



CLEARING PERMIT

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

Purpose Permit number:	CPS 8556/1
Permit Holder:	R & EB Pessotto
Duration of Permit:	17 March 2020 – 17 March 2025

The permit holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of silvicultural thinning.

2. Land on which clearing is to be done

Lot 2684 on Deposited Plan 129244, Wilgarrup
Lot 2339 on Deposited Plan 129244, Wilgarrup
Lot 2340 on Deposited Plan 125356, Wilgarrup
Lot 2732 on Deposited Plan 129243, Wilgarrup

3. Area of clearing

The Permit Holder must not clear more than 45.9 hectares of native vegetation within the areas cross-hatched yellow on attached Plan 8556/1.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation authorised under this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

5. Type of clearing authorised

(a) The Permit Holder may undertake the following activities:

- (i) clearing of *understorey* within the areas cross-hatched yellow on Plan 8556/1;
- (ii) *thinning* of Jarrah (*Eucalyptus marginata*), Yarri (*Eucalyptus patens*) and Marri (*Corymbia calophylla*) trees;
- (iii) *culling* of unsaleable trees; and
- (iv) burning of cleared *understorey* and *culled* trees.

(b) Clearing authorised under this Permit must be completed by 17 March 2024, being four years from the date from which this Permit becomes valid.

6. Compliance with Assessment Sequence and Management Procedures

Prior to clearing any native vegetation under conditions 1, 2, 3 and 5 of this Permit, the Permit Holder must comply with the Assessment Sequence and the Management Procedures set out in Part II of this Permit.

PART II – ASSESSMENT SEQUENCE AND MANAGEMENT PROCEDURES

7. 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.

8. Dieback and weed control

(a) 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*:

- (i) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (ii) shall not move soils in wet conditions;
- (iii) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- (iv) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

(b) At least once in each 12 month period for the *term* of this Permit, the Permit Holder must remove or kill any *weeds* growing within areas cleared under this Permit.

9. Watercourse management

The Permit Holder shall not clear native vegetation within 50 metres of the *riparian vegetation* of any *watercourse* or *wetland* within the area cross-hatched yellow on Plan 8556/1.

10. Fauna management

(a) Prior to undertaking any clearing authorised under this Permit, the Permit Holder must demarcate the three *Black Cockatoo habitat trees* containing hollows as identified within the 'Black cockatoo tree assessment/survey' prepared by John Clarke at the following locations:

Tree ID	Species	Latitude	Longitude
2	<i>Corymbia calophylla</i> (Marri)	-34.133611	116.237778
3	<i>Corymbia calophylla</i> (Marri)	-34.131667	116.238611
4	<i>Eucalyptus marginata</i> (Jarrah)	-34.132222	116.245556

(b) The Permit Holder shall not clear within 10 metres of the trees as described in condition 10(a).

11. Vegetation management

(a) Prior to undertaking any clearing authorised under this Permit, an environmental specialist must determine the species composition, structure and density of the understorey of areas proposed to be thinned;

(b) The Permit Holder must retain a minimum of 225 *habitat trees*, with an average of 5 *habitat trees* per hectare, within the area authorised to clear under this Permit;

- (c) A minimum retention rate of 15m²/ha *basal area* is required within the area of clearing authorised under this Permit;
- (d) Prior to undertaking any clearing authorised under this Permit, the Permit Holder must exclude all stock from the areas subject to thinning activities; and
- (e) Within two years of completing clearing of native vegetation authorised under this Permit, the Permit Holder must:
 - (i) determine the species composition, structure and density of the *understorey* of areas subject to *thinning*; and
 - (ii) where, in the opinion of an *environmental specialist*, there is evidence that *understorey* will not recover and develop towards its pre-clearing composition, structure and density determined under condition 11(e)(i), the Permit Holder must undertake *remedial action* at an *optimal time* within the next 12 months to ensure re-establishment of *understorey* prior to expiry of this Permit.

