



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 9021/1
File Number: DWERVT6364
Duration of Permit: 12 February 2021 to 12 February 2027

PERMIT HOLDER

Mr Dean Ryan, on behalf of Mr Glen Ryan and Mr Antony Ryan.

LAND ON WHICH CLEARING IS TO BE DONE

Lot 961 on Deposited Plan 44726, Quinninup
Lot 7 on Plan 40973, Quinninup
Lot 1 on Diagram 67333, Quinninup

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 0.28 hectares of native vegetation within the area cross-hatched yellow on attached Plan 9021/1.

CONDITIONS

1. Application

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

2. 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.

3. 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.

4. Revegetation requirements

The permit holder shall take the following actions for the purpose of *revegetation*:

- (a) preparing the *revegetation* area cross-hatched in red on the attached Plan 9021/1 by:
 - (i) undertaking *weed* control;
 - (ii) ripping the soil; and
 - (iii) constructing or ensuring the good working order of a fence fully enclosing the area cross-hatched red on the attached Plan 9021/1.

- (b) retain the vegetative material and topsoil removed by clearing authorised under this permit and lay the vegetative material and topsoil in the areas cross-hatched red on the attached Plan 9021/1;
- (c) prior to 12 October 2022, commence *revegetating* the area cross-hatched red on Plan 9021/1, by way of:
 - (i) deliberately planting tube stock and salvaged native vegetation that will result in the achievement of the completion criteria outlined in condition 4(g);
 - (ii) ensuring only endemic species are used to *revegetate* the area;
 - (iii) installing tree guards around the tube stock; and
 - (iv) installing a minimum of two (2) 10 x 10 metre *quadrat* monitoring sites.
- (d) implement hygiene protocols by cleaning earth-moving machinery of soil and vegetation prior to entering and leaving the site;
- (e) undertake *weed* control activities on an ‘as needs’ basis to maintain a minimum 20 per cent *weed* free state by the end of the project maintenance period;
- (f) undertake supplementary watering on an ‘as needs’ basis to ensure tube stock survival rates achieve the criteria outlined in condition 4(g);
- (g) achieve the completion criteria specified below after the four-year monitoring period for areas *revegetated* under this permit; and

Criterion	Aspect	Scale	Completion Criteria	Monitoring
1	Per cent <i>weed</i> cover	Average of quadrat data	<20 per cent <i>weed</i> cover	Annually (April)
2	Vegetation density	Average of quadrat data	15 stems per 100 m ²	Annually (April)
3	Vegetation diversity	Average of quadrat data	5 species per 100 m ²	Annually (April)

- (h) undertake remedial actions for areas *revegetated* where monitoring indicates that *revegetation* has not met the completion criteria, outlined in 4(g), including:
 - (i) *revegetate* the area by deliberately planting native vegetation that will result in the minimum target in condition 4(g) and ensuring only local species are used;
 - (ii) undertake further *weed* control activities;
 - (iii) undertake supplementary watering; and
 - (iv) annual monitoring of each *revegetated* site through the monitoring sites installed under condition 4(c)(iv), until the completion criteria, outlined in condition 4(g) are met.

5. 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) 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;
- (b) the date that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 2 of this Permit;
- (e) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 3 of this Permit; and
- (f) in relation to the *revegetation* of areas pursuant to condition 4
 - (i) a description of the *revegetation* activities;
 - (ii) the size of the area *revegetated*;
 - (iii) the date(s) on which the area *revegetation* was undertaken; and
 - (iv) actions taken in accordance with condition 4(h).

6. Reporting

The Permit Holder must provide to the *CEO* the records required under condition 5 of this Permit, when requested by the *CEO*.

