



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: 7631/2
File Number: DWERVT5372
Duration of Permit: 4 October 2018 to 4 October 2022

PERMIT HOLDER

Villmaggiore Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 102 on Deposited Plan 401885, Channybearup

AUTHORISED ACTIVITY

The Permit Holder shall not clear more than 16.6 hectares of native vegetation within the area hatched yellow on attached Plan 7631/2.

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. 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 1 of this Permit; and
- (e) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 2 of this Permit.

4. Reporting

The Permit Holder must provide to the CEO the records required under condition 3 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;

weed/s means any plant -

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Meenu Vitarana
A/MANAGER
NATIVE VEGETATION REGULATION

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

9 September 2020




Plan 7631/2

116°0'0.000"E



116°0'0.000"E

Legend

-  CPS areas approved to clear
-  CPS areas subject to conditions
-  Road Centrelines



Meenu Vitarana
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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 7631/2
Permit type:	Area permit
Applicant name:	Villmaggiore Pty Ltd
Application received:	20 February 2020
Application area:	16.6 hectares (ha) of native vegetation
Purpose of clearing:	Horticulture
Method of clearing:	Mechanical
Property:	Lot 102 on Deposited Plan 401885
Location (LGA area/s):	Shire of Manjimup
Localities (suburb/s):	Channybearup

1.2. Description of clearing activities

This application was to extend the duration of permit 7631/1, which authorised the clearing of 16.6 hectares of native vegetation contained within a single contiguous area within Lot 102 on Deposited Plan 401885 (see Figure 1, Section 1.5).

1.3. Decision on application and key considerations

Decision:	Amended
Decision date:	9 September 2020
Decision area:	16.6 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 20 February 2020. DWER advertised the application for public comment and one submission was received.

In undertaking their 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 D), relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (see Sections 3 and 4). Consideration of matters raised in the public submission is summarised in Appendix B.

In particular, the Delegated Officer has determined that:

- the clearing is not likely to have a significant impact on the local population of black cockatoo species (see Section 3.2.1);
- the implementation of a suitable weed and dieback management condition is appropriate to mitigate the impact of spreading weeds into adjacent vegetation (see Section 3.2.2).

The Delegated Officer also noted that the black cockatoo habitat tree assessment identified no hollow bearing trees within the application area, and noting the applicant had met the requirements of the fauna management condition (condition 2) of CPS 7631/1, the delegated officer determined that this condition was redundant and excluded it from the amended permit CPS 7631/2.

The Delegated Officer determined that the proposed clearing is unlikely to lead to any unacceptable risk to the environment and decided to extend the duration of the permit with avoidance and minimisation, dieback and weed management conditions.

