. The original proposed clearing size has therefore been reduced by 7.4 ha, from 34ha to 26.6ha (DWER, 2018b).

### 4. 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

The amended application is for the clearing of up to 26.6ha of native vegetation to facilitate the expansion of grazing and pasture activities. As noted in section 2 above, the vegetation structure comprises an upper-storey of mostly younger karri, jarrah, marri with a mid-storey that is either absent or comprised of *Allocasuarina* sp. and *Acacia* sp. and a ground cover comprising either

scattered native shrubs and leaf litter or introduced weeds and grasses. The mid-storey and canopy vary from scattered to partially closed (DWER, 2018a).

As noted during the DWER site inspection (DWER, 2018a), 7.4 ha of the original clearing application area was considered to be in a very good (Keighery, 1994) or better condition, exhibiting better habitat values including a more mature age tree structure and denser mid-storey and ground cover. The applicant subsequently removed these areas from the application thus significantly reducing the degree of impact to the biological diversity and potential fauna habitat value (DWER, 2018b).

The vegetation within the revised application area ranges from degraded to good (Keighery, 1994) condition. There are clear edge effects of the application area as a result of both cattle grazing and weed/pasture incursion. These effects extend up to approximately 10 metres into the application area in some parts. A larger section of the application area has also been previously subject to timber thinning operations. This is evident given the notable younger age structure of the upper-storey karri, jarrah and marri and by a more open tree canopy and mid-storey; the ground cover also displays a degraded condition and lacks flora diversity (DWER, 2018a).

According to available datasets one priority two (P2) listed flora species, one P3 and three P4 species have been mapped in the local area (WAH, 1998-). None of these species are mapped within the application area. Based on soil type and/or habitat preferences (such as moist, seasonally inundated areas or sedgeland) the application area is unlikely to provide suitable habitat, particularly given the observed vegetation condition, position of the application in the mid to upper slopes of the landscape and current landuse (DWER, 2018a).

There are no known priority or threatened ecological communities mapped within the local area or the application area.

The 26.6 ha of vegetation under application forms part of 67 ha (or 39 per cent) of existing vegetation within the applicant's three land parcels which are the subject of this clearing application. The DWER site inspection (DWER, 2018a) noted that the other vegetation outside the application area (being 40.4 ha) is in a very good (Keighery, 1994) or better condition and includes approximately 14 ha associated with two minor, perennial watercourses and a 3.5 ha fenced remnant subject of a Commissioner of Soil and Land Conservation's (CSLC) (DPIRD, 2018) agreement to reserve. It is noted that the local area is highly vegetated with approximately 70 per cent of vegetation cover remaining [refer to principle (e)] and includes vegetation within several conservation estates within 0.8 to 9 kilometres of the application area [(refer principle (h))].

Given the above, the vegetation under application is not considered to comprise a high level of biological diversity.

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

## **(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 may be at variance to this Principle**

Six threatened fauna species, *Calyptorhynchus banksii* subsp. *naso* (forest red-tailed black cockatoo), *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo), *Leipoa ocellata* (malleefowl), *Setonix brachyurus* (quokka) and *Pseudocheirus occidentalis* (western ringtail possum) have been recorded within the local area (DBCA, 2007-). None of the abovementioned species were observed during the DWER site inspection of the application area.

The DWER site inspection noted 7.4ha of the original clearing application (contained within Lot 8892 and Lot 8893) were considered to be in a very good or better (Keighery, 1994) condition. It is considered this 7.4ha and the other remaining 33ha of intact vegetation located within the three land parcels (which form this application), contains better habitat values and is more likely to be utilised by such fauna should they occur. The applicant subsequently removed the 7.4ha area from the clearing application (DWER, 2018a; DWER, 2018b).

It is noted that the local area retains 70 per cent vegetation cover [(refer principle (e))] and includes large areas of conservation estates within 0.8 to 9 kilometres of the application area [(refer principle (h))]. These areas are also considered to comprise vegetation of a significantly better condition and habitat value than that of the application area.

