GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	8968/1
Permit Holder:	Shire of Collie
Duration of Permit:	3 November 2020 – 31 May 2021

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

PART I –CLEARING AUTHORISED

1. **Purpose for which clearing may be done**
   Clearing for the purpose of road construction.

2. **Land on which clearing is to be done**
   Concession Street Road reserve (PIN 11460745), Mungalup
   Lot 20 on Deposited Plan 222871, Mungalup
   Collie State Forest (F 4), Mungalup

3. **Area of Clearing**
   The Permit Holder must not clear more than 4.11 hectares of native vegetation within the area cross hatched yellow on attached Plan 8968/1.

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

5. **Type of clearing authorised**
   This Permit authorises the Permit Holder to clear native vegetation for the activities described in condition 1 of this Permit to the extent that the Permit Holder has the power to carry out works involving clearing for those activities under the *Local Government Act 1995* or any other written law.

PART II –MANAGEMENT CONDITIONS

6. **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.

7. 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 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.

8. Fauna management – direction of clearing

The Permit Holder shall conduct clearing in a slow progressive manner from one direction to the other (e.g. north to south) to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

9. Fauna management – clearing not allowed

Prior to undertaking any clearing authorised under this Permit, the Permit Holder must demarcate the following *black cockatoo habitat tree* containing a hollow identified during the 'Black cockatoo habitat tree survey' (Harewood, 2020) and ensure that clearing of this tree does not occur (area cross-hatched red on attached Plan 8968/1c):

Tree ID	Species	Latitude	Longitude
1	*Corymbia calophylla* (Marri)	-33.393597	116.106865

PART III - RECORD KEEPING AND REPORTING

10. Records to 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 the extent of clearing in accordance with condition 6 of this Permit;
(e) actions taken to minimise the risk of the introduction and spread of *dieback* and *weeds* in accordance with condition 7 of this Permit;
(f) actions taken in accordance with condition 8 of this Permit; and
(g) the date that the tree was demarcated in accordance with condition 9 of this Permit.

11. Reporting

The Permit Holder must provide to the *CEO* the records required under Condition 10 of this Permit, when requested by the *CEO*.

DEFINITIONS

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

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

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

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

REFERENCES

Harewood, G. (2020). *Black Cockatoo Habitat Tree Survey.* Report prepared in relation to the Shire of Collie's application for a clearing permit CPS 8968/1 along Concession Street (SLK 0.00 to 1.88), Mungalup. July 2020. Version 1. Available at ftp://ftp.dwer.wa.gov.au/permit/8968/

Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

9 October 2020

Plan 8968/1a

Legend

- CPS areas approved to clear
- base layers
- Local Government Authorities
- Roads - Landgate 012
- Image

N

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MGA 94
Geocentric Datum of Australia 1994

Mathew Gannaway
2020.10.09 12:09:55 +08'00'

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

GOVERNMENT OF WESTERN AUSTRALIA

Plan 8968/1b

Legend

- CPS areas approved to clear
- base layers
- Local Government Authorities
- Roads - Landgate 012
- Image

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Geocentric Datum of Australia 1994

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

GOVERNMENT OF
WESTERN AUSTRALIA

Plan 8968/1c

Legend

- CPS areas approved to clear
- CPS subject to conditions

base layers

- Local Government Authorities
- Roads - Landgate 012

Image

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

GOVERNMENT OF WESTERN AUSTRALIA

Plan 8968/1d

Legend

- CPS areas approved to clear
base layers
- Local Government Authorities
- Roads - Landgate 012
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Officer with delegated authority under Section 20
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GOVERNMENT OF
WESTERN AUSTRALIA

Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 8968/1
Permit type:	Purpose permit
Applicant name:	Shire of Collie (the Shire)
Application received:	16 July 2020
Application area:	4.11 hectares (ha) of native vegetation
Purpose of clearing:	Road construction
Method of clearing:	Mechanical clearing
Property:	Concession Street Road reserve (PIN 11460745) Lot 20 on Deposited Plan 222871 Collie State Forest (F4)
Location (LGA area/s):	Shire of Collie
Localities (suburb/s):	Mungalup

1.2. Description of clearing activities

The application is to clear 4.11 ha of native vegetation to construct a sealed road along the existing Concession Street between straight line kilometres (SLK) 0.00 and SLK 1.88, Mungalup. The Shire advised that the 4.11 ha area consists of approximately 240 trees and 69 grass trees and the majority of the clearing will occur within the northern side of the road (see Figure 1, Section 1.5).

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	9 October 2020
Decision area:	4.11 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 section 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The application was received by the Department of Water and Environmental Regulation (DWER) on 16 July 2020 and advertised for public comments for 21 days. One public submission was received, raising concerns in relation to impacts to the three threatened black cockatoo species. The submitter's comments and the DWER's consideration of these comments are summarised in Appendix A. DWER used geographic information system datasets and the findings of the 'Black Cockatoo Habitat Tree Survey' (Harewood, 2020) submitted in support of the application to determine that the whole application area was foraging habitat for black cockatoos. Noting the size of the proposed clearing and the amount of suitable habitat in the local area, it was considered that the vegetation proposed to be cleared was unlikely to comprise significant habitat for these species.

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

(see Sections 3 and 4), information provided by the Shire (see Appendix E), as well as relevant datasets available at the time of the assessment (see Appendix G).

The Delegated Officer also took into consideration that the purpose of the clearing is to improve road safety of Concession Street by sealing the existing gravel road and constructing adequate drainage

The 'Black Cockatoo Habitat Tree Survey' (Harewood, 2020) identified a tree with a suitable hollow for black cockatoo breeding. The Shire (2020b) has committed to avoid the tree containing the hollow. It was also determined that a number of fauna may be utilising the application area at the time of clearing. Slow, directional clearing that enables fauna to move into adjacent habitat will mitigate impacts to individuals that may be present at the time of clearing.