PART III – RECORD KEEPING AND REPORTING

12. Records to be kept

- (a) In relation to the clearing of native vegetation undertaken pursuant to this Permit:
 - (i) the species composition, structure and density of the cleared area;
 - (ii) 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 or decimal degrees;
 - (iii) the date that the area was cleared;
 - (iv) the size of the area cleared (in hectares)
 - (v) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 7 of this Permit;
 - (vi) actions taken to minimise the risk of the introduction and spread of dieback and weeds in accordance with condition 8 of this Permit; and
 - (vii) actions taken in accordance with condition 10 of this Permit.
- (b) In relation to vegetation management pursuant to condition 11 of this Permit:
 - (i) prior to clearing native vegetation authorised under this Permit, the species composition, structure and density of *understorey*;
 - (ii) the species and number per hectare of *habitat trees* retained;
 - (iii) the location of *habitat trees* retained, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;
 - (iv) monitoring undertaken to ensure that the specified minimum *basal area* is retained;
 - (v) photographs of the *understorey* taken at one year, two years and three years after completing clearing authorised under this Permit; and
 - (vi) a detailed description of the nature and extent of any *remedial actions* undertaken.

13. Reporting

- (a) The Permit Holder must provide to the *CEO*, on or before 30 June of each year, a written report of records required under condition 12 of this Permit and activities done by the Permit Holder under this Permit between 1 January and 31 December of the preceding year.
- (b) Prior to 8 March 2025 the Permit Holder must provide to the *CEO* a written report of records required under condition 12 of this Permit where these records have not already been provided under condition 13(a) of this Permit.

Definitions

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

basal area is the method of expression of tree cover density in an area where the total area of tree trunk, measured at average adult human breast height, is expressed as square metres per hectares of land area;

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

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

culled/ing means the selective removal and/or killing of unsaleable trees for *thinning*, using methods including notching, felling or machine pushing;

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

direct seeding means a method of re-establishing vegetation through the establishment of a seed bed and the introduction of seeds of the desired plant species;

environmental specialist means a person who is engaged by the Permit Holder for the purpose of providing environmental advice, who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit;

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

habitat tree(s) means trees that have a diameter, at average adult human chest height, of greater than 50cm, healthy but with dead limbs and broken crowns that are likely to contain hollows and roosts suitable for native fauna, or where these are not present then healthy but with the potential to contain hollows and roosts;

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;

planting means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species;

optimal time means the period from April to June for undertaking *direct seeding*, and the period from May to July for undertaking *planting*;

rehabilitate/ed/ion means actively managing an area containing native vegetation in order to improve the ecological function of that area;

remedial action/s means for the purpose of this Permit, any activity that is required to ensure successful re-establishment of *understorey* to its pre-clearing composition, structure and density, and may include a combination of soil treatments and *revegetation*;

revegetate/ed/ion means the re-establishment of a cover of *local provenance* native vegetation in an area using methods such as *regeneration*, *direct seeding* and/or *planting*, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area;

riparian vegetation has the meaning given to it in Regulation 3 of the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*;

stock means the horses, cattle, sheep, pigs and other non-indigenous grazing animals kept or bred on a property;

term means the duration of this Permit, including as amended or renewed;

thinned/ing describes a silvicultural activity to promote the growth of selected trees by removing competing trees;

understorey means, for the purpose of this Permit, all native vegetation that does not include trees to be *culled* or subject to harvest;

watercourse has the meaning given to it in section 3 of the *Rights in Water and Irrigation Act 1914*;

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 Regional Weed Rankings Summary, regardless of ranking; and
- (c) not indigenous to the area concerned

wetland/s means an area of seasonally, intermittently or permanently waterlogged or inundated land, whether natural or otherwise, and includes a lake, swamp, marsh, spring, dampland, tidal flat or estuary

