GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 8962/1

File Number: DWERVT6030

Duration of Permit: From 17 March 2021 to 17 March 2023

PERMIT HOLDER

Garry Charles Smith

LAND ON WHICH CLEARING IS TO BE DONE

Lot 810 on Deposited Plan 301864, Ringbank

Lot 9597 on Deposited Plan 140614, Ringbank

AUTHORISED ACTIVITY

The permit holder must not clear more than 4.01 hectares of native vegetation within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Avoid, minimise, and reduce impacts and extent of clearing

In determining the native vegetation authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending 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. Offset – Conservation covenant

The permit holder must not clear any native vegetation under this permit unless the permit holder has provided to the *CEO* a copy of the conservation covenant under section 30B of the *Soil and Land Conservation Act 1945* setting aside the area cross-hatched red on Figure 1 of Schedule 1, for the protection and management of native vegetation in perpetuity.

3. Vegetation Management

(a) Prior to commencing clearing, the Permit Holder shall construct a fence enclosing the area cross-hatched red on Figure 1 of Schedule 1.

(b) Within one month of installing the fence the Permit Holder must notify the *CEO* in writing that the fence has been completed.

4. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) 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; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); and (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1.

5. Reporting

The permit holder must provide to the *CEO* the records required under condition 4 of this permit when requested by the *CEO*.

DEFINITIONS

In this permit, the terms in Table have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	*Environmental Protection Act 1986* (WA)
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.

END OF CONDITIONS

Mike Young
A/Manager
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

22 February 2021

SCHEDULE 1

The boundary of the area authorised to be cleared (hatched yellow) and the boundary of the area to be placed under conservation covenant (hatched red) is shown in the map below (

Figure **1**).