DEFINITIONS

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

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;

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;

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

quadrat means a sample plot established for the purpose of data collection and monitoring vegetation characteristics, for example species composition, structure, density and condition;

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; 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*

20 January 2021






Plan 9021/1

116°11'42.000"E

116°12'0.000"E



Legend

-  CPS areas approved to clear
-  CPS subject to conditions
-  Land Tenure LGATE - 226
-  Local Government Authorities
- Road Centrelines
-  Local Rd - Other
- Image




0 50 100 150 200 m



1:5256

MGA Zone 50
Geocentric Datum of Australia 1994


Ryan Mincham
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Officer delegated under section 20 of the
Environmental Protection Act 1986



GOVERNMENT OF
WESTERN AUSTRALIA



Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 9021/1
Permit type:	Area permit
Applicant name:	Mr Dean Ryan, on behalf of Mr Glen Ryan and Mr Antony Ryan
Application received:	24 August 2020
Application area:	0.28 hectares (ha) of native vegetation
Purpose of clearing:	Horticulture
Method of clearing:	Mechanical
Property:	Lot 961 on Deposited Plan 44726, Lot 7 on Plan 40973 and Lot 1 on Diagram 67333.
Location (LGA area/s):	Shire of Manjimup
Localities (suburb/s):	Quinninup

1.2. Description of clearing activities

The application is clear native vegetation to construct horticultural infrastructure within Lot 961 on Deposited Plan 44726, Lot 7 on Plan 40973 and Lot 1 on Diagram 67333, Quinninup. The vegetation applied to be cleared is distributed across nine separate areas (see Figure 1, Section 1.5).

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	20 January 2021
Decision area:	0.28 hectares (ha) of native vegetation as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Water and Environmental Regulation (DWER) on 24 August 2020. DWER advertised the application for public comment and no submissions were received.

In undertaking the assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the Clearing Principles in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (see Sections 3 and 4).

In particular, the Delegated Officer has determined that:

- the clearing is not likely to have a significant impact on habitat for threatened species of black cockatoo;
- the implementation of a suitable dieback and weed management condition is appropriate to mitigate the impact of spreading dieback and weeds into adjacent vegetation (see Section 3.2.1).
- the proposed clearing reduces the area of native vegetation within the land holding below the 10 per cent threshold outlined in the *Country Areas Water Supply Act 1947* (CAWS Act), however, the revegetation proposed satisfies the exceptional circumstances constraint under Section 12C(3) of the CAWS Act.

In determining to grant a clearing permit subject to conditions, the Delegated Officer found that the proposed clearing will not result in an unacceptable risk to the environment.