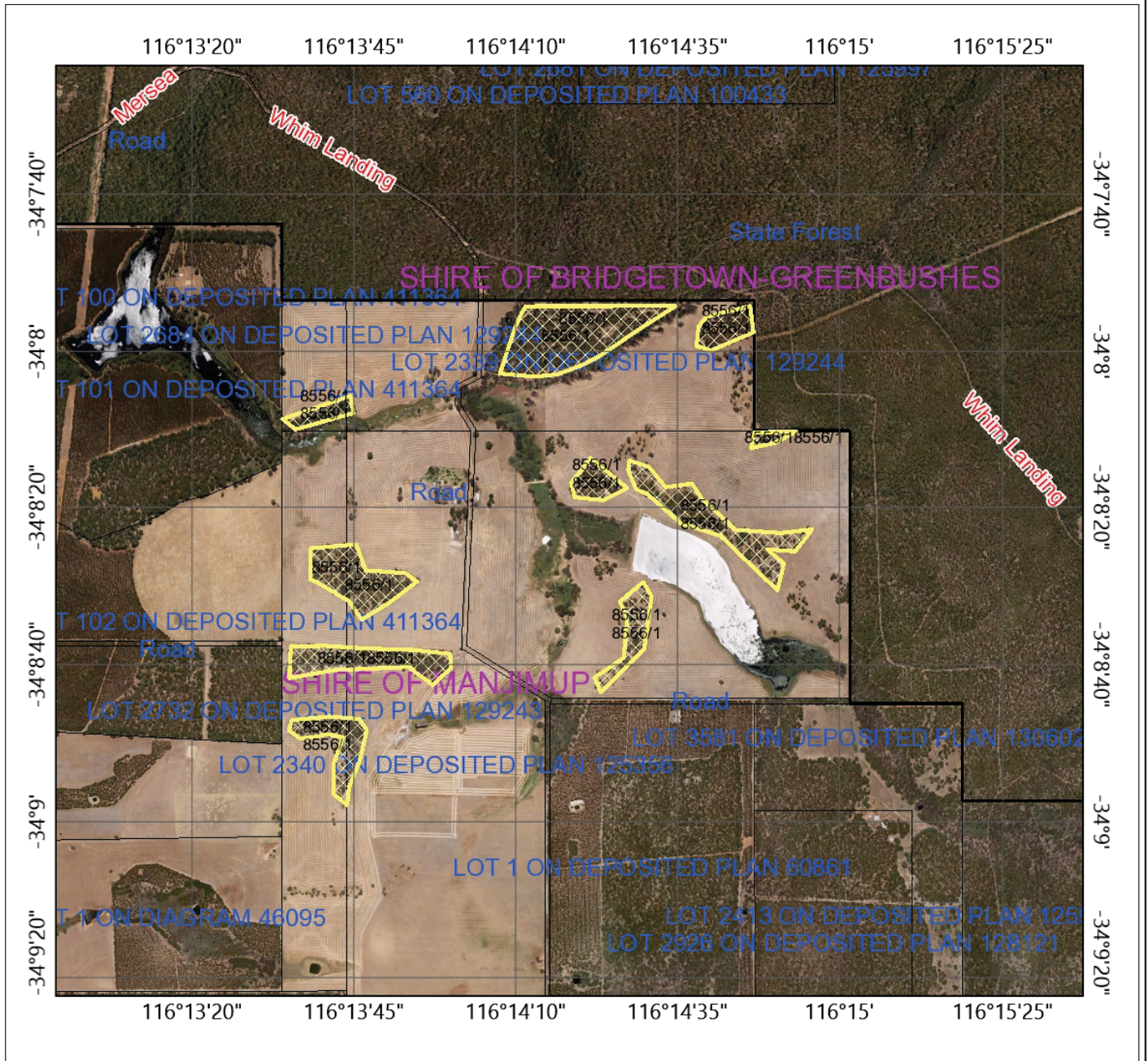


Samara Rogers
MANAGER
NATIVE VEGETATION REGULATION

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

21 February 2020

Plan 8556/1



Legend

- CPS areas approved to clear
- Local Government Authorities
- LGA
- BRIDGETOWN-GREENBUSHES, SHIRE OF
- MANJIMUP, SHIRE OF
- Roads - State Roads

0.7 0.35 0.7 Kilometers



WGS_1984_Web_Mercator_Auxiliary_Sphere

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

Disclaimer: This map is used as a generic static output for reference purposes. Information on this map may or may not be accurate, current, or otherwise reliable. While the Department of Water and Environmental Regulation, has made all reasonable efforts to ensure the accuracy of this data, the department accepts no responsibility for any inaccuracies and persons relying on this data do so at their own risk.