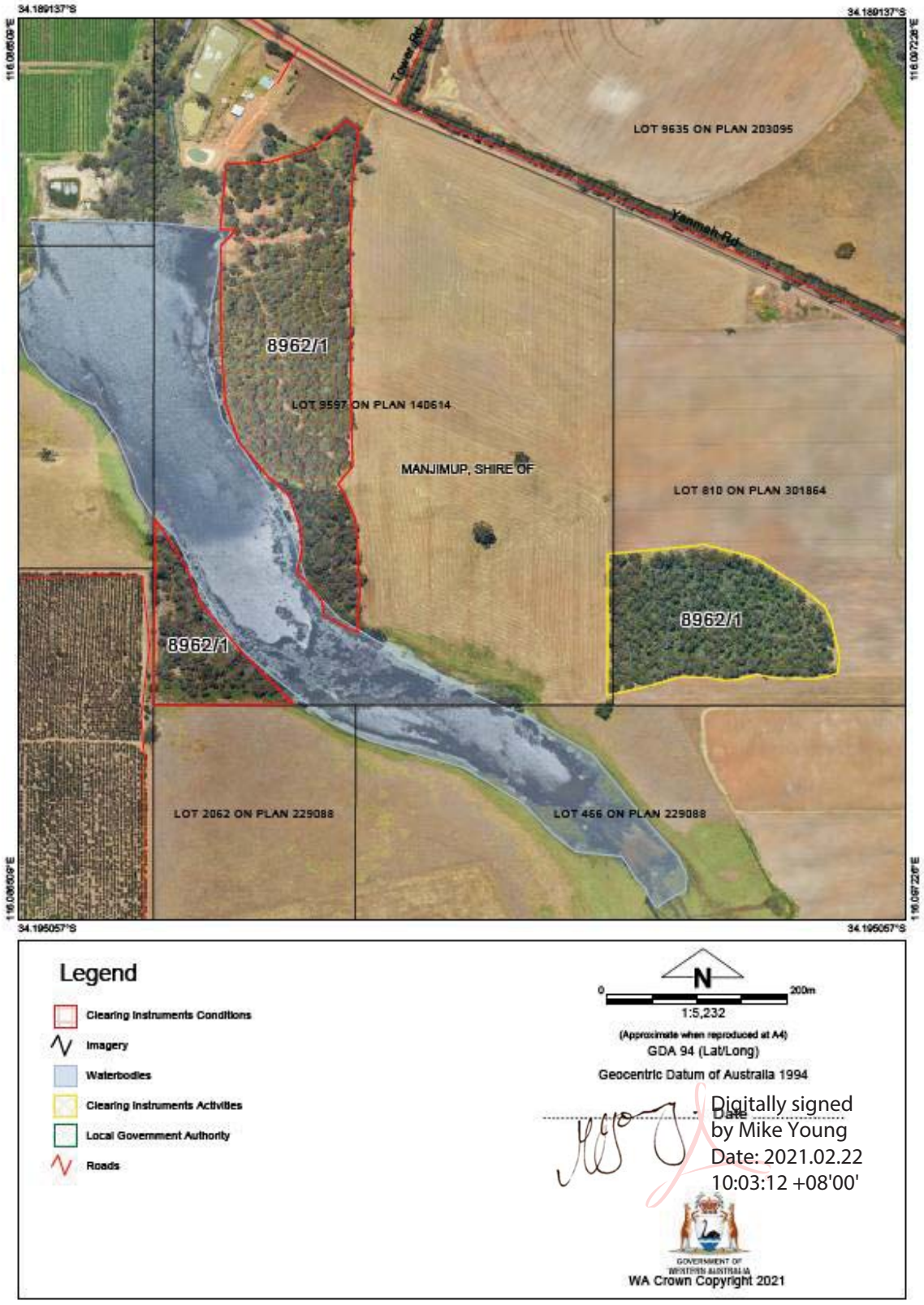

Figure 1: Map of the boundary of the area within which clearing may occur (hatched yellow) and the boundary of the area to be placed under conservation covenant (hatched red).

Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 8962/1
Permit type:	Area permit
Applicant name:	Garry Charles Smith
Application received:	3 July 2020
Application area:	4.01 hectares (ha) of native vegetation
Purpose of clearing:	Horticulture
Method of clearing:	Mechanical
Property:	Lot 9597 on Deposited Plan 140614 and Lot 810 on Deposited Plan 301864
Location (LGA area/s):	Shire of Manjimup
Localities (suburb/s):	Ringbark

1.2. Description of clearing activities

The vegetation applied to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5).

The application is to clear a 4.01 hectare patch of native vegetation for the purpose of horticulture.

1.3. Decision on application and key considerations

Decision:	Grant
Decision date:	22 February 2021
Decision area:	4.01 hectares (ha) of native vegetation as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and one submission was received. Consideration of matters raised in the public submission is summarised in Appendix B.

In making this decision, the Delegated Officer had regard to the site characteristics (see Appendix C), relevant datasets (see Appendix H), the findings of the black cockatoo assessment (Smithson Environmental 2020), photographs provided by the applicant (see Appendix G), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments, the applicant's minimisation and mitigation measures and any other matter considered relevant to the assessment (see Section 3). The assessment identified that the proposed clearing will result in the following:

- The loss of native vegetation that is suitable foraging habitat for threatened black cockatoo species
- The loss of a potential roost site for the Forest Red-tailed Black cockatoo

After consideration of the available information, as well as the applicant's minimisation and mitigation measures, the Delegated Officer determined that the impacts of the proposed clearing could be minimised and managed to be environmentally acceptable. The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing.

- place nine hectares of very good condition native vegetation that contains foraging and roosting habitat for black cockatoos under a conservation covenant to ensure it is protected in perpetuity.

1.5. Site map

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

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
4. the polluter pays principle

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

Relevant policies considered during the assessment were:

- *Environmental Offsets Policy* (2011)

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)
- *Environmental Offsets Guidelines* (August 2014)
- Technical guidance – *Terrestrial Vertebrate Fauna Surveys for Environmental Impact Assessment* (EPA, 2020)

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to fauna habitat was necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed 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 C) 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 value of biological values (fauna) and that these required further consideration. The detailed consideration and assessment of the clearing impacts against the specific environmental values is provided below.

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

Assessment:

According to available databases, 21 fauna species of conservation significance have been recorded within the local area (DBCA, 2007-). Of these species, it is considered that habitat for Carnaby's cockatoo (*Calyptorhynchus latirostris*; Endangered, BC Act; Endangered, EPBC Act), Baudin's Cockatoo (*Calyptorhynchus baudinii*; Endangered, BC Act; Endangered, EPBC Act), the Forest red-tailed black cockatoo (*Calyptorhynchus banksia naso*; Vulnerable, BC Act; Vulnerable, EPBC Act), the Western Ringtail Possum (*Pseudocheirus occidentalis*; Critically Endangered, BC Act; Critically Endangered, EPBC Act) and the South-western brush-tailed phascogale (*Phascogale tapoatafa wambenger*; Conservation Dependent, BC Act) may occur within the application area.