1.5. Site map

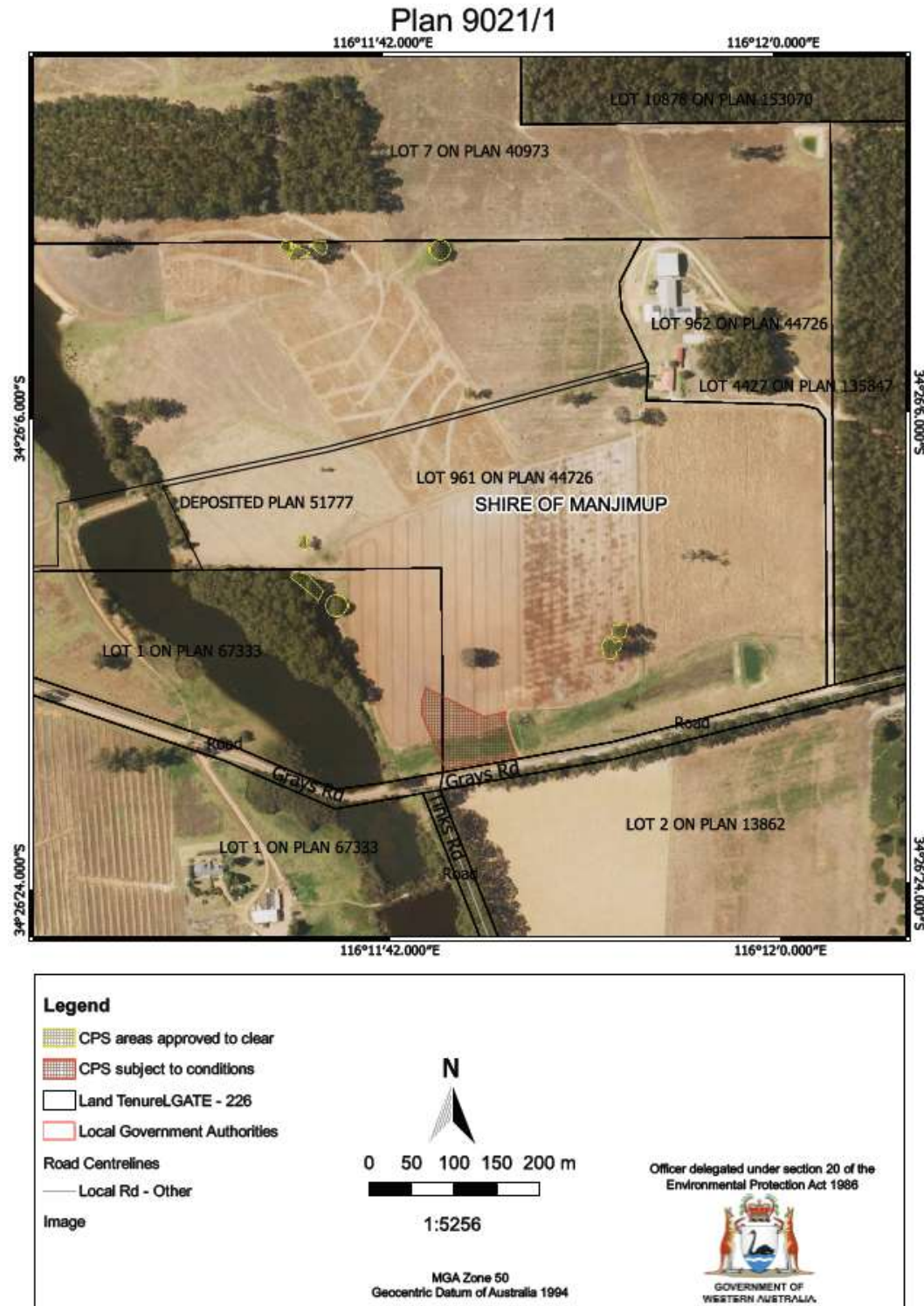


Figure 1. Map of the application area.

The areas cross-hatched yellow indicate the areas authorised to be cleared under the granted clearing permit. The areas cross-hatched red indicate the areas that have been identified for revegetation.

2. Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

1. the precautionary principle;
2. the principle of intergenerational equity;
3. the principle of the conservation of biological diversity and ecological integrity; and

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant stated that avoidance and mitigation measures were difficult in this circumstance as the purpose of the clearing is to construct horticultural infrastructure which will cover the entire application area. The applicant has designed the placement of infrastructure to minimise the amount of clearing required and demonstrated that minimisation and avoidance had been considered to reduce the potential impacts of the clearing on environmental values.

3.2. Assessment of environmental impacts

In assessing the application in accordance with section 51O of the EP Act, the Delegated Officer has examined the application and site characteristics (Appendix A) and considered whether the clearing poses a risk to environmental values. The assessment against the Clearing Principles is contained in Appendix B.

Currently available databases indicate there are nine conservation significant flora species recorded in the local area, including one Threatened flora species, three Priority 2, three Priority 3 and two Priority 4. The site characteristics within the application area, including vegetation condition and soil type, do not represent suitable habitat within which any of these conservation significant flora species are likely to occur. No floristic ecological communities of conservation significance are recorded within the local area. Nineteen fauna species of conservation significance including eight Vulnerable, five Endangered, three Priority 4, two species of conservation interest and one Critically Endangered fauna species are recorded within the local area.

