GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 10397/1

File Number: Shire of Capel

Duration of Permit: From 15 January 2024 to 15 January 2026

PERMIT HOLDER

Shire of Capel

LAND ON WHICH CLEARING IS TO BE DONE

Weld Road Reserve (PIN 11543470), Capel River

AUTHORISED ACTIVITY

The permit holder must not clear more than one (1) native tree 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 15 January 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. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 2; and (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 3.

5. Reporting

The permit holder must provide to the *CEO* the records required under condition 4 of this permit when requested by the *CEO*.

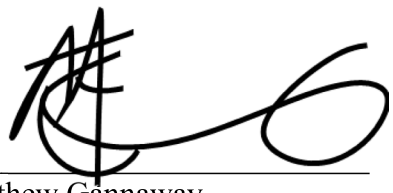
DEFINITIONS

In this permit, the terms in Table 2 have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
fill	means material used to increase the ground level, or to fill a depression.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
dieback	means the effect of *Phytophthora* species on native vegetation.
EP Act	*Environmental Protection Act 1986* (WA)
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
weeds	means any plant – (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or (b) published in a Department of Biodiversity, Conservation and Attractions species-led ecological impact and invasiveness ranking summary, regardless of ranking; or (c) not indigenous to the area concerned.

END OF CONDITIONS



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

Officer delegated under Section 20
of the Environmental Protection Act 1986

22 December 2023

SCHEDULE 1

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

