GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9047/1

File Number: DWERVT6493

Duration of Permit: From 14 April 2022 to 14 April 2024

PERMIT HOLDER

Brumby Lane Land Holdings Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 9770 on Plan 203103, Glenoran

Lot 9768 on Plan 203103, Glenoran

Lot 9767 on Plan 203103, Glenoran

Lot 9766 on Plan 153017, Glenoran

AUTHORISED ACTIVITY

The permit holder must not clear more than 41 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 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); and (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1; and (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 2.

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 2 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)
fill	means material used to increase the ground level, or to fill a depression
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.
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

Ryan Mincham
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Ryan Mincham
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

22 March 2022

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below

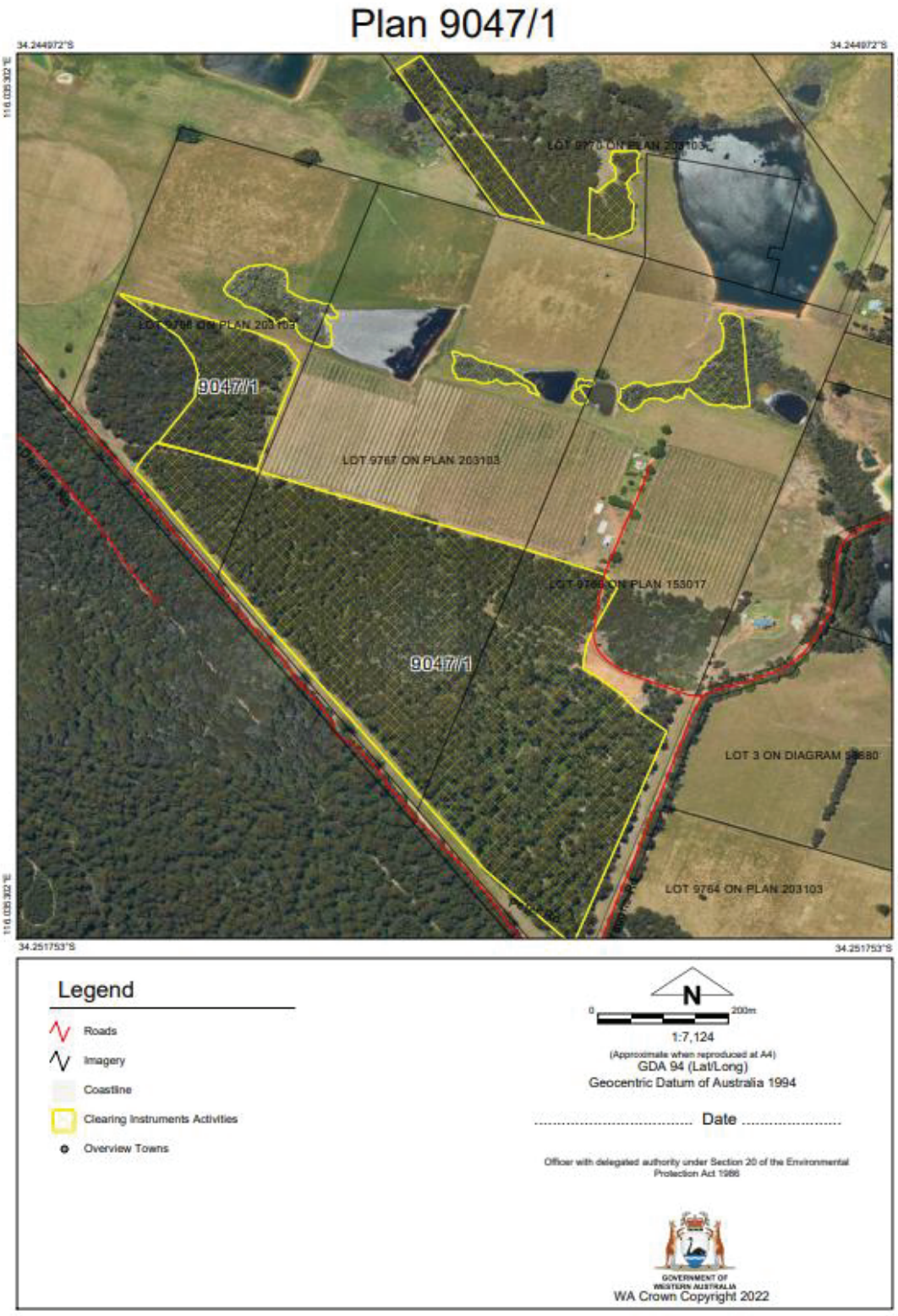


Figure 1: Map of the boundary of the area within which clearing may occur

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9047/1
Permit type:	Area permit
Applicant name:	Brumby Lane Land Holdings Pty Ltd
Application received:	6 October 2020
Application area:	41 hectares of native vegetation
Purpose of clearing:	Horticulture
Method of clearing:	Mechanical
Property:	Lot 9770 on Plan 203103 Lot 9768 on Plan 203103 Lot 9767 on Plan 203103 Lot 9766 on Plan 153017
Location (LGA area/s):	Shire of Manjimup
Localities (suburb/s):	Glenoran

1.2. Description of clearing activities

The vegetation proposed to be cleared is largely contained within contiguous areas which traverse four adjoining properties (see Figure 1, Section 1.5). The application is to clear vegetation with a tree harvester and a dozer for the purpose of horticulture.

The application was revised during the assessment process to align with DWER water licence measures (DWER, 2022) and to avoid and minimise western ringtail possum habitat identified during a fauna survey of the application area (Brumby Lane Land Holdings, 2022).

1.3. Decision on application

Decision:	Granted
Decision date:	22 March 2022
Decision area:	41 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

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

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix C), relevant datasets (see Appendix G.1), the findings of a flora, fauna and vegetation surveys (see Appendix FF), the clearing

principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The assessment identified that the proposed clearing will result in:

- 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;
- impacts to riparian vegetation; and
- the potential to impact individual fauna within the application area at the time of clearing.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to appreciable land degradation, have long-term adverse impacts on the environment and potential risks of clearing can be minimised and managed to unlikely lead to an unacceptable risk to the environment. The applicant has suitably demonstrated avoidance and minimisation measures.