1.5. Site map

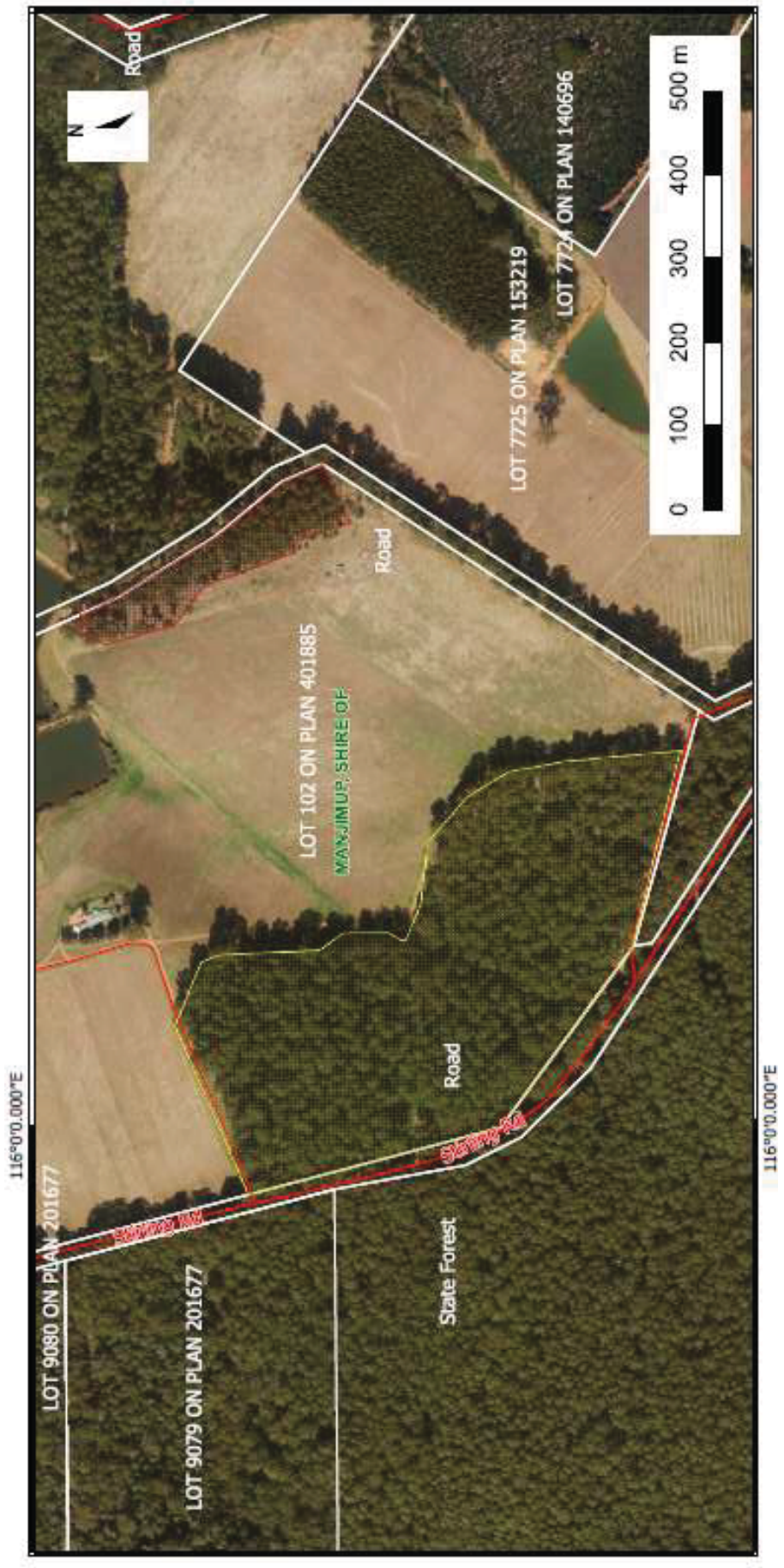


Figure 1. Map of the permit area (cross-hatched yellow).

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; and
3. the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act);
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act); and
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act).

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 advised that avoidance of areas of vegetation was not considered to be practical for the proposed avocado orchards. It is noted that during the assessment of CPS 7631/1, the application area was reduced from an original area of 20 hectares to 16.6 hectares to meet CAWS Act requirements.

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 C) and findings of a Black Cockatoo Nesting Tree Survey (Appendix F) and considered whether the clearing poses a risk to environmental values. The assessment against the Clearing Principles is contained in Appendix D.

This assessment identified that the clearing may pose a risk to the environmental values of biological values and significant remnant vegetation and conservation areas and that these required further consideration. The detailed consideration and assessment of the clearing impacts against the specific environmental values 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 are also identified below.

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

Assessment: Baudin's cockatoo (*Calyptorhynchus baudinii*), Carnaby's cockatoo (*Calyptorhynchus latirostris*) and the forest red-tailed black cockatoo (*Calyptorhynchus banksii subsp. naso*) (herein collectively referred to as black cockatoos), all of which have been recorded within the local area, are able to utilise both marri and karri trees present within the application area for breeding if suitable nesting hollows are present (Commonwealth of Australia 2012). The application area is also within the modelled breeding range of Carnaby's cockatoo and Baudin's cockatoo (Commonwealth of Australia 2016a, Commonwealth of Australia 2016b and Department of Environment and Conservation 2008). However, given the findings of the black cockatoo nesting tree survey (Harewood 2020), it is considered that vegetation within the application area is not likely to provide breeding habitat for black cockatoos. Given that most trees within the application area were relatively small (Harewood 2020), it is considered that the application area is not likely to contribute a significant supply of breeding habitat in the near future.

Potential foraging species for black cockatoos within the application area include marris (preferred by all three species), *Allocasuarina* and karri (less preferred) (Commonwealth of Australia, 2012 and Department of Biodiversity, Conservation and Attractions, 2020), and it is noted that possible evidence of foraging of marri nuts by Baudin's cockatoo was observed near marri trees near the eastern boundary of the application area (DWER, 2020). As such

the application area may provide foraging habitat for black cockatoos, however given the predominance of karri trees within the application area and the extensive remnant vegetation (69 per cent) within the local area, the majority of which is mapped as vegetation subsystems containing either preferred foraging species marri, jarrah and *Banksia* spp., it is considered that the proposed clearing is unlikely to result in a significant residual impact on black cockatoo foraging habitat that would involve offsetting. Furthermore, more than 65 per cent vegetation remaining in the Warren IBRA subregion is within conservation estate, with over 55 per cent of the mapped veg complexes represented within conservation estate, the proposed clearing is not likely to contribute to a significant decline in black cockatoo foraging habitat within the local area in the future. It is also noted that the area is further than 12 kilometres from a known black cockatoo breeding or roosting site, which further reduces the likelihood of the application area being significant foraging habitat (DBCA, 2020), although it is noted that roosting and breeding still have the potential to occur in the local area given the lack of detailed information on roost site records in the south-west region. Given the extensive remnant vegetation within the local area and proximity to Donnelly State Forest, it is considered that the proposed clearing is unlikely to have a significant impact upon black cockatoo roosting and foraging habitat.