The DWER site inspection noted the vegetation within the revised application area ranges from degraded to good (Keighery, 1994) condition. There are clear edge effects on the periphery of the application area as a result of both cattle grazing, pasture and weed incursion. These effects extend up to approximately 10 metres into the application area. A larger section of the application area has also been previously subject to timber thinning operations. This is evident given the notable younger age structure of the upper-storey karri, jarrah and marri and by a more open tree canopy and mid-storey; the ground cover also displays a degraded condition and lacks flora diversity in some parts (DWER, 2018a).

The Carnaby's cockatoo recovery plan (Department of Parks and Wildlife, 2013) summarises habitat critical to the survival for this species as:

- the eucalypt woodlands that provides nest hollows used for breeding, together with nearby vegetation that provides feeding, roosting and watering habitat that supports successful breeding;
- woodland sites known to have supported breeding in the past and which could be used in the future, provided adequate nearby food and/or water resources are available or are re-established; and
- in the non-breeding season the vegetation that provides food resources as well as the sites for nearby watering and night roosting that enable the cockatoos to effectively utilise the available food resources.

The recovery plan also states, "success in breeding is dependent on the quality and proximity of feeding habitat within 12 kilometres of nesting sites. Along with the trees that provide nest hollows, the protection, management and increase of this



feeding habitat that supports the breeding of Carnaby's cockatoo is a critical requirement for the conservation of the species" (Department of Parks and Wildlife, 2013).

Black cockatoos breed in large hollow-bearing trees, generally within woodlands or forests or in isolated trees (Commonwealth of Australia, 2012). 'Breeding habitat' for black cockatoos is defined as trees of species (for example marri, jarrah, wandoo) 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 (Commonwealth of Australia, 2012). DWER's site inspection noted two trees could have a hollow(s), but a significant portion of the eucalyptus trees are unlikely to be of a mature enough age or of a suitable diameter at breast height to have or develop hollows (DWER, 2018a). Whilst the revised proposed clearing area is considered unlikely to contain habitat trees, impacts to potential habitat trees can be managed through permit conditions requiring pre-clearing inspections and avoidance of trees actively being utilised.

Black cockatoos, in particular Carnaby's cockatoo, forage on the seeds, nuts and flowers of a large variety of plants including proteaceous and eucalyptus species, allocasuarina, and a range of introduced species (Valentine and Stock, 2008). Whilst the revised application area comprises a eucalyptus woodland, it is considered that the younger composition and structure of the woodland noted during the DWER site inspection (DWER, 2018a) may not be a significant food source, compared to the better quality vegetation elsewhere on the property and local area [refer to principle (e) and (h)].

Given this, and noting the remaining vegetation surrounding the application area and the extensive remnant vegetation in the local area, it is considered the application area is not likely to provide significant breeding or foraging habitat for black cockatoos.

The malleefowl is found in semi-arid to arid shrublands and low woodlands, especially those dominated by mallee and/or acacias (Benshemesh, J., 2007). A sandy substrate and abundance of leaf litter are required for breeding. Densities of the birds are generally greatest in areas of higher rainfall and on more fertile soils where habitats tend to be thicker and there is an abundance of food. The species has been shown to be highly sensitive to grazing by sheep, and is probably similarly sensitive to grazing by other introduced herbivores (Benshemesh, J., 2007). Given the malleefowl's preferred habitat requirements and the application areas historical and current agricultural landuse and condition, it is considered unlikely that the application area contains suitable or significant habitat for the malleefowl nesting requirements.

No habitat trees (*Agonis flexuosa*) for western ringtail possum (WRP) were noted in the revised application area during the DWER site inspection. WRP's utilise a variety of shelters including dreys (within *A. flexuosa*), tree hollows and forks, grass trees (*Xanthorrhoea* spp.), hollow logs, rabbit burrows and forest debris (Shedley and Williams, 2014). In addition, vegetation communities critical to WRP include long, unburnt mature remnants of *A. flexuosa* woodlands with high canopy continuity and jarrah and marri forests and woodlands with limited anthropogenic disturbance (unlogged or lightly logged, and a low intensity and low frequency fire history), that are intensively fox-baited and have low indices of fragmentation (DPaW, 2017). Studies have shown that the rate of sighting for the species correlates with the abundance of *A. flexuosa* and presence of hollow bearing trees (Shedley and Williams, 2014). Noting the absence of *A. flexuosa* and suitable hollow bearing trees, the application area is not likely to provide significant habitat for this species.

