GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9063/1

File Number: DWERVT6631

Duration of Permit: 7 March 2021 to 7 March 2023

PERMIT HOLDER

Mr Peter Raymond Bloxsome

LAND ON WHICH CLEARING IS TO BE DONE

Lot 1910 on Deposited Plan 122450, Yornup

AUTHORISED ACTIVITY

The permit holder must not clear more than 3.2 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. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of 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 known 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. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner from west to east to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

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); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; (f) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 2; and (g) actions taken in accordance with condition 3.

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.
dieback	means the effect of *Phytophthora* species on native vegetation.
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.
weeds	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.

END OF CONDITIONS

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Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

12 February 2021

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).

Figure 1: Map of the boundary of the area within which clearing may occur

Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 9063/1
Permit type:	Area permit
Applicant name:	Peter Raymond Bloxsome
Application received:	7 September 2020
Application area:	3.2 hectares (ha) of native vegetation
Purpose of clearing:	Dam construction and maintenance
Method of clearing:	Mechanical clearing
Property:	Lot 1910 on Deposited Plan 122450
Location (LGA area/s):	Shire of Bridgetown – Greenbushes
Localities (suburb/s):	Yornup

1.2. Description of clearing activities

The application is to clear 3.2 ha of native vegetation within two sites for the purpose of constructing a dam. The two sites are separated from each other by approximately 60 metres of cleared agricultural land (see Figure 1, Section 1.5). Within Site 1 (the eastern site) and Site 2 (the western site), the applicant proposes to clear approximately 2.12 and 1.08 ha of native vegetation respectively.

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	12 February 2021
Decision area:	3.2 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 no submissions were received.

In undertaking their assessment and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the site characteristics (see Appendix A), the Clearing Principles in Schedule 5 of the EP Act (see Appendix B), the supporting information supplied by the applicant (Bloxsome, 2020a; 2020b; 2020c), relevant planning instruments, and any other pertinent matters they deemed relevant to the assessment (see Sections 3 and 4), land degradation advice provided by the Commissioner of Soils and Land Conservation (the Commissioner) (2020), as well as relevant datasets available at the time of the assessment (see Appendix E).

The assessment has identified that the proposed clearing will result in the following:

- The loss of native vegetation that is suitable habitat for *Calyptorhynchus banksia* subsp. *naso* (forest red-tailed black cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo) and *Calyptorhynchus baudinii* (Baudin's cockatoo) (collectively referred to as black cockatoos herein this report), *Phascogale tapoatafa* subsp. *wambenger* (south-western brush-tailed phascogale), *Isoodon fusciventer* (quenda, southwestern brown bandicoot), *Notamacropus Irma* (western brush wallaby), *Pseudocheirus occidentalis* (western

ringtail possum, ngwayir), *Bettongia penicillata ogilbyi* (woylie, brush-tailed bettong) and *Falco peregrinus* (peregrine falcon)

- The potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

Whilst the proposed clearing is impacting suitable fauna habitat, it is not considered significant habitat due to the remnant native vegetation in the local area and is not likely to have an impact on vegetation acting as a significant stepping stone for fauna movement. It is recognised that impacts to individuals of these species may occur at the time of clearing.

After consideration of the available information, the Delegated Officer has determined that with appropriate management conditions the proposed clearing is not likely to lead to an unacceptable risk to the environment. The Delegated Officer has decided to grant a clearing permit subject to conditions to:

- Undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- Take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

1.5. Site maps

Figure 1. Map of the application area. The areas cross-hatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

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.

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)
- *Rights in Water and Irrigation Act 1914*
- *Aboriginal Heritage Act 1972* (WA).

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019).

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

In relation to whether the alternatives that would avoid the need for clearing were considered, the applicant advised that only vegetation occurring within the proposed dam boundary will be cleared. To further minimise the need for clearing, the applicant advised that clay, which will be required for dam wall construction, will come from cleared areas. 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, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to biological values (fauna) and water resources. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

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

Assessment:

According to available databases, 18 conservation significant fauna species have been recorded within the local area (Department of Biodiversity, Conservation and Attractions (DBCA), 2007). Noting the habitat requirements of the recorded species, the mapped vegetation type, the condition of the vegetation within the application area, as well as the photographs supplied by the applicant (Bloxsome, 2020a, 2020b and 2020c), the application area is likely to comprise suitable habitat for:

- Black cockatoos
- Peregrine falcon
- Quenda
- Western brush wallaby
- Western ringtail possum
- South-western brush-tailed phascogale
- Woylie.