The Delegated Officer decided to grant a clearing permit subject to conditions to:

- avoid, minimise to reduce the impacts and extent of clearing;
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback; and
- undertake slow, progressive one-directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

1.5. Site maps

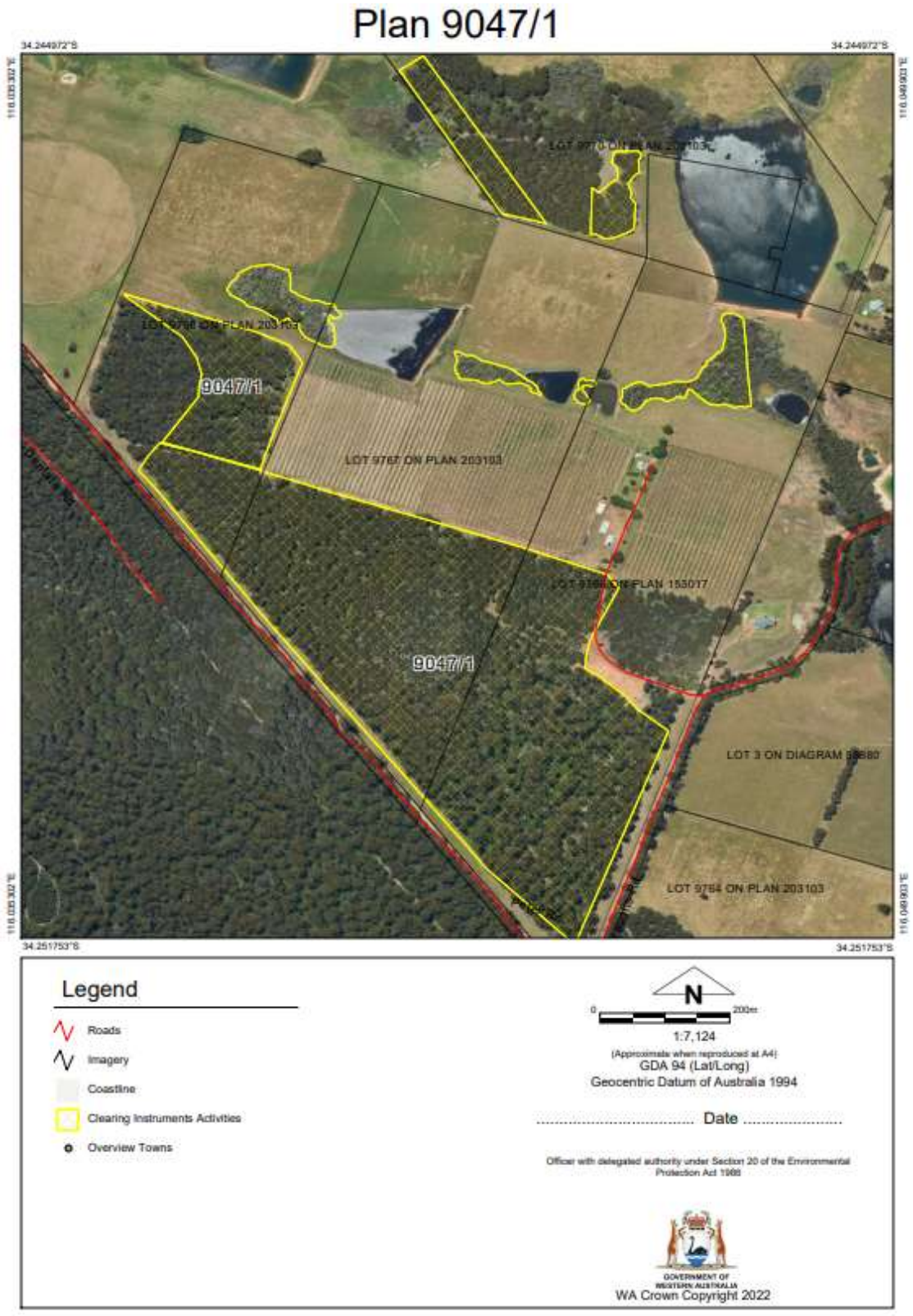


Figure 1 Map of the clearing permit area

The areas cross-hatched yellow indicates 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 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- 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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)
- *Rights in Water and Irrigation Act 1914* (RIWI Act).

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

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.

The applicant agreed to the retention of 16 hectares of native vegetation, demonstrating avoidance of native vegetation with significant environmental value. Subsequent to a fauna survey, the applicant modified the application area to avoid and minimise impacts to a single western ringtail possum recorded in poor quality habitat within the application area (Brumby Lane Land Holdings, 2022). The applicant amended the clearing permit application to exclude the area of habitat where the western ringtail possum was recorded. The Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix C) 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 D) identified that the impacts of the proposed clearing present a risk to flora and fauna values. 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. Biological values (biodiversity, flora and fauna) - Clearing Principles (b)

Evidence

- 23 conservation significant flora species recorded within the local area
    - 7 priority and one threatened flora species are known from similar habitats as the application area (see Appendix C.2)
- 28 conservation significant fauna species are recorded within the local area
    - 7 conservation significant species are considered to have suitable habitat within the application area (see Appendix C.3)

- An appropriately timed reconnaissance flora survey found that;
    - One hundred and sixteen vascular flora taxa were identified within the survey area, of which twenty-eight were introduced species.
    - No conservation significant flora were recorded within the survey area
    - The post-survey likelihood of occurrence of the seven potential significant vascular flora, including Threatened flora, was "unlikely", except for a P1 grass that was assigned a post-survey likelihood of "possible" because it would not have been flowering at the time of the survey.
    - Over 90% of the survey area vegetation is in Good-or-better condition. The Degraded and Completely Degraded vegetation is mainly associated with the riparian areas or with a stand of karri in the northwest part of the survey area where the understorey is comprised solely of pasture species.
    - Two vegetation units were identified within the application area including Crowea (CRb) and Yanmah (YN1).
    - Almost all the vegetation within the survey area forms part of a mapped ecological linkage associated with uncleared vegetation within the DBCA managed State Forest with vegetated portions in the southern half of the area assigned the highest 1a proximity value rating as they are contiguous with vegetation associated with this linkage.

  (Ecoedge, 2022)
- A fauna survey of the application area recorded one western ringtail possum within the application area (Harewood, 2021) and no other fauna were considered likely to have suitable habitat within the application area. The applicant modified the application area to avoid and minimise impacts to the western ringtail possum recorded.
- A black cockatoo habitat assessment noted;
    - No habitat trees suitable for use by black cockatoos within the application area
    - Three potential habitat trees within the application area, which do not currently include hollows suitable for use by black cockatoos

  (Harewood, 2020)

Assessment

Flora

The survey undertaken by Ecoedge (2022) was appropriately timed for the majority of conservation significant flora known from the local area. The survey effort was sufficient to identify these species if present, therefore, there is a high degree of confidence in the conclusion that no conservation significant flora occurs within the application area.

It is noted that one species, *Deyeuxia inaequalis* (priority one) is not known to be in flower at the time of the survey and is not easily identifiable when not in flower. The vegetation survey noted that the post-survey likelihood assessment found that *D. inaequalis* may possibly occur within the application area. The survey noted that suitable habitat for this species was difficult to survey at the vegetation was very dense in places, and the taxon is non-descript and difficult to find (Ecoedge, 2022).

D. inaequalis is an erect, tufted annual, grass or herb which grows to approximately 0.75 m high and occurs in loam soils. This species is known from 11 populations and the application area is within the known distribution for this species, therefore any populations within the application area would not represent new range extents for this species.

While this species possibly occurs within the application area, further surveys are not expected to provide better results given the density of vegetation resulting in access limitations regardless of survey time. The survey did not identify preferred habitat for this species within the surveyed areas, therefore the likelihood of a population occurring is not high or likely.