In the southern forest of Western Australia, quokkas have a preference for jarrah, marri and karri forest and riparian habitats with a sedge dominated understorey (DEC, 2013). Factors favouring habitat occupancy in the southern forest are burn patchiness, complex vegetation structure and habitat that supports a low density of near-surface fuel (DEC, 2013). Noting these habitat requirements, the application area is unlikely to provide suitable habitat for the quokka.

Based on the above, the proposed clearing may be at variance to this principle due to the presence of the two hollow-bearing trees that may be utilised by black cockatoos, however any potential impacts to other fauna habitat are likely to be negligible given the presence of vegetation in a very good or better (Keighery, 1994) condition elsewhere on the property, and within the local area.

**(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, no rare flora species occur within either the local area or the application area.

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

**(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 occur within the local area or within the application area.

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

**(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 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 application area is located within the Warren Interim Biogeographic Regionalisation of Australia bioregion, which retains 79 per cent of the pre-European vegetation extent, and the mapped South West Forest vegetation association's COy 1, COb and S4 of which each retain approximately 82, 87 and 55 per cent of their pre-European vegetation extent within the bioregion (Government of Western Australia, 2018; Mattiske et al, 1998; refer Table 1). The local area retains approximately 70 per cent native vegetation cover.

Noting the vegetation extents are well above the 30 per cent threshold, the application area does not occur within an extensively cleared area and is not considered to be a significant remnant.

The proposed clearing is not at variance to this principle.

Table 1: Vegetation extent in the local area of CPS 7905/1

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed lands (ha)	Extent remaining in all DBCA managed lands (proportion of Pre-European extent) (%)
<b>IBRA bioregion:</b>					
Warren	833,985	659,438	79	557,850	66
<b>South West Vegetation complex:</b>					
Cob	22,136	19,274	87	17,732	80
COy1	23,057	19,028	82	16,984	73
S4	1,568	866	55	373.55	23

**(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**

A small section of the application area (approximately less than 0.2 ha) within Lot 8679 occurs between 15 and 50 metres from a mapped minor, perennial watercourse. Given this proximity, the vegetation here may be considered as growing in association with a watercourse. This represents 0.75 per cent of the application area.

A section of application area within Lot 8892 is located approximately 100 metres northwest of a mapped non-perennial watercourse of which approximately 30 metres is vegetated. Another watercourse occurs approximately 200 metres to the west of this Lot; it is noted that all of the 200 metre buffer is vegetated.

The proposed clearing is at variance to this principle with regards to the 0.2 ha within Lot 8679. However, given the vegetated buffers and small amount propose to be impacted, it is considered that the clearing is not likely to result in any significant environmental harm.

**(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**

The application area comprises two soil types: the Collis yellow duplex Phase and Collis brown gravelly duplex Phase. Each are similarly associated with duplex sandy gravels and loamy gravels in a landform comprising low hills or low hilly terrain with smooth flanking slopes with local relief less than 20 metres (DPIRD, 2017).

The CSLC confirmed, as did the DWER site inspection, that the application area is located on the mid to upper slopes of the landscape, that the soil types have a moderate to high capability for the proposed landuse (establishing pasture) and the risk of land degradation is low (DPIRD, 2018).

The soil types have a nil to moderate risk of water and wind erosion. Groundwater salinity is mapped at 500-1000 dissolved solids milligrams per litre, which is considered to be a marginal level of salinity (DPIRD, 2018; DPIRD, 2017).

During the site inspection, it was noted that the paddocks surrounding the application area comprised established pasture and that there was no evidence of water or wind erosion occurring or having occurred. The applicant advised that they are conscious of land degradation and to mitigate the risk of potential water and wind erosion, pasture is hand planted into any bare ground within the paddocks (DWER, 2018a).

