



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9399/1
File Number: DWERVT8491
Duration of Permit: From 6 April 2024 to 6 April 2031

PERMIT HOLDER

Mr Bradley Stewart Noakes and Mr Steven Murray Noakes

LAND ON WHICH CLEARING IS TO BE DONE

Lot 1002 on Deposited Plan 419056, Forest Grove

Lot 2760 on Deposited Plan 203074, Forest Grove

AUTHORISED ACTIVITY

The permit holder must not clear more than 24 native trees within the areas cross-hatched yellow in Figure 1 and Figure 2 of Schedule 1.

CONDITIONS

1. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 6 April 2026.

2. 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.

3. 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.

4. Revegetation

The permit holder shall:

- (a) within six (6) months from the commencement of clearing activities authorised under this permit and no later than 6 October 2024, commence *revegetation* within the area cross-hatched red in Figure 3 Schedule 1 within Lot 1002 on Deposited Plan 419056, Forest Grove by:
 - (i) undertaking *weed* control activities prior to *planting*; and
 - (ii) ripping the ground on the contour to remove soil compaction.
- (b) undertake the deliberate *planting* of at least 41 *Corymbia calophylla* (marri) within the area cross-hatched red in Figure 3 Schedule 1 in accordance with the following conditions:
 - (i) ensure only *local provenance* propagating material of plants are used;
 - (ii) ensure *planting* is undertaken at the *optimal time*;
 - (iii) undertake *weed* control activities and watering of plantings on an 'as needed' basis to ensure success of *revegetation*.
- (c) the permit holder must, within 24 months of *planting* the native plants in accordance with condition 4(b) of this permit;
 - (i) engage an *environmental specialist* to make a determination that at least 41 individuals of *Corymbia calophylla* (marri) will survive;
 - (ii) if the determination made the *environmental specialist* under condition 4(c)(i) that at least 41 *Corymbia calophylla* (marri) will not survive, the permit holder must plant additional native seedlings that will result in at least 41 *Corymbia calophylla* (marri) persisting, located within the area cross-hatched red in Figure 3 of Schedule 1.
- (d) where additional planting of native seedlings is undertaken in accordance with condition 4(c)(ii), the permit holder must repeat the activities required by condition 4(b) of this permit.

5. 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	<ul style="list-style-type: none"> (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 GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the number of trees cleared; (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 2; and (f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 3.
2.	In relation to <i>revegetation</i> activities in accordance with condition 4.	<ul style="list-style-type: none"> (a) actions taken to undertake <i>planting</i> of 41 <i>Corymbia calophylla</i> (marri); (b) the date <i>revegetation</i> activities commenced; (c) the number of <i>Corymbia calophylla</i> (marri) planted; (d) <i>weed</i> control and watering activities undertaken; (e) <i>environmental specialist</i> determination on survivability; and (f) any remedial actions undertaken.

6. Reporting

- (a) The permit holder must provide to the *CEO*, on or before 30 June of each calendar year, a written report containing:
 - (i) the records required to be kept under condition 5; and
 - (ii) records of activities done by the permit holder under this permit between 1 January and 31 December of the preceding calendar year.
- (b) If no clearing authorised under this permit has been undertaken, a written report confirming that no clearing under this permit has been undertaken, must be provided to the *CEO* on or before 30 June of each calendar year.
- (c) The permit holder must provide to the *CEO*, no later than 90 calendar days prior to the expiry date of the permit, a written report of records required under condition 5, where these records have not already been provided under condition 6(a).

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 <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has experience relevant to the type of environmental advice that an environmental specialist is required to provide under this Permit, or who is approved by the CEO as a suitable environmental specialist.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
fill	means material used to increase the ground level, or to fill a depression.
local provenance	means native vegetation seeds and propagating material from natural sources within 50 kilometres and the same IBRA subregion of the area cleared.
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.
optimal time	means the period from May to July for undertaking planting.
planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
revegetate	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to pre-clearing vegetation types in that area.
weeds	means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i> ; or

Term	Definition
	(b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS

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by Juraj Galba
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Juraj Galba
A/MANAGER
NATIVE VEGETATION REGULATION

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

14 March 2024

SCHEDULE 1



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



Figure 2: Map of the boundary of the western area within which clearing may occur.