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Locality Map



Government of Western Australia
 Department of Water and Environmental Regulation



1. Application details

1.1. Permit application details

Permit application No.: 8556/1
Permit type: Purpose Permit

1.2. Applicant details

Applicant's name: R & EB Pessotto
Application date: 19 June 2019

1.3. Property details

Property: Lot 2684 on Deposited Plan 129244
Lot 2339 on Deposited Plan 129244
Lot 2340 on Deposited Plan 125356
Lot 2684 on Deposited Plan 19244
Local Government Authority: Manjimup, Shire of
Locality: Wilgarrup

1.4. Application

Clearing Area (ha)	No. Trees	Method of Clearing	Purpose category
76.349 ha (revised to - 45.9 ha)	-	Mechanical Removal	Timber Harvesting

1.5. Decision on application

Decision on Permit Application: Grant

Decision Date: 21 February 2020

Reasons for Decision:

The clearing permit application was received on 19 June 2019 and 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 with principle (f), may be at variance with Principles (b), (h), and (i), and is not likely to be at variance with the remaining clearing principles.

The Delegated Officer determined that the proposed clearing may increase the risk of weeds and dieback spreading into the adjacent native vegetation. Weed and dieback management measures will mitigate this risk.

Through assessment it was identified that the application area comprises suitable breeding and foraging habitat for black cockatoos. To mitigate and minimise impacts to black cockatoo clearing permit contains have been placed on the permit requiring the retention of three trees identified to contain hollows which may be suitable for breeding by black cockatoos and vegetation within ten metres surrounding that tree; a condition requiring a minimum 225 habitat trees within the area proposed to be cleared; and a condition requiring a minimum retention of 15m²/ha *basal area* and undertake remedial action to ensure re-establishment of the understorey.

To minimise impacts on the watercourses that lie between areas proposed to be cleared, the clearing permit contains a condition to avoid all clearing of native vegetation within 50 meters of riparian vegetation of any watercourse.

In determining to grant a clearing permit subject to conditions, the Delegated Officer determined that the proposed clearing is not likely to lead to any unacceptable impacts on the environment.

2. Site Information

Clearing Description:

The original application was for the proposed thinning up to 76.349 hectares of native vegetation within the lots listed above, for the purpose of silviculture (Pessotto, 2019)

Following correspondence received by the Department of Water and Environmental Regulation (DWER), the applicant reduced the application area to 45.9 hectares.

Vegetation Description:

The application area intersects four mapped South West Forest vegetation complexes (Mattiske and Havel, 1998); being:

- Wheatley, described as a woodland of *Eucalyptus marginata subsp. marginata-Eucalyptus wandoo* on slopes with woodland of *Eucalyptus rudis* on valley floors in the humid zone (Mattiske and Havel, 1998);

- Bevan 2, described as open forest to woodland of *Eucalyptus marginata* subsp. *marginata* with some *Corymbia calophylla* on lateritic uplands in humid and subhumid zones (Mattiske and Havel, 1998);
- Yanmah 2, described as mixture of tall open forest of *Eucalyptus marginata* subsp. *marginata*-*Corymbia calophylla* on slopes and low woodland of *Banksia littoralis*-*Banksia seminuda* on valley floors in the humid zone (Mattiske and Havel, 1998); and
- Corbalup 2, described as open forest of *Eucalyptus marginata* subsp. *marginata* with some *Corymbia calophylla* on low rises and low woodland of *Melaleuca preissiana*-*Banksia littoralis* on depressions in humid and subhumid zones. (Mattiske and Havel, 1998).

A site inspection conducted by Environmental Officers from DWER in September 2019 found that the application area consisted of *Corymbia calophylla* and (Marri), *Eucalyptus marginata* (Jarrah) trees over native and non-native grasses. In some of the northern areas of the application area some native understory was present and included *Xanthorrhoea*, *Hakea*, *Acacia*, *Hardenbergia* and *Kennedia* species (DWER, 2019).

Vegetation Condition:

The condition of the application area was determined from the site inspection (DWER, 2019) and is considered to be in degraded (Keighery, 1994) condition, described as; basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. (Keighery, 1994).

Soil Type:

The application area has been mapped by the Department of Primary Industries and Regional Development (DPIRD, 2019) as the following soil types:

- Bevan Subsystem (Manjimup) subsystem, described as Broad, gently sloping (3-15%) divides on laterite, soils are sandy gravels and loamy gravel (Schoknecht et al., 2004);
- Yanmah subsystem, described as soils of loamy gravels, sandy gravels and deep sands with non-saline wet soils on the valley floors (Schoknecht et al., 2004);
- Corbelup subsystem soils are loamy gravels and sandy gravels (Schoknecht et al., 2004); and
- Wheatley Subsystem (Dwalganup) described as shallow (20-40 m) minor valleys with low sideslopes (5-20%). and narrow swampy floors with a slightly incise stream channel. Soils are loamy gravels, sandy gravels and loamy earths (Schoknecht et al., 2004).