The Delegated Officer considered the impacts of the proposed clearing are unlikely to have any long-term adverse impacts on the environmental values in the local area and that weed and dieback management practices will mitigate any potential impacts to adjacent vegetation.

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 fauna management and weed and dieback management conditions.

1.5. Site maps

Plan 8968/1a

Legend

CPS areas approved to clear

base layers

Local Government Authorities

Roads - Landgate 012

Image

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MGA 94
Geocentric Datum of Australia 1994

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

GOVERNMENT OF WESTERN AUSTRALIA

Plan 8968/1b

Legend

CPS areas approved to clear

base layers

Local Government Authorities

Roads - Landgate 012

Image

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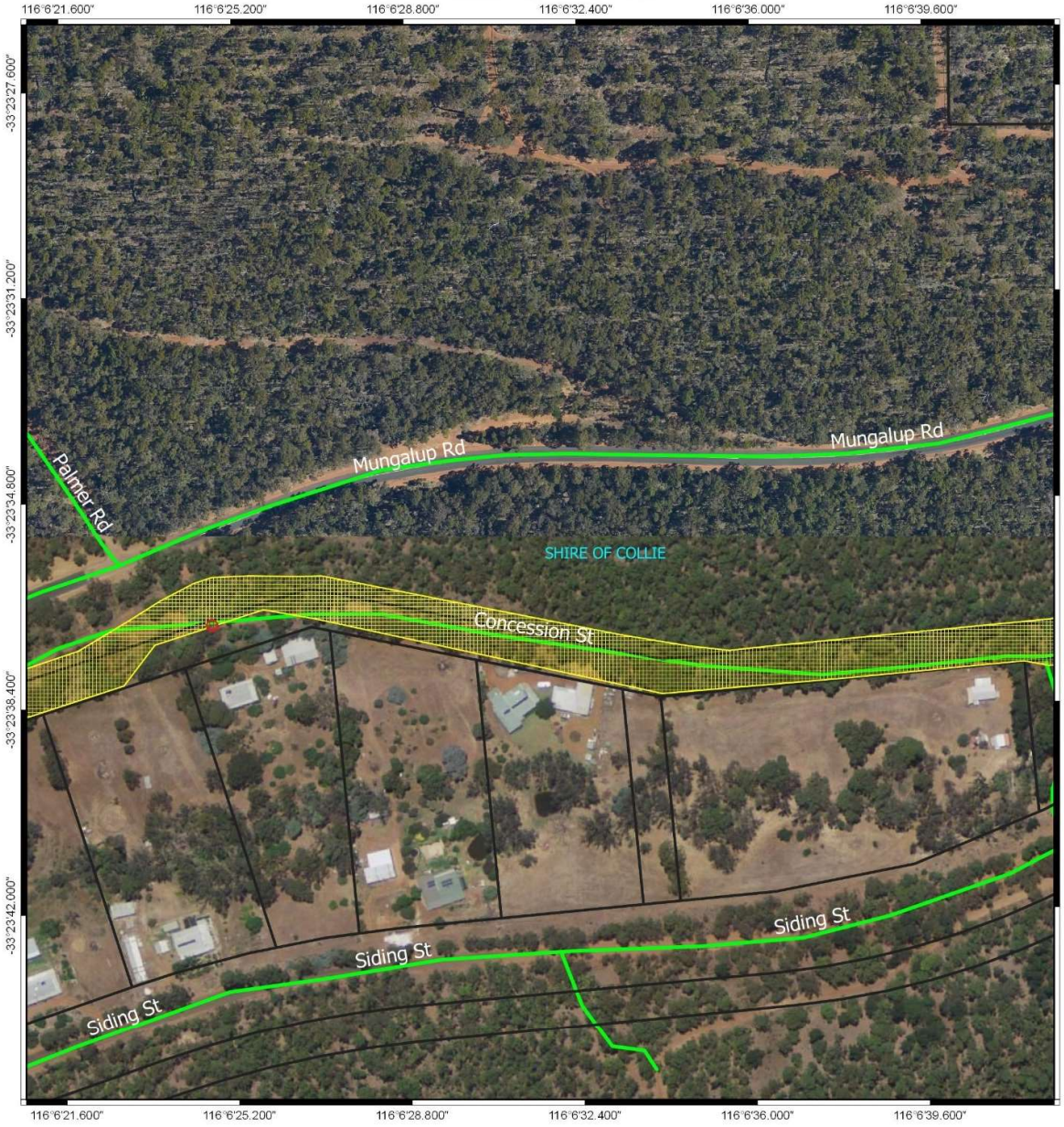
MGA 94
Geocentric Datum of Australia 1994

