



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9059/1
File Number: DWERVT6627
Duration of Permit: From 19 November 2022 to 19 November 2029

PERMIT HOLDER

Cotton Holdings Pty Ltd

LAND ON WHICH CLEARING IS TO BE DONE

Lot 333 on Plan 111125, Gwindinup

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.185 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 19 November 2024.

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. Retain vegetative material and topsoil, and rehabilitation

- (a) The permit holder must retain the vegetative material and topsoil removed by *clearing* authorised under this Permit and stockpile the vegetative material and topsoil in an area that has already been cleared.
- (b) The permit holder must within 12 months of undertaking *clearing* authorised under this permit and no later than 19 November 2025 *revegetate* and *rehabilitate* the areas that are no longer required for the purpose for which they were cleared under this Permit by:
 - (i) re-shaping the surface of the land so that it is consistent with the surrounding five metres of uncleared land;
 - (ii) ripping the ground on the contour to remove soil compaction; and
 - (iii) laying the vegetative material and topsoil retained under Condition 4(a) on the cleared area.
- (c) The permit holder must within 18 months of laying the vegetative material and topsoil on the cleared area in accordance with condition 4(b) of this Permit:
 - (i) engage an *environmental specialist* to determine the species composition, structure and density of the vegetation of area *revegetated* and *rehabilitated*; and
 - (ii) engage an *environmental specialist* to make a determination as to whether the composition, structure and density determined under condition 4(c)(i) of this Permit will, without further *revegetation*, result in a similar species composition, structure and density to that of pre-*clearing* vegetation types in that area.
- (d) If the determination made by the *environmental specialist* under condition 4(c)(ii) is that the species composition, structure, and density determined under condition 4(c)(i) will not, without further *revegetation*, result in a similar species composition, structure and density to that of pre-*clearing* vegetation types in that area, the permit holder must *revegetate* the area by deliberately *planting* and/or *direct seeding native vegetation* seeds that will result in a similar species composition, structure, and density of *native vegetation* to pre-*clearing* vegetation types in that area.
- (e) Where additional *planting* or *direct seeding of native vegetation* is undertaken in accordance with condition 4(d), the permit holder must repeat the activities required by condition 4(c) and 4(d) within 12 months of undertaking the additional *planting* or *direct seeding of native vegetation*.
- (f) Where a determination is made by an *environmental specialist* under condition 4(c)(ii) that the composition, structure and density within areas *revegetated* and *rehabilitated* will result in a similar species composition, structure and density to that of pre-*clearing* vegetation types in that area, that determination shall be submitted to the *CEO* within three months of the determination being made by the *environmental specialist*.

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 Geocentric Datum Australia 1994/2020 (GDA94/2020), 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 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 the <i>revegetation</i> and <i>rehabilitation</i> areas pursuant to condition 4 of this Permit	<ul style="list-style-type: none">(a) a description of the <i>revegetation</i> and <i>rehabilitation</i> activities undertaken;(b) the size of the area(s) <i>revegetated</i> and <i>rehabilitated</i> (in hectares);(c) the data when <i>revegetation</i> and <i>rehabilitation</i> works began; and(d) actions taken in accordance with condition 4(d) of this permit to ensure that the environmental benefits of <i>revegetation</i> and <i>rehabilitation</i> are achieved.

6. Reporting

The permit holder must provide to the *CEO* the records required under condition 5 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 <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.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
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.
Direct seeding	means a method of re-establishing vegetation through establishment of a seed bed and the introduction of seeds of the desired plant species
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 <i>environmental specialist</i> .
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 <i>native vegetation</i> seeds and propagating material from natural sources within 100 kilometres and the same Interim Biogeographic Regionalisation for Australia (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.
Planting	means the re-establishment of vegetation by creating favourable soil conditions and planting seedlings of the desired species.
Rehabilitate/ed/ion	means actively managing an area containing <i>native vegetation</i> in order to improve the ecological function of that area
Revegetate/ed/ion	means the re-establishment of a cover of <i>local provenance native vegetation</i> in an area using methods such as natural regeneration, direct seeding and/or <i>planting</i> , so that the species composition, structure and density is similar to pre-clearing vegetation types in that area

Term	Definition
weeds	means any plant – (a) that is a declared pest under section 22 of the <i>Biosecurity and Agriculture Management Act 2007</i> ; 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