Black Cockatoos

The application area occurs within the known breeding ranges for all three black cockatoo species (Department of the Environment and Energy, 2017). Currently, the overall population trend for all three species is declining. The decline of black cockatoos is primarily due to the loss and fragmentation of habitat as a result of clearing native vegetation (Department of the Environment and Energy, 2017).

Marri is the primary foraging species for all three black cockatoo species within the Jarrah Forest bioregion. Noting the vegetation types present within the application area, the application area contains suitable foraging habitat for the three black cockatoo species.

A black cockatoo habitat assessment observed evidence of foraging on Marri nuts by Forest red-tailed black cockatoos and possible evidence of foraging by white tailed black cockatoo (either Carnaby's or Boudin's). Flocks of about seven birds were also observed foraging within the application area with one flock being of Forest red-tailed black cockatoos and the other flock of Baudin's cockatoo (Smithson Environmental, 2020).

Based on the foraging habitat scoring tool for black cockatoos developed by Department of the Environment and Energy (DEE, 2017) as part of the revised draft referral guidelines for black cockatoo species, the application area is classed as very high quality foraging habitat for all three threatened black cockatoo species. The clearing of high quality foraging habitat for these species is likely to have a significant impact (DEE, 2017).

The habitat assessment concluded that the application area is likely to provide a night roost for the Forest red-tailed black cockatoo, which was observed roosting within the application area (Smithson Environmental, 2020). The application area is also within 100 m of a water source (Ringbark Brook). Roost sites provide shelter during the heat of the day and safe resting places at night. Black cockatoos will favour roost sites that are close to water sources

and in proximity to foraging resources. Roost sites that provide access to required resources provide a critical function in maintaining populations of black cockatoos (Department of Environment and Energy, 2017).

The national recovery plan (DEC, 2008) for the Forest Red-tailed Black cockatoo and Baudin's cockatoo lists the critical habitat for these species as areas that:

- Is currently occupied by the cockatoos,
- Not currently occupied buy the cockatoos due to recent fire but capable of supporting cockatoo populations when sufficiently recovered;
- Native vegetation in which cockatoos nest, feed and roost;
- Native vegetation through which the cockatoos can move from one occupied area to another; and
- Suitable vegetation with the recorded range in which undiscovered cockatoos populations may exist.

Critical habitat is also considered to be confirmed breeding trees and trees with suitable hollows with the potential to become nesting trees. The black cockatoo habitat assessment recorded 179 trees that exceeded 50 cm diameter at breast height within the application area, however no trees with suitable size hollows for breeding by black cockatoos were recorded (Smithson Environmental, 2020). Therefore, although the application area could be considered to have potential as breeding habitat in future, it is not considered to represent critical breeding habitat at present.

Given the above, it is considered that the application area provides foraging habitat for all three black cockatoo species and critical roosting habitat for the Forest red-tailed black cockatoo, as it contains a likely roost site in close proximity to water and a high quality foraging resource.

Western Ringtail Possum

Habitat critical to the survival of the Western Ringtail Possum comprises forests with limited anthropogenic disturbance (unlogged or lightly logged, and a low intensity and low frequency fire history) that are intensively fox-baited and have low incidents of fragmentation (DPAW, 2017).

The application area may provide habitat for Western Ring-tailed Possum, however it is highly fragmented and is a small isolated patch surrounded by farmland with no continuity with nearby vegetation. Small tree hollows were observed during the habitat assessment that may be suitable for the Western Ring-tail Possum however no scats or scratchings were observed near these hollows during the habitat assessment (Smithson Environmental 2020).

Given the above, it is considered unlikely that the application area provides significant habitat for the Western Ring-tailed Possum.

South-western brush-tailed phascogale

The South-western Brush-tailed phascogale occurs in dry sclerophyll forests and open woodlands that contain hollow bearing trees but a sparse ground cover, with home ranges varying from 20 to 70 hectares (CALM, 2002). Small tree hollows were observed within the application area during the habitat assessment (Smithson Environmental, 2020) and habitat may occur for this species. However, given that the application area is 4.01 hectares in size and is isolated from nearby vegetation by cleared farmland, it is considered unlikely for this species to use the application area.