With consideration of the site characteristics (Appendix A), relevant datasets (see Appendix E) and black cockatoo survey information provided by the applicant, this assessment identified that the clearing may pose a risk to the environmental value of biological values with regard to black cockatoo habitat, and that this required further consideration. The detailed consideration and assessment of the clearing impacts against this specific environmental value is provided below.

Where the assessment found that the clearing presents an unacceptable risk to environmental values, conditions aimed at controlling and/or ameliorating the impacts have been imposed under sections 51H and 51I of the EP Act. These conditions are also identified below.

3.2.1. Environmental value: biological values (fauna) – Clearing Principle (b)

Assessment:

The application area is within the modelled distribution of all three threatened black cockatoo species and a confirmed breeding tree is located approximately 7.29 kilometres from the application area. The loss of potential breeding hollows is known to contribute to a decline in black cockatoo population viability (WAM, 2017). SW Environmental (2020) conducted a black cockatoo survey over the entire application area, including parcels of vegetation outside the application to the north on Lot 7 on Plan 40973, which are part of another native vegetation clearing permit application located 100 metres to the north (CPS 9010/1). The survey identified 53 trees with a diameter at breast height greater than 50cm, the majority of which are considered to be unsuitable for black cockatoo breeding. Five of the trees within the broader survey area contain medium to large hollows of a suitable size for black cockatoo

breeding. Three of the five trees with hollows show no evidence of use by black cockatoos. The two remaining tree hollows both showed evidence of wear, however one was currently being used by a breeding pair of Kookaburras (*Dacelo novaeguineae*) and the other was most likely being used by a common brushtail possum (*Trichosurus vulpecula*) which was evidenced by the presence of scats (SW Environmental, 2020). No evidence of roosting or foraging was observed within the application area (SW Environmental, 2020). Only two of the trees with hollows occur within the application area.

Lot 961 on Deposited Plan 44726, Lot 7 on Plan 40973 and Lot 1 on Diagram 67333 are surrounded by the nearby Warren State Forrest (380 metres away at its closest point) which comprises approximately 35,500 hectares of protected remnant native vegetation, including marri forest. Warren State Forest is likely to contain large tracts of mature trees which are suitable for foraging, roosting and breeding by black cockatoos. Given black cockatoo's are a mobile species and that the trees proposed for clearing are predominantly isolated within cleared paddocks, or located along the edges of larger parcels of vegetation, it is unlikely that they provide an important ecological linkage function. It is also unlikely that they represent regionally significant habitat trees for black cockatoo's (SW Environmental, 2020).

Given the small area proposed to be cleared (0.28 hectares), and the close proximity of the Warren State Forest, it is unlikely that the removal of vegetation within the application area will impact locally significant foraging habitat, or result in impacts which would compromise the conservation status of any species of black cockatoos that may utilise the application area.

Although the proposed clearing is not assessed as significantly impacting habitat for threatened black cockatoo species, the proponent is advised of their responsibility to determine if there are notification responsibilities under the *Environment Protection and Biodiversity Conservation Act 1999*.

Outcome:

Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable.

Conditions:

No fauna management conditions required.

3.3. Relevant planning instruments and other matters

The Shire of Manjimup advised DWER that local government approvals are not required, and that the clearing is consistent with the Shire's Local Planning Scheme. The Shire did not have any objections to the clearing.

Offsets under *Country Areas Water Supply Act 1947* (CAWS Act) require a revegetation condition to be placed upon the permit.