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

GOVERNMENT OF
WESTERN AUSTRALIA

Plan 8968/1c



Legend

- CPS areas approved to clear
- CPS subject to conditions

base layers

- Local Government Authorities
- Roads - Landgate 012

Image

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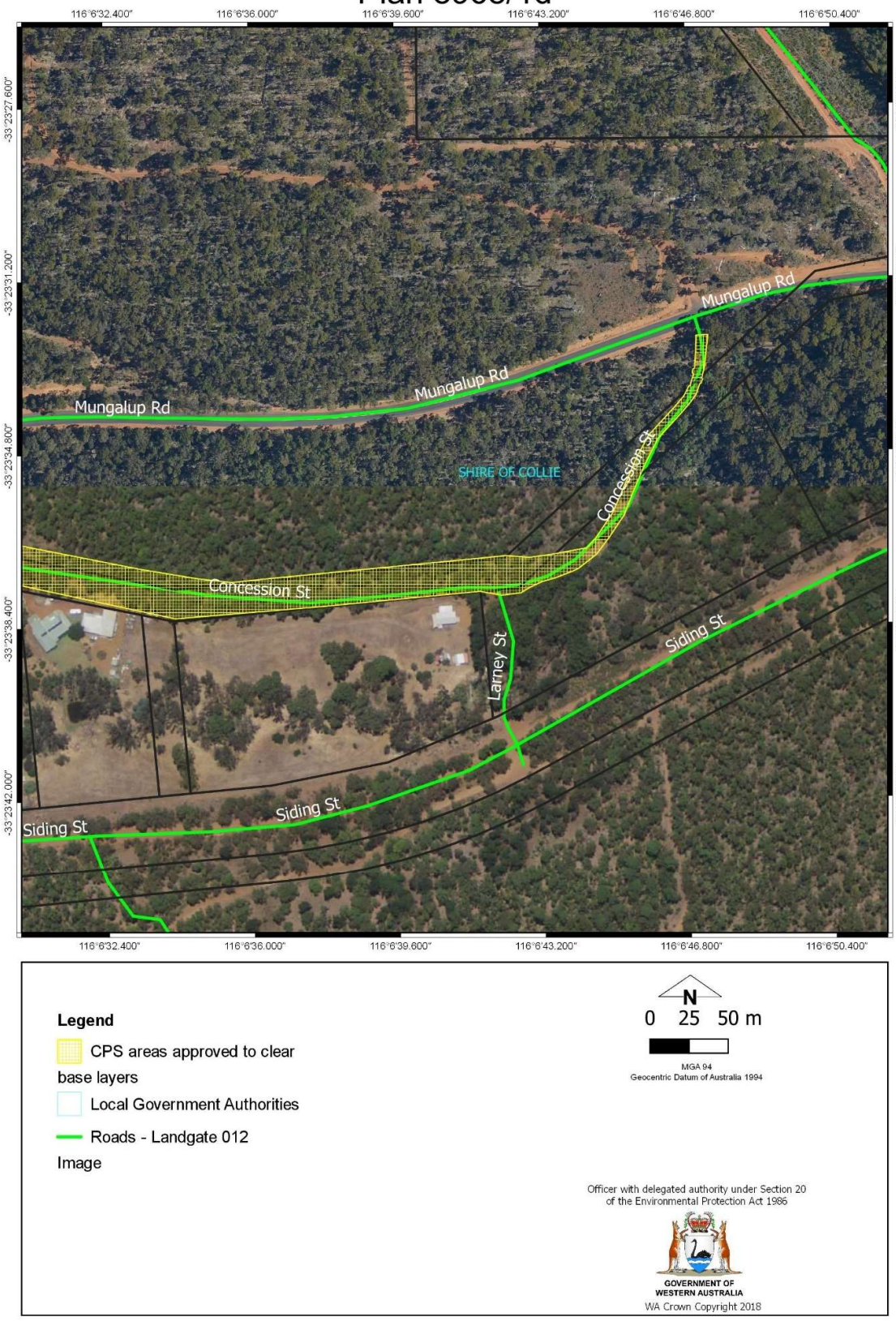
Geocentric Datum of Australia 1994

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

GOVERNMENT OF WESTERN AUSTRALIA

Plan 8968/1d



Figures 1a-1d. Maps of the application area. The area cross-hatched yellow indicates the area authorised to be cleared under the granted clearing permit. The area cross-hatched red indicates the area within which clearing activities must not be undertaken.

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)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *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

In relation to whether alternatives have been considered that would avoid or minimise the need for clearing, the Shire has advised that the new road design alignment would be constructed mainly over the existing gravel track to minimise the clearing required. In the areas where the existing track departs the road reserve, the road will be realigned so that it is contained within the road reserve. The realignment has been designed to minimise the clearing. In addition, the applicant avoided the clearing of a tree that contains a hollow suitable for black cockatoo nesting.

This adequately demonstrated that all reasonable efforts had been taken to avoid and minimise potential impacts of the clearing on environmental values.

3.2. Assessment of environmental impacts

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

This assessment identified that the clearing may pose a risk to the environmental values of conservation significant fauna, flora, water resources 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 a 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:
According to available databases, 142 records of 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 and the condition of the vegetation within the application area, the application area is likely to comprise suitable habitat for three black cockatoo species: forest red-tailed black cockatoo (*Calyptorhynchus banksia* subsp. *naso*), Carnaby's cockatoo (*Calyptorhynchus latirostris*) and Baudin's cockatoo (*Calyptorhynchus baudinii*) (collectively referred to as black cockatoo herein this report), chuditch (*Dasyurus geoffroii*), quenda, southwestern brown bandicoot (*Isoodon fusciventer*), Quokka (*Setonix brachyurus*), south-western brush-tailed phascogale (*Phascogale tapoatafa* subsp. *wambenger*), western ringtail possum, ngwayir (*Pseudocheirus occidentalis*) and woylie, brush-tailed bettong (*Bettongia penicillate* subsp. *ogilbyi*).

Black cockatoos

According to available databases, 13 records of forest red-tailed black cockatoo, eight records of Carnaby's cockatoo and 29 records of Baudin's cockatoo have been recorded in the local area (DBCA, 2007).

The assessment has identified that the application area may provide suitable breeding habitat for black cockatoos. Suitable breeding habitat for these species 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 Black Cockatoo Habitat Tree Survey (Harewood, 2020) identified one tree containing a large chimney type hollow within the application area (Figure 2). The hollow was examined with a drone and did not show any apparent evidence of use by black cockatoos or any other fauna (Harewood, 2020). In order to minimise the impacts on black cockatoo breeding habitat, the Shire amended the design of the proposed road to retain this tree. Noting this, the proposed clearing is not likely to impact black cockatoo breeding habitat.