Meenu Vitarana
MANAGER
NATIVE VEGETATION REGULATION

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

26 October 2022

SCHEDULE 1

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

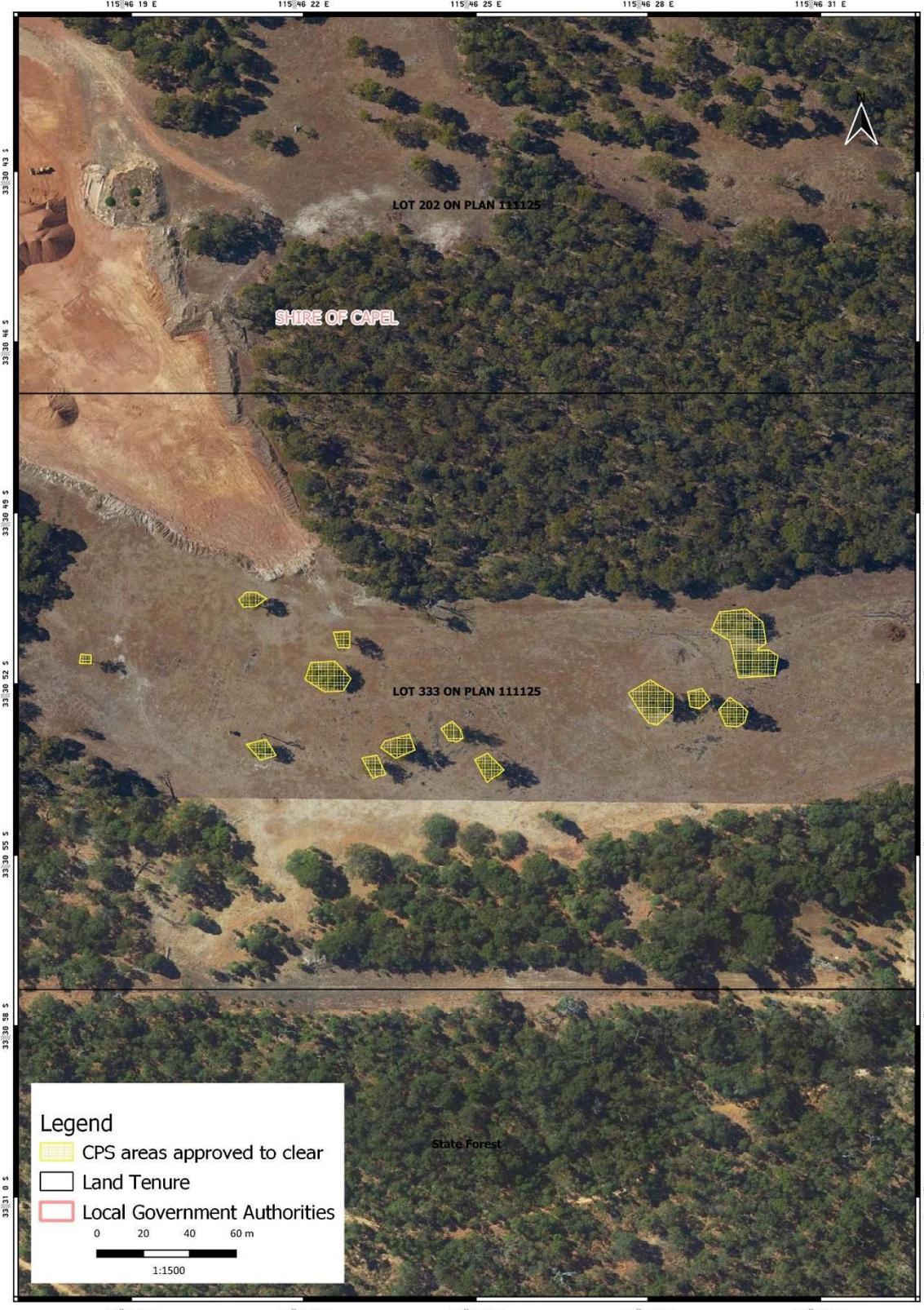


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1. Application details and outcome