Black cockatoos

According to available databases, 17 records of forest red-tailed black cockatoo, 10 records of Carnaby's cockatoo and 13 records of Baudin's cockatoo have been recorded in the local area (DBCA, 2007).

The assessment has identified that the application area is not likely to provide suitable breeding habitat. Suitable breeding habitat for black cockatoos includes trees which either have a suitable nest hollow or are of a suitable dimeter at breast height (DBH) to develop a nest hollow. For most tree species a suitable DBH is 500 millimetres (Commonwealth of Australia, 2012). A review of the photographs of the application area supplied by the applicant (Bloxsome, 2020a; 2020b; 2020c) identified that the application area contains only one tree with DBH greater than 500 millimetres. This tree does not contain any hollows suitable for black cockatoos.

Noting typical food resources for black cockatoos, the application area contains approximately 1.08 ha of foraging habitat for these species. Forest red-tailed black cockatoo forages within jarrah and marri woodlands and forest, and edges of karri forests including wandoo and blackbutt, within the range of the subspecies. The species largely feeds on seeds of marri and jarrah, as well as other *Eucalyptus* species and *Allocasuarina* cones (Commonwealth of Australia, 2012). Baudin's cockatoo prefer foraging within Eucalypt woodlands and forest, and proteaceous woodland and heath. During the breeding season (October to late January/early February) this species has a preference for marri seeds. Outside the breeding season the species may feed in fruit orchards and tips of *Pinus* spp. (Commonwealth of Australia, 2012). Carnaby's cockatoo feeds on the seeds, nuts and flowers of a large variety of plants including Proteaceous species (*Banksia*, *Hakea* and *Grevillea*), as well as Allocasuarina and Eucalyptus species, *Corymbia calophylla* and a range of introduced species (Valentine and Stock, 2008).

The local area comprises approximately 13,508 ha of native vegetation, a majority of which is mapped as black cockatoo foraging habitat. The application area represents approximately 0.024 per cent of this extent. Approximately 78 per cent (10,488 ha) of the vegetation in the local area occurs within DBCA managed estate (Figure 1).