Ecological Linkages

The application area is located 1.8 kilometres west of a non-continuous north-south ecological linkage mapped as part of the South West Regional Ecological Linkage project and is separated from this linkage via other small patches of remnant vegetation and cleared paddocks. The proposed clearing is unlikely to significantly impact the landscape function of this ecological linkage given this distance.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

- offset (conservation covenant) condition to mitigate the clearing of significant black cockatoo habitat (see section 4)

3.3. Relevant planning instruments and other matters

Other relevant authorisations required for the proposed land use include:

- Licence to abstract water under the *Rights in Water and Irrigation Act 1914* (RIWI Act).

The Shire of Manjimup (2020) 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.

The application area occurs within the Donnelly River System RIWI Act surface water area. Taking of surface water will require a water licence. The applicant currently holds two surface water licences over the application area, one for 100000 KL (179897) and one for 110000 KL (180788). The applicant has advised that they do not require further water for the proposed horticulture.

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.

4. Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- 4.01 ha of high-quality foraging habitat for Carnaby's, Baudin's and Forest Red-tailed black cockatoo species; and
- A roost site for the Forest Red-tailed Black cockatoo.

The applicant was advised that an offset is required to mitigate the significant residual impacts to black cockatoo habitat and that a suitable offset may include the conservation of 11 ha of native vegetation in good condition on the applicants land holding under a conservation covenant. Alternatively, approximately 8 ha of cleared land could be revegetated.

In response, the applicant proposed an environmental offset consisting of 5 ha of native vegetation to be secured under a conservation covenant within Lot 9597 on Deposited Plan 140614, Ringbark.

The Delegated Officer considered that the offset proposed only counterbalance 45 per cent of the significant residual impacts listed above.

In response to this, the applicant provided an environmental offset consisting of 9 ha of native vegetation in very good condition to be secured under a conservation covenant within Lot 9597 on Deposited Plan 140614, Ringbark, 100 metres to the north-west of the Application Area. The applicant has committed to fencing this area. From photographs provided by the applicant, the offset area contains native vegetation consisting of Marri and Jarrah woodland over Banksia and other native species in a predominantly very good (Keighley, 1994) condition. Photographs and video provided by the applicant indicate that some trees may have hollows present.

The Delegated Officer considers that this adequately counterbalances the significant residual impacts listed above. The justification for the values used in the offset calculation is provided in Appendix F.

Appendix A – Additional information provided by applicant

Summary of comments	Consideration of comment
The applicant provided a Black cockatoo impact assessment on 1 October 2020.	Results of the impact assessment has been discussed under section 3.2.1.
The applicant has proposed an offset of 5 hectares of native vegetation to be protected under a conservation covenant to offset the residual impacts of the proposed clearing on 25 November 2020.	Consideration of this proposed offset has been discussed under section 4.
The applicant has proposed an offset of 9 hectares of native vegetation to be protected under a conservation covenant to offset the residual impacts of the proposed clearing on 13 January 2021.	Consideration of the proposed offset has been discussed under section 4 and Appendix F.

Appendix B – Details of public submissions

Summary of comments	Consideration of comment
A public submission regarding the impact of the proposed clearing on black cockatoo species was received that raised the following issues: • A comprehensive black cockatoo assessment is required to determine impacts to potential foraging and breeding habitat present within the proposed clearing area; and • The proposed clearing is likely to result in the loss of significant foraging and breeding habitat for black cockatoo species, given the size of the application area and the cumulative impacts of habitat loss. • Habitat trees should be retained. • Revegetation and mitigation through installation of nesting boxes required if clearing is approved. • Requirement to advise applicant that they have responsibilities under the EPBC Act.	The comments made in this submission are addressed as follows: • The applicant was requested to conduct a Black cockatoo habitat assessment of the application area. • The assessment of impacts to environmental values are discussed in Section 3.2.1. • The applicant has been advised of their responsibilities under the *Environmental Protection Biodiversity Conservation Act 1998.*

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 a 4.01 hectare isolated patch of native vegetation. It is surrounded by pasture/farmland on all sides and is 100 metres northeast of a perennial watercourse. Aerial imagery indicates the local area (10 kilometre radius of the proposed clearing area) retains approximately 35.6% of the original native vegetation cover.