Given the survey results, the risk of potential impacts to this species are acceptable without additional surveys.

Black Cockatoo

Carnaby's cockatoo and Baudin's cockatoo are listed as Endangered and Forest Red-Tailed black cockatoo (FRTBC) is listed as Vulnerable under the Western Australian *Biodiversity Conservation Act 2016*. Carnaby's cockatoo is listed as Endangered and Baudin's cockatoo and FRTBC are listed as Vulnerable under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). Black cockatoos' nest in hollows in live or dead trees of Karri, Marri, Wandoo, Tuart, Salmon Gum, Jarrah, Flooded Gum, York Gum, Powder Bark, Bullich and Blackbutt (DotEE, 2017). Breeding habitat or 'habitat tree' is defined in the EPBC Act referral guidelines as 'trees of species known to support breeding within the range of the species which either have a suitable nest hollow or are of a suitable

diameter at breast height (DBH) to develop a nest hollow' (DotEE, 2017). The application area is within the known breeding range of Baudin's and Carnaby's black cockatoo and the 'core' range of FRTBC.

One mapped black cockatoo roosting site is known within 12 kilometres of the application area. No breeding sites have been recorded locally however there are 231 records of black cockatoo species have been recorded within the local area, the closest of which is approximately 70 metres away.

The referral guidelines indicate while breeding, black cockatoos will generally forage within a 6–12 kilometre radius of their nesting site. Following breeding, black cockatoos assemble into flocks and move through the landscape searching for food, usually foraging within 6 kilometre of a night roost (DotEE, 2017). This variable range indicates large areas of foraging habitat are required to support black cockatoo populations. Cumulative impacts of the loss of remnant vegetation restrict the availability of food sources for black cockatoos (DotEE, 2017).

Carnaby's cockatoos have preference for feeding habitat that includes jarrah and marri woodlands and forest heathland and woodland dominated by proteaceous plant species such as *Banksia* sp., *Hakea* sp. And *Grevillea* sp., also insects and insect larvae; pith of kangaroo paw (*Anigozanthos flavidus*); juice of ripe persimmons; tips of *Pinus* spp. and seeds of apples and pears (DotEE, 2017). Forest red-tailed black cockatoo's have preference for seeds of jarrah and marri in woodlands and forest, and edges of karri forests, including wandoo and blackbutt, *Eucalyptus caesia*, *E. erythrocorys*, *Allocasuarina* cones, fruits of snottygobble (*Persoonia longifolia*) and mountain marri (*Corymbia haematoxylon*), and some introduced eucalypts such as river red gum (*E. camaldulensis*) and flooded or rose gum (*E. grandis*). Baudin's cockatoo prefer native shrubland, kwongan heathland and woodland on seeds, flowers and nectar of native proteaceous plant species (*Banksia* spp., *Hakea* spp., *Dryandra* spp., and *Grevillea* spp.), as well as *Callistemon* spp. and marri. Seeds of introduced species including *Pinus* spp., *Erodium* spp., wild radish, canola, almonds and pecan nuts; insects and insect larvae; occasionally flesh and juice of apples and persimmons have also been known to make up the diet of black cockatoos.

The application area proposes to remove a total of 41 hectares of native vegetation which includes species known to be foraging resources for black cockatoos. While the amount of foraging habitat has not been quantified by survey, the application area is:

- adjacent to a state forest with similar or better foraging habitat for black cockatoos
- not within 12 kilometres of a breeding site or 6 kilometres of a roosting site for black cockatoos
- in a local area where there is 21,335 hectares of black cockatoo foraging habitat remaining (of which 95 per cent occurs within conservation estate); and
- in a local area which retains 47 percent remnant vegetation cover

Based on this, the foraging habitat within the application area is not likely to be significant for the continuance of black cockatoos in this area.

A black cockatoo habitat assessment of the application area did not identify any trees within the application area that would be suitable for black cockatoo breeding or nesting (Harewood, 2020).

Western Ringtail Possum (WRP)

The *Western Ringtail Possum (Pseudocheirus occidentalis) Recovery Plan* outlines strategies to slow the decline in population size, extent and area of occupancy through managing major threatening processes affecting the subpopulations and their habitats and allowing the persistence of the species in each of the identified key management zones: Swan Coastal Plain, southern forests and south coast (DPaW, 2017). The application area is located within the Southern Forest Management Zone.

Within this management zone, populations are associated with a diverse range of habitats including coastal heath, jarrah/marri woodland and forest, peppermint woodlands, myrtaceous heaths and shrublands, Bullich (*Eucalyptus megacarpa*) dominated riparian zones and karri forest.

A fauna survey of the application area recorded one western ringtail possum with the application area. The survey report noted that the woodland vegetation which dominates the site has a coherent lack of midstory vegetation preferred by western ringtail possums. Further, the report determined that the native vegetation within the application area provides poor habitat quality for western ringtail possums (Harewood, 2021). As a result of the survey, the applicant modified the application area to avoid and minimise the record of a western ringtail possum within the application area.

Noting the extent of vegetation within the local area in similar condition to the application area and with better quality habitat for western ringtail possums, the application area does not represent significant habitat for this species. The risk of long-term impacts to western ringtail possum populations within the local area as a direct result of the proposed clearing is low, and the removal of the vegetation would not significantly impact on the conservation status of the species. The clearing may directly impact individuals occurring within the application area at the time of clearing, however, management measures are sufficient to mitigate this risk.

South-Western Brush-Tailed Phascogale

In south-west WA, this species is known to occur in dry sclerophyll forests and open woodlands that contain hollow-bearing trees, with records less common in higher rainfall areas. This species is said to occur in highest densities Perup/Kingston area, Collie River valley, and near Margaret River and Busselton (DEC, 2012).

A fauna survey of the application area did not record any phascogales within the application area and noted that the vegetation within the application area provided poor quality habitat for this species. Noting the extent of vegetation within the local area in similar condition to the application area and with better quality habitat for phascogales, the application area does not represent significant habitat for this species. The risk of long-term impacts to phascogale populations within the local area as a direct result of the proposed clearing is low, and the removal of the vegetation would not significantly impact on the conservation status of the species.

Water rat
The Rakali, or water rat, occupies a unique niche within south-west systems, being the only amphibious or semiaquatic species in the region (feeding largely underwater, but living on land). While a distribution map for the species is not available, the species is broadly expected to occur throughout much of the south-west living in burrows on low banks of rivers, lakes, wetlands, estuaries and even along the coast. It is noted that intact riparian vegetation and associated bank stability is critical to their survival. Noting the presence of waterbodies within the application area and riparian vegetation, the application area may provide habitat for the species. The application area has been amended to comply with the spillway required of the applicant's water licence which further reduces the risk of the proposal impacting this species. The removal of the vegetation and the construction of dams is not likely to impact significant habitat for the species and is unlikely to impact individuals.