Figure 2 Chimney type of hollow identified within the application area (Harewood, 2020)

Considering typical food resources for black cockatoos, the assessment has identified that the application area provides foraging habitat for black cockatoos. 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 25,500 ha of native vegetation which is mapped as black cockatoo foraging habitat and the application area represents approximately 0.00016 per cent of this extent (Figure 3). Approximately 22,714 ha of the foraging habitat occurs within DBCA managed estate, of which approximately 1,000 ha of Collie State Forest is immediately adjacent the northern boundary of the application area.

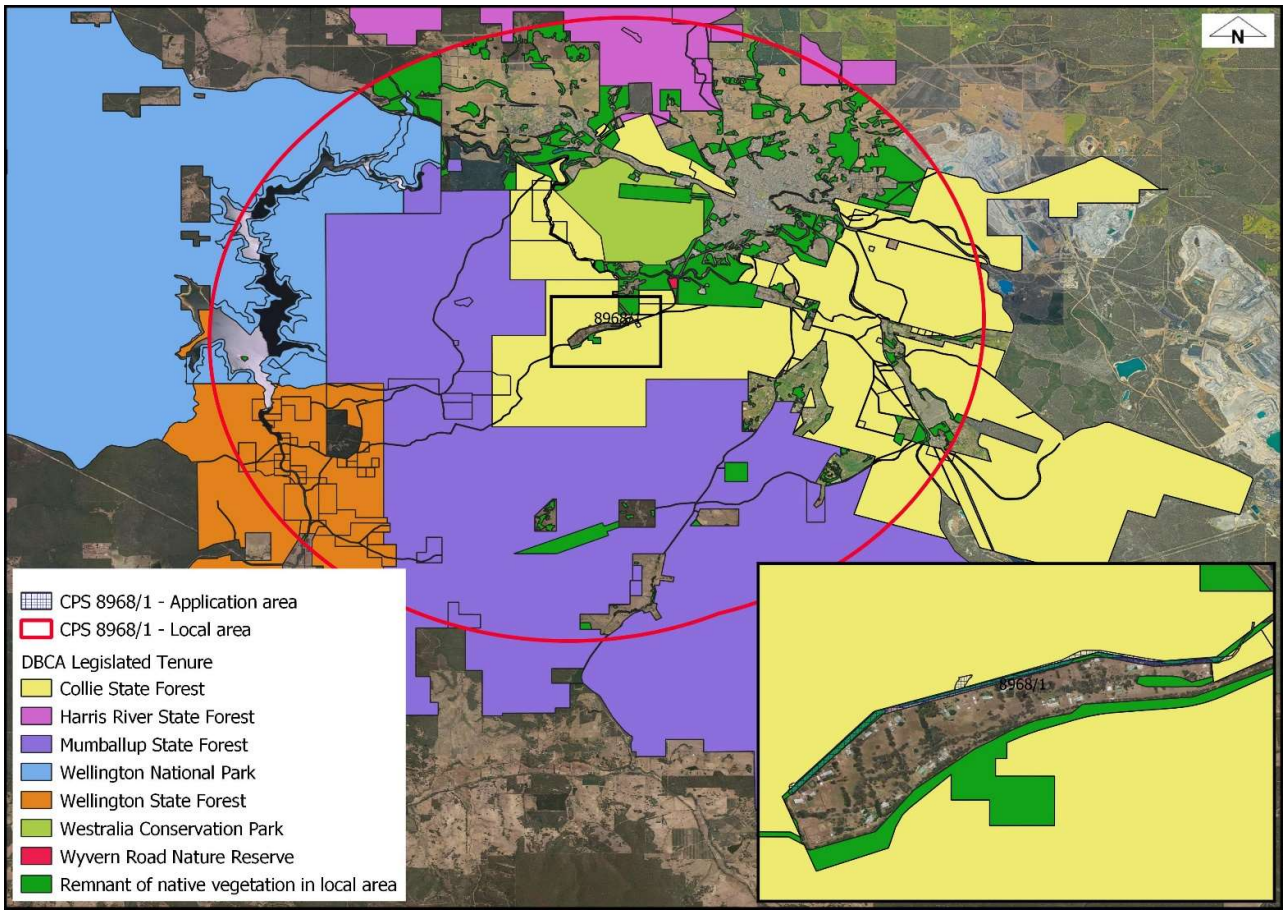


Figure 3 Extent of remnant vegetation and DBCA managed lands in the local area

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 shape of the application, its location within a broader remnant containing vegetation in similar composition and condition as that proposed to be cleared and with regard for the extent of remnant vegetation in DBCA managed lands in the local area, the application 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 kilometre 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 and according to available databases, there are no confirmed breeding points within the local area. The closest confirmed breeding area is located approximately 13.3 kilometre south of the application area. Noting this, the proposed clearing is unlikely to significantly reduce the amount of food available to breeding birds or affect chick survival rates.

Furthermore, the assessment has identified that the application area is not likely to provide significant foraging habitat that supports black cockatoo night roosting. Individual night roosting sites need suitable foraging habitat and water within 6 kilometres (EPA, 2019). Overlapping foraging ranges within 12 kilometres also support roosting sites and maintain habitat connectivity and movement across the landscape (EPA, 2019). Whilst there are three confirmed black cockatoo roosting sites within the local area, taking into consideration the abundance of native vegetation in the local area that is likely to comprise similar quality of foraging habitat for these species, the foraging habitat is not considered significant to support night roosts.

Taking into account the small size of the application area compered 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.

Chuditch, quenda, southwestern brown bandicoot, Quokka, south-western brush-tailed phascogale, western ringtail possum, ngwayir and woylie, brush-tailed bettong

Given the application area is adjacent to substantial areas of remnant vegetation, chuditch, quenda, southwestern brown bandicoot, Quokka, south-western brush-tailed phascogale, western ringtail possum, ngwayir and woylie,

brush-tailed bettong may occur within the application area. Taking into account the shape and extent of the proposed clearing, it is considered that these species may only opportunistically utilise the application area. It is not considered that the application contains significant habitat for foraging for any of the abovementioned species.