Taking into account the applicant's management measures, the application area's position in the landscape and the soil types present, the risk of water erosion, wind erosion and salinity causing land degradation as a result of the proposed clearing is considered to be low (DPIRD, 2018).

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

**(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 is not at variance to this Principle**

The application area is surrounded by conservation estate and state forest as follows:

- Boorara-Gardner National Park – closest boundary is three kilometres (km) southwest of the application area;
- D'Entrecasteaux National Park – closest boundary is 7.6 km east;
- Gardner State Forest - closest boundaries is 5.6 km west and 7 km south;
- Hawke National Park - closest boundaries are 4.8 km east and 3 km northwest;
- Jane National Park - closest boundary is 9 km east; and
- Warren State Forest – closest boundary is 0.8km north.

Given the distance to the conservation areas and state forest, and that a vegetated buffer occurs between these areas and the application area, the proposed clearing is not at variance to this Principle.

**(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**

A site inspection of the application area did not record any natural surface water features or evidence of surface salinity. An area subject to inundation and a Palusplain (seasonally waterlogged flat) wetland occurs in the adjoining property approximately 300 metres southwest and south of the southwestern end of the application area; these areas are further protected by a 150 metre vegetated buffer. Aerial imagery does not show any salinity issues in the adjoining properties.

The CSLC confirmed that the application area is located on the mid to upper slopes of the landscape, that the soil types have a moderate to high capability for the proposed landuse (establishing pasture) and the risk of land degradation is low (DPIRD, 2018)

The soil types have a nil to moderate risk of water and wind erosion. Groundwater salinity is mapped at 500-1000 dissolved solids milligrams per litre, which is considered to be a marginal level of salinity (DPIRD, 2018; DPIRD, 2017).

During the site inspection, it was noted that the paddocks surrounding the application area comprised established pasture and that there was no evidence of water or wind erosion occurring, or having occurred.

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

**(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**

The application area is located on the mid to upper slopes of the landscape, comprises low hills or low hilly terrain with smooth flanking slopes, with a local relief of less than 20 metres across the application area (DPIRD, 2017). Given the sandy nature of the soils present and position in the landscape, vegetation removal is not likely to cause water ponding or flooding issues (DPIRD, 2018).

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

**Planning instruments and other relevant matters.**

The application area is zoned as General Agriculture under the Shire of Manjimup's Local Planning Scheme No. 4; Shire planning approval for the proposed clearing is not required (Shire of Manjimup, 2018).

The clearing permit application was advertised on the DWER website on 19 January 2018 with a 21 day submission period. No public submissions have been received in relation to this application.

**5. Applicant's Submissions**

On 12 September 2018, the applicant was advised of the environmental values that certain sections of the application area comprise and asked how impacts to these values could be avoided and/or minimised. On 21 September 2018, the applicant agreed to remove from the application 7.4 hectares of vegetation in Lot 8893 and 8892 that is in a very good or better (Keighery, 1994) condition.

**6. References**

Benshemesh, J. (2007). National Recovery Plan for Malleefowl. Department for Environment and Heritage, South Australia Commonwealth of Australia (CoA)(2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra. Commonwealth of Australia (CoA)(2012). EPBC Act referral guidelines for three threatened black cockatoo species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra. Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>.

Department of Environment and Conservation (DEC) (2013) Quokka (*Setonix brachyurus*) Recovery Plan. Wildlife Management Program No. 56. Department of Environment and Conservation, Perth, Western Australia.

Department of Water and Environmental Regulation (DWER) (2018a) site inspection for clearing permit CPS 7905/1 (DWER Ref: A 1658425)

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#### GIS Databases:

- Department of Biodiversity, Conservation and Attractions, Tenure
- Groundwater salinity
- Hydrography, General Hydro
- Hydrography, Wetlands
- SAC bio datasets
- TPFL Data
- WAHerb Data
- WA TEC PEC Boundaries
- Virtual Mosaic WA Now / Aerial imagery (accessed October 2018)