Quenda
The quenda occupies areas of dense understory such as around swamps or in banksia and jarrah woodlands and are distributed near the south coast from Guilderton north of Perth to east of Esperance. Noting the known distribution and the habitat presented within the application area, it is considered the application area may provide habitat for this species. Removal of native vegetation and the construction of a dam is not likely to result in the removal of significant habitat for the species but may impact individuals occurring within the application at the time of clearing.

Conclusion
Based on the above assessment, the proposed clearing may result in the spread of weeds and dieback into adjacent native vegetation and may impact individual native fauna occurring within the application area at the time of clearing.

For the reasons set out above, it is considered that the impacts of the proposed clearing can be managed by taking steps to minimise the risk of the introduction and spread of weeds and dieback and undertake slow directional clearing to allow fauna to move into adjacent vegetation.

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

- Slow directional clearing to allow native fauna, including transitional western ringtail possums, to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals and
- Measures to minimise the risk of the introduction and spread of weeds and dieback into adjoining native vegetation

3.2.2. Environmental value – land and water resources - Clearing Principles (g) and (i)

Evidence

- The application area intersects two minor watercourses which are tributaries to the Warren River
- A flora and vegetation survey identified vegetation growing in association with a watercourse within the application area.
- A site assessment, undertaken by DPIRD (CSLC, 2020) noted that the application area was located on the lower and mid slope position in the landscape. The application area is covered by two map units of the

Pimelia land soil-landscape system (Map Units 254PvYN and 254PvCRb) and one map unit of the Dwalganup soil-landscape system) Map Unit 254DwCRy). The CSLC advice was that the application area has a moderate to high capability for the proposed land use.

- The Land Degradation Assessment Report (CSLC, 2020) identified phosphorus export (eutrophication) as a potential degradation risk in waterlogged areas if the vegetation is removed. It was noted that the risk could be minimised if the proposed dams were constructed in those areas.

Assessment:

The area of proposed clearing intersects two minor watercourses and includes areas of vegetation that is growing in association with the watercourses. The removal of this vegetation is anticipated to cause some short-term changes in water quality as the banks become destabilised for the construction of dams. Changes to water quality are likely be localised due to the number of dams along the watercourse, within the property, and neighbouring properties.

Based on the land degradation assessment and advice from the Commissioner (CSLC, 2020) the proposed clearing may cause eutrophication within the application areas associated with waterlogging.

Conclusion:

Consistent with advice from the Commissioner of Soil and Land Conservation, the assessment of the potential environmental impacts is such that there is a risk of eutrophication associate with waterlogging as a result of clearing native vegetation.

Consideration is given to the purpose of clearing in these areas being for a dam, which would mitigate the potential eutrophication risks associated with vegetation clearing.

Condition:

No condition to manage and mitigate the potential land degradation and water quality risks are recommended as the purpose for clearing will sufficiently mitigate the risks associated with the proposed clearing.

3.3. Relevant planning instruments and other matters

Rights in Water Irrigation Act 1914

Brumby Lane Land Holdings Pty Ltd is the holder of Surface Water Licence, SWL178234(4), in the Upper Lefroy subarea of the Warren River resource. The Annual water entitlement is 250,000kL per annum and Horticulture is an approved use. The subarea is fully allocated for licencing purpose under the *Rights in Water and Irrigation Act 1914* (the Act). The watercourse traversing West to East on Lots 9768, 9767 & 9766 has been determined to be exempt from regulation and therefore is at liberty to construct dams on that watercourse up to an exclusion zone at the confluence of this watercourse and the watercourse traversing North South on the Eastern side of Lot 9766 (DWER, 2022). The applicant has modified the application area to ensure all of the application area is within the exempt areas.

No licence to obstruct or interfere beds and banks in required in accordance with s17 of the *Rights in Water and Irrigation Act 1914* as the applicant has amended the application area to avoid the spillway.

Country Areas Water Supply Act 1947

The proposed clearing lies within the 1 September 1978 *Country Areas Water Supply Act 1947* (CAWS Act) gazetted Warren River Water Reserve. The reserve is currently a 'Priority Not Assigned' Public Drinking Water Source Area. Furthermore, the catchment has been subject to CAWS Act native vegetation clearing controls since December 1978 to prevent salinisation of water resources.

The proposed clearing lies within Zone D of the Warren River Water Reserve, a low salinity risk area of the catchment where the Department of Water and Environmental Regulation Guidelines for CAWS Act Clearing Controls Administration allow for clearing for any purpose subject to the statutory one-tenth of the land in question remaining under native vegetation, unless exceptional circumstances apply. Advice received on this matter noted that the landowners holdings will retain more than 10 per cent remnant vegetation and this is consistent with Section 12C(3) of the CAWS Act (DWER 2020b).

Planning and Development Act 2005

The Shire of Manjimup has no objection and advise that there are no planning or other matters which would affect the proposal. The land is zoned by Local Planning Scheme No. 4 as "Priority Agriculture" and planning approval for clearing of vegetation for horticulture is not required. Local government approvals are required for the construction of a dam and that a development application for dam was received by the Shire on 5 February 2021. Development approval for the dam was issued on 20/04/2021 (DA21/20 P50857).

Aboriginal Heritage Act 1972

No Aboriginal sites of significance have been mapped within the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End

Appendix A. Additional information provided by applicant

Information	Description
Black cockatoo survey	Harewood (2020) Noted three potential habitat trees, none of which contained suitable breeding/nesting hollows for black cockatoos
Flora and Vegetation survey	Ecoedge (2022) Noted no threatened or priority flora were recorded during a Spring survey. One Priority one grass species could not confidently be identified as it was outside the flowering period for this species.
Fauna survey	Harewood (2021) One fauna species of conservation significance was recorded within the application area. Remote camera traps detected one western ringtail possum within the application area.
Response letter to RFI	The applicant provided the above survey reports (Ecoedge, 2022 and Harewood, 2021) in response to the Department's request for further information about the environmental values present at the proposed clearing site.

*Survey data extracts are provided under Appendix F

Appendix B. Details of public submissions

The application was accepted on 6 October 2020 and advertised for 21 days. During this time, one public submission was received (Submission, 2020).

Summary of comments	Consideration of comment
No vegetation or flora survey has been completed	The survey has been undertaken and results incorporated into the assessment as relevant.
Impacts to other fauna such as western ringtail possum have not been considered	A fauna survey has been undertaken and results incorporated into the assessment as relevant.
Black cockatoo assessment is deficient, does not consider foraging potential	Addressed under section 3.2.1.
Impacts to black cockatoo are significant and this should be referred to DAWE under the EPBC Act	Request for information letter to the applicant notes potential obligations under the EPBC Act.
Assessment should consider the drawdown on nearby wetlands and aquifers	Water drawdown considerations are managed through water licencing regulatory functions. The requirement for water licences and approvals is addressed under section 3.3.
Impacts to conservation areas have not been considered	Impacts to nearby conservation areas are included under Appendix D. Management measures including weed and dieback management conditions are recommended to mitigate impacts to adjoining conservation areas.