Ecological linkage

According to available databases, the application area is mapped approximately 0.45 kilometre east of a mapped South West Regional Ecological Linkage. Given the separation distance, shape and size of the proposed clearing and the extent of vegetation in the local area, the proposed clearing is unlikely to sever the connectivity of, or permanently disrupt the function of, this or any other ecological linkage.

Outcome:

Based on the above assessment, the Delegated Officer has determined that any potential impacts on the abovementioned fauna species can be addressed through fauna management conditions that aim to retain the tree identified to contain a hollow which may be suitable for breeding by black cockatoos and slow, directional clearing to enable fauna to move into adjacent areas of suitable habitat.

3.2.2. Environmental value: biological values (flora) – Clearing Principles (a)

Assessment:

According to available databases, 13 priority flora species have been mapped within the local area. Based on the similarities shared between the soil and vegetation types in habitats for these flora taxa and within the application area, it was determined that the application area may provide habitat for *Grevillea prominens, Grevillea ripicola* and *Lomandra whicherensis.*

G. prominens (Priority 3) is known from 15 populations and the extent of occurrence of these populations is approximately 450 km^2. The species tends to occupy gravelly loam along creek lines mostly within jarrah woodland but also within blackbutt, marri and jarrah woodland (WA Herbarium, 2020). A single occurrence of this taxon was recorded in the local area approximately 6.3 kilometre south of the application area. This record is more than 50 years old and may be considered as an outlier given the remaining populations are located more than 15 kilometre north of the application area. Noting the known distribution of *G. prominens* and that the application area does not cross over any permanent creek line, the application area is not likely to provide suitable habitat for this flora taxon.

G. ripicola (Priority 4) is known from 55 populations spread across approximately 1,300 km^2. This species occurs on sandy clay, clay or gravelly loam in forests dominated by jarrah, marri, *Eucalyptus rudis* and *Xanthorrhoea preissii* (WA Herbarium, 2020). Approximately 50 populations of this species have been recorded within the local area. As demonstrated in Figure 1, *G. ripicola* typically occupy swampy flats along watercourses (WA Herbarium, 2020). Given that the application area contains only a non-perennial tributary of Collie River, the application area is unlikely to provide suitable habitat for this species.

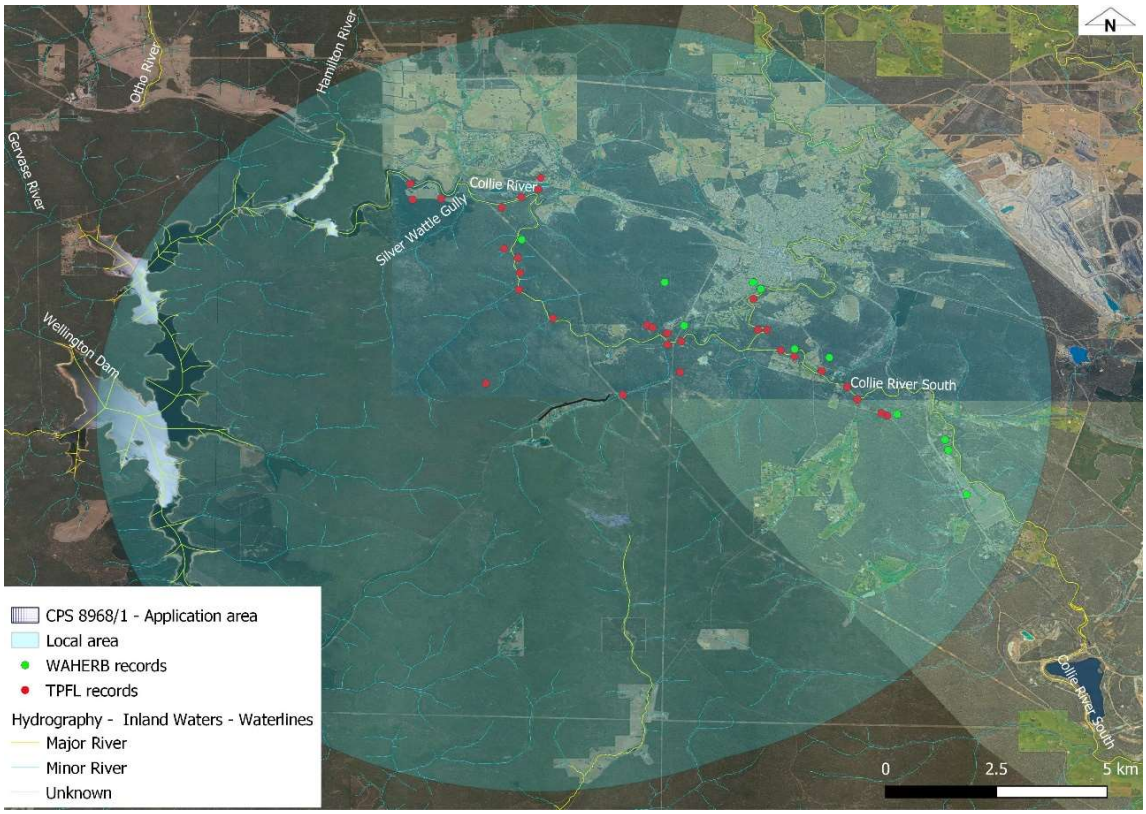


Figure 1 Records of *Grevillea ripicola* within the local area

Lomandra whicherensis (Priority 3) is known from 16 records and the extent of occurrence of this species is approximately 320 km^2. The species tends to occupy gravelly soil with brown sand over laterite predominantly within jarrah, marri woodland or open forest (WA Herbarium, 2020) along laterite ridges (Keighery, 2008). A single occurrence of this taxon was recorded in the local area approximately seven kilometres northwest of the application area. The remaining populations have been recorded more than 14 kilometres west and northwest of the application area. Historical records have this species restricted to the Whicher Range and Scarp (Keighery, 2008). Given the known distribution of the known populations of *L. whicherensis*, this species is unlikely to occur within the application area.