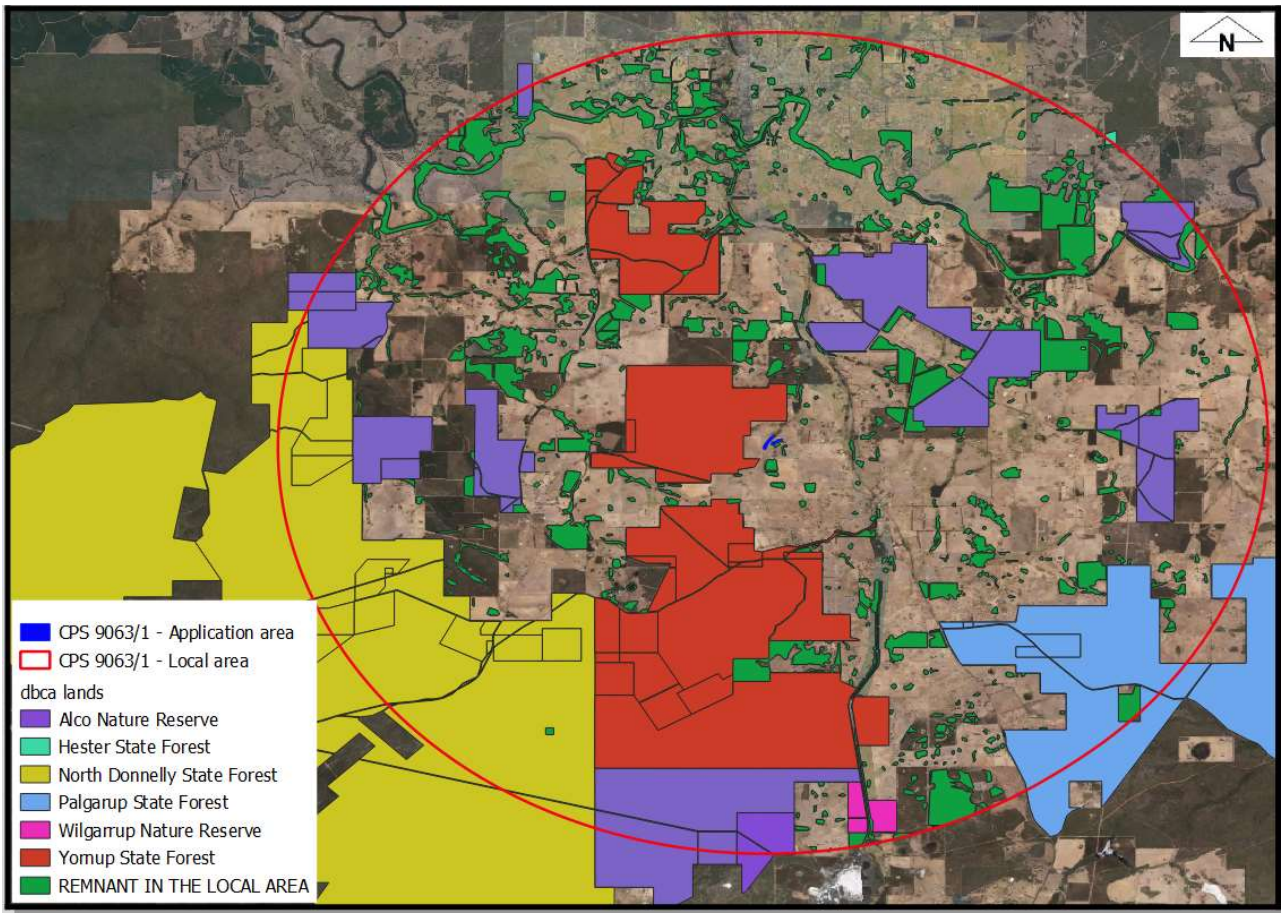

Figure 2 Extent of remnant vegetation and DBCA managed lands in the local area

Significant habitat refers to the resources (breeding, resting and feeding), connectivity or habitat area for a species or community that is critical for its survival. Noting the location of the application area with regards to DBCA lands and the extent of remnant vegetation in the local area, the application area is unlikely to be significant foraging habitat for black cockatoos.

The assessment has identified that the application area is not likely to provide significant foraging habitat that supports black cockatoo breeding. Foraging habitat for black cockatoos within 7 kilometres (km) of a breeding site is important to adequately support breeding pairs (EPA, 2019). The application area is not located within the mapped confirmed breeding area for Carnaby's cockatoo or forest red-tailed black cockatoo. According to available databases, there are no confirmed breeding points within the local area. The closest confirmed breeding areas for white-tailed black cockatoos and forest red-tailed black cockatoo are located approximately 41 and 94 km from the application area respectively. Noting this, the proposed clearing is unlikely to reduce the amount of food available to breeding birds or affect chick survival rates.

The assessment has identified that the application area provides foraging habitat that supports black cockatoo night roosting. Individual night roosting sites need suitable foraging habitat and water within 6 km (EPA, 2019). Overlapping foraging ranges within 12 km also support roosting sites and maintain habitat connectivity and movement across the landscape (EPA, 2019). It has been acknowledged that there are five roosting sites within the local area, of which one is located approximately 2.8 km from the application area. However, taking into consideration the abundance of native vegetation in the local area that is likely to comprise similar quality foraging habitat for black cockatoos, the foraging habitat is not considered significant to support night roosts.

Taking into account the small size of the application area compared to the extent of native vegetation in the local area and that the application area is not within an ecological linkage, the proposed clearing is not likely to restrict black cockatoo ability to migrate across the landscape.

Peregrine falcon

According to available databases, one record of peregrine falcon has been recorded in the local area, approximately 4.1 km northeast of the application area.

The species is found in most habitats, from rainforests to the arid zone and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites and prefers coastal and inland cliffs or open woodlands near water and may even be found nesting on high city buildings (Australian Museum, 2020). This species is widespread, highly mobile and is found in various habitats. The application area may comprise suitable habitat for this species, but noting habitat preferences and the small extent of the proposed clearing, the application area is unlikely to comprise a significant habitat for this species.