Appendix C. Site characteristics

C.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is part of a part of an expansive tract of native vegetation in the intensive land use zone of Western Australia which is adjacent to the Donnelly State Forest. The proposed clearing area contributes to a local linkage and is part of a large area of vegetation. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 47 per cent of the original native vegetation cover.
Ecological linkage	No formal ecological linkages are mapped within the application area. The application area contributes to local linkages as it lies between a number of state forests and timber reserves. The vegetation along the watercourses within the application area also contributes to a linkage. No significant ecological function will be lost as a result of the removal of the vegetation proposed to be cleared.
Conservation areas	Part of the application area is adjacent to the Donnelly State Forest. The Donnelly State Forest is dissected by private properties and a patch of this state forest also lies to the south east of the application area.
Vegetation description	Description provided by Department of Primary Industry and Regional Development (DPIRD) within their site inspection indicate the vegetation within the proposed clearing area consists of Marri, Karri, and Banksia forest (DPIRD, 2020). This is consistent with the mapped vegetation type(s): • Crowea complex (CRb), which is described as Tall open forest of *Corymbia calophylla-Eucalyptus diversicolor* on upper slopes with *Allocasuarina decussata-Banksia grandis* on upper slopes in hyperhumid and perhumid zones. (Shepherd et al, 2001) • Crowea, complex (Cry) - Tall open forest of *Corymbia calophylla* with mixture of *Eucalyptus marginata subsp. marginata* and *Eucalyptus diversicolor* on uplands in hyperhumid and perhumid zones. • Yanmah complex (YN1), which is described as Mixture of tall open forest of *Eucalyptus diversicolor* and tall open forest of *Corymbia calophylla-Eucalyptus patens-Eucalyptus marginata subsp. marginata* over *Agonis flexuosa* and *Agonis juniperina* on valleys in perhumid and humid zones. The mapped vegetation types retain approximately 81, 66 and 77 per cent respectively of the original extent (Government of Western Australia, 2019)
Vegetation condition	The DPIRD site inspection indicates the vegetation within the proposed clearing area is in good to degraded (Keighery, 1994) condition, described as: • Good: Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing; to • 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. The full Keighery (1994) condition rating scale is provided in Appendix EE.
Climate and landform	The annual average rainfall for the Manjimup area is 986.8 millimetres. The elevation within the proposed clearing area ranges from approximately 270 meters to 305 meters above sea level.

Characteristic	Details
Soil description	The soil is mapped as the following soil types; • Yanmah Subsystem - Shallow (5-20 m) minor valleys, usually U-shaped with gentle sideslopes (3-10%) and broad swampy floors. Soils are loamy gravels, sandy gravels and deep sands with non-saline wet soils on the valley floors. • Crowea (Dwalganup), yellow duplex Phase - Gravelly yellow duplex soils; jarrah-marri forest. • Crowea (Pimelea) - Brown gravelly duplex soils and red earths; karri-marri forest.
Land degradation risk	A report from DPIRD (CSLC, 2020) assessed the land degradation risks as a result of the proposed clearing and noted the following; • The risk of salinity causing land degradation is low • The risk of eutrophication causing land degradation is low if dams are constructed in waterlogged areas • The risk of wind erosion causing land degradation is low • The risk of water erosion causing land degradation is low • The risk of waterlogging causing land degradation is low • The risk of flooding causing land degradation is low
Waterbodies	The desktop assessment and aerial imagery indicated that the application area intersects two minor, unnamed, non-perennial rivers which are tributaries to the Warren River. A number of waterbodies intersect the application area; available data notes the waterbodies are man-made dams.
Hydrogeography	The application area is within the Warren River and Tributaries surface area Proclaimed under the *Rights in Water and Irrigation Act 1914* and the Warren River Water Reserve under the *Country Areas Water Supply Act 1947*. The application area is adjacent to a Priority 1 Public Drinking Water Source Area.
Flora	There are 23 species of conservation significant flora recorded within the local area, with the nearest record being a Priority 3 (P3) species *Pultenaea pinifolia*. The survey undertaken by Ecoedge (2022) did not identify any threatened or priory flora species within the application area.
Ecological communities	Within the local area, there are multiple recordings of the Priority 3 (P3) ecological community '*Epiphytic Cryptogams of the karri forest'* and the P1 ecological community *'Open Jarrah forest and woodland developed on young exposed quartzite on Ridge Road'.*
Fauna	There are 28 conservation significant species recorded within the local area, with the nearest record being *Pseudocheirus occidentalis* (Western Ringtail possum (WRP)). The WRP is the most frequently recorded conservation significant fauna species within the local area with 161 recordings. The fauna survey recorded one Western Ringtail Possum from the night camera trapping (Harewood, 2021).

C.2. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix G.1), impacts to the following conservation significant flora required further consideration.

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Amanita kalamundae	P3	Y	Y	Y	10.1	18	n/a
Hemigenia microphylla	P3	Y	Y	Y	16.4	25	n/a
Pultenaea pinifolia	P3	Y	Y	Y	4.7	44	n/a
Andersonia sp. Echidna (A.R. Annels ARA 5500)	P2	Y	Y	Y	19.1	7	n/a
Hemigenia microphylla	P3	Y	Y	Y	11.7	25	n/a
Stylidium ireneae	P4	Y	Y	Y	13.8	25	n/a
Xanthoparmelia xanthomelanoides	P2	y	Y	Y	14.3	5	n/a
Caladenia harringtoniae	T	Y	Y	Y	12.1	6	n/a

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

C.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Pseudocheirus occidentalis (western ringtail possum	T	Y	Y	0.6	14583	N
Calyptorhynchus baudinii (Baudins cockatoo)	EN	Y	Y	0.07	4076	Y
Falco peregrinus (Peregrine falcon)	OS	Y	Y	3.9	1786	N/A
Setonix brachyurus (quokka)	VU	Y	Y	2.7	6626	N
Hydromys chrysogaster (water rat)	P4	Y	Y	1.4	813	N
Notamacropus irma (western brush wallaby)	P4	Y	Y	8.4	5412	N
Calyptorhynchus banksii naso (forest red tailed black cockatoo	VU	Y	Y	4.7	3360	y
Dasyurus geoffroii (chuditch, quoll)	VU	Y	Y	7.7	5501	N
Isoodon fusciventer (quenda)	P4	Y	Y	2	9503	N
Myrmecobius fasciatus (numbat)	EN	Y	Y	9.3	2053	N
Phascogale tapoatafa wambenger (brush-tailed phascogale)	CD	Y	y	1.0	1795	N
Calyptorhynchus latirostris (Carnabys cockatoo)	EN	Y	Y	3.8	20924	Y

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Falsistrellus mackenziei (western false pipistrelle)	P4	N	Y	15.5	530	N

T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority . CD: conservation dependent species, OS: other specially protected species