The vegetation within the application area may provide suitable habitat for ground dwelling and other species of indigenous fauna, including the threatened Western Ringtail Possum (*Pseudocheirus occidentalis*) and Woylie (*Bettongia penicillata ogilbyi*), however, noting that vegetation within the application area is less dense and more disturbed than surrounding vegetation, including within the Donnelly State Forest, as a result of previous clearing under Clearing Permit 7631/1, and that the vegetation types within the application area are well represented within the local area, the proposed clearing is not likely to comprise significant habitat for these species.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable in relation to this environmental value.

3.2.2. Environmental value: significant remnant vegetation and conservation areas – Clearing Principles (e) and (h)

Assessment: According to available datasets, the local area contains a number of conservation areas, including the Donnelly State Forest which adjoins the western section of the application area. The Donnelly State Forest covers an area of greater than 26,000 hectares, and it is unlikely the proposed clearing will have a significant impact on its environmental values. However, the proposed clearing may increase the risk of dieback and weeds being spread into adjacent areas of native vegetation within the Donnelly State Forest. Dieback and weed management measures would assist in minimising this risk. Given the above, the proposed clearing may have an impact on the environmental values of an adjacent conservation area.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable subject to relevant conditions (see below) in relation to this environmental value.

Conditions: To address the above impacts, the following conditions will be added to the permit:

- Dieback and weed management - Permit holder is required to take certain measures to minimise the risk of introduction and spread of weeds and dieback.

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 (Shire of Manjimup, 2020). The Shire did not have any objections to the clearing.

Consultation with DWER indicated that there was no objection to the proposed clearing under the *Country Areas Water Supply Act 1947* (CAWS Act) given that there were no changes to the original proposal (DWER, 2020b).

No Aboriginal sites of significance have been mapped within the application area. 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 – Additional information provided by applicant

Summary of comments	Consideration of comment
Applicant provided black cockatoo habitat survey in response to a request for information letter. This survey was also used to satisfy a condition of permit 7631/1	See results of survey in Appendix F
Applicant intends to undertake some clearing within application area under permit 7631/1 shortly	The application area of 7631/2 is likely to contain less vegetation than was present during the site inspection
The applicant advised that avoidance of areas of vegetation was not considered to be practical for the proposed avocado orchards.	

Appendix B – Details of public submissions

One submission was made. A summary of the comments made in this submission and consideration of these comments is in the table below.

Comment Category	comments	Consideration of comment
Concerns identified in the 'application for amendment' form	The original application and amendment application for clearing impact on three matters of national significance (Western Australia's black cockatoo species), and the referral guidelines state that removal of (a) a single breeding tree or (b) more than hectare of foraging habitat should be referred federally. As such it was considered that the applicant should be made aware of their requirement to refer this matter to DAWE.	It is recognised that a referral under the EPBC Act should be considered by the Permit Holder and the Department has advised the applicant that they may have notification responsibilities under the EPBC Act in relation to black cockatoos. It is the Permit Holder's responsibility to refer proposed clearing that may have a significant impact on matters of national environmental significance under the EPBC Act.
	The applicant had not provided evidence in their application form that avoidance and mitigation options had been pursued nor that offsets had been proposed.	Noting the application was to amend the duration of the permit, the applicant had not provided avoidance and mitigation options in this instance. However, the applicant had reduced the application area from 20 hectares to 16.6 hectares during the assessment of the original application. Both CPS 7631/1 and 7631/2 have conditions for the applicant to consider further avoidance and mitigation options.
	The proposed clearing had not been referred to EPA, as it was believed that the clearing may have a significant effect for Western Australia's black cockatoo species and as such should be considered a "significant proposal".	Given the findings of this assessment, particularly the findings from the black cockatoo nesting tree survey (Harewood, 2020), it is not considered that the proposed clearing is unlikely to have "significant impacts" to warrant referral to EPA for assessment.
Importance of foraging habitat in the area of	The area proposed to clear has the potential to be habitat for all three of Western Australia's black cockatoo species, as it contains tree species	It is acknowledged that the proposed clearing area contains potential foraging habitat for all three black cockatoo species. However, as