It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

Appendix A – Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

1. Site characteristics

Site characteristic	Details
Local context	The proposed clearing area consists of isolated patches of vegetation surrounded by cleared paddocks used for agriculture. The proposed clearing areas are small, isolated patches of remnant vegetation in a highly cleared landscape. Aerial imagery and spatial data indicate the local area (10 km radius of the proposed clearing area) retains over 75% of the original native vegetation cover.
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of individual trees within a cleared paddock and stands of trees with no significant understory on the fringes of a completely cleared paddock. Representative photos are available in Appendix D.</p> <p>These species are broadly consistent with the mapped vegetation type:</p> <ul style="list-style-type: none"> • Wheatley, WH1, which is described as; Tall open forest of <i>Eucalyptus diversicolor</i>-<i>Corymbia calophylla</i> on slopes and tall open forest of <i>Eucalyptus patens</i> on valley floor in perhumid and humid zones. • Crowea, Cry, which is described as; Tall open forest of <i>Corymbia calophylla</i> with mixture of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> and <i>Eucalyptus diversicolor</i> on uplands in hyperhumid and perhumid zones.
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Good to Completely Degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> • Good: Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing. • Completely Degraded: The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs. <p>The full Keighery condition rating scale is provided in Appendix C, below. Representative photos are available in Appendix D.</p>
Soil description	The soil is mapped as Wheatley Subsystem (Dwalganup) which is 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.
Land degradation risk	The mapped soil types have a very high wind erosion and subsurface acidification risk. The risk of water erosion is mapped as moderate. All other land degradation risks are mapped as low.
Waterbodies	The desktop assessment and aerial imagery indicated that no perennial watercourses or wetlands transect the application area.
Conservation areas	<p>DBCA Lands and Waters:</p> <p>Warren State Forest: 380 metres east from nearest application area.</p>
Climate and landform	<p>Rainfall: 1100 mm per annum</p> <p>Evapotranspiration: 900 mm per annum</p>

Site characteristic	Details
	Geology: Gneiss Acid Sulfate Soil Risk: No

2. Flora, fauna and ecosystem analysis

Currently available databases indicate there are nine conservation significant flora species recorded in the local area, including one Threatened flora species (*Kennedia glabrata*), three Priority 2, three Priority 3 and two Priority 4 species. No floristic ecological communities of conservation significance are recorded within the local area. Nineteen conservation significant fauna species including two Species of Special Conservation interest, one Critically Endangered, five Endangered, three Priority Four and eight Vulnerable fauna are recorded within the local area.

Species / Ecological Community	Distance of closest record to application area (kilometres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)	Suitable habitat features (fauna)	Are surveys adequate to identify? (Y, N, N/A)
Baudin's Cockatoo (<i>Calyptorhynchus baudinii</i>). Confirmed.	6.79	NA	NA	Y	Y
Carnaby's Cockatoo (<i>Calyptorhynchus latirostris</i>). Confirmed.	9.4	NA	NA	Y	Y
Forest red-tailed black cockatoo (<i>Calyptorhynchus banksii naso</i>).	6.2	NA	NA	Y	Y
White-tailed black cockatoo. (unspecified).	5.5	NA	NA	Y	Y

3. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	% remaining	Current extent in all DBCA managed land (ha)	% current extent in all DBCA managed land (proportion of pre-European extent)
IBRA bioregion					
Darling Plateau	3,329,170.37	2,089,486.79	62.76	1,597,419.38	47.98
Vegetation complex					
Warren	8,620.69	7,602.19	88.19	6,793.40	78.80

Appendix B – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The local area does not have any recorded threatened ecological communities and the vegetation within the application area is in a Good to Completely Degraded condition (Keighery, 1994). In addition, the soil types present within the application area are not associated with any of the priority flora species recorded within the local area. Based on the above, the proposed clearing area is unlikely to contain a high level of biodiversity.</p>	Not likely to be at variance.	No.
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The proposed clearing areas contain foraging, roosting and potentially breeding habitat for conservation significant fauna, notably all three threatened species of black cockatoo, Baudin’s Cockatoo (<i>Calyptorhynchus baudinii</i>), Forest re-tailed black cockatoo (<i>Calyptorhynchus banksii naso</i>) and Carnaby’s Cockatoo (<i>Calyptorhynchus latirostris</i>). The site characteristics indicate that the vegetation is unlikely to be necessary for the maintenance of significant habitat for any other conservation significant fauna species.</p>	May be at variance.	Yes.
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>The proposed clearing area is unlikely to contain habitat for threatened flora species listed under the <i>BC Act</i>. One species listed as Threatened under the <i>BC Act</i> (<i>Kennedia glabrata</i>) is recorded within the local area (10 kilometre radius from the application areas). This species is associated with granite outcrops in soil pockets along cracks in the outcrops, however, no suitable habitat features are present within or immediately adjacent to the application area. Given the vegetation present is in Good to Completely Degraded condition (SW Environmental, 2020) and no conservation significant species recorded within the local area are recorded on the same soil types as those recorded within the application area, the proposed clearing is not likely to be at variance with this principle.</p>	Not likely to be at variance.	No.
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The local area (10 kilometre radius from the application areas) does not have any recorded state listed threatened ecological communities and the application area does not contain species that can indicate a threatened ecological community.</p>	Not likely to be at variance.	No.
Environmental values: significant remnant vegetation and conservation areas		