Appendix D. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared is not likely to contain regionally significant flora and habitats and has been amended to avoid records of conservation significant fauna. The vegetation within the application area is not likely to represent a high level of biological diversity locally or regionally.	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 area proposed to be cleared contains low quality habitat for conservation significant fauna (western ringtail possum). The application area has been amended to avoid known habitat for this species however some risk may remain to individuals.	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: The area proposed to be cleared is not likely to contain habitat for flora species listed under the BC Act. A survey of the application area did not identify any threatened flora within the application area (Ecoedge, 2022).	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 area proposed to be cleared does not contain species that can indicate a threatened ecological community.	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation types and the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001). The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.	Not likely to be at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."*	May be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Assessment: The application area is adjacent to the Donnelly State Forest conservation area. The proposed clearing may have an impact on the environmental values of the adjacent Donnelly State Forest through the spread of weeds and dieback. These risks can be effectively managed by weed and dieback conditions on the permit.		
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Given the application area includes two watercourses and is in part for the purpose of constructing a dam, the vegetation within the application area includes vegetation growing in accordance with a watercourse.	At variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soils are not susceptible to the land degradation risks of wind erosion, water erosion, nutrient export, or salinity but may pose risk of eutrophication in waterlogged areas.	May be at variance	Yes *Refer to Section 3.2.2, above.*
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Given two watercourses are mapped as intersecting the application area, the proposed clearing may impact surface water or quality. The assessment from DPIRD noted that the mapped soil types are prone to erosion when exposed on a slope but noted the application area has short slope lengths and low gradients.	May be at variance	Yes *Refer to Section 3.2.2, above.*
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: A land degradation assessment completed by DPIRD noted that the removal of vegetation as applied for is not expected to cause a significant change in flood risk. Furthermore, the assessment noted the risk of flooding causing land degradation is low. In addition to the above, DPIRD also noted there are numerous other storage dams located upstream of the proposed clearing. Given the above, the proposed clearing is not likely to cause or exacerbate flooding within the application, locally or regionally.	Not likely to be at variance	No

Appendix E. Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present

in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

Measuring vegetation condition for the South West and Interzone Botanical Province (Keighery, 1994)

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

Appendix F. Biological survey information excerpts

Flora and Vegetation Survey (Ecoedge, 2022)

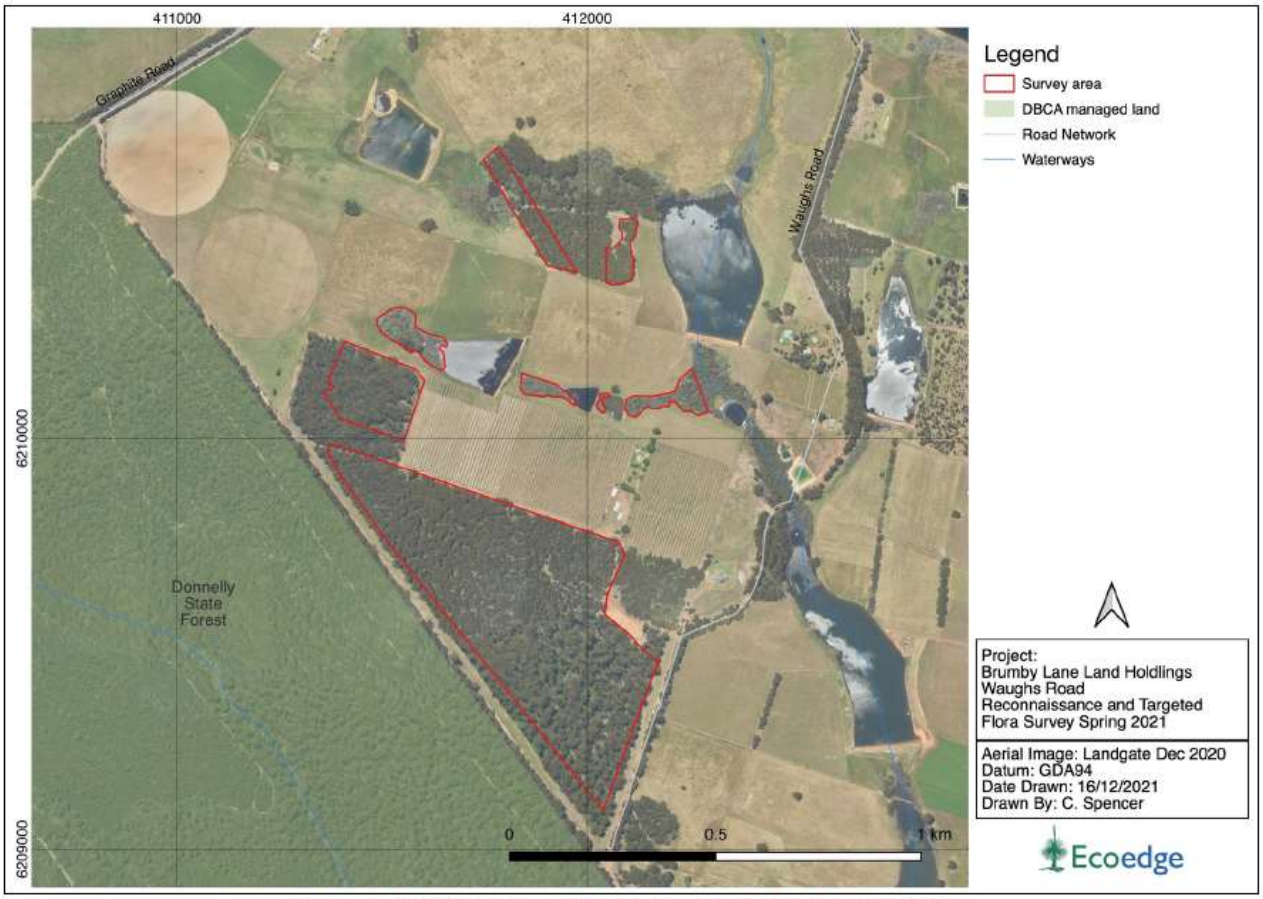


Figure 2. Aerial photograph showing the location of the survey area.