Comment:

The local area referred to in the below assessment is defined as the area within a 10 kilometre radius of the application area.



Figure 1. Map of the revised application area (hatched blue)

3. Assessment of application against clearing principles

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

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

According to available datasets, two threatened (T) flora species and six priority species have been recorded within the local area; though none of the recordings are within the application area;

- *Caladenia christineae* (T) - known from 54 records, one of which is in the local area. This species is recorded as growing in brown sandy loam and associated with winter wet areas).
- *Caladenia harringtoniae* (T) - known from three records in the local area, this species has been recorded on many soil types including sandy and loam soils and in association with a forest of *Eucalyptus marginata* and *Corymbia calophylla*.
- *Diuris drummondii* (T) - known from one record within the local area, this species grows in association with low-lying depressions and swamps.
- *Hemigenia microphylla* (Priority 3) - known from 25 records, two of which are in the local area, this species has been recorded on many soil types and is found along creek lines.
- *Usnea pulvinata* (Priority 1) - known to grown on granite outcrops and in layers of decomposing leaf litter
- *Schoenus natans* (Priority 4) - known from 1 record within the local area and known to occur in winter wet depressions
- *Thysanotus unicusensis* (Priority 3) - known from 13 records, two of which are in the local area. The species is known to grow in association with sandy loamy soils and in association with wet areas.

The application area contains approximately 45.9 hectares of naïve vegetation that is considered to be in degraded (Keighery, 1994) condition. Given the vegetation condition and previous silvicultural harvesting and grazing activities within the application area, it is considered the application area is not likely to provide habitat for the conservation significant flora species found within the local area. Threatened flora species are discussed further under Principle (c).

As assessed under Principle (b), the application area comprises foraging and nesting habitat for forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*), Baudin's cockatoo (*Calyptorhynchus baudinii*) and Carnaby's cockatoo (*Calyptorhynchus latirostris*) (hereon referred to as black cockatoos) but is not considered to provide habitat for ground-dwelling species due to the absence of dense understory.

According to available datasets, no threatened ecological communities (TECs) or priority ecological communities (PECs) are mapped within the local area. The vegetation within the application area is not likely to comprise the whole or a part of, or be necessary for the maintenance of a PEC or TEC.

The application area is located approximately 800 meters to the west of a mapped South West Regional Ecological Linkage (Molloy et al., 2009). An ecological linkage is defined as a series of (both contiguous and non-contiguous) patches, 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 (Molloy et al., 2009). The application area is adjacent to Palgarup State Forest which contributes to the contiguous strip of vegetation running parallel to the mapped linkage which may support the movement of fauna across the landscape and is therefore also considered to be part of an ecological linkage. Given the adjacent Palgarup State Forest has secure tenure for conservation, the proposed clearing is not likely sever or significantly impact this linkage.

The local area retains approximately 60 per cent cover of remnant native vegetation. The majority of this remnant vegetation occurs within lands managed by the Department of Biodiversity, Conservation and Attractions (DBCA). The local area is expected to contain vegetation and fauna habitats in better condition than those within the application area.

Noting the vegetation within the application area contains approximately 45.9 hectares of native vegetation in a degraded (Keighery, 1994) condition, which comprises suitable nesting and foraging habitat for black cockatoo species. The vegetation is not likely to comprise conservation significant flora species, is not considered representative of any TEC/PEC, and is not part of an ecological linkage. Therefore the proposed clearing is not likely to be at variance with 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.

Proposed clearing may be at variance with this Principle

According to available databases, nine threatened fauna species, one fauna species protected under international agreement, three specially protected fauna species and six Priority 4 species have been recorded within the local area (DBCA, 2007-). The threatened species include;

- *Bettongia penicillata* (Woylie)
- *Bettongia penicillata* subsp. *ogilbyi* (Woylie)
- *Calyptorhynchus banksii* subsp. *naso* (forest Red-tailed black cockatoo)
- *Calyptorhynchus baudinii* (Baudin's cockatoo)
- *Calyptorhynchus latirostris* (Carnaby's cockatoo)
- *Dasyurus geoffroii* (Chuditch)
- *Myrmecobius fasciatus* (Numbat)
- *Pseudocheirus occidentalis* (western ringtail possum)
- *Westralunio carteri* (Carter's freshwater mussel)