Quenda, western brush wallaby, western ringtail possum, south-western brush-tailed phascogale and woylie

Quenda, western brush wallaby, western ringtail possum, south-western brush-tailed phascogale and woylie are known to occupy low dense understorey located nearby watercourse, dense myrtaceous shrublands or marri and jarrah forest (Department of Environment and Conservation, 2012; Department of Parks and Wildlife, 2014) which occur within the application area. Noting this, the application area may provide suitable habitat for these species. Taking into consideration the abundance of native vegetation occurring within DBCA managed estate in the local area, which is likely to provide similar or better habitat, the application area is not likely to provide significant habitat for these species.

Quenda, western brush wallaby, western ringtail possum, south-western brush-tailed phascogale and woylie may be subject to individual harm should they be present at the time of clearing.

Ecological linkage

According to available databases, the application area is mapped approximately 1.3 km south of a mapped South West Regional Ecological Linkage. Given the separation distance and the extent of the proposed clearing scattered along two sites, the proposed clearing is not likely to have an impact on the environmental value of this linkage.

A review of aerial imagery indicates that the vegetation in the application area is isolated and not likely to function as an ecological linkage enabling fauna to move between areas of remnant vegetation. In addition, aerial imagery and spatial datasets indicate that larger patches of remnant vegetation occur in close proximity to the application area which are more likely to be used by fauna for movement across the landscape. Therefore, the proposed clearing is not likely to have an impact on vegetation acting as a significant stepping stone for fauna movement.

Weed and dieback

The application area occurs adjacent to remnants of native vegetation. Adhering to weed and dieback management measures (as conditioned on the clearing permit) will minimise the risk of weeds and dieback being spread.

Outcome:

Based on the findings of the assessment, the Delegated Officer determined that the proposed clearing will impact on suitable habitat for black cockatoos, peregrine falcon, quenda, western brush wallaby, western ringtail possum, south-western brush-tailed phascogale and woylie. Whiles not considered significant habitat, impacts to individuals of these species may occur at the time of clearing.

Considering this, the Delegated Officer has determined that to minimise the potential impacts to conservation significant fauna, the applicant will be required to undertake slow, progressive one-directional clearing to allow terrestrial fauna to disperse ahead of the clearing activity should they occur on site at the time of clearing. Weed and dieback management practices will mitigate any potential impact to adjacent suitable habitat.

3.2.2. Environmental value: water resources – Clearing Principles (f)

Assessment:

According to available databases, the application area intersects a non-perennial tributary of Donnelly River. The review of the representative photos of the vegetation within the application area (Bloxsome, 2020a, 2020b and 2020c) noted some riparian vegetation. It has been noted that the application area may contain some vegetation growing in, or in association with the watercourse. Given the extent of the proposed clearing and its location within an agricultural property that does not connect to DBCA managed lands, the proposed clearing is not likely to have a significant impact upon riparian vegetation or the environmental values of the watercourse.

Furthermore, the findings of the Department of Primary Industries and Regional Development's (DPIRD) site inspection were also considered. The DPIRD's site inspection report concluded that the risks of salinity, eutrophication, wind erosion, water erosion, waterlogging and flooding are low and no significant changes to the environment are expected (the Commissioner, 2020).

Outcome:

For the reasons set out above, it is considered the impacts of the proposed clearing are unlikely to have any long-term adverse impacts on the hydrological and ecological values of the wetland. No clearing permit conditions are necessary in relation to this matter.

3.3. Relevant planning instruments and other matters

Under the *Rights in Water and Irrigation Act 1914,* the applicant does not require a permit to construct a dam or a licence to irrigate from it because the property is located within an unproclaimed surface water area. In these areas, DWER requires that the watercourse's 'flow is not sensibly diminished'. This means everyone who has direct access to the watercourse on their property is entitled to use the water, when it is flowing, for their domestic and stock watering needs. The applicant was requested to be considerate to his downstream neighbours, particularly if they have an existing dam which may be impacted by the construction of a new dam on the applicant's property (DWER, 2020).

On 6 October 2020, in accordance with section 51E(4)(b) of the EP Act, comments on the application was sought from the Shire of Bridgetown-Greenbushes. On 1 December 2020, the Shire verbally advised that Development Approval is required for the construction of a dam at this property.

On 13 January 2021, the Shire revised its advice and noted that in accordance with the Shire's Town Planning Scheme No 4 and 3, Development Approvals on rural zoned land where water captured is used for bona fide agricultural purposes is not required (the Shire of Bridgetown - Greenbushes, 2021).