1.1. Permit application details

Permit number:	CPS 9059/1
Permit type:	Area Permit
Applicant name:	Cotton Holdings Pty Ltd
Application received:	21 September 2020
Application area:	0.185 hectares (ha) of native vegetation
Purpose of clearing:	Laterite gravel extraction
Method of clearing:	Mechanical
Property:	Lot 333 on Deposited Plan 111125
Location (LGA area/s):	Shire of Capel
Localities (suburb/s):	Gwindinup

1.2. Description of clearing activities

The application is to clear 0.185 ha of scattered native vegetation that is parkland cleared (see Figure 1, Section 1.5). The trees proposed to be cleared include jarrah (*Eucalyptus marginata*), grass tree (*Xanthorrhoea* sp.), marri (*Corymbia calophylla*) and peppermint (*Agonis flexuosa*) (Harewood, 2020).

1.3. Decision on application and key considerations

Decision:	Granted
Decision date:	26 October 2022
Decision area:	0.185 hectares (ha) of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was made in accordance with section 51E of the *Environmental Protection Act 1986* (EP Act) and was received by the Department of Water and Environmental Regulation (the department) on 21 September 2020. The department advertised the application for public comment and no submissions were received.

In undertaking their assessment, and in accordance with section 51O of the EP Act, the Delegated Officer has given consideration to the Clearing Principles in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments, and other matters considered relevant to the assessment (see Section 3).

In particular, the Delegated Officer has determined that:

- the clearing is not likely to have a significant impact on the local population, habitat or conservation status of black cockatoos (see Section 3.2.1).
- the implementation of a suitable weed and dieback management condition is appropriate to mitigate the impact of spreading weeds and/or dieback into adjacent vegetation.
- the implementation of a revegetation and rehabilitation condition is appropriate to mitigate the long term impact of temporary clearing.
- the applicant has suitably demonstrated avoidance and minimisation measures (see Section 3.1)

The Delegated Officer also took into consideration that the applicant has obtained Development Approval and an Extractive Industry Licence from the Shire of Capel, as well as a Works Approval under Part V, Division 3 of the EP Act for this project

Based on the above information the Delegated Officer has determined to grant a clearing permit at this time, subject to standard best practice management conditions.

1.5. Site map



Figure 1. Map of the application area.

The areas cross-hatched blue indicates the areas applied to be cleared.

2. Legislative context

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

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.3), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

1. the precautionary principle;
2. the principle of intergenerational equity;
3. the principle of the conservation of biological diversity and ecological integrity

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)

The key guidance documents which inform this assessment are:

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

3. Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant stated that the most degraded land was chosen for extractive industry to avoid any larger scale clearing. The Delegated Officer is satisfied that reasonable planning had taken place to avoid and minimise potential impacts of the clearing on environmental values.

3.2. Assessment of environmental impacts

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

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

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

The local area contains records from 19 species of conservation significant fauna. These species are either listed under the state BC Act and/or Commonwealth EPBC Act, or are migratory species listed under International Agreements. Western ringtail possum (*Pseudocheirus occidentalis*) is the most common recorded species with 252 records, with Carnaby's cockatoo (*Zanda latirostris*) comprising 25 records. The nearest record of conservation significant fauna is for a south-western brush-tailed phascogale (*Phascogale tapoatafa wambenger*), located approximately 1.46 kilometres from the application area.

Noting the lack of canopy connectivity, the parkland cleared nature of the application area and the distance to the nearest records, proposed clearing is not considered to provide significant habitat for western ringtail possum and south-western brush-tailed phascogale. As such, of the conservation significant fauna species recorded within the local area, the following have the potential to be found within the application area based on habitat preferences (see Appendix A.2):

- *Baudin's cockatoo* (*Zanda baudinii*) (previously *Calyptorhynchus baudinii*),
- *Carnaby's cockatoo* (*Zanda latirostris*) (previously *Calyptorhynchus latirostris*), and
- *forest red-tailed black cockatoo* (*Calyptorhynchus banksii naso*).

Black cockatoos

The forest red-tailed black cockatoo, Baudin's cockatoo and Carnaby's cockatoo, collectively known as 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, 2022). 'Breeding habitat' for black cockatoos includes trees of these species that either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow, where suitable DBH for nest hollows is 500 millimetres for most tree species (Commonwealth of Australia, 2022). While breeding, black cockatoos also generally forage within a 6 to 12-kilometre radius of their nesting site (Commonwealth of Australia, 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 (Commonwealth of Australia, 2022). According to available databases, the closest confirmed breeding site is approximately 9 kilometres southwest of the application area.