Comment Category	comments	Consideration of comment
<p>the proposed clearing</p>	<p>(e.g. marri) used for foraging for all three species and falls within the breeding ranges for all three species.</p>	<p>discussed in Section 3.2.1, the findings of the The black cockatoo nesting tree survey (Harewood, 2020) and the availability of ample foraging habitat within conservation estate, the proposed clearing is unlikely to result in a significant residual impact on black cockatoo foraging habitat that would involve offsetting.</p>
	<p>Foraging habitat for threatened black cockatoos in Western Australia is currently insufficient and any remaining foraging vegetation may be critical for the persistence of the flocks that depend on them. To ensure no significant impact on black cockatoos, it was considered that clearing should not be approved or the same or greater area of replacement habitat be created through revegetation.</p>	<p>See Section 3.2.1 – while the application area may provide foraging habitat for black cockatoos, given the extensive remnant vegetation within the local area, the majority of which is mapped as vegetation subsystems containing preferred black cockatoo foraging species, it is considered that the proposed clearing of this foraging habitat is unlikely to have a significant residual impact on black cockatoo species to warrant refusal of the clearing or necessitating rehabilitation as an offset.</p>
<p>Significance of Cumulative Impacts</p>	<p>Cumulative impacts of clearing to black cockatoo population viability needs to be considered for clearing permit applications, and that the risk posed to these species from cumulative habitat losses, including from smaller, unregulated clearing actions; appears to be under-appreciated.</p>	<p>DWER notes that although many clearing actions in Western Australia may not reach the threshold for Federal level referral for impacts to black cockatoos, the State system for managing these smaller areas of clearing, Part V of the EP Act, includes assessment of the impacts on habitat for black cockatoos, including the context of available habitat in the wider region and at a local scale.</p> <p>DWER consider cumulative impacts in the assessment of clearing permit applications primarily through Clearing Principle (e). Through this assessment, the proportion of native remnant vegetation remaining within the wider region (IBRA region) and at a smaller scale, such as within buffers surrounding application areas, is considered. The proportion of vegetation remaining in specific vegetation complexes, and the value of the area as a remnant, such as ecological linkage value, are also considered in the assessment. This assessment allows for the consideration of these smaller areas of clearing, which are reflected in remnant vegetation databases.</p> <p>Consideration has been given to the context for this application area and the value of the vegetation to be cleared in comparison to the quantity and value of the vegetation in the local area and beyond. As discussed above, the cumulative impacts from the proposed clearing is considered minimal noting that over 65 per cent of remnant vegetation in the local area are secured in conservation estate and therefore is not likely to be cleared in the future.</p>
<p>Impacts from the loss of existing and future breeding</p>	<p>Condition 2 of permit CPS 7631/1, that identified black cockatoo nesting trees identified as being utilized by a black cockatoo (for breeding) must</p>	<p>Refer to Section 3.2.1 - A black cockatoo nesting tree survey was conducted for this assessment, which found no trees with suitable</p>

Comment Category	comments	Consideration of comment
<p>(hollow-bearing) trees</p>	<p>not be felled until the chicks have fledged, was inappropriate, as the EPBC referral guidelines state that loss of a single nesting tree is likely to represent a 'significant impact' for these species. Given this, it was considered that all trees that are or have been used for nesting should be retained.</p>	<p>hollows for black cockatoo nesting with most trees being too young/small to have developed hollows of any size.</p>
	<p>Given that the site contains potential breeding habitat, a comprehensive black cockatoo habitat assessment should be conducted prior to DWER making any decision about this application, to quantify and qualify the breeding habitat at the site.</p>	<p>A black cockatoo nesting tree survey was provided, following a request from DWER, to inform this assessment.</p>
	<p>Consideration should be given to all trees that are of suitable size to be potential breeding trees (irrespective of hollow size), as they can be future breeding trees</p>	<p>Given that the black cockatoo nesting tree survey identified "vegetation within the Permit area appears to represent young regrowth from an extensive historical clearing event with the vast majority of the trees being relatively small" with "most trees too young/small to have developed hollows of any size" it is considered that the application area is not likely to provide habitat in the near future.</p>
	<p>If required, measures to mitigate the impacts from clearing of breeding habitat could include installation of artificial hollows in nearby areas, including long-term monitoring of such hollows, to ensure they remain free of bees and to confirm successful use by black cockatoos.</p>	<p>As no trees with suitable hollows for black cockatoo nesting were found within the application area, such measures are not required.</p>
<p>Key points regarding offsets and mitigation measures</p>	<p>Mitigation measures should be implemented, including foraging revegetation/ replanting programs and supplementation of hollows with artificial hollows, and revegetation with tree species which will ensure natural hollow development. Replacement of habitat should occur in the range-area of the affected flocks within appropriate time frames. Direct offsets are not sufficient without revegetation, as they cannot compensate for net habitat loss.</p>	<p>As no trees with suitable hollows for black cockatoo nesting were found within the application area, such measures are not required. Further to this, given the application area is not ideal foraging habitat for black cockatoos, it is considered that other mitigation measures are not required.</p>
<p>Other</p>	<p>If DWER's reconsideration of the environmental impact of this proposed clearing does identify significant impacts to black cockatoos (e.g. as per referral guidelines) that were not identified during the original assessment, it may be beneficial also to consider the process by why these impacts to MNES were overlooked initially by</p>	<p>This assessment and the assessment of CPS 7631/1 have acknowledged that the application may provide part of a significant habitat for black cockatoo species. It is the Permit Holder's responsibility to refer proposed clearing that may have a significant impact on matters of national environmental significance under the EPBC Act. DWER had notified the applicant of their notification responsibilities.</p>