No registered Aboriginal sites of significance have been mapped within the application area. The nearest Aboriginal Heritage Places is Registered Site 'Blackwood River' located approximately 1.3 km from the application area. Given the separation distance, the proposed clearing is unlikely to impact on this site. 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.

The application area is largely consistent with the boundaries of expired Clearing Permit CPS 5883/1. No clearing of native vegetation occurred under this permit.

Appendix A – Site characteristics

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

1. Site characteristics

Site characteristic	Details
Local context	Spatial data indicates the local area (10 km radius of the application area, which is equal to approximately 32,530 ha) retains approximately 41.5 per cent (13,508 ha) of the original native vegetation cover within 616 remnant areas. The majority (approximately 81 per cent) of the remnant areas are less than 5 ha. Approximately 32.3 per cent of the vegetation in the local area (approximately 10,488 ha) occurs within DBCA managed estate.
Ecological linkage	A South West Regional Ecological linkage (axis 233), which connects Yornup State Forest and an un-named conservation area (PIN 483876) is mapped approximately 1.3 km north of the application area.
Conservation areas	The closest conservation area is Yornup State Forest (Class A) located approximately 400 metres south and north of the application area (Figure 2 above).
Vegetation description	Photographs supplied by the applicant (Bloxsome, 2020a; 2020b; 2020c) indicate the vegetation within Site 1 consists of a thicket of Myrtaceae sp. over an understorey dominated by introduced pasture species. This is inconsistent with the mapped vegetation complex Catterick, which is described as open forest of *Eucalyptus marginata* subsp. *marginata* – *Corymbia calophylla* mixed with *Eucalyptus patens* on slopes, *Eucalyptus rudis* and *Banksia littoralis* on valley floors in the humid zone (Mattiske & Havel, 1998). A review of the same photographs (Bloxsome, 2020a; 2020b; 2020c) observed that Site 2 comprises jarrah marri woodland with minimal understorey. This is consistent with the mapped vegetation complexes Catterick and Bevan 1 mapped in Site 2. DPIRD site inspection described Site 1 as paperbark scrub-heath and Site 2 as Jarrah-marri forest (the Commissioner, 2020)
Vegetation condition	Photographs supplied by the applicant (Bloxsome, 2020a; 2020b; 2020c) indicate the vegetation within the application area appears to range from degraded (Keighery, 1994) to completely degraded (Keighery, 1994) condition. DPIRD's site inspection noted that the vegetation in the application area was unfenced and has been grazed by livestock over many years. As a result, the condition of the vegetation was considered to be completely degraded with no understorey (the Commissioner, 2020). The full Keighery condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.
Climate and landform	*Rainfall: 9*00 millimetres *Evapotranspiration: 8*00 millimetres *Groundwater Salinity (Total Dissolved Solids):* 100-3000 milligrams per litre total dissolved solids
Soil description	The soils within the application area are mapped as the following subsystems (DPIRD, 2020): • Catterick Subsystem (Manjimup) (Site 1 and approximately 90 per cent of Site 2) which is described as shallow minor valleys (5 – 40 meter relief) with gentle to low slopes (3 – 20 per cent), soils are loamy gravels and loams, swampy valley floors; and • Bevan Subsystem (Manjimup) (approximately 10 per cent of Site 2) described as broad, gently sloping (3 – 15 per cent) divides on laterite, soils are sandy gravels and loamy gravels.

Site characteristic	Details
Land degradation risk	The mapped soils within the application area have a moderate risk of acidification and sub surface compact.
Waterbodies	The desktop assessment indicates the application area is not mapped within any wetland. Site 1 is intersected by a minor, nonperennial tributary of Donnelly River (ID 22604).
Hydrogeography	The application area is not mapped within any proclaimed Surface Water or Groundwater Area.
Flora	Three flora species listed as threatened under the BC Act and 10 Priority listed flora by DBCA have been recorded within the local area. The closest record of a conservation significant flora species is the record of *Diuris drummondii* (T) located approximately 2.9 km from the application area.
Ecological communities	No threatened or priority ecological communities have been mapped within the local area.
Fauna	According to available databases: • 19 conservation significant fauna species have been recorded within the local area (DBCA, 2007). • A record of forest red-tailed black cockatoo recorded approximately 1.8 km from the application area is the closest record of a conservation significant fauna species from the application area. • The closest white-tailed black cockatoo breeding habitat is located approximately 41 km from the application area. • The closest red-tailed black cockatoo breeding habitat is located approximately 94 km from the application area. • The closest black cockatoo roosting site can be found approximately 2.8 km south of the application area within Yornup State Forest.