<table>
<tr><th>Site characteristic</th><th>Details</th></tr>
<tr><td>Vegetation description</td><td>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of Marri (Corymbia calophylla), Jarrah (Eucalyptus marginata) and Blackbutt (Eucalyptus patens) over an understorey dominated by the introduced Genista monspessulana and grassy weeds interspersed with native climbers Kennedia prostrata and Hardenbergia comptoniana with some native species such as Xanthorrhoea preisii, Macrozamia riedlei, Patersonia umbrosa, Hakea amplexicaulis. Representative photographs are available in Appendix G.

This is consistent with the mapped vegetation type(s):
South West vegetation complex Bevan 1, which is described as tall open forest of Corymbia calophylla-Eucalyptus marginata subsp. marginata on uplands in perhumid and humid zones (Government of Western Australia, 2019); and
South West vegetation complex Yanmah, which is described as mixture of tall open forest of Eucalyptus diversicolor and tall open forest of Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata over Agonis flexuosa and Agonis juniperina on valleys in perhumid and humid zones (Government of Western Australia, 2019).</td></tr>
<tr><td>Vegetation condition</td><td>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in good (Keighery, 1994) condition, described as:
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.
The full Keighery condition rating scale is provided in Appendix E, below.

Representative photos are available in Appendix G.</td></tr>
<tr><td>Soil description</td><td>The soil is mapped as
Bevan Subsystem (Manjimup) described as Broad, gently sloping (3-15%) divides on laterite, soils are sandy gravels and loamy gravels; and
Yanmah Subsystem (Manjimup) described as Shallow (5-20 m) minor valleys, usually U-shaped with gentle sideslopes (3-10%) and broad swampy floors. Soils are loamy gravels, sandy gravels and deep sands with non-saline wet soils on the valley floors.</td></tr>
<tr><td>Land degradation risk</td><td><table>
<tr><th>Risk categories</th><th>Bevan</th><th>Yanmah</th></tr>
<tr><td>Wind erosion</td><td>>70% of map unit has a high to extreme wind erosion risk</td><td>>70% of map unit has a high to extreme wind erosion risk</td></tr>
<tr><td>Water erosion</td><td>0% of map unit has moderate to high</td><td>10-30% of map unit has a moderate to high</td></tr>
<tr><td>Salinity</td><td>0% of map unit has moderate to high</td><td>0% of map unit has moderate to high</td></tr>
<tr><td>Flood risk</td><td>0% of map unit has moderate to high flood</td><td>10-30% of the map unit has a moderate to high</td></tr>
<tr><td>Water logging</td><td>3-10% of map unit has a moderate to very high waterlogging risk</td><td>10-30% of map unit has a moderate to very high waterlogging risk</td></tr>
<tr><td>Phosphorus export risk</td><td>30-50% of map unit has a high to extreme phosphorus export risk</td><td>10-30% of map unit has a moderate to high phosphorus export risk</td></tr>
</table></td></tr>
<tr><td>Waterbodies</td><td>The desktop assessment and aerial imagery indicated that a tributary of the Donnelly River, Ringbark Brook, occurs 100 m southwest of the application area. The closest wetland is 391 metres away.</td></tr>
<tr><td>Conservation areas</td><td>North Donnelly State Forest occurs 1.1 km north of the application area</td></tr>
</table>

Site characteristic	Details
	Timber Reserve managed by DBCA occurs 2.9 km east of the application area. Faunadale Nature Reserve occurs 3.6 km south of the application area.
Climate and landform	Rainfall: 1000 Evapotranspiration: 800 Geology: Marine limestone, sandstone, and valley-fill deposits

2. Flora, fauna and ecosystem analysis

With consideration for the site characteristics set out above, relevant datasets (see Appendix E), the following conservation significant flora and fauna species, and ecological communities may be impacted by the clearing.

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)
Western Ringtail Possum (Pseudocheirus occidentalis)	2.1 km	NA	NA	Y	Y
Forest red-tailed black cockatoo (Calyptorhynchus banksii naso)	4 km	NA	NA	Y	Y
Carnaby's cockatoo (Calyptorhynchus latirostris)	6 km	NA	NA	Y	Y
Baudin's cockatoo (Calyptorhynchus baudinii)	3.7 km	NA	NA	Y	Y
South-western brush-tailed phascogale (Phascogale tapoatafa wambenger)	4 km	NA	NA	N	N/A

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					
Jarrah Forest	4,506,660.25	2,399,838.15	53.25	1,673,614.25	37.14
Vegetation complex					
Bevan 1	76,781.57	62,802.37	81.79	59,258.88	77.18
Yanmah	23,494.22	19,229.71	81.85	18,180.49	77.38