Outcome:

Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not going to significantly impact this environmental value and no flora or vegetation management conditions are required.

3.2.3. Environmental value: land and water resources – Clearing Principles (f)

Assessment:

According to available databases, the application area intersects a non-perennial tributary of Collie River. No distinctive riparian vegetation has been observed within the application area (Harewood, 2020). It is noted that the application area may contain some vegetation growing in, or in association with the watercourse. Noting the extent of the proposed clearing and its liner shape, the proposed clearing is not likely to have a significant impact upon riparian vegetation or the environmental values of the watercourse.

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 watercourse. No clearing permit conditions are necessary in relation to this matter.

3.2.4. Environmental value: conservation areas – Clearing Principles (h)

Assessment:

The application area includes 1.05 ha of Collie State Forest. It is therefore considered that the proposed clearing may impact on the environmental values of this conservation area. However, considering the extent and linear shape of the proposed clearing and the extent of the remaining Collie State Forest, impacts are unlikely to be significant.

It has also been noted that the DBCA's assessment of the Shire's proposal to undertake disturbance activity in DBCA lands concluded that the potential impacts of the proposed activities had been removed or minimised to a level 'As Low As Reasonably Practicable' (ALARP) and the proposal was therefore consistent with departmental objectives, associated management plans and the land use category in the activity area (DBCA, 2020).

There is a risk of weeds and dieback spreading into remnants of native vegetation adjacent to the proposed clearing and the applicant will be required to adhere to weed and dieback management measures (as conditioned on the clearing permit) to minimise this risk.

Outcome:

Based on the above assessment and subject to management conditions, the Delegated Officer has determined that the proposed clearing will not significantly impact on this environmental value.

Conditions:

To address the above impacts, it is considered that the impacts of the proposed clearing on Collie State Forest can be managed by requiring the applicant to take steps to minimise the risk of the introduction and spread of weeds and dieback.

3.3. Relevant planning instruments and other matters

On 11 August 2020, in accordance with section 51E(4)(b) of the EP Act, comments on the application was sought from the Native Title Representative Body – South West Aboriginal Land and Sea Council and the Native Title Claimant - Gnaala Karla Booja. No comments were received.

No registered Aboriginal Heritage Place has been mapped within the application area. The nearest Aboriginal Heritage Place is Registered Site 'Collie River Waugal' located approximately 30 metres south of 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 proposed clearing site lies within the *Country Areas Water Supply Act 1947* (CAWS Act) Wellington Dam Catchment Area which is subject to CAWS Act native vegetation clearing controls to prevent salinization of water resources. The application area is located in Zone B, a high salinity risk part of the catchment, where DWER Policy and Guidelines for the "Granting of Licences to Clear Indigenous Vegetation" provide for the grant of a licence subject to the condition that an equivalent area within Zone A or B is revegetated.

DWER has permitted the Shire to amalgamate their salinity mitigation offset obligations in order to establish more sustainable areas of revegetation. Considering that the aggregated Shire's revegetation obligation was 6.9 ha, which included the area subject to Clearing Permit application CPS 8968/1, DWER requested the Shire to provide evidence of meeting the Shire's salinity mitigation offset obligation under the CAWS Act. DWER advised the Shire it must revegetate 2.79 ha area equivalent to the vegetation historically cleared and 4.11 ha that is an equivalent area to that vegetation within the application area for CPS 8968/1.

In response, the Shire provided details of its replanting program which had occurred within Zone D of Wellington Dam Catchment Area over the last three years and comprised of revegetation of more than 14 ha. At the time of the decision, DWER were in an ongoing liaison with the Shire to ensure that the revegetation areas are located within appropriate salinity risk zones, i.e. outside Zone D. It is the Shire's responsibility to submit evidence of appropriate revegetation action to comply with the provision of the CAWS Act.

On 21 July 2020, DBCA granted the Shire 'Approval of proposal to undertake disturbance activity' within area consistent with the area subject to clearing permit application CPS 8968/1 (DBCA, 2020). This approval is granted until 31 May 2021.

Appendix A – Details of public submissions

One public submission was received, raising concerns in relation to three threatened black cockatoo species. The submitter's comments, and the Department's consideration of these, are summarised below.

Summary of comments	Consideration of comment
There was no information provided in the clearing application to enable the public to assess the quality of the vegetation in the application area as foraging habitat the three species of black cockatoos. Foraging habitat for black cockatoos is already insufficient, which is driving ongoing decline in these species. Therefore, any remaining foraging habitat will be important. The cumulative impacts of habitat loss on black cockatoos needs to be considered, particularly the effects of numerous instances of clearing smaller patches that do not meet the threshold for referral as controlled actions. It is unclear whether the applicant plans to refer the proposed clearing under the EPBC Act. The referral guidelines for these species state that removal of more than hectare of foraging habitat should be referred, given the likelihood that such clearing represents a significant impact for these 'matters of national environmental significance'. Clearing of quality foraging habitat should not occur unless there are mitigation measures in place to ensure no net impact to black cockatoo habitat. It is important to ensure that mitigation measures adequately compensate for actual habitat loss. To ensure no significant impacts on black cockatoos from the proposed clearing, the foraging habitat should be replaced through revegetation.	As detailed under sections 1.4 and 3.2.1, DWER's assessment has had regard for the characteristics of the application area, relevant datasets including records of threatened fauna in the local area or mapping of vegetation complexes, supporting information provided by the applicant and any other information considered to be relevant. In the absence of a black cockatoo foraging habitat assessment, DWER used geographic information system datasets and the findings of the 'Black Cockatoo Habitat Tree Survey' (Harewood, 2020) to determine that the whole application area was foraging habitat for black cockatoos. For the reason set out in section 3.2.1, it was considered that the vegetation proposed to be cleared was unlikely to comprise significant habitat for these species. Cumulative impacts have been considered in the assessment against clearing principle (e), which focusses on the importance of the native vegetation proposed to be clearing in regional and local context. For the reasons set out in Appendix C, it was considered that the application area was not significant as a remnant of native vegetation in an area that has been extensively cleared. Based on the assessment findings and in accordance with the *WA Environmental Offset Policy and Guidelines*, it was concluded that the proposed clearing would not result in any significant residual impacts that would require counterbalancing by an offset. The Department has advised the Shire in writing that it may have notification responsibilities under the Commonwealth EPBC Act in relation to black cockatoos. The responsibility for notification is with the Shire. As detailed under section 3.3, over the last three years, the Shire has undertaken revegetation activities of more than 14 ha within the Wellington Dam Catchment Area as required under the CAWS Act. It is determined that this has contributed to the replacement of foraging habitat for black cockatoos.