2. Flora, fauna and ecosystem analysis

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

C.1. Fauna analysis table

Species name	Conservation status	Suitable habitat features	Suitable vegetation type? [Y/N]	Distance of closest record to application area (m)	Are surveys adequate to identify?
Calyptorhynchus baudinii (Baudin's cockatoo)	EN	Yes	Yes	6334	N/A
Calyptorhynchus latirostris (Carnaby's cockatoo)	EN	Yes	Yes	3957	N/A
Calyptorhynchus banksii naso (Forest red-tailed black cockatoo)	VU	Yes	Yes	1808	N/A
Falco peregrinus (Peregrine falcon)	OS	Yes	Yes	4108	N/A
Isoodon fusciventer (Quenda, southwestern brown bandicoot)	P4	Yes	Yes	4819	N/A
Phascogale tapoatafa wambenger (South-western brush-tailed phascogale, wambenger)	CD	Yes	Yes	2083	N/A
Notamacropus Irma (Western brush wallaby)	P4	Yes	Yes	7612	N/A

Species name	Conservation status	Suitable habitat features	Suitable vegetation type? [Y/N]	Distance of closest record to application area (m)	Are surveys adequate to identify?
Pseudocheirus occidentalis (Western ringtail possum, ngwayir)	CR	Yes	Yes	2641	N/A
Calyptorhynchus sp. 'white-tailed black cockatoo' (White-tailed black cockatoo)	EN	Yes	Yes	6929	N/A
Bettongia penicillata ogilbyi (Woylie, brush-tailed bettong)	CR	Yes	Yes	8155	N/A

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority

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					
Catterick, CC1	27,385.55	16,733.59	61.10	15,210.18	55.54
Bevan 1, BE1	76,781.57	62,802.37	81.79	59,258.88	77.18
Local area					
10 km radius from the perimeter of the application area	32,530.47	13,508.03	41.5	10,487.56	32.2

Appendix B – 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: Considering the understorey is dominated by weeds and in degraded (Keighery, 1994) to completely degraded (Keighery, 1994) condition, the application area is not likely to provide suitable habitat for conservation significant flora. The application area does not comprise significant habitat for fauna and vegetation in the application area is not representative of threatened or priority ecological communities.	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 comprises suitable habitat for three black cockatoo species, western ringtail possum, peregrine falcon, quenda, western ringtail possum, western brush wallaby, woylie and south-western brush-tailed phascogale. Noting the extent of the proposed clearing, its location in close proximity to patches of remnant vegetation and the sparse weed-dominated understorey, the vegetation proposed to be cleared is not likely to comprise a significant habitat for these of other native fauna.	May be at variance	Yes Refer to Section 3.2.1 above
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: Noting the weed-dominated understorey in degraded (Keighery, 1994) to completely degraded (Keighery, 1994) condition, the proposed clearing area is unlikely to contain threatened flora species listed under the BC Act.	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 proposed clearing area does not contain species composition indicative of a TEC listed by the Western Australian Minister for Environment.	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 extents of native vegetation in the local area and the mapped vegetation complexes are above the national objectives and targets for biodiversity conservation in Australia. The application area does not provide habitat for conservation significant flora, significant habitat for conservation significant fauna, does not function as an ecological linkage and is not representative of any TECs or PECs. Given this, the vegetation proposed to be cleared is not significant as a remnant of native vegetation.	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
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 any nearby conservation areas.	Not likely to be at variance	No
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: The application area is intersected by a nonperennial tributary of Donnelly River, and therefore, the vegetation proposed to be cleared is growing in an environment associated with a watercourse. Proposed clearing may increase turbidity and sedimentation of surface water if tributary is present at the time of the proposed clearing. However, noting the extent and condition of the vegetation growing along the watercourse, the clearing is unlikely to impact on the environmental values of the watercourse.	Is at variance	Yes Refer to Section 3.2.2 above
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 not susceptible to wind or water erosion, nutrient export or salinity. Noting the extent of the proposed clearing and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation. The Commissioner (2020) advised that the proposed clearing is not at variance with Clearing Principle (g).	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: Noting the extent of the proposed clearing and the condition of the vegetation within the application area, the proposed clearing is not likely to cause deterioration in the quality of surface or underground water. Proposed clearing may increase turbidity and sedimentation of surface water if tributary is present at the time of the proposed clearing, however impacts are likely to be minimal and short term.	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.	Not likely to be at variance	No