Appendix D – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The proposed clearing area does not contain suitable habitat for priority or threatened flora species or for priority or threatened ecological communities recorded within the local area. In addition, the vegetation in the application area does not represent highly cleared vegetation associations.	Not likely to be at variance	No
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."* Assessment: The application area contains foraging and roosting habitat for threatened black cockatoo species.	Is at variance	Yes Refer to Section 3.2.2 above.
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The application area does not contain suitable habitat (winter-wet, swamps) for those flora species listed under the BC Act that have been recorded within the local area.	Not likely to be at variance	No
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."* Assessment: The application area does not contain species that indicate a threatened ecological community.	Not likely to be at variance	No
Environmental values: significant remnant vegetation and conservation areas		
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."* Assessment: The extent of the mapped vegetation types and the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. Vegetation in the application area is not considered to be part of a significant ecological linkage in the local area.	Not likely to be at variance	No
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."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
Environmental values: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given no water courses or wetlands are recorded within the application area, and the distance to the nearest watercourse/wetland, the proposed clearing is not considered to include vegetation growing in or in association with a watercourse or wetland.	Not likely to be at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are moderately to highly susceptible to wind erosion; however, advice from the Commission of Soil and Land Conservation states that the proposed clearing is not likely to cause appreciable land degradation given the soil unit's capacity for the proposed land use (CSLC, 2020).	Not likely to be at variance	No
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."* Assessment: Given no water courses are recorded within the application area, the clearing is considered unlikely to impact surface water quality. The risk of salinity within the application area is low and given this, it is not expected for the proposed clearing to impact the quality of groundwater.	Not likely to be at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding. Given no water courses / wetlands are recorded within the application area, the proposed clearing is considered unlikely to contribute to waterlogging.	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 – Offset calculator value justification

Offset Calculation 1 - Conservation Covanant

Note: Complete the following calculation for each relevant residual impact.

Field Name	Description	Justification for value used
IUCN Criteria	The IUCN criteria for the value being impacted	**0.2%** - Afforded to Forest red-tailed black cockatoo habitat as this species is listed as Vunerable under the Biodiversity Conservation Act 2016 and the Environment Protection and Biodiversity Conservation Act 1999.
Area of impact (habitat/community) or Quantum of impact (features/individuals)	The area of habitat/community impacted or number of features/individuals impacted	**4.10 ha** - The black cockatoo habitat assessment identified that the entire application area provides high quality foraging habitat for black cockatoo species.
Quality of impacted area (habitat/community)	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	**4** - The black cockatoo habitat assessment identified that the entire application area provides high quality foraging habitat for black cockatoo species. A night roost site for red-tailed black cockatoos was identified during the survey. No breeding habitat identified. Application area is in good conditions with extensive weeds in the understorey.
Time over which loss is averted (habitat/community)	This describes the timeframe over which changes in the level of risk to the proposed mitigation site can be considered and quantified	**20** - The offset site would be conserved in perpetuity. 20 years is the maximum value associated with this field.
Time until ecological benefit (habitat/community) or Time horizon (features/individuals)	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed mitigation to be realised	**1 year** - Provides for up to 12 months to complete the change in reserve purpose or put in place a conservation covenant.
Start area (habitat/community) or Start value (features/individuals)	The area of habitat/community or number of features/individuals proposed to mitigate the impacts	**9 ha** - The applicant has proposed to protect 9 ha under a conservation covanant on his land holdings.
Start quality (habitat/community)	The quality score for the area of habitat/community proposed as mitigation - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	**7** - An offset site has been identified and photographs show that it occurs in a predominetly very good condition. The offset site conatains Marri and Jarrah with some visible hollows present. Understorey includes other forgaing species such as Banksia. Considered to provide forgaing, breeding and roosting habitat for black cockatoos. Are will be fenced.
Future quality without offset (habitat/community) or Future value without offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed mitigation site without the mitigation	**7** - The offset site currently has no form of conservation tenure, and may degraded overtime.
Future quality with offset (habitat/community) or Future value with offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed mitigation site with the mitigation	**7** - The quality scores for the offset is 7 on the basis that the quality will be maintained over the foreseeable future (20 years)
Risk of loss (%) without offset (habitat/community)	This describes the chance that the habitat/community on the proposed mitigation site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without the mitigation	**40%** - The offset site currently has no form of conservation tenure, is currently in private ownership and has minimal restrictions on future development through its zoning ('priority agriculture').
Risk of loss (%) with offset (habitat/community)	This describes the chance that the habitat/community on the proposed mitigation site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with the mitigation	**10%** - The offset site will be conserved in perpetuity through a conservation covenant. On this basis the risk of loss with the offset implemented is likely to be greatly reduced.
Confidence in result (%) – risk of loss (habitat/community)	The capacity of measures to mitigate risk of loss of the mitigation site	**90%** - The offset site will be conserved in perpetuity. There will be a high level of confidence that the level of risk of loss of the offset site will be reduced.
Confidence in result (%) – Change in quality (habitat/community) or Change in value (features/individuals)	The level of certainty about the successful achievement of the proposed change in quality (habitat/community) or value (features/individuals)	**90%** - There is a high level of confidence that the offset site comprises of the values outlined in the calculation.
% of impact offset	The net present value of the mitigation (area of habitat/community or number of individuals/features) that will be applied to the quantum of impact	**101%** - Obtained through the input of variables explained above.
Other comments	Include here any relevant additional comments	