Black cockatoo's (Baudin's, Carnaby's and forest red-tailed black cockatoo) 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), Eucalyptus, Corymbia and a range of introduced species (DotEE, 2013; Valentine and Stock, 2008). A survey provided by the applicant 'Black cockatoo habitat tree assessment' (Clarke, 2019) noted four trees within the application area which contain hollows that may be of suitable size to support breeding habitat for the black cockatoo species. The vegetation type mostly consists of Jarrah and Marri trees which provide foraging habitat for black cockatoos. The foraging habitat represented within the application area is not considered significant due to the presence of similar vegetation types within the surrounding area and that the applicant is required to retain a rate of 15m²/ha *basal area*, revegetate the area after clearing and retain 225 habitat trees.

The understory within the application area is not considered to provide habitat for the ground dwelling fauna species listed above, however there are vast areas of state forest to within the local area which are likely to provide suitable habitat for these species in better condition.

The western ringtail possum has a preference for habitat dominated by *Agonis flexuosa* (peppermint) near coastal areas, swamps, watercourses or floodplains (Department of Parks and Wildlife, 2014). From the supporting information provided by the applicant, no areas dominated by peppermint trees were observed within the application area. The application area is not likely to provide significant habitat for the western ringtail possum.

Records of *Westralunio carteri* (Carter's Freshwater Mussel) within the local area are associated with larger waterbodies (DBCA, 2007). As the application area does not include the waterbody and as discussed under Principle (i), is not likely to impact surface water quality, the proposed clearing is not likely to impact on habitat for this species.

Noting that the local area retains approximately 60 per cent of native vegetation that is likely to provide similar or better habitat as found within the application area, and that this vegetation is highly connected and predominantly on land managed by DBCA, the proposed clearing is not expected to result in the loss of significant fauna habitat. To mitigate impacts to breeding habitat for black cockatoo species, a permit to clear has been conditioned to avoid the four trees known to contain suitable hollows for black cockatoo breeding habitat and 225 habitat trees within the application area.

The proposed clearing may be at variance with this Principle.

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

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

According to available datasets, two threatened flora species (*Caladenia harringtoniae* and *Caladenia christineae*) have been recorded within the local area.

The threatened flora species *Caladenia harringtoniae* and *Caladenia christineae* have been recorded on sand, clayey loam and laterite soils and are known to inhabit the margins of winter wet swamps and freshwater lakes. These species typically inhabit paperbark (*Melaleuca* species) and *Eucalyptus rudis* (flooded gum) swamps and flats which are inundated for several months of the year. These species may also be found along creek lines in *Eucalyptus marginata* (jarrah) and *Eucalyptus diversicolor* (karri) forest (Brown et al., 1998). Given that the application area does not contain swamps, flat or other inundated areas, it is considered that application area is not likely to comprise suitable habitat for the flora species known to occur within the local area.

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

According to available datasets, no state listed 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 with 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 likely to be at variance with 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 Jarrah Forest Interim Biogeographic Regionalisation of Australia (IBRA) bioregion, and the four mapped South-West vegetation complexes all retain greater than 30 per cent of their pre-European extents.

The local area retains approximately 60 per cent native vegetation cover.

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 with this Principle.

Table 1: Bioregion and vegetation extent statistics (Government of Western Australia, 2019)

	Pre-European extent	Current extent remaining		Current extent remaining in DBCA managed lands	
	(ha)	(ha)	(%)	(ha)	Proportion of current extent (%)
IBRA bioregion					
Jarrah Forest	4,506,660.25	2,399,838.15	53.25	69.74	37.14
South West Forest vegetation complex					
Wheatley	6,443.50	3,614.78	56.10	2,820.41	43.77
Bevan 2	45,828.05	40,360.14	88.07	38,982.75	85.06
Yanmah 2	6,744.41	5,330.82	79.04	5,099.40	75.61
Corbalup 2	26,357.02	22,095.49	83.83	21,443.16	81.36

(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 with this Principle

According to available datasets, the application area is located between branches of minor and major perennial watercourse. The watercourse flows to the west forming the Wilgarrup River.