Assessment against the Clearing Principles	Variance level	Is further consideration required?
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The extent of the mapped vegetation type and native vegetation in the local area is above the national objective to prevent the clearing of ecological communities with an extent below 30 per cent of that present prior to European settlement (DEH, 2001). The application area is not considered to be part of a significant ecological linkage and the vegetation within the application area is not considered to be regionally or locally significant remnant native vegetation.</p>	Not likely to be at variance.	No.
<p><u>Principle (h):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>Given the relatively small size of the clearing application area and the lack of topographical or ecological connectivity to the nearest conservation area, Warren State Forest which is 380 metres away, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not likely to be at variance.	No.
Environmental values: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>Given no watercourses or wetlands are within the application area, and the area proposed for clearing already has very little ground cover, the proposed clearing is unlikely to significantly exacerbate impacts to on or off-site hydrology and water quality. The moderate topographic contours and soil with good infiltration characteristics also reduces the likelihood that this clearing will exacerbate impacts to nearby wetlands or watercourses. None of the vegetation present can be characterised as riparian, or associated with a watercourse or wetland.</p>	Not likely to be at variance.	No.
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils have a high risk of wind erosion and subsurface acidification and have a moderately high risk of water erosion. An inspection by an officer from the Department of Primary Industries and Rural Development (DPIRD) on the adjoining lot with the same soil type concluded that the risk of land degradation is unlikely to increase with the clearing of native vegetation. This was due to the prevalence of moderate slopes, good infiltration and nutrient absorption characteristics and the maintenance of high levels of surface cover from cultivation (DPIRD, 2020). The soils and topographic contours in the adjoining lot assessed by DPIRD (2020) are the same as those found within the application area.</p>	Not likely to be at variance.	No.

Assessment against the Clearing Principles	Variance level	Is further consideration required?
<p><u>Principle (i):</u> <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.”</i></p> <p><u>Assessment:</u></p> <p>No watercourses or wetlands are within the application areas. The closest drainage line feeds into the Warren River and is approximately 55 metres from the southern-most part of application area. The application is within a Public Drinking Water Sources Area, the Warren River Water Reserve as stated under the CAWS Act. Given the limited area of clearing within a predominantly cleared landscape with moderate topographical contours, it is not likely that the proposed clearing will cause a deterioration in the quality of surface or underground water.</p>	Not likely to be at variance.	No.
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The mapped soils have a low waterlogging risk and low water repellence risk. The topographic contours within the application area and surrounding areas are moderate. It is therefore considered unlikely that the proposed clearing will contribute to an increased incidence or intensity of flooding.</p>	Not likely to be at variance.	No.

Appendix C – Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Measuring Vegetation Condition for the South West and Interzone Botanical Province (Keighery, 1994)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very Good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely Degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D – Black cockatoo survey map and vegetation photographs provided by the applicant



FIGURE 3
BLACK COCKATOO SURVEY,
LOTS 7 AND 961 QUINNINUP

- Suitable DBH tree no hollows observed (48)
- 1 medium or large hollows observed (3)
- 2 medium or large hollows observed (2)
- Dead
- Jarrah
- Karri
- Marri
- ▨ Proposed clearing (site)

Ref: SW054
Date: 14/11/2020 Author: SP

Source: Base map © Esri and its data suppliers, 30° 41' Longitude (2018)



A3 @ 1:4500
0 25 50 100 m
CRD1: GDA zone 50
SW
environmental
www.swenvironmental.com.au

Photos of application area from SW Environmental (2020)



134 (looking west)



225 (looking south)



222 (looking south)



503 (looking west)



128 (looking east)

Photo Locations

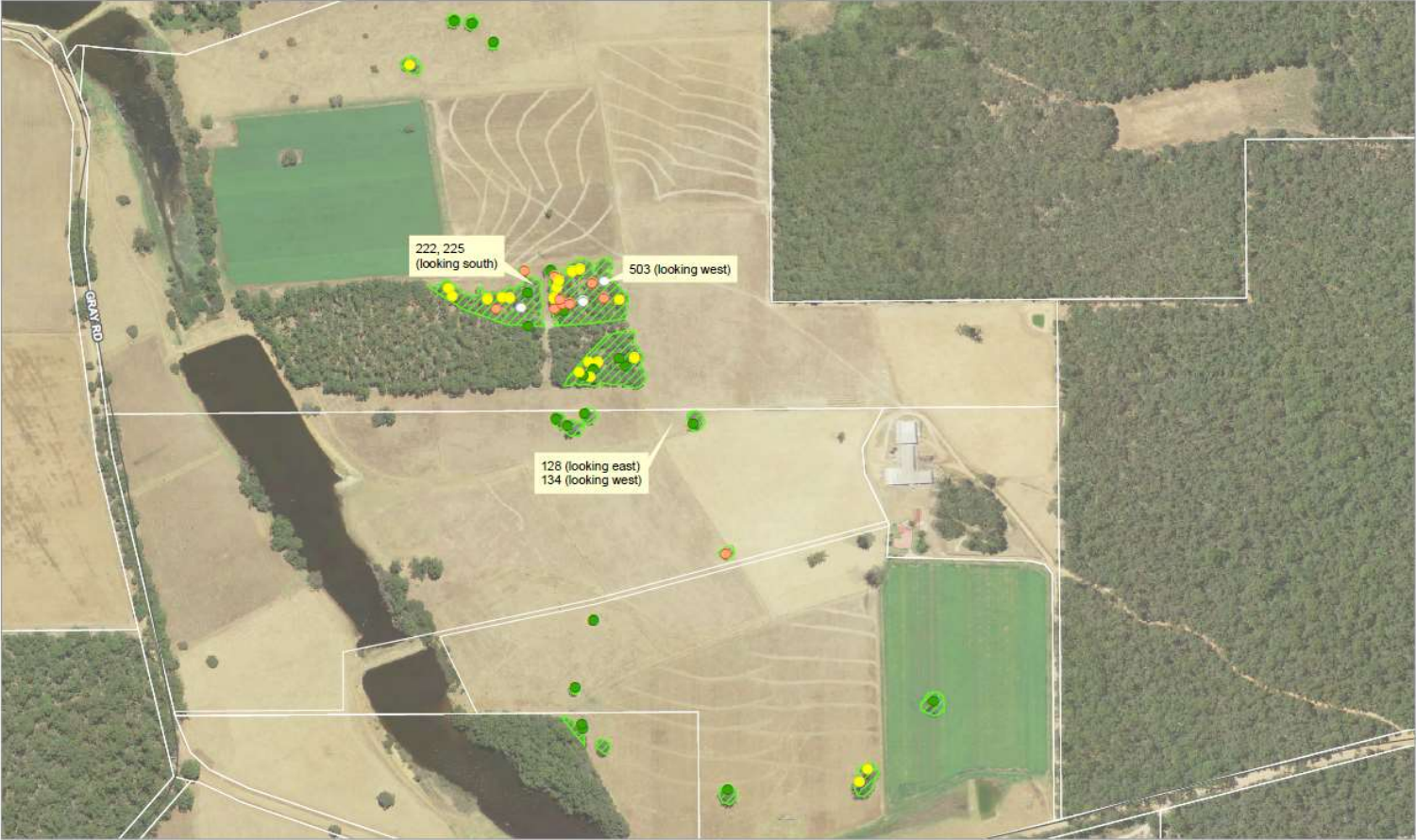


FIGURE 1

- Suitable DBH**
- Dead
- Jarrah
- Karri
- Marri
- ▨ Proposed clearing (site)

Ref: 200294
Date: 16/11/2020 Author: SP

Source: base map © Esri and its data suppliers, SLIP Landgate (2019)

A3 @ 1:4500
0 25 50 100 m
GSD: GDA zone 50
SW environmental
www.swenvironmental.com.au

Photographs of individual trees proposed for clearing, provided by applicant



Tree showing t roosting potential.



Tree showing roosting potential.



Tree showing Completely Degraded surrounding vegetation condition.



Tree showing roosting potential.



Tree showing roosting potential.



Tree trees showing roosting potential.



Tree canopy showing roosting potential and Completely Degraded surrounding vegetation condition.



Two trees showing roosting potential and Completely Degraded surrounding vegetation condition.



Tree canopy showing roosting potential and Completely Degraded surrounding vegetation condition.

Photographs of parcel of trees proposed for clearing in the south west of Lot 1 Plan 67333, provided by applicant



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



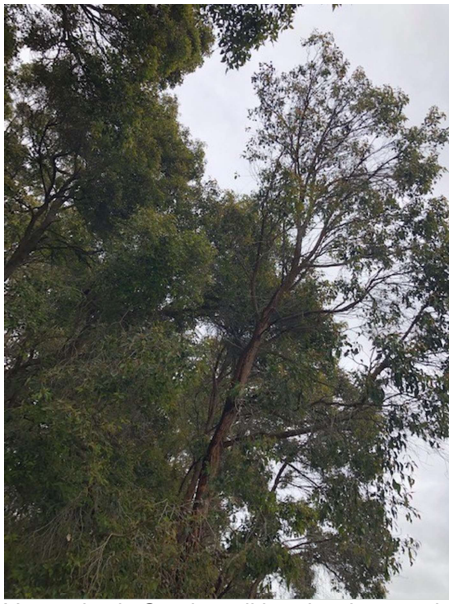
Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Tree canopy showing roosting potential and Completely Degraded surrounding vegetation condition.



Tree canopy showing roosting potential and Completely Degraded surrounding vegetation condition.



Vegetation in Good condition showing roosting potential and Completely Degraded surrounding paddock.



Tree canopy showing roosting potential and Completely Degraded surrounding vegetation condition.



Tree canopy showing roosting potential and Completely Degraded surrounding vegetation condition.



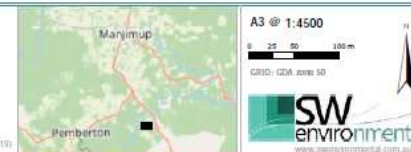
FIGURE 3

BLACK COCKATOO SURVEY,
LOTS 7 AND 961 QUINNINUP

Ref: 506294
Date: 16/11/2020 Author: SP

- Suitable DBH tree no hollows observed (48)
- 1 medium or large hollows observed (3)
- 2 medium or large hollows observed (2)
- Dead
- Jarrah
- Karri
- Marri
- ▨ Proposed clearing (site)

Source: Base map © Esri and its data suppliers, SLIP Landgate (7011)



Appendix E – References and databases

1. GIS datasets

Publicly available GIS Databases used (sourced from www.data.wa.gov.au):

- Aboriginal Heritage Places (DPLH-001)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping – Best Available

Restricted GIS Databases used:

- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

2. References

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