Comment Category	comments	Consideration of comment
	pinpointing any gaps in the permit approval process that are currently supporting the ongoing loss of MNES habitat.	

Appendix C – 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 D.

1. Site characteristics

Site characteristic	Details
Local context	The proposed clearing area is contiguous with an expansive tract of native vegetation. It is surrounded by native vegetation to the south and west, and by cleared land to the north and east. Spatial data indicates the local area (10 km radius of the proposed clearing area) retains approximately 69% of the original native vegetation cover.
Vegetation description	<p>A site inspection undertaken by DWER staff (DWER 2020a) indicates the vegetation within the proposed clearing area consists of an open forest comprising predominantly of <i>Eucalyptus diversicolor</i> (karri) trees over <i>Agonis flexuosa</i> (peppermint) trees and <i>Allocasuarina</i> sp. with an understorey including <i>Pteridium esculentum</i> (bracken fern), <i>Tetraria</i> sp., and introduced weed species (e.g. Figure 2, Figure 3 and Figure 4, Appendix F). The eastern portion of the application area contains several mature <i>Corymbia calophylla</i> (marri) trees (Figure 5, Appendix F). Parts of the application area show evidence of previous thinning and disturbance, where large trees and most native species are virtually absent (Figure 6, Appendix F).</p> <p>This is consistent with the mapped vegetation types:</p> <ul style="list-style-type: none"> • Crowea (Cb), which is described as: Tall open forest of <i>Corymbia calophylla-Eucalyptus diversicolor</i> on upper slopes with <i>Allocasuarina decussata-Banksia grandis</i> on upper slopes in hyperhumid and perhumid zones (Mattiske and Havel 1998); and • Pemberton (PM1), which is described as: Tall open forest of <i>Eucalyptus diversicolor</i> with mixtures of <i>Corymbia calophylla</i> on valley slopes and low forest of <i>Agonis juniperina-Banksia seminuda-Callistachys lanceolata</i> on valley floors in the perhumid zone (Mattiske and Havel 1998). <p>No trees containing hollows were observed within the application area during the site inspection, however several large karri trees and marri trees with DBH greater than 500 mm were noted within the application area (e.g. Figures 4 and 5). Almost all marri trees observed within the eastern portion of the application area were of DBH greater than 500 mm. Several marri nuts exhibiting foraging evidence were observed in the eastern portion of the application area, around the mature marri trees (Figure 7). The position of the foraging marks indicate these may have been made by Baudin's cockatoo or smaller parrot species.</p> <p>DWER's 2020 site inspection is consistent with the findings of another site inspection undertaken within the application area in 2017, which found vegetation to consist of Karri forest over <i>Allocasuarina decussata</i> over understorey species (commonly including <i>Bossiaea webbii</i>, <i>Pteridium esculentum</i>, <i>Lasiopetalum floribundum</i>, <i>Malvaceae</i> sp., <i>Hardenbergia comptoniana</i> and <i>Tetraria</i> sp.), with some small stands (more prevalent on the lower lying eastern portion of the larger application area) and singular scattered occurrences of marri (DWER 2017). Peppermint trees were also found to occur in the eastern portion of the larger application area.</p>