Areas within the northern portion of the application area are in close proximity to water courses. Although no riparian vegetation was observed during the site inspection (DWER, 2019), there is a possibility of riparian vegetation being within the areas closest to the watercourse. Therefore the proposed clearing is at variance this Principle. To mitigate risk to riparian vegetation, a permit to clear has been conditioned to avoid clearing within 50 meters of the riparian vegetation associated with the watercourse.

Considering the above, the impacts to riparian vegetation are not likely to be significant.

(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 with this Principle

The application area has been mapped by the Department of Primary Industries and Regional Development within the Yanmah, Corbalup, Bevan and Wheatley subsystems, described in detail in Section 2 above (Schoknecht et al., 2004).

A site inspection identified that the soils within the application area are comprised of gravelly soils with more loamy soils closer to the watercourses (DWER, 2019).

Table 2: Land Degradation risks for mapped soil units (DPIRD, 2019)

Risk categories	Yanmah subsystem	Corbalup Subsystem	Bevan Subsystem	Wheatley Subsystem
Wind erosion	10-30% of map unit has a high to extreme wind erosion risk	10-30% of map unit has a high to extreme wind erosion risk	>70% of the map unit has a high to extreme hazard	50-70% of the map unit has a high to extreme hazard
Water erosion	10-30% of map unit has a high to extreme water erosion risk	<3% of map unit has a high to extreme water erosion risk	<3% of the map unit has a very high to extreme hazard	10-30% of the map unit has a very high to extreme hazard
Salinity	30-50% of map unit has a moderate to high salinity risk or is presently saline	30-50% of map unit has a moderate to high salinity risk or is presently saline	<3% of the map unit has a moderate or high hazard or is presently saline	<3% of the map unit has a moderate or high hazard or is presently saline
Subsurface Acidification	3-10% of map unit has a high subsurface acidification risk or is presently acid	3-10% of map unit has a high subsurface acidification risk or is presently acid	>70% of the map unit has a high susceptibility	>70% of the map unit has a high susceptibility
Flood risk	10-30% of the map unit has a moderate to high flood risk	<3% of the map unit has a moderate to high flood risk	<3% of the map unit has a moderate to high flood risk	<3% of the map unit has a moderate to high flood risk
Water logging	10-30% of map unit has a moderate to very high waterlogging risk	30-50% of map unit has a moderate to very high waterlogging risk	3-10% of the map unit has a moderate to very high to risk	3-10% of the map unit has a moderate to very high to risk
Phosphorus export risk	30-50% of map unit has a high to extreme phosphorus export risk	30-50% of map unit has a high to extreme phosphorus export risk	10-30% of the map unit has a high to extreme hazard	30-50% of the map unit has a high to extreme hazard

As detailed in Table 2 above, the mapped soil types within the application area generally have a low to moderate risk for the land degradation categories. The risk of wind erosion is high within the mapped Bevan and Wheatley subsystems and the risk of subsurface acidification is high within the Wheatley Subsystem ranges from medium to high risk. Considering the proposed clearing is for silvicultural thinning and mature vegetation will remain within the application area, it is considered the proposed clearing is not likely to cause appreciable land degradation.

Given the above the proposed clearing is not likely to be at variance with 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 may be at variance with this Principle

The northern and eastern extent of the application area is adjacent to the Palgarup State Forest, the southern and western extents are adjacent to private property.

The application area is located approximately 800 meters to the west of a mapped South West Regional Ecological Linkage (Molloy et al., 2009). An ecological linkage is defined as a series of (both contiguous and non-contiguous) patches, 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 (Molloy et al., 2009). The application area is adjacent to Palgarup State Forest which contributes to the contiguous strip of vegetation running parallel to the mapped linkage which may support the movement of fauna across the landscape and is therefore also considered to be part of an ecological linkage. Given the adjacent Palgarup State Forest has secure tenure for conservation, the proposed clearing is not likely sever or significantly impact this linkage.

Given the close proximity to the Palgarup State Forest, there is potential for the spread of weeds and/or dieback to be introduced by the proposed clearing. To mitigate the risk of weeds and dieback, a Permit to clear has been conditioned with weed and dieback management measures.

The proposed clearing may be at variance with 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 may be at variance with this Principle

As discussed under Principle (f), the application area is located between branches of perennial watercourse which traverses both farmland and vegetated areas, and enters the Warren River.