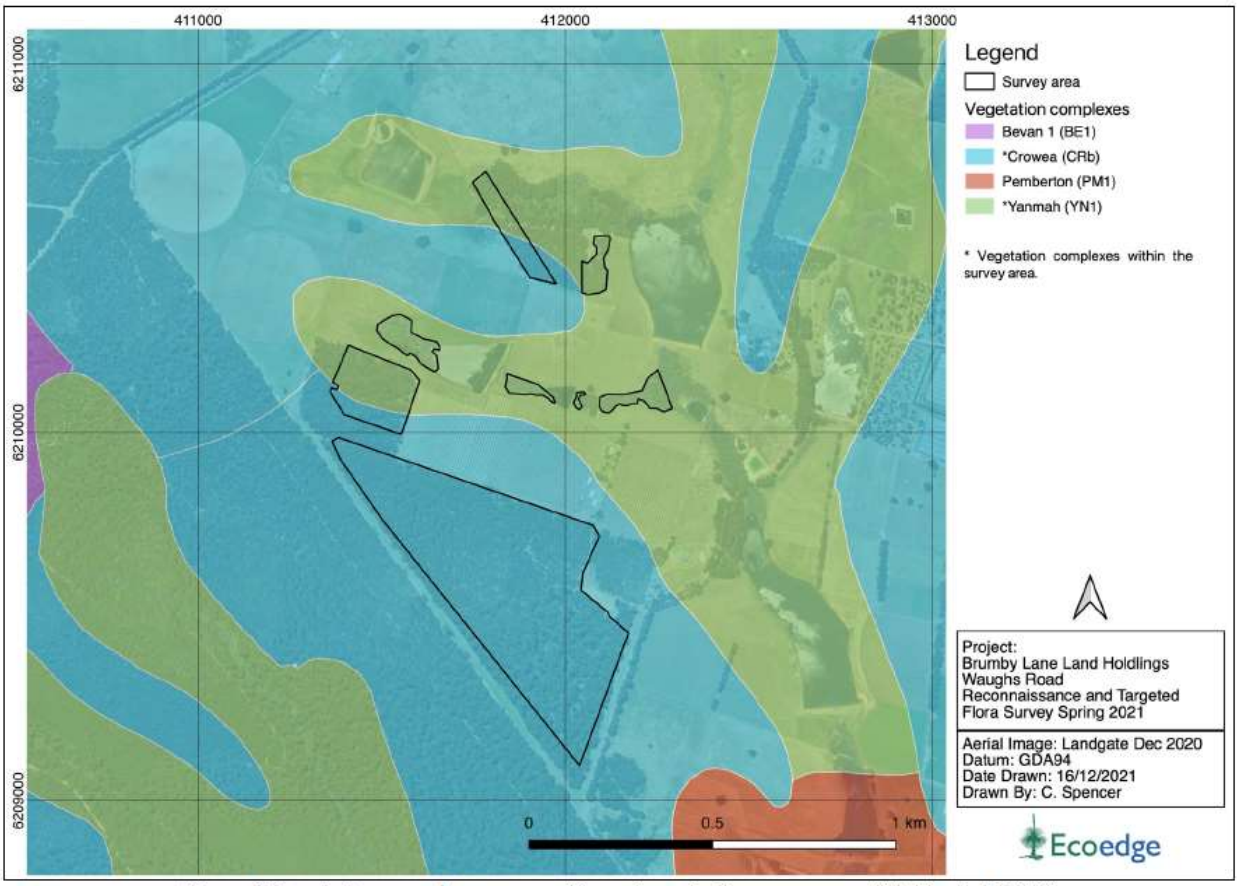


Figure 4. Vegetation complexes mapped in and nearby the survey area (Webb et al. 2016)

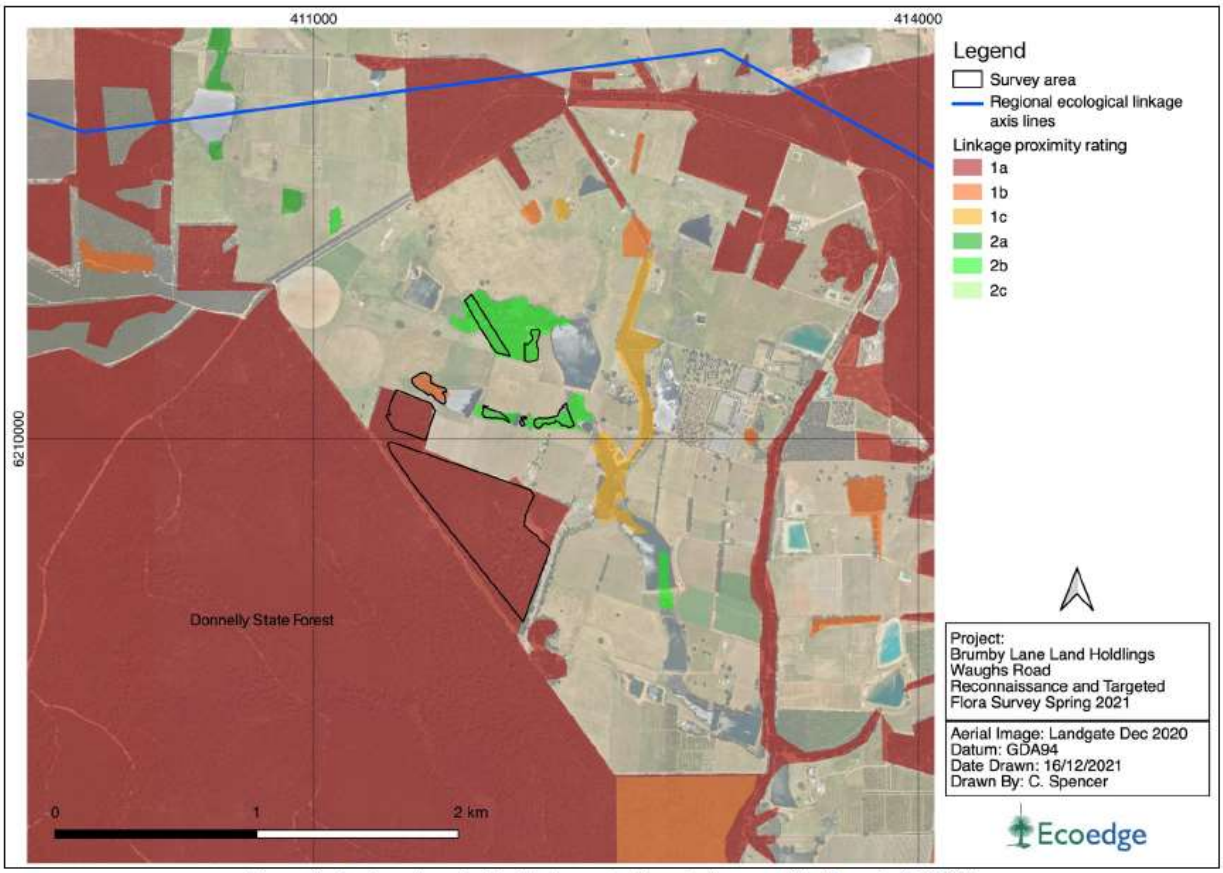


Figure 9. Regional ecological linkages in the study area (Molloy et al. 2009).