Site characteristic	Details
Vegetation condition	<p>A site inspection undertaken by DWER staff indicates the vegetation within the proposed clearing area ranges from Completely Degraded to Very Good (Keighery, 1994) condition:</p> <ul style="list-style-type: none"> • Where clearing has occurred, the application area is in Completely Degraded (Keighery, 1994) condition; the structure of the vegetation is no longer intact and is completely or almost completely devoid of native species (e.g. Figure 6, Appendix F); • Around the borders of the application area, close to the existing track, the vegetation is in Degraded to Good (Keighery, 1994) condition; the structure of the vegetation has been significantly altered through weed invasion and disturbance from activity (i.e. previous thinning activities), but retains basic structure with native canopy and mid-storey species present, in some areas native understorey is sparse or almost completely absent (e.g. Figure 3). The vegetation has the ability to regenerate, in some areas with intensive management; • The remainder of the application area is in Very Good (Keighery, 1994) condition; the vegetation structure has been altered, with signs of disturbance from weed invasion and disturbance from activity (i.e. previous thinning activities), however the basic structure is still evident, with native canopy, mid- and understorey species present, and has the potential to regenerate without management (e.g Figure 2, Appendix F). <p>The full Keighery / Trudgen condition rating scale is provided in Appendix E, below.</p>
Soil description	<p>The soil is mapped as:</p> <ul style="list-style-type: none"> • Crowea (Pimelia) brown duplex Phase Map Unit 254PvCrb, described as broad bridge crests on weathered mantle over gneiss, with loamy gravels, red deep loamy duplexes and friable red/brown loamy earths; and • Pemberton Subsystem (Pimelia) Map Unit 254zPvPM (0.035 ha), described as minor valleys (20-40 metres deep) on colluvium gneiss with loamy gravels, friable red/brown loamy earths, brown loamy earths and red deep loamy duplexes (Deputy Commissioner of Soil and Land Conservation, 2017).
Land degradation risk	<p>The land degradation risk categories that apply to the Crowea (Pimelia) brown duplex subsystem are (Schoknecht et al., 2004; DAFWA,2017):</p> <ul style="list-style-type: none"> • Water Erosion: 3-10% of map unit has a high to extreme water erosion risk; • Wind Erosion: 50-70% of map unit has a high to extreme wind erosion risk; • Salinity: <3% of map unit has a moderate to high salinity risk or is presently saline; • Subsurface Acidification: >70% of map unit has a high subsurface acidification risk or is presently acid; • Flood risk: <3-% of map unit has a moderate to high flood risk; • Water logging: <3% of map unit has a moderate to very high waterlogging risk; • Phosphorus export: 10-30% of map unit has a high to extreme phosphorus export risk. <p>The land degradation risk categories that apply to the Pemberton subsystem (Pimelia) are (Schoknecht et al., 2004; DAFWA,2017):</p> <ul style="list-style-type: none"> • Water Erosion: 10-30% of map unit has a high to extreme water erosion risk; • Wind Erosion: 30-50% of map unit has a high to extreme wind erosion risk; • Salinity: <3% of map unit has a moderate to high salinity risk or is presently saline; • Subsurface Acidification: >70% of map unit has a high subsurface acidification risk or is presently acid; • Flood risk: <3-% of map unit has a moderate to high flood risk; • Waterlogging: 3-10% of map unit has a moderate to very high waterlogging risk; • Phosphorus export: 30-50% of map unit has a high to extreme phosphorus export risk.

Site characteristic	Details
Waterbodies	The desktop assessment and aerial imagery indicated that the closest waterbody, Lefroy Brook, is 604km from the application area.
Conservation areas	The desktop assessment indicated that the closest conservaton area to the application area is Donnelly State Forest, located immediately adjacent to the application area to the south and separated from the application area to the west by a road reserve.
Climate and landform	Groundwater Salinity (Total Dissolved Soilds): 500-1000 mg/L Rainfall: 1300 Evapotranspiration: 900 Topography: the application area inclines from a low point of 145m AHD in the north-east to 170m AHD in the west and south.

2. Flora, fauna and ecosystem analysis

According to available databases, three threatened flora species, two priority flora species, five threatened fauna species, one specially protected fauna species, two priority fauna species and no ecological communities protected under the BC Act have been recorded within the local area. With consideration for the site characteristics set out above and relevant datasets (see Appendix G) conservation significant flora and ecological communities are not likely to be impacted by the clearing and the following conservation significant fauna species may be impacted by the clearing.