As detailed under Principle (g), the mapped soil units within the application area, present a low risk for majority of the land degradation categories with a higher risk of wind erosion in two of the soil systems and high risk of subsurface acidification for one mapped soil unit. The proposed clearing may cause some deterioration in the quality of surface water in the form of sedimentation, however noting the proposed clearing is for silvicultural thinning only, the impacts to surface water quality are likely to be short-term and minimal. The proposed clearing is for the purpose of silvicultural thinning of approximately 45.9 hectares of native vegetation, it is considered the selective removal of trees is not likely to cause significant deterioration in the quality of surface or underground water as much vegetation will remain over the area.

The proposed clearing may be at variance with 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 with this Principle

The mapped soil types within the application area have a low to moderate flood risk. The proposed selective thinning method within 45.9 hectares of native vegetation in degraded (Keighery, 1994) condition is not likely to cause or exacerbate the incidence or intensity of flooding.

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

Planning instruments and other relevant matters.

The application was originally advertised on DWER's website on 25 July 2019 with a 21 day submission period. No public submissions were received.

The application was advertised for an additional seven day period on 15 January 2020 as the permit type was changed from an area permit to a purpose permit due to the purpose of silviculture meeting the definition of purpose permit under section 51E(8) of the EP Act. No submissions were received.

The application area is located within Zone B of Warren River Water Reserve under the Part II of *Country Areas Water Supply Act 1947* (CAWS Act). A separate CAWS Act Licence to Clear is not required for this application as

- The proposed clearing is not exempt under the EP Act; and
- No compensation has previously been paid to retain the subject vegetation.

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. The Shire of Manjimup also advised that silvicultural thinning does not require planning approval (Shire of Manjimup, 2019).

Private Land Supplier's licence under the Regulation 63 of the *Biodiversity Conservation Regulations 2018* will be required in order to sell any timber or harvested logs that are cleared.

The application area intersects a registered Aboriginal site of significance – Muirs Highway Ethnographic Site 3 (17127) (Mythological, nature feature, water source). It is the applicant's responsibility to comply with the requirements of the *Aboriginal Heritage Act 1972* and to ensure that no Aboriginal sites of significance are disturbed as a result of any activities.

4. References

- Clarke, J (2019) Black cockatoo habitat tree assessment/survey. Western Australia
Commonwealth of Australia (2001). National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.
Commonwealth of Australia (2012) EPBC act referral guidelines for three threatened back cockatoos species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra.
Department of Parks and Wildlife (2007-). NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: <http://naturemap.dpaw.wa.gov.au/>. Accessed August 2019.
Department of Parks and Wildlife (2014). Western Ringtail Possum (*Pseudocheirus occidentalis*) Recovery Plan. Wildlife Management Program No. 58. Department of Parks and Wildlife, Perth, WA.
Department of Primary Industries and Regional Development (DPIRD). (2019). NRInfo Digital Mapping. Department of Primary Industries and Regional Development. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (accessed August 2019).
Department of Water and Environmental Regulation (DWER). (2019). Site inspection report in relation to clearing permit application CPS 8556/1. DWER Ref: A1829947
Government of Western Australia (2019). 2018 South West Vegetation Complex Statistics. Current as of October 2017. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>
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. Western Australian Local Government Association and Department of Environment and Conservation.
Pessotto, R and EB (2019) Application for a Clearing Permit – CPS 8556/1. DWER reference: A1798273
Shire of Manjimup (2019). Advice for Clearing Permit CPS 8556/1. Western Australia. DWER Ref: A1810030
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.
Valentine L. E. & Stock W. (2008) Food Resources of Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*) in the Gngangara Sustainability Strategy study area. Unpublished report to the Forests Products Commission. Available online: <http://ro.ecu.edu.au/ecuworks/6147>
Western Australian Herbarium (1998-). FloraBase – the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. <https://florabase.dpaw.wa.gov.au/>. Accessed August 2019.

GIS Databases:

- Aboriginal Sites of Significance
- DAFWA Heritage
- DBCA Estate
- DEC Covenant
- Groundwater salinity
- Hydrography, linear
- National Trust WA Covenant
- Remnant vegetation
- SAC bio datasets (accessed August 2019)
- Soils, Statewide
- Topographic contours
- Wetlands