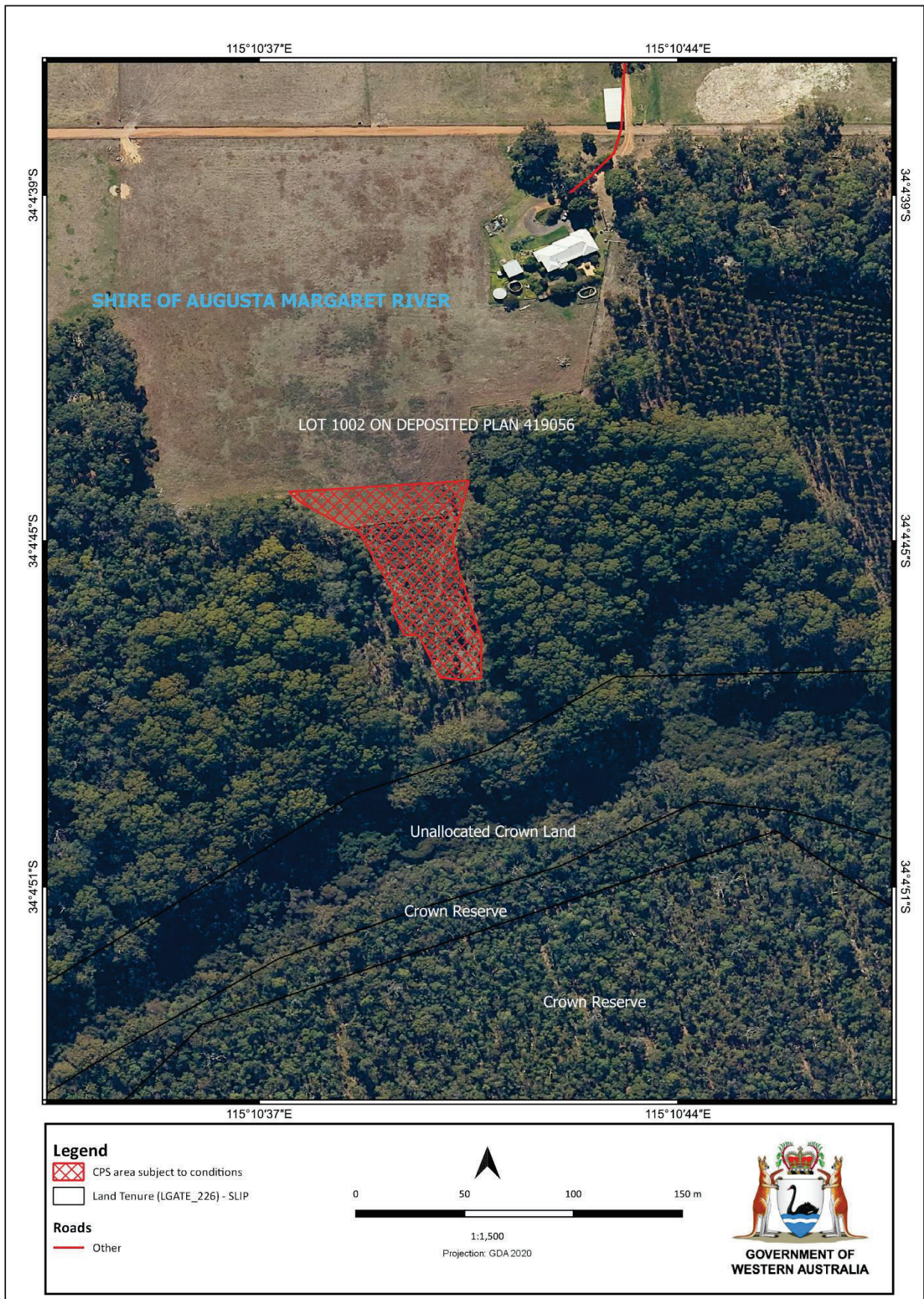


Figure 3: Map of the boundary of the area subject to conditions.



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9399/1
Permit type:	Area permit
Applicant name:	Mr Bradley Stewart Noakes and Mr Steven Murray Noakes
Application received:	19 August 2021
Application area:	24 native trees
Purpose of clearing:	Installation of a centre pivot for irrigation
Method of clearing:	Mechanical
Property:	Lot 1002 on Deposited Plan 419056 Lot 2760 on Deposited Plan 203074
Location (LGA area/s):	Shire of Augusta Margaret River
Localities (suburb/s):	Forest Grove

1.2. Description of clearing activities

The application area is to clear 24 native marri trees for the purpose of installing a centre pivot irrigation system (Noakes B.S and Noakes S.M, 2021a). The trees under application are distributed across two properties that has been parkland cleared (see Figure 1, Section 1.5). The distance between the two properties is approximately two kilometres. The application area is currently being used for irrigation purposes and is being extensively grazed by livestock.

1.3. Decision on application

Decision:	Granted
Decision date:	14 March 2024
Decision area:	24 native trees, 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 received no submissions.

In making this decision, the Delegated Officer had regard for the:

- site characteristics (see Appendix B)
- relevant datasets (see Appendix F.1)
- findings of a black cockatoo habitat assessment (Harewood.G, 2022) (see Appendix E)
- photographs provided by the applicant (Noakes B.S and Noakes S.M, 2021b) (see Appendix E)
- land degradation assessment report prepared by the Department of Primary Industries and Rural Development (DPIRD) (Commissioner of Soil and Land Conservation (CSLC), 2021)

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

In making the decision to grant the clearing permit application, the Delegated Officer also took into consideration the location and scattered nature of the proposed clearing area and the revegetation commitments by the applicant to mitigate impacts on the environment.

The assessment identified that the proposed clearing will result in:

- the loss of marri trees providing suitable foraging habitat for *Zanda latirostris* (Carnaby's black cockatoo), *Zanda baudinii* (Baudin's black cockatoo) and *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) (collectively known as black cockatoos); and
- 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.

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 and have long-term adverse impacts on environmental values and can be minimised and managed to unlikely lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and mitigation measures (see Section 3.1).