Species / Ecological Community	Distance of closest record to application area (km)	No of records within local area	Suitable habitat features	Other	Are surveys adequate to identify? (Y, N, N/A)
Forest red-tailed black cockatoo (<i>Calyptorhynchus banksii</i> subsp. <i>naso</i>) (VU)	3.3	2	Y (foraging, roosting)	<ul style="list-style-type: none"> • 2 mapped confirmed Carnaby's breeding records approx. 23km from site • Closest confirmed (white tailed BC) roost 17.8km SE of site 	nesting trees only
Baudin's cockatoo (<i>Calyptorhynchus baudinii</i>) (EN)	1.9	28*	Y (foraging, roosting)		nesting trees only
Carnaby's cockatoo (<i>Calyptorhynchus latirostris</i>) (EN)	2.9	5*	Y (foraging, roosting)		nesting trees only
Woylie, (<i>Bettongia penicillata ogilbyi</i>) (CR)	3.1	2	Y		N
Western Ringtail Possum (<i>Pseudocheirus occidentalis</i>) (CR)	3.6	16	Y		N
Phascogale tapoatafa wambenger (CD)	2.1	14	Y		N
Masked owl (<i>Tyto novaehollandiae novaehollandiae</i>) (P3)	3.1	2	Y (foraging)		N
Quenda (<i>Isoodon fusciventer</i>) (P4)	2.1	14	Y		N

*An additional 18 records of 'Calyptorhynchus sp. 'white-tailed black cockatoo"' were recorded, which could be additional records for either Baudin's cockatoo or Carnaby's cockatoo.

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					
Warren	833,985.56	659,432.21	79.07	558,485.38	66.97
Vegetation complex					
PM1	25,801.16	16,661.53	64.58	15,021.45	58.22
CRb	52,753.26	45,425.07	86.11	43,135.87	81.77
Local area					
Remnant vegetation in 10km buffer	-	23,415.5	69.2	-	-

Appendix D – 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> “Native vegetation should not be cleared if it comprises a high level of biodiversity.”</p> <p><u>Assessment:</u></p> <p>The proposed clearing area is considered unlikely to contain threatened or priority flora or ecological communities. The proposed area may provide suitable habitat for three threatened black cockatoo species, and other ground dwelling and other species of indigenous fauna.</p>	May be at variance	Yes: Refer to Section 3.2.2 above.
<p><u>Principle (b):</u> “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.”</p> <p><u>Assessment:</u></p> <p>The proposed clearing area comprises part of a significant habitat (forest containing foraging species) for three threatened black cockatoo species. Vegetation within the application area may provide black cockatoo breeding habitat in the future, although not currently.</p>	May be at variance	Yes: Refer to Section 3.2.2 above.
<p><u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</p> <p><u>Assessment:</u></p> <p>The proposed clearing area is unlikely to contain habitat for threatened flora species listed under the BC Act.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> “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.”</p> <p><u>Assessment:</u></p>	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
The proposed clearing area does not contain species that can indicate the presence of a threatened ecological community listed under the BC Act.		
Environmental values: significant remnant vegetation and conservation areas		
<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 extents of both the mapped vegetation type and remnant native vegetation in the local area are consistent with the national objectives and targets for biodiversity conservation in Australia. Vegetation in the proposed clearing area is not considered to be part of a significant ecological linkage in the local area.</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 distance to the nearest conservation area, the proposed clearing may have an impact on the environmental values of adjacent conservation areas.</p>	May be at variance	Yes: Refer to Section 3.2.2 above.
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>No watercourses or wetlands are recorded within the proposed clearing area and the vegetation types within the application area are terrestrial and not consistent with riparian vegetation.</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 Deputy Commissioner of Soil and Land Conservation advised that the mapped soil types have a low risk of land degradation in the form of wind erosion, waterlogging, water erosion, flooding, eutrophication and salinity as a result of the proposed clearing (Deputy Commissioner of Soil and Land Conservation, 2017).</p>	Not likely to be at variance	No
<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>The Deputy Commissioner of Soil and Land Conservation advised that given the mapped soil types, groundwater salinity levels and lack of evidence of salinity within the application area, the proposed clearing is unlikely to contribute to nutrient enrichment to surface and/or groundwater bodies or changes to groundwater salinity (Deputy Commissioner of Soil and Land Conservation, 2017). Given the low water erosion risk, the clearing is unlikely</p>	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
to result in impacts to the watercourse (tributary of Lefroy River) downslope of the application area.		
<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 Deputy Commissioner of Soil and Land Conservation advised that the risk of flooding occurring as a result of the proposed clearing is low, and that the risk of waterlogging increasing as a result of the proposed clearing is low (Deputy Commissioner of Soil and Land Conservation, 2017).</p>	Not likely to be at variance	No

Appendix E – 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 F – Biological survey information excerpt, photographs of vegetation

A summary of the Black Cockatoo Nesting Tree Survey of Proposed Clearing Area (CPS 7631/1) (Harewood, 2020) is below.