Appendix B – 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 C.

1. Site characteristics

Site characteristic	Details
Local context	The application area is located approximately 5.5 kilometres south-southwest of the Collie townsite. The application area contains roadside vegetation along an existing local road and is surrounded by Collie State Forest (Class A). Approximately 1,000 ha of the Collie State Forest is immediately adjacent to the northern side of the application area. The southern side is adjacent to an approximately 34 ha townsite which has been extensively cleared. Spatial data indicates the local area (10 kilometre radius of the proposed clearing area (35,045 ha)) retains approximately 73 percent (25,500 ha) of the original native vegetation cover. Approximately 65 per cent (22,714 ha) of the vegetation remaining in the local area occur within DBCA managed lands.
Vegetation description	Harewood (2020) described the vegetation in the application area as comprising of open forest/woodland mostly comprised of marri (*Corymbia calophylla*), blackbutt (*Eucalyptus patens*) and jarrah (*E. marginata*) over an open shrubland. A small number of non-endemic and exotic plant species (e.g. pines) were also present. This is considered consistent with the south-west forest mapped vegetation complex Yarragil 1, which is described as open forest of *Eucalyptus marginata* subsp. *marginata-Corymbia calophylla* on slopes with mixtures of *Eucalyptus patens* and *Eucalyptus megacarpa* on the valley floors in humid and subhumid zones (Mattiske and Havel, 1998).
Vegetation condition	Aerial imageries indicate the vegetation within the proposed clearing area is in excellent (Keighery, 1994) to completely degraded (Keighery, 1994) condition. Vegetation condition rating scale is provided in Appendix D.
Soil description	The soil is mapped as Yarragil downstream valleys phase (Department of Primary Industries and Regional Development (DPIRD), 2020) which is described as shallow, narrow valleys with relief 20-40 metres and slopes 3-10 per cent. Valley floor is narrower than upstream phase and soil parent materials are laterite, granite and gneiss. Soils are loamy gravels, loamy earths and deep sandy gravels (Schoknecht et al., 2004).
Land degradation risk	The mapped land subsystem has a moderate risk of acidification and low risk of land degradation in form of soil erosion (water or wind erosion), salinity, eutrophication and flooding (including waterlogging). The full land degradation risk summary for the mapped soil subsystems is provided in Appendix F.
Waterbodies	The desktop assessment and aerial imagery indicated that a tributary of the Collie River transects the application in its western section (Figure 3 above). The application area is within the Wellington Dam Catchment Area – Surface Water Zone B, proclaimed under the *Country Areas Water Supply Act 1947*.
Conservation areas	Approximately 1.05 ha of the 4.11 ha clearing footprint is located within Collie State Forest.

Site characteristic	Details
Climate and landform	Rainfall: 1000 and 1100 millimetres Evapotranspiration: 700 millimetres Geology: Granite and Gneiss Groundwater Salinity (Total Dissolved Solids): 500-1000 milligrams per litre total dissolved solids

2. Flora, fauna and ecosystem analysis

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

Species / Ecological Community	Conservation status	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)
Flora						
Adenanthos cygnorum subsp. *chamaephyton*	3	4.5	N	N		N/A
Caladenia validinervia	1	4.5	N	N		N/A
Calothamnus graniticus subsp. *leptophyllus*	4	4.5	N	N		N/A
Drakaea confluens	T	7.1	N	N		N/A
Eucalyptus rudis subsp. *cratyantha*	4	9.7	N	N		N/A
Grevillea prominens	3	6.3	Y	Y		N/A
Grevillea ripicola	4	0.3	Y	Y		N/A
Hypolaena robusta	4	4.4	N	N		N/A
Juncus meianthus	3	0.5	N	N		N/A
Lomandra whicherensis	3	7.0	N	Y		N/A
Pultenaea skinneri	4	2.4	N	N		N/A
Synaphea hians	3	3.6	N	N		N/A
Tetratheca parvifolia	3	1.1	N	N		N/A
Thysanotus unicupensis	3	6.6	N	N		N/A
Fauna						
Baudin's cockatoo	Endangered	0.5			Y	Y
Bilby, dalgyte, ninu	Vulnerable	8.4			N	N/A
Black bittern (southwest subpop.)	Priority 2	4.4			N	N/A
Carnaby's cockatoo	Endangered	2.4			Y	Y
Carter's freshwater mussel	Vulnerable	5.8			N	N/A
Chuditch, western quoll	Vulnerable	0.07			Y	N/A
Forest red-tailed black cockatoo	Vulnerable	0.5			Y	Y
Numbat, walpurti	Endangered	6.1			N	N/A
Pouched lamprey	Priority 3	4.5			N	N/A