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 deliberate planting and ensure the long-term survival of at least 41 locally-provenanced *Corymbia calophylla* (marri) trees within Lot 1002 on Deposited Plan 419056.

1.5. Site map



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



Figure 2. Map of the application area. The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), 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 polluter pays principle
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)
- *Aboriginal Heritage Act 1972*
- *Soil and Land Conservation Act 1945* (WA).

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 – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016).

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicants advised that the centre pivot location has been chosen to minimise the number of trees that need to be removed. The applicant has avoided areas of remnant native vegetation within the properties (Noakes B.S and Noakes S.M, 2021).

The applicant has also committed to revegetating 41 *Corymbia calophylla* (marri) trees on the property as a mitigation measure for the clearing of marri trees. To adequately mitigate the impacts, DWER used the WA environmental metric calculator to calculate the number of replacement trees required. DWER has implemented a revegetation condition on the clearing permit to ensure the success of the revegetation.

Given the small extent of the proposed clearing and the proposed revegetation measures, the Delegated Officer was satisfied that the applicant has undertaken reasonable measures to avoid, minimise and mitigate 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 B) 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 C) identified that the impacts of the proposed clearing present a risk to biological values (fauna) and adjacent conservation areas. 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 (fauna) - Clearing Principles (b)

Assessment

The proposed clearing includes 24 *Corymbia calophylla* (marri) trees with a Diameter at Breast Height (DBH) of more than 50 centimeters (Harewood. G. 2022). The photographs of the trees are included in Appendix E of this decision report.

The desktop assessment identified 32 conservation significant fauna species within the local area, which include 15 mammals, 11 birds, two amphibians, two fish and two invertebrates. The majority of the records identified from the local area are *Pseudocheirus occidentalis* (western ringtail possum). In determining the likelihood of occurrence of

these species within the application area, the species preferred habitat attributes were considered. The following fauna species were considered likely to occur.

- *Calyptorhynchus banksii naso* (Forest red-tailed black cockatoo) – VU
- *Zanda baudinii* (Baudin's cockatoo) – EN
- *Zanda latirostris* (Carnaby's cockatoo) – EN

The completely degraded (Keighery, 1994) condition of the native vegetation, in particular the lack of an understory, the isolation of the application area from areas of native vegetation in good to better condition (Keighery, 1994) and the absence of a watercourse associated with the trees proposed to be cleared minimises the likelihood of migratory, marine and terrestrial ground dwelling fauna of conservation significant occurring within the application area.

Black cockatoos

The application area is mapped within the known distribution zones of the Endangered Baudin's cockatoo and Carnaby's cockatoo and Vulnerable Forest red-tailed black cockatoo. Black cockatoo habitat can be considered in terms of breeding, roosting and foraging habitat (DAWE, 2022).

The three black cockatoo species are known to nest in hollows of live and dead trees, including marri (*Corymbia calophylla*), jarrah (*Eucalyptus marginata*), karri (*Eucalyptus diversicolor*), wandoo (*Eucalyptus wandoo*), tuart, flooded gum (*Eucalyptus rudis*), and other *Eucalyptus* spp. (Commonwealth of Australia, 2012). 'Breeding habitat' for black cockatoos includes trees of these species that either have a suitable nest hollow or are of a suitable DBH to develop a nest hollow, where suitable DBH for nest hollows is 500 millimetres for most tree species (Department of Agriculture, Water and the Environment (DAWE), 2022). While breeding, black cockatoos also generally forage within a 6 to 12-kilometre radius of their nesting site (DAWE, 2022). According to available datasets, mapped black cockatoo foraging habitat is recorded within a 12-kilometre radius of the application area, making it a suitable location for breeding if appropriate hollows are present (DAWE, 2022).

A black cockatoo habitat assessment was undertaken within Lot 2760 and Lot 1002 by Greg Harewood (2022). The black cockatoo assessment included an assessment of all habitat trees within the survey area. The majority of trees did not appear to contain hollows of any size (Harewood. G, 2022).

A potential small spout type hollow was identified in one tree within the application area. This hollow was not considered suitable for a black cockatoo bird to occupy. Another tree contained an upwards facing chimney type hollow in the main trunk. This hollow was further examined and photographed with a drone. The hollow appeared to be very shallow and broad. Based on this, and the exposure to prevailing winds and potential predators, the hollow was not considered to be suitable for black cockatoo nesting (Harewood.G, 2022). Based on the findings from the black cockatoo habitat assessment, the proposed clearing is not likely to impact breeding habitat for black cockatoos.

Night-roosts are usually located in the tallest trees of an area, and in close proximity to both a food supply and a water source (DAWE, 2022). Based on the photographs, it is likely that few of the marri trees located within the application area are of a suitable height to provide for a roosting habitat. None of these trees, however, are known to be confirmed roost sites. The closest confirmed roost site is located approximately 1.98 kilometres from the application area. However, based on the abundant vegetation located within the local area close to watercourses and within foraging distance to black cockatoo food sources, the proposed clearing is not likely to significantly impact on the availability of roost sites for the black cockatoo birds.

Foraging habitat for Carnaby's, Baudin's and Forest red-tailed black cockatoo varies (Commonwealth of Australia, 2012). Forest red-tailed black cockatoo forages within jarrah and marri woodlands and forest, and edges of karri forests including wandoo, 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 (Johnstone et al, 2013). Baudin's cockatoos prefer foraging within eucalypt woodlands and forest, and proteaceous woodland and heath. Its diet consists mainly of seeds from marri, but Baudin's also feed on various *Banksia* species, *Hakea* species jarrah, and occasionally insects and insect larvae (DAWE, 2022). During the breeding season (October to late January/early February), Baudin's has a preference for marri seeds (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, marri and a range of introduced species (Valentine and Stock, 2008).

Food resources within the range of breeding sites and roost sites are important to sustain black cockatoo populations. Foraging resources are therefore, viewed in the context of known breeding and night roosting sites. It is considered that foraging habitat within 6 to 12 kilometres of an application area are a significant food source

(DAWE, 2022). According to the available databases, seven known black cockatoo roosting sites and no breeding sites are mapped within the 12 kilometres of the application area. The closest mapped breeding site (natural, confirmed) is located 15.9 kilometres from the application area.

According to the findings of the black cockatoo habitat assessment, apart from one small dead tree, all of the trees present within the proposed clearing areas represent potential foraging habitat for black cockatoos given the dominance of marri trees. Foraging evidence attributed to Baudin's black cockatoo was located at one location in the form of chewed marri fruits (Harewood. G, 2022).

Based on the above, DWER's assessment has identified that the marri trees proposed for clearing are a potential food source for black cockatoo species.

DWER notes that the extent of vegetation remaining within the local area is approximately 54 per cent with abundant vegetation secured under the Department of Biodiversity, Conservation and Attractions (DBCA) legislated land likely containing suitable foraging habitat for the black cockatoos. However, given the rapidly declining foraging resources for the black cockatoos, it is important that revegetation conditions are implemented on the clearing permit to ensure the clearing does not result in a net loss of native vegetation.

According to the *WA Environmental Offsets Calculator* and consistent with the *WA Environmental offsets policy* (2011), to mitigate the loss of 24 marri trees suitable for black cockatoo foraging, 41 marri trees are required to be planted within the same property as the proposed clearing area. A significant residual impact no longer remains following the mitigation planting.

Conclusion

Based on the above assessment, the application area is likely to provide significant foraging habitat for black cockatoos. Due to the nature of the proposed clearing and the degraded understorey, other fauna species are not likely to be significantly impacted by the proposed clearing. Planting marri trees within the same property as the proposed clearing area will ensure no significant residual impact remains for clearing black cockatoo foraging habitat.

Conditions

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

- Avoidance and minimisation measures; and
- Planting and ensure the long-term survival of at least 41 *Corymbia calophylla* (marri) to counterbalance the residual impacts from the loss of 24 marri trees suitable for black cockatoo foraging.

3.2.2. Land and water resources – Clearing principals (f and g)

Assessment

There are no permanent watercourses or wetlands within the application area. There are numerous minor watercourses surrounding the application area such as the blackwood river, which is a nonperennial minor river located within 100 metres of the application area. The vegetation types mapped within the application area are not associated with riparian ecosystems. The proposed clearing is therefore unlikely to impact on vegetation associated with a watercourse, or the quality of surface water.

According to the available databases, a draft proposed Ramsar site is mapped immediately adjacent to approximately half of the application area. The Ramsar site is named Spearwood Creek. Given the completed degraded nature and the small extent of the proposed clearing, it is unlikely the proposed clearing will have a significant impact on the drafted Ramsar site. Weed and dieback management condition is implemented on the clearing permit to manage the potential spread of weed and dieback into the adjacent Ramsar site.

Land degradation

The application area is mapped within the Treeton hillslopes Phase (214ThTRh) soil landscape map unit, described as; slopes with gradients generally ranging from 2-15 per cent and gravelly duplex, loamy gravels. Grey deep sandy duplex soils, pale sandy earths and semi wet soils (CSLC, 2021).

Given the purpose of the clearing is for installing a centre pivot for irrigation, DWER sought advice from DPIRD. DPIRD's findings are as followed (CSLC, 2021):

- Wind erosion – The entire property is intensely farmed, and vegetation cover is maintained all year around which is supplemented with irrigation. No change to wind erosion is therefore expected from the proposed clearing.
- Water erosion – Based on the soil type within the application area, planned operations and the permeant pasture cover, the proposed clearing is not likely to increase the risk of water erosion.
- Salinity – Salinity was not observed on the property or offset. Therefore, the risk of salinity causing land degradation is low.
- Flooding – Based on the nature of the proposed clearing, it is not likely that the removal of native vegetation will contribute to flooding.
- Waterlogging – The mapped soil unit (214ThTRh) has nil to moderate risk of waterlogging and therefore the risk of waterlogging causing land degradation is low.
- Eutrophication - The mapped soil unit (214ThTRh) has nil to moderate risk of eutrophication and therefore the risk of eutrophication causing land degradation is low.

Based on the DPIRD's findings, CSLC advised that the proposed clearing is not at variance with clearing principle (g).

Conclusion

Noting the extent and the location of the application area and the condition of the vegetation, the proposed clearing is not likely to have an appreciable impact on land degradation.

Conditions

Weed and dieback management condition to be implemented on the permit.

3.3. Relevant planning instruments and other matters

The Shire of Augusta Margaret River advised that local government approvals are not required, and that the proposed clearing is consistent with Clause 5.20 (a) (v) the Shire's Local Planning Scheme (Shire of Augusta Margaret River, 2022).

DWER advised that the applicant has a current licence to take groundwater which authorised the take of water for the purposes of pasture irrigation and the clearing permit application of irrigation water via a centre pivot system is appropriated. The upgrade of existing irrigation infrastructure to a centre pivot operation will not require any changes to the water licence or have any implications under the RIWI Act (DWER, 2022).

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
Photographs of the trees proposed for clearing (Noakes. B.S and Noakes. S.M)	The applicant provided photographs of the trees proposed for clearing along with the clearing permit application form.
Black cockatoo habitat assessment (Harewood. G, 2022)	As part of a response to DWER's request for further information, the applicant submitted a black cockatoo habitat assessment for the trees proposed to be cleared. The fauna assessment was carried out on the 06 December 2022.

Appendix B. Site characteristics

B.1. 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.

Characteristic	Details
Local context	<p>The area proposed to be cleared consists of 24 native trees over pasture. They are located within predominantly cleared farmland. Lot 1002 and Lot 2760 are located adjacent to Forest Grove Nature reserve.</p> <p>Aerial imagery indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 54 per cent of the original native vegetation cover.</p>
Ecological linkage	A South West Regional Ecological Linkage is located approximately 50 metres east from the application area within Lot 2760 and 640 m south of the application area within Lot 1002.
Conservation areas	Forest Grove nature reserve and an un-named national park is located adjacent to the Lot 1002 and Lot 2760.
Vegetation description	<p>Photographs supplied by the applicant and a black cockatoo habitat assessment (Harewood. G, 2022) indicate the vegetation within the proposed clearing area consists of parkland clearing marri trees in a paddock setting. Representative photos and the summary of the black cockatoo habitat assessment is located in Appendix E.</p> <p>The mapped vegetation type:</p> <ul style="list-style-type: none"> South West Forest vegetation complex 'Treeton' which is described as Woodland of <i>Eucalyptus marginata</i> subsp. <i>marginata</i> - <i>Corymbia calophylla</i> with some <i>Allocasuarina fraseriana</i> on mild slopes in the perhumid zone. <p>The mapped vegetation type retains approximately 46 per cent of the original extent (Government of Western Australia, 2019)</p>
Vegetation condition	<p>Photographs supplied by the applicant and a black cockatoo habitat assessment (Harewood. G, 2022) indicate the vegetation within the proposed clearing area is in completely degraded (Keighery, 1994) condition with obvious signs of disturbance. The area is being extensively grazed by livestock.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix D. Representative photos are available in Appendix E.</p>
Climate and landform	The property is situated near the 1050 millimetre rainfall isohyet (CSLC, 2021). The application area is located within the Treeton Hills System describes as Rises and low hills, of the western Donnybrook Sunkland. Sandy gravel, grey deep sandy duplex and loamy gravel associated with Jarrah-marri forest.
Soil description	The proposed clearing areas fall within the mapped soil type 'Treeton hillslopes Phase' which is described as: Slopes with gradients generally ranging from 2-15% and

Characteristic	Details
	gravelly duplex (Forest Grove) and pale grey mottled (Munglge) soils.
Land degradation risk	The land degradation table B.4. below outlines the land degradation risk levels for the Treeton hillslopes Phase.
Waterbodies	The desktop assessment and aerial imagery indicates that no watercourses transect the area proposed to be cleared. A number of minor watercourses are mapped within 150 metres of the application areas, majority of are tributaries of the Blackwood River.
Hydrogeography	The application area falls within the Donnybrook hydrological zone of Western Australia and the Hardy Estuary_Blackwood River hydrographic catchment. The application area is located within the Lower Blackwood River Surface Water Area and the Blackwood Groundwater Area proclaimed under the RiWI Act (DWER-037).
Flora	There are records of two threatened and 20 priority flora species within the local area, the closest of which to the application area is <i>Actinotus repens</i> (Priority 3) located approximately 2 kilometres south west of the application area.
Ecological communities	The application area does not intersect any mapped Priority or Threatened Ecological Communities. The closest PEC is 'Reedia swamps - Blackwood Plateau' (Priority 1) mapped approximately 5.5 kilometres east and southwest of the application area. A TEC Aquatic Root Mat Community Number 3 of Caves of the Leeuwin Naturaliste Ridge (Kudjal Yolghah and Budjur Mar Caves) has been mapped approximately 9.3 kilometres southwest of the application area.
Fauna	There are records of 22 threatened, seven priority, one migratory, one conservation dependent and one other specially protected fauna species within the local area, the closest of which, <i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo), has been recorded approximately 320 metres northwest of the application area. There is one breeding record (for white tailed black cockatoos, 15 km north west) and approximately 24 roosting records for black cockatoo species recorded within a 20 kilometre radius of the application area. The closest roosting record has been recorded approximately 1.1 km north of the application area. A habitat tree assessment (Harewood.G, 2022) examined the 24 habitat trees within the application area and found 24 marri trees with a DBH greater than 50 centimetres. None of these trees contained hollows suitable for black cockatoo breeding.

B.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in DBCA managed land
IBRA bioregion*					
Jarrah Forest	4,506,660	2,399,838	53.25	1,673,614.25	37.14
Vegetation complex					
Treeton 266	27,420.43	12,798.11	46.67	7,641.00	27.87
Local area					
10km radius	37,509.88	20,335.95	54.2	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.3. Fauna analysis table

Species scientific name	Species common name	Conser- vation status	Suitable habitat features? [Y/N]	Number of known records in local area (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Calyptorhynchus banksii naso</i>	forest red-tailed black cockatoo	EN	Y	12	Y
<i>Zanda baudinii</i>	Baudin's cockatoo	EN	Y	72	Y
<i>Zanda latirostris</i>	Carnaby's cockatoo	OS	Y	32	N/A
<i>Falco peregrinus</i>	peregrine falcon	VU	Y	1	Y

B.4. Land degradation risk table

Risk categories	<i>Treeton hillslopes Phase (214ThTRh)</i>
Wind erosion	50-70% of map unit has a high to extreme wind erosion risk
Water erosion	<3% of map unit has a high to extreme water erosion risk
Salinity	<3% of map unit has a moderate to high salinity risk or is presently saline
Subsurface Acidification	>70% of map unit has a high subsurface acidification risk or is presently acid
Flood risk	<3% of map unit has a moderate to high salinity risk or is presently saline
Water logging	10-30% of map unit has a moderate to very high waterlogging risk
Phosphorus export risk	3-10% of map unit has a high to extreme phosphorus export risk

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains primary foraging habitat for the black cockatoo species.</p> <p>The current condition (Keighery, 1994) of the vegetation proposed to be cleared is completely degraded (Keighery, 1994) with obvious signs of disturbance and the area is being grazed extensively by livestock. The application includes several trees close together or single trees (CSLC, 2021). Based on this, it is unlikely that the application area contains vegetation of a high diversity or contain conservation significant flora or ecological communities.</p>	Not likely to be at variance	No
<p><u>Principle (b):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains foraging and potential roosting habitat for black cockatoo species.</p>	At variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“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.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain species that can indicate a threatened ecological community.</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The 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. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	Not likely to be at variance	No
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u></p> <p>Based on the available databases, the Forest Grove National Park is located</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>immediately adjacent to the proposed clearing area. Forest Grove National Park is protected under the CALM Act and is vested under the conservation commission of Western Australia. The assessment note that the trees proposed to be cleared which are located adjacent to the national park are individual trees within a completely degraded (Keighery, 1994) paddock. Removal of these trees are not likely to impact on the environmental values of the adjacent conservation area. A weed and dieback management condition is imposed on the permit to manage the spread of weed and dieback into the adjacent conservation area.</p> <p>It is the responsibility of the applicant to ensure that the end land use does not cause impacts to the environmental values of the Forest Grove national park.</p>		
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>“Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</i></p> <p><u>Assessment:</u></p> <p>Given no permanent water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.</p> <p>The proposed clearing does not involve removal of riparian vegetation.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><u>Principle (g):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</i></p> <p><u>Assessment:</u></p> <p>Noting the condition and the extent of the vegetation proposed to be cleared, the proposed clearing of 24 native trees within with no understorey is unlikely to have an appreciable impact on land degradation.</p> <p>CSLC advised that proposed clearing is not expected to contribute to appreciable land degradation (CSLC, 2022).</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><u>Principle (i):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment:</u></p> <p>Given no significant wetlands or Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p> <p>No watercourses are mapped within the application area. However, there are watercourses close to the application area. Noting the condition and nature of the proposed clearing, it is unlikely that the proposed clearing will lead to the deterioration in the quality of surface water.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u></p> <p>The commissioner of soil and land conservation advised that proposed clearing is not expected to contribute to flooding on the proposed areas to clear because of the nature of the proposed clearings (CSLC, 2022).</p>	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.

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 E. Biological survey information excerpts (Harewood.G, 2022) and photographs of the application area (Noakes B.S and Noakes S.M, 2021b)

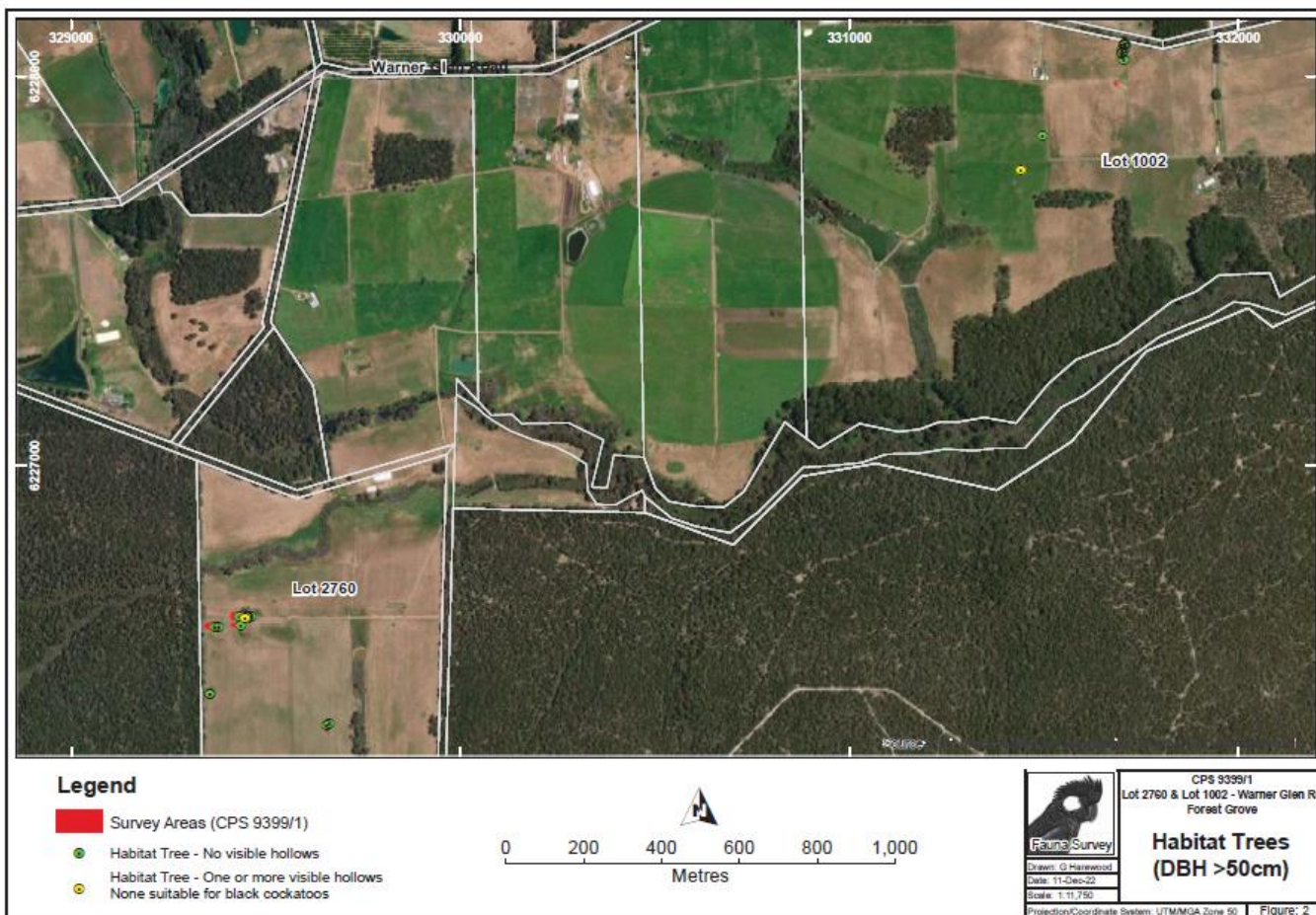


Figure 3: A map representing the number of hollows identified within the habitat trees of the application area.

Habitat Trees
DBH >50cm
Datum - GDA94
Entrance Size Ranges - Small = >5cm, Medium = 5 to 10cm, Large = >10cm

Waypoint Number	Zone	mE	mN	Tree Species	Tree Height (m)	DBH (cm)	Number of Hollows	Estimated Hollow Entrance Size	Occupancy	Chew Marks	Potential Cockatoo Nest Hollow	Comments
wpt001	50H	331707	6228043	Marri	20+	>50	0					
wpt002	50H	331702	6228058	Marri	20+	>50	0					
wpt003	50H	331702	6228061	Marri	0-5	>50	0					
wpt004	50H	331701	6228079	Marri	10-15	>50	0					
wpt005	50H	331710	6228074	Marri	10-15	>50	0					
wpt006	50H	331707	6228080	Marri	20+	>50	0					
wpt007	50H	331708	6228081	Marri	15-20	>50	0					
wpt008	50H	331709	6228082	Marri	20+	>50	0					
wpt009	50H	331709	6228083	Marri	10-15	>50	0					
wpt010	50H	331441	6227761	Marri	15-20	>50	1	Large	No signs	No signs	No	Chimney type hollow -Examined with drone - too shallow/open/exposed
wpt011	50H	331488	6227847	Marri	10-15	>50	0					
wpt015	50H	329463	6226611	Marri	0-5	>50	0					
wpt016	50H	329456	6226610	Marri	15-20	>50	0					
wpt017	50H	329454	6226611	Marri	20+	>50	0					
wpt018	50H	329451	6226611	Marri	20+	>50	0					
wpt019	50H	329450	6226611	Marri	20+	>50	0					
wpt020	50H	329447	6226609	Marri	20+	>50	1	Small	No signs	No signs	No	
wpt021	50H	329433	6226611	Marri	20+	>50	0					
wpt022	50H	329437	6226591	Marri	15-20	>50	0					
wpt023	50H	329379	6226587	Marri	15-20	>50	0					
wpt024	50H	329370	6226587	Marri	15-20	>50	0					
wpt025	50H	329356	6226414	Marri	10-15	>50	0					
wpt026	50H	329357	6226415	Marri	0-5	>50	0					
wpt027	50H	329657	6226334	Marri	0-5	>50	0					Main trunk broken
wpt028	50H	329663	6226337	Marri	10-15	>50	0					

Figure 4: A detailed description of the habitat trees within the application area

ID	Coordinates (MGA 94/Z50)	331441mE	6227761 mN	Tree Species	Marri	Survey Date	14/09/2022
10	Comments	Marri with a large chimney style hollow. When examined with drone the hollow was found to be very broad and shallow (base visible – see photo below). In the Authors opinion the hollow would be unsuitable for black cockatoos to use for nesting purposes because it is too shallow and exposed. No signs of use by any fauna.				Classification	Unsuitable Hollow.



Figure 5: Details and the photograph of the tree which appeared to have a potential hollow for black cockatoos.

Photographs of the trees proposed to be cleared.









Appendix F. Sources of information

F.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)

F.2. References

- Commissioner of Soil and Land Conservation (CSLC) (2021) *Land Degradation Advice and Assessment Report for clearing permit application CPS 9399/1*, received 11 October 2021, Department of Primary Industries and Regional Development, Western Australia (DWER Ref: DWERDT514496).
- Commonwealth of Australia (2001) *National Objectives and Targets for Biodiversity Conservation 2001-2005*, Canberra.
- Commonwealth of Australia. (2012). Department of Sustainability, Environment, Water, Population and Communities. *EPBC Act referral guidelines for three threatened black cockatoo species*.
- Department of Agriculture, Water and the Environment (DAWE) (2022), Referral guideline for 3 WA threatened black cockatoo species: Carnaby's cockatoo, Baudin's cockatoo and the Forest Red-tailed Black-cockatoo, Department of Agriculture, Water and the Environment, Canberra, February
- Department of Environment Regulation (DER) (2013). *A guide to the assessment of applications to clear native vegetation*. Perth. Available from: https://www.der.wa.gov.au/images/documents/your-environment/native-vegetation/Guidelines/Guide2_assessment_native_veg.pdf.
- Department of Primary Industries and Regional Development (DPIRD) (2019). *NRInfo Digital Mapping. Department of Primary Industries and Regional Development*. Government of Western Australia. URL: <https://maps.agric.wa.gov.au/nrm-info/> (accessed 07 March 2024).
- Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF.
- Department of Water and Environmental Regulation (DWER) (Regulatory Services – Water) (2022) *Rights in Water and Irrigation Act 1914 advice for clearing permit application CPS 9399/1*, received 26 August 2022 (DWER Ref: DWERDT649869).
- Environmental Protection Authority (EPA) (2016). *Technical Guidance – Terrestrial Fauna Surveys*. Available from: https://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/Tech%20guidance-%20Terrestrial%20Fauna%20Surveys-Dec-2016.pdf.
- Government of Western Australia (2019) *2018 South West Vegetation Complex Statistics. Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions, Perth, <https://catalogue.data.wa.gov.au/dataset/dbca>
- Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Harewood, Greg (2022). Black cockatoo habitat assessment for CPS 9399/1 Lot 2760 and Lot 1002 Forest Grove, received 12 December 2022 (DWER Ref: DWERDT699254)
- Johnstone, R.E., Kirkby, T., and Sarti, K. (2013). *The breeding biology of the Forest Red-tailed Black Cockatoo *Calyptorhynchus banksii naso* Gould in south-western Australia*. I. Characteristics of nest trees and nest hollows. *Pacific Conservation Biology*; Clayton Vol. 19, Iss. 2, (Winter 2013): 121-142.
- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) *Vegetation Complexes of the South-west Forest Region of Western Australia*. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.

- Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) *South West Regional Ecological Linkages Technical Report*, Western Australian Local Government Association and Department of Environment and Conservation, Perth.
- Noakes, B.S and Noakes, S.M (2021) *Clearing permit application CPS 9399/1*, received 19 August 2021 (DWER Ref: DWERDT493700).
- Noakes, B.S and Noakes, S.M (2021) *Supporting information for clearing permit application CPS 9399/1*, received 19 August 2021 (DWER Ref: A2040134).
- Schoknecht, N., Tille, P. and Purdie, B. (2004) *Soil-landscape mapping in South-Western Australia – Overview of Methodology and outputs* Resource Management Technical Report No. 280. Department of Agriculture.
- Shepherd, D.P., Beeston, G.R. and Hopkins, A.J.M. (2001) *Native Vegetation in Western Australia, Extent, Type and Status*. Resource Management Technical Report 249. Department of Agriculture, Western Australia.
- Shire of Augusta and Margaret River (2022) *Advice for clearing permit application CPS 9399/1*, received 25 August 2022. DWER Ref: DWERDT649859
- Valentine, L.E. and Stock, W. (2008) *Food Resources of Carnaby's Black Cockatoo (Calyptorhynchus latirostris) in the Gnangara Sustainability Strategy Study Area*. Edith Cowan University and Department of Environment and Conservation. December 2008.