It is noted that the application area includes 25 trees being;

- 18x jarrah (*Eucalyptus marginata*)
- 1x grass tree (*Xanthorrhoea* sp.)
- 1x marri (*Corymbia calophylla*)
- 5x peppermint (*Agonis flexuosa*)

A black cockatoo habitat tree assessment was carried out over a section of Lot 333 Nybo Road, Gwindinup on the 15 September 2020 by Greg Harewood (Harewood, 2020). The assessment found nine of the 25 trees proposed to be cleared had a diameter at breast height over 50 cm, however none of the trees contained hollows that appeared suitable for black cockatoos to use for nesting purposes (see Appendix D). Noting the presence of abundant better-quality vegetation within the local area and the temporary nature of the proposed clearing with a requirement to revegetate post extraction, it is considered the proposed clearing will not have a significant impact on breeding habitat for black cockatoos.

There are no known black cockatoo roosting sites within the application area, with eight known roosting sites within 12 kilometres and the closest site recorded approximately 1.6 kilometres away. Roosting is typically noted to occur within suitable trees within 2 kilometres of an important water source and within an area of quality foraging habitat (Commonwealth of Australia, 2022). As the application area does not transect any watercourses and contains only a small area of foraging habitat in a parkland cleared state, it is not considered likely that the application area contains significant roosting habitat for any black cockatoo species.

Foraging habitat within a 12-kilometre radius of breeding sites and a 6-kilometre radius of roosting sites is noted as being of particular importance for black cockatoo species (Commonwealth of Australia, 2022). The proposed clearing area may provide an insignificant amount of foraging habitat (19 trees known to be a feeding resource) for the known black cockatoo roosts sites within 12 kilometres of the application area.

A significant area mapped feeding habitat for black cockatoos surround the application area (see Figure 2). The clearing area represents only a small proportion of the mapped feeding habitat. The DBCA managed estates such as Boyanup State Forest provide substantial and better-quality foraging habitat within the immediate vicinity of the application area.

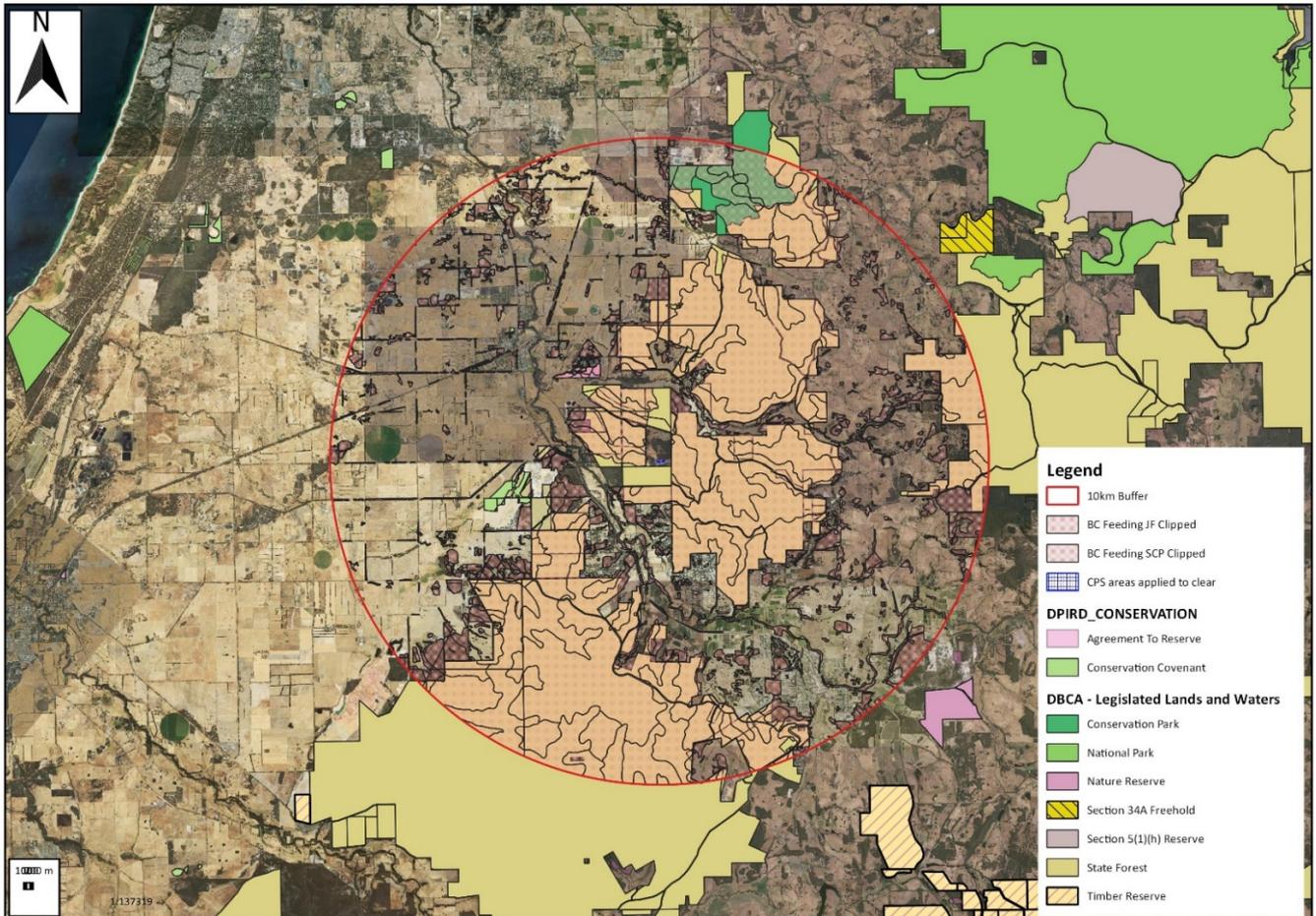


Figure 2: Aerial imagery showing the extent of mapped black cockatoo feeding habitat (red areas) and DPIRD and DBCA estate surrounding the application areas.

Given the small scale of the proposed clearing (0.185 ha) and the extent of foraging resources available in adjacent remnant vegetation, the clearing is unlikely to present a significant impact to the local availability of foraging and roosting resources for black cockatoos, or impact on their ability to move through the landscape. Revegetation post extraction will reinstate foraging resources in the local area.

Conclusion

Based on the above assessment, the proposed clearing is unlikely to significantly impact breeding, roosting or feeding habitat for black cockatoo species or significant habitat for conservation significant fauna species in the local area. For the reasons set out above, it is considered that potential impacts to fauna resulting from the proposed clearing is deemed insignificant. Further, to mitigate any long term impacts of temporary clearing, a revegetation and rehabilitation condition will be required as a condition on the clearing permit.

3.3. Relevant planning instruments and other matters

Other relevant authorisations required for the proposed land use include:

- Development approval under the *Planning and Development Act 2005* (issued by The Shire of Capel).
- Extractive Industry Licence (issued by The Shire of Capel).
- A works approval / licence issued under Part V Division 3 of the EP Act.

The Shire of Capel advised DWER that local government approvals are required, however the Shire did not have any objections to the clearing (Shire of Capel, 2020). Development Approval and Extractive Industry licences have been granted.

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.

Appendix A – Site characteristics

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

A.1. Site characteristics

Site characteristic	Details
Local context	The proposed clearing area comprises 25 isolated trees within pasture. The property subject to the clearing permit application is surrounding by the Boyanup State Forest. Spatial data indicates that the local area (10 km radius of the proposed clearing area) retains approximately 45.5% of the original native vegetation cover.
Vegetation description	<p>The black cockatoo habitat survey indicates the vegetation within the proposed clearing area consists of 25 trees, including a combination of jarrah (<i>Eucalyptus marginata</i>), grass tree (<i>Xanthorrhoea</i> sp.), marri (<i>Corymbia calophylla</i>) and peppermint (<i>Agonis flexuosa</i>) (Harewood, 2020), within pasture. Representative photos are available in Appendix D.</p> <p>This is consistent with the dominant species of the mapped Kingia vegetation complex, which is described as open forest of <i>Eucalyptus marginata</i> subsp. <i>marginata</i>, <i>Corymbia calophylla</i>, <i>Allocasuarina fraseriana</i>, <i>Banksia grandis</i>, <i>Xylomelum occidentale</i> on lateritic uplands in perhumid and humid zones (Mattiske & Havel 1998).</p> <p>Noting the above, the vegetation under application is not considered to be representative of any threatened or priority ecological communities.</p>
Vegetation condition	<p>The black cockatoo habitat assessment and aerial imagery indicate the vegetation within the proposed clearing area is in Completely Degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> 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. <p>The full Keighery condition rating scale is provided in Appendix C, below.</p>
Soil description	The application area is located within the mapped Kingia subsystem, described as broad undulating lateritic crests and divides over sedimentary rocks, relief 5-20 metres, slopes 1-10 per cent. Soils are sandy gravels with some deep sands (Purdie et al., 2004).
Land degradation risk	The mapped Kingia subsystem has a low risk of water erosion, flooding, and waterlogging, however, has a high to extreme wind erosion risk (Tille et al., 1996).
Waterbodies	No watercourses or wetlands intersect the application area.
Conservation areas	The property subject to the clearing permit application is surrounded by the Boyanup State Forest. At the nearest point, the application area is located approximately 120 metres from the Boyanup State Forest.
Climate and landform	<p>Rainfall: 1000 ml per annum Evapotranspiration: 700 ml per annum Geology: Marine and continental sedimentary rocks</p>

A.2. Fauna Analysis

With consideration for the site characteristics set out above, relevant datasets (see Appendix A), and a black cockatoo habitat tree assessment (Appendix D), the following conservation significant fauna species may be impacted by the clearing. It is noted that a black cockatoo tree habitat survey (Harewood, 2020) did not identify any trees with suitable hollows for black cockatoo breeding (see Appendix D).

Species / Ecological Community	Distance of closest record to application area (kilometres)	Suitable soil type? (flora, ecological community)	Suitable vegetation type? (flora, ecological community)	Suitable habitat features (fauna)	Are surveys adequate to identify? (Y, N, N/A)
Carnaby's black cockatoo (<i>Zanda latirostris</i>)	1.6	N/A	N/A	Y	Y
Baudin's black cockatoo (<i>Zanda baudinii</i>)	1.89	N/A	N/A	Y	Y
Forest red railed black cockatoo (<i>Calyptorhynchus banksii naso</i>)	4.37	N/A	N/A	Y	Y
White-tailed black cockatoo	7.72	N/A	N/A	Y	Y

Appendix B – 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> The proposed clearing is for 25 trees (up to 0.185 ha) within pasture. The application area does not contain any conservation significant flora or ecological communities and is of low biological diversity.</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 application area is unlikely to provide suitable habitat for conservation significant species given the completely degraded (Keighery, 1994) condition and lack of understory vegetation. The vegetation may provide limited poor-quality foraging habitat for black cockatoos, however, given the close proximity of better-quality habitat within the nearby Boyanup State Forest, the proposed clearing is not considered to be necessary for the maintenance black cockatoo in the local area.</p> <p>A Black Cockatoo Habitat Tree Assessment completed in September 2020 (Harewood, 2020) did not find any trees within the application area containing suitable hollows for black cockatoo breeding. A site map of all trees and locations surveyed can be seen in Appendix D.</p>	May be 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> The proposed clearing is for 25 trees (up to 0.185 ha) within pasture. Noting the completely degraded (Keighery, 1994) condition of the application area, and that none of the 25 trees identified are listed as threatened under the BC Act, the proposed clearing is unlikely to impact on habitat that is necessary for the continued existence of threatened flora.</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> The proposed clearing is for isolated trees within a parkland cleared area. The application area does not comprise vegetation that is representative of any state listed threatened ecological communities.</p>	Not likely to be at variance	No
Environmental values: 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> The extent of the mapped vegetation type, Kingia vegetation complex, and the extent of remnant native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. Vegetation in the proposed clearing area is not considered to be part of a significant ecological linkage in the local area.</p>	Not likely to be at variance	No

Assessment against the Clearing Principles	Variance level	Is further consideration required?
<p>Principle (h): <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>The application area is adjacent to the Boyanup State Forest (which surrounds the entire application area). The vegetation within the application area is highly impacted by weeds which may spread as a result of clearing. Given the above, the proposed may degrade the environmental values of this conservation area through the spread of weeds. These impacts can be mitigated through weed management conditions on the permit.</p>	May be at variance	No
Environmental values: land and water resources		
<p>Principle (f): <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> No watercourses or wetlands intersect the application area. Noting this, the proposed clearing is not likely to impact on an environment associated with a watercourse or wetland.</p>	Not likely to be at variance	No
<p>Principle (g): <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> Given the extent and condition of the vegetation, the proposed clearing is not likely to appreciably increase the likelihood of land degradation within the application area and therefore the proposed clearing is not likely to be at variance with this principle.</p>	Not likely to be at variance	No
<p>Principle (i): <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 watercourses wetlands or Public Drinking Water Sources Areas are recorded within the application area, the clearing is not likely to impact surface or groundwater quality.</p>	Not likely to be at variance	No
<p>Principle (j): <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> The mapped Kingia subsystem has a low flooding and waterlogging risk. The proposed clearing of 25 trees within pasture is unlikely to contribute to increased incidence or intensity of flooding, or contribute to waterlogging.</p>	Not likely to be at variance	No

Appendix C – Vegetation condition rating scale

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

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

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

Appendix D – Fauna Assessment and representative photos

“An inspection of trees within and near the proposed clearing area previously identified by Lundstrom Environmental Consultants was carried out by Greg Harewood (Zoologist – 17 years’ experience) on the 15 September 2020. The assessment has involved the inspection of the 25 trees within the proposed clearing area.

Nine of the 25 trees inspected were found to have a DBH <50cm in addition to not contain any hollows and therefore do not qualify as “habitat trees” in the first instance.

Of the 16 remaining trees 14 had a DBH >50cm but no contain hollows of any size. Two of these trees (wpt 10 and 12) had possible spout like hollows that were difficult to see from ground level but upon inspection with a drone were found to have no depth.

Two trees (wpt 13 and 16) contain hollows of various sizes however in all cases these were deemed to be unsuitable for black cockatoos due to entrance size being too small or if the accommodating branch was too small. One side entry hollow (<10cm entrance diameter) in tree wpt 16 showed evidence consistent with breeding galah activity i.e. hollow entranced chewed around entire perimeter.” (Harewood, 2020)



Figure 2: Extract from Harewood (2020) Black Cockatoo Habitat Assessment showing location of trees inspected.



Figure 3: Drone image of vegetation proposed to be cleared



Figure 4: Photo showing representative trees taken during a field visit undertaken on 27 August 2020 by Lundstrom Environmental Consultancy. This photo shows the trees proposed for clearing as well as the southern boundary of the paddock which abuts Boyanup State Forest.



Figure 5: Photo showing tree proposed for clearing with hollows. These hollows are considered unsuitable for black cockatoo breeding (Harewood, 2020).

Appendix E – References and databases

1. GIS datasets

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

- Aboriginal Heritage Places (DPLH-001)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- IBRA Vegetation Statistics
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Regional Parks (DBCA-026)
- Soil and Landscape Mapping – Best Available

Restricted GIS Databases used:

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

2. References

Commonwealth of Australia (2001) National Objectives and Targets for Biodiversity Conservation 2001-2005, Canberra.

Commonwealth of Australia (2022) Referral guideline for 3 WA threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black cockatoo,

Cotton Holdings Pty Ltd (2020) *Clearing permit application CPS 9059/1*, received 21 September 2020 (DWER Ref: A1936469).

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.

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>.

Harewood, (2020). Black Cockatoo Habitat Tree Assessment, Lot 333 Nybo Road Gwindinup, September 2020.

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, EM and Havel JJ. (1998). Vegetation Mapping in the South West of Western Australia and Region Forest Agreement vegetation complexes. Map sheets for Pemberton, Collie, Pinjarra, Busselton-Margaret River, Mt Barker, and Perth, Western Australia. Scale 1:250,000. Department of Conservation and Land Management, Perth.

Purdie, B R, Tille, P J, and Schoknecht, N R. (2004). Soil-landscape mapping in south-Western Australia : an overview of methodology and outputs. Department of Agriculture and Food, Western Australia, Perth. Report 280.

Shire of Capel (2021). *Advice for clearing permit application CPS 9059/1*, received 6 January 2021 (DWER Ref: A1969645).

Tille, P J, Wilson, G, and National Landcare Program (Australia). (1996), Wellington-Blackwood land resources survey. Department of Agriculture and Food, Western Australia, Perth. Report 14.