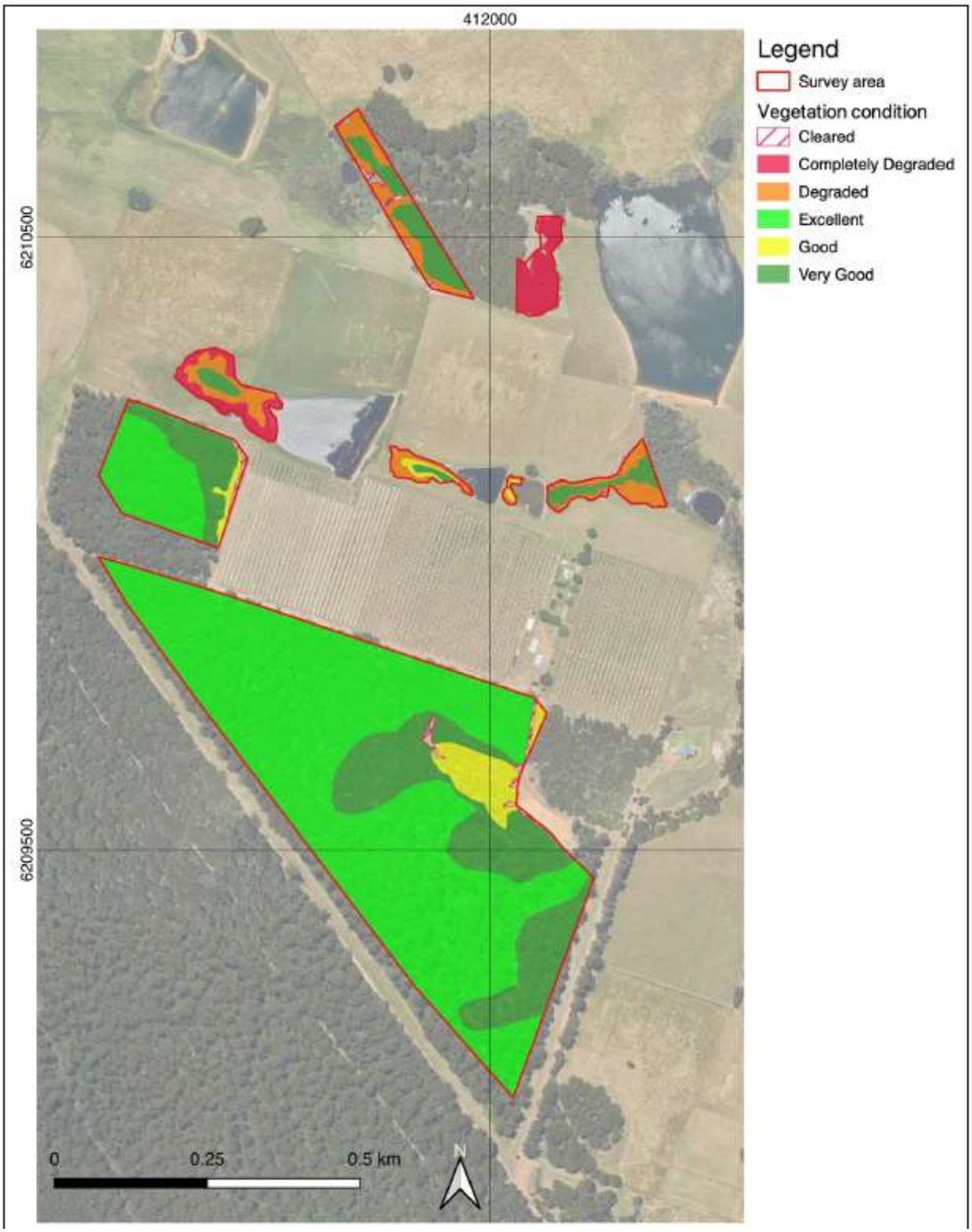
The extent and proportion of the total vegetated areas of each of these vegetation units are presented in **Table 11** and shown in **Figure 15**.

Table 11. Vegetation units by area and condition rating in the survey area.

Unit	Condition	Area (ha)	%
A	Excellent	23.16	80.4
	Very Good	4.41	15.3
	Good	0.08	0.3
	Degraded	0.43	1.5
	Completely Degraded	0.74	2.6
	Total	**28.81**	**100.0**
B	Very Good	3.18	73.4
	Good	1.16	26.6
	Total	**4.34**	**100.0**
C1	Very Good	0.28	54.2
	Degraded	0.23	45.8
	Total	**0.51**	**100.0**
C2	Very Good	0.61	24.6
	Good	0.14	5.5
	Degraded	1.14	46.4
	Completely Degraded	0.58	23.5
	Total	**2.47**	**100.0**
	Cleared	0.60	
	Grand Total	**36.73**	

Table 12. Area and percentage of the survey area in vegetation condition classes.

Condition	Area (ha)	%
Excellent	23.16	64.12
Very Good	8.47	23.45
Good	1.37	3.80
Degraded	1.80	4.99
Completely Degraded	1.32	3.65
Total Native veg.	36.13	100.00
Cleared	0.60	
Total Survey Area	36.73	


412000
6210500
6209500
Legend
Survey area
Vegetation condition
Cleared
Completely Degraded
Degraded
Excellent
Good
Very Good
0
0.25
0.5 km
N


411500
412000
412500
6210500
6210000
6209500
Lot 9770
A
Lot 9768
B
C
D
E
Lot 9767
Lot 9766
F
Potts Road
Vaughn Road
DS, USDA, USGS, AeroGRID
Legend
Survey Area
Camera Trap
WRP Recorded
0 100 200
Metres
Fauna Survey
Drawn: G Harewood
Date: 05-Dec-21
Scale: 1:50,000
Projection/Coordinate System: UTM/MGA Zone 50
Lots 9766-68 and 9770
Glenoran
Camera Traps
&
Possum
Observations
Figure: 2

A single western ringtail possum was recorded on one camera trap (Cam 31) on the 16 July 2021 (Figure 2). This camera trap was positioned at the base of a hollow bearing tree and it is assumed that the possum was using a hollow in this tree (and possibly others nearby) for daytime refuge. Example camera trap images of the WRP recorded are shown below.

No other fauna species of conservation significance was recorded during the camera trap survey.

Black Cockatoo Habitat survey (Harewood, 2020)

WPT	Coordinates (MGA 94/Z50)	411434 mE	6210075 mN	Tree Species	Karri (dead)	Survey Date	05/06/2020
19	Comments	Karri with a number of possible side entry, spout and chimney like hollows. All of the hollows were found to have no depth. Some additional possible hollows only provided access into narrow branches. This tree does not contain any hollows suitable for black cockatoos to use for nesting.				Classification	Unsuitable Hollows



WPT	Coordinates (MGA 94/Z50)	411439 mE	6210125 mN	Tree Species	Karri (dead)	Survey Date	05/06/2020
20	Comments	Large dead Karri with a number of possible side entry, spout and chimney like hollows. All of the hollows were found to have no depth. This tree does not contain any hollows suitable for black cockatoos to use for nesting.				Classification	No Hollows




WPT	Coordinates (MGA 94/Z50)	411370 mE	6210124 mN	Tree Species	Karri (dead)	Survey Date	05/06/2020
21	Comments	Large dead Karri with a number of possible side entry, spout and chimney like hollows. All of the hollows were found to have little or no depth. This tree does not contain any hollows suitable for black cockatoos to use for nesting.				Classification	Unsuitable Hollows



Appendix G: Sources of information

G.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- 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)
- 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)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)

- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

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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