Species / Ecological Community	Conservation status	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)
Quenda, southwestern brown bandicoot	Priority 4	4.3			Y	N/A
Quokka	Vulnerable	4.5			Y	N/A
South-western brush-tailed phascogale, wambenger	A specially protected species (category of species of special conservation interest) under the BC Act	0.5			Y	N/A
Water-rat, rakali	Priority 4	4.5			N	N/A
Western brush wallaby	Priority 4	4.5			Y	N/A
Western false pipistrelle, western falsistrelle	Priority 4	6.6			N	N/A
Western ringtail possum, ngwayir	Critically endangered	4.2			Y	N/A
White-tailed black cockatoo	Endangered	7.7			Y	Y
Woylie, brush-tailed bettong	Critically endangered	9.3			Y	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					
e.g. Jarrah Forest	4,506,660.25	2,399,838.15	53.25	1,673,614.25	37.14
Vegetation complex					
e.g. Yarragil 1	80,202.95	64,927.06	80.95	59,063.57	73.64

Appendix C – 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 application area does not comprise significant habitat for fauna, is not likely to contain priority and threatened flora and the vegetation in the application area is not representative of any threatened or priority ecological community.	Not likely to be at variance	Yes Refer to Section 3.2.2 above.
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 and a range of terrestrial and arboreal fauna may also utilise it. Given the shape and extent of the proposed clearing, its location within highly vegetated landscape where the vast majority of vegetation is within DBCA managed lands in similar or better vegetation condition, the vegetation proposed to be cleared is not likely to comprise significant habitat for fauna.	May be at variance	Yes Refer to Section 3.2.1
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The proposed clearing area is unlikely to contain habitat for 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: There are not threatened of priority ecological communities within the local area and the proposed clearing area does not contain species composition indicative of a threatened ecological community 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 extent of the mapped vegetation type and native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. As there is a high representation of vegetation remaining within the local area, majority of which occurs within DBCA manage estate, the vegetation within the application area is not likely to be considered significant as a remnant of native vegetation. In addition, the vegetation withinin the application area is not considered to be part of a significant ecological linkage.	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 northern side of the application area is adjacent to the Collie State Forest and a portion of application area is also mapped within the Collie State Forest, the proposed clearing may increase the risk of edge effects on the environmental values of this conservation area.	May be at variance	Yes Refer to Section 3.2.4
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 crosses over the mapped boundary of a tributary of the Collie River. Therefore, the vegetation proposed to be cleared is growing in an environment associated with a watercourse. However, given no distinctive riparian vegetation will be cleared, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.	At variance	Yes Refer to Section 3.2.3
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: Noting the extent of the proposed clearing scattered along the application area, the proposed clearing is not likely to cause appreciable land degradation.	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 scattered along the application area, the proposed clearing is not likely to cause deterioration in the quality of surface or underground water.	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 D – 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 E – Biological survey information excerpts / photographs of the vegetation

A black cockatoo habitat tree survey (Harewood, 2020) of the application area and an adjacent 10 metre buffer area (excluding private properties) has been carried out to identify any trees with a hollow suitable for black cockatoos nesting. The majority of the trees were found to be relatively young and contained no obvious hollows. Thirty-three trees with a DBH larger than 500 millimetre have been identified. Of these, two trees contained hollows considered unsuitable for black cockatoos either due to being too small or having an unfavourable orientation and one tree was found to contain a large (+500 millimetre entrance) chimney type hollow. The hollow, examined with a drone, showed no apparent evidence of use by black cockatoos (i.e. chipping/chew marks) or any other fauna. The survey concluded that if the tree requires clearing, it is recommended that a fauna spotter is present on the site to ensure the hollow is vacant at the time of the clearing as while it may not be used by clack cockatoos, other fauna may utilise it (e.g. common brushtail possums) (Harewood, 2020).

Appendix F – Land degradation risk summary

C	C1 (most limiting)	C2	C3	C4 (least limiting)
pH				
0-10 acidity	very strongly acid: 0 %	strongly acid: 0 %		
0-10 alkalinity	strongly alkaline: 0 %	alkaline: 0 %		
50-80 acidity	very strongly acid: 0 %	strongly acid: 2 %		
50-80 alkalinity	strongly alkaline: 0 %	alkaline: 0 %		
acidification risk	presently acid: 22 %	high: 75 %	moderate: 0 %	low: 3 %
SALINITY				
salinity risk	presently saline: 0 %	high: 0 %	moderate: 0 %	nil or partial: 100 %
surface salinity	extreme: 0 %	high: 0 %	moderate: 0 %	slight to nil: 100 %
SOME PLANT LIMITS				
rooting depth	very shallow: 0 %	shallow: 1 %	moderately shallow: 10 %	v deep to moderate: 89 %
sub surface compact	high: 80 %	moderate: 16 %	low: 4 %	
water repel	high: 10 %	moderate: 18 %	low: 0 %	nil: 72 %
water storage	extremely low: 7 %	very low: 6 %	low: 0 %	high to moderate: 87 %
EROSION				
flood risk	high: 5 %	moderate: 0 %	low: 1 %	low: 94 %
instability	high: 0 %	moderate: 0 %	low: 0 %	nil to very low: 100 %
water erosion	extreme; 2 %	very high: 14 %	high: 23 %	nil to moderate: 61 %
wind erosion	extreme; 0 %	very high: 0 %	high: 66 %	nil to moderate: 34 %
WATER & DRAINAGE				
site drainage	very poor: 6 %	poor: 0 %	moderate: 5 %	high: 89 %
waterlogging	very high: 6 %	high: 6 %	moderate: 5 %	nil to low: 89 %
OTHER QUALITIES				
excavation ease	very low: 13 %	low: 13 %	moderate: 0 %	high: 74 %
microbial purification	very low: 8 %	low: 15 %	moderate: 21 %	high: 56 %
phosphorus loss	extreme: 5 %	very high: 14 %	high: 27 %	nil to moderate: 54 %

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)
- 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
- Threatened Ecological Communities and Priority Ecological Communities (Buffers)

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