Appendix G – Photographs of the vegetation under application and offset site

Figure 2: Photographs of the vegetation within the application area (Smith, 2020b).

Figure 3: Photographs of foraging evidence by black cockatoos within the application area (Smithson Environmental, 2020)

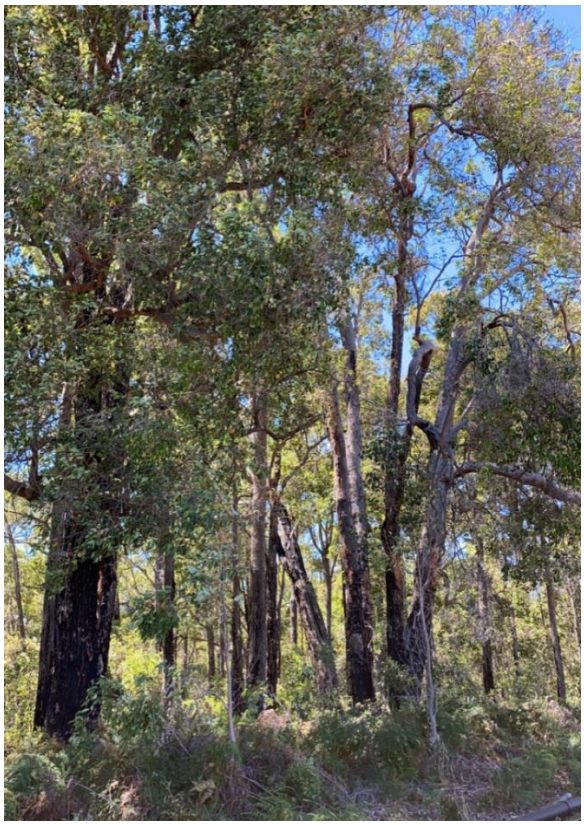

Figure 4: Photographs of the offset site (Smith 2021)

Appendix H – 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:

- ICMS (Incident Complaints Management System) – Points and Polygons
- Threatened Flora (TPFL)
- Threatened Flora (WAHerb)
- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities

2. References

Commissioner of Soil and Land Conservation (CSLC) (2020) Land degradation assessment for clearing permit application CPS 8962/1. DWER ref A1934171

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Department of the Environment and Energy (2017) Revised draft referral guideline for three threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and Forest Red-tailed Black Cockatoo, Commonwealth of Australia.

Department of Environment and Conservation (DEC) (2008) Forest Black Cockatoo (Baudin's Cockatoo *Calyptorhynchus baudinii* and Forest Red-tailed Black Cockatoo *Calyptorhynchus banksia naso*) Recovery Plan. Western Australia

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Smith (2020b) Photographs of application area for CPS 8962/1 clearing application. DWER ref A1924063

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Smithson Environmental (2020) Black Cockatoo Impact Assessment Yanmah Road, Manjimup, 14 October 2020. Prepared for Mike Smith, Smith Family Farms, 296 Yanmah Road Manjimup.

Department of Parks and Wildlife (DPAW) (2014) Western Ringtail Possum (*Pseudocheirus occidentalis*) Recovery Plan. Western Australia