Appendix C – Vegetation condition rating scale

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

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

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

Appendix D – Photographs of the vegetation

Figure 1 Site 1 and Site 2 (Bloxsome, 2020a)

Figure 2 Representative photo of the vegetation in Site 1 (Bloxsome, 2020a)

Figure 3 Representative photo of the vegetation in Site 2 (Bloxsome, 2020a)

Figure 4 Habitat tree within Site 2 (Bloxsome, 2020b)

Figure 5 Habitat tree within Site 2. No hollows were observed (Bloxsome, 2020b)

Appendix E – References and databases

1. GIS datasets

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Consanguineous Wetlands Suites (DBCA-020)
- 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 – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Remnant Vegetation, All Areas
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- South Coast Significant Wetlands (DBCA-018)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- RIWI Act, Groundwater Areas (DWER-034)

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

Australian Museum (2020) Peregrine Falcon. Government of New South Wales. Available at: https://australianmuseum.net.au/learn/animals/birds/peregrine-falcon/.

Bloxsome, P. (2020a) Application form and supporting documents in relation to the clearing permit application CPS 9063/1. Received by DWER on 23 September 2020. DWER Ref: A1936777.

Bloxsome, P. (2020b) Additional supporting information in relation to the clearing permit application CPS 9063/1. Received by DWER on 4 November 2020. DWER Ref: A1949573

Bloxsome, P. (2020c) Additional supporting information in relation to the clearing permit application CPS 9063/1. Received by DWER on 4 November 2020. DWER Ref: A1949574

Commissioner of Soil and Land Conservation (2020) Land degradation advice in relation to clearing permit application CPS 9063/1. DWER Ref: A1951593.

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

Department of Biodiversity, Conservation and Attractions (DBCA) (2007-) NatureMap: Mapping Western Australia's Biodiversity. Department of Parks and Wildlife. URL: http://naturemap.dpaw.wa.gov.au/. Accessed February 21.

Department of Environment and Conservation (2012) Brush-tailed Phascogale *phascogale tapoatafa* (Meyer, 1793). Retrieved from https://library.dbca.wa.gov.au/static/FullTextFiles/071549.pdf

Department of Parks and Wildlife (2014). Western Ringtail Possum (*Pseudocheirus occidentalis*) Recovery Plan. Wildlife Management Program No. 58. Department of Parks and Wildlife, Perth, WA.

Department of Primary Industries and Regional Development (DPIRD) (2020). NRInfo Digital Mapping. Accessed at https://maps.agric.wa.gov.au/nrm-info/ Accessed February 21. Department of Primary Industries and Regional Development. Government of Western Australia.

Department of Water and Environmental Regulation (DWER) (Regulatory Services – Water) (2020) *Rights in Water and Irrigation Act 1914* advice to the applicant (DWER Ref: A1958396).

Environmental Protection Authority (EPA) (2019). EPA Technical Report: Carnaby's Cockatoo in Environmental Impact Assessment in the Perth and Peel Region. Advice of the Environmental Protection Authority under Section 16(j) of the *Environmental Protection Act 1986*.

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

Government of Western Australia. (2019). 2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019. WA Department of Biodiversity, Conservation and Attractions. https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics

Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Mattiske, E.M. and Havel, J.J. (1998) Vegetation Complexes of the South-west Forest Region of Western Australia. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

Shire of Bridgetown – Greenbushes (2021) Advice received in relation to the clearing permit application CPS 9063/1. Received by DWER on 13 January 2021. DWER Ref: DWERDT401345.

Valentine, L.E. and Stock, W. (2008) Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy Study Area. Edith Cowan University and Department of Environment and Conservation. December 2008.

Western Australian Herbarium (1998-2020). FloraBase - the Western Australian Flora. Department of Biodiversity, Conservation and Attractions. https://florabase.dpaw.wa.gov.au/ Accessed February 21.