SUMMARY

This report details the results of a black cockatoo nest tree survey carried out over a section of Lot 102 Stirling Road, Channybearup..

The landowner (Villmaggiore Pty Ltd) has been given a Permit to clear up to 16.6 hectares of vegetation from within the property by the Department of Water and Environmental Regulation (DWER) (CPS 7631/1 - DWER 2020) (Figure 1). The black cockatoo nest tree survey detailed here seeks to satisfy some of the required conditions contained within the Permit.

An inspection of the permit area was carried out by Greg Harewood (Zoologist - 17 years' experience) on the 26 May 2020.

No hollows suitable for black cockatoos to use for nesting purposes were observed, with most trees being too young/small to have developed hollows of any size. Clearing can therefore be carried out without compromising conditions of the Permit relating to this matter.

In accordance with condition 5 of the Permit this report should be forwarded to DWER on or before June 30 2020 as evidence of compliance with condition 2 of the Permit.



Figure 2. Looking north-west from the south-western boundary of the application area, into the area to be cleared.



Figure 3. Looking north-west from the south-eastern boundary of the application area, into the area to be cleared.



Figure 4. Looking south-west from the northern border of the application area, into the area to be cleared. Large karri tree, DBH > 500 millimetres, no suitable hollows.



Figure 5. Looking south from the eastern boundary of the application area, into the area to be cleared. Large marri tree DBH > 500 millimetres, no suitable hollows.



Figure 6. Looking west from the western boundary of the application area, into the area to be cleared.



Figure 7. Marri nuts with potential foraging evidence by Baudin's black cockatoo or smaller parrot observed within the application area.

Appendix G – 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)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography Linear – Hierarchy (DWER-031)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping – Best Available
- Soil landscape land quality - Flood Risk (DPIRD-007)
- Soil landscape land quality - Phosphorus Export Risk (DPIRD-010)
- Soil landscape land quality - Salinity Risk (DPIRD-009)
- Soil landscape land quality - Subsurface Acidification Risk (DPIRD-011)
- Soil landscape land quality - Water Erosion Risk (DPIRD-013)
- Soil landscape land quality - Waterlogging Risk (DPIRD-015)
- Soil landscape land quality - Wind Erosion Risk (DPIRD-016)

Restricted GIS Databases used:

- Black Cockatoo Roost Sites – Restricted Use (April 2019)
- Carnaby's Cockatoo Confirmed Breeding Areas within the Swan Coastal Plain and Jarrah Forest IBRA Bioregions
- Carnaby's Cockatoo Unconfirmed Breeding Areas within the Swan Coastal Plain and Jarrah Forest IBRA Bioregions
- ICMS (Incident Complaints Management System) – Points and Polygons
- SWF Vegetation Complex Statistics Report
- 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

- Commissioner of Soil and Land Conservation (2017) Advice received in relation to Clearing Permit Application CPS 7709. Department of Primary Industries and Regional Development (DWER Ref:A1510119).
- 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 black cockatoo species. Department of Sustainability, Environment, Water, Populations and Communities, Canberra.
- Commonwealth of Australia (2016a) Modelled distribution for Carnaby's Cockatoo (*Calyptorhynchus latirostris*). Department of Environment and Energy, Canberra.
- Commonwealth of Australia (2016b) Modelled distribution for Baudin's Cockatoo (*Calyptorhynchus latirostris*). Department of Environment and Energy, Canberra.
- Department of Biodiversity, Conservation and Attractions (DBCA) (2020) Advice provided for CPS 7403/3 (DWER ref: A1876059).
- Department of Environment and Conservation (2008) Forest Black Cockatoo (Baudin's Cockatoo *Calyptorhynchus baudinii* and Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso*) Recovery Plan. Department of Environment and Conservation. Western Australia.
- Department of Water and Environmental Regulation (DWER) (2017) Site Inspection Report undertaken 10 July 2017. Department of Water and Environment Regulation. Western Australia (DWER Ref: A1522233).
- Department of Water and Environmental Regulation (DWER) (2020a) Site Inspection Report undertaken 9 March 2020. Department of Water and Environment Regulation. Western Australia (DWER Ref: A1905259).
- Department of Water and Environmental Regulation (DWER) (2020b) Water resource and licensing advice for Clearing Permit Application CPS 7631/2. Department of Water and Environmental Regulation. Land and Clearing (CAWSA) Management. Western Australia (DWER Ref: A1470372).
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- Government of Western Australia. (2019). 2018 South West Vegetation Complex Statistics. Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>.
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- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
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- 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.
- Shire of Manjimup (2020). Advice received in relation to Clearing Permit Application CPS 7631/2 (DWER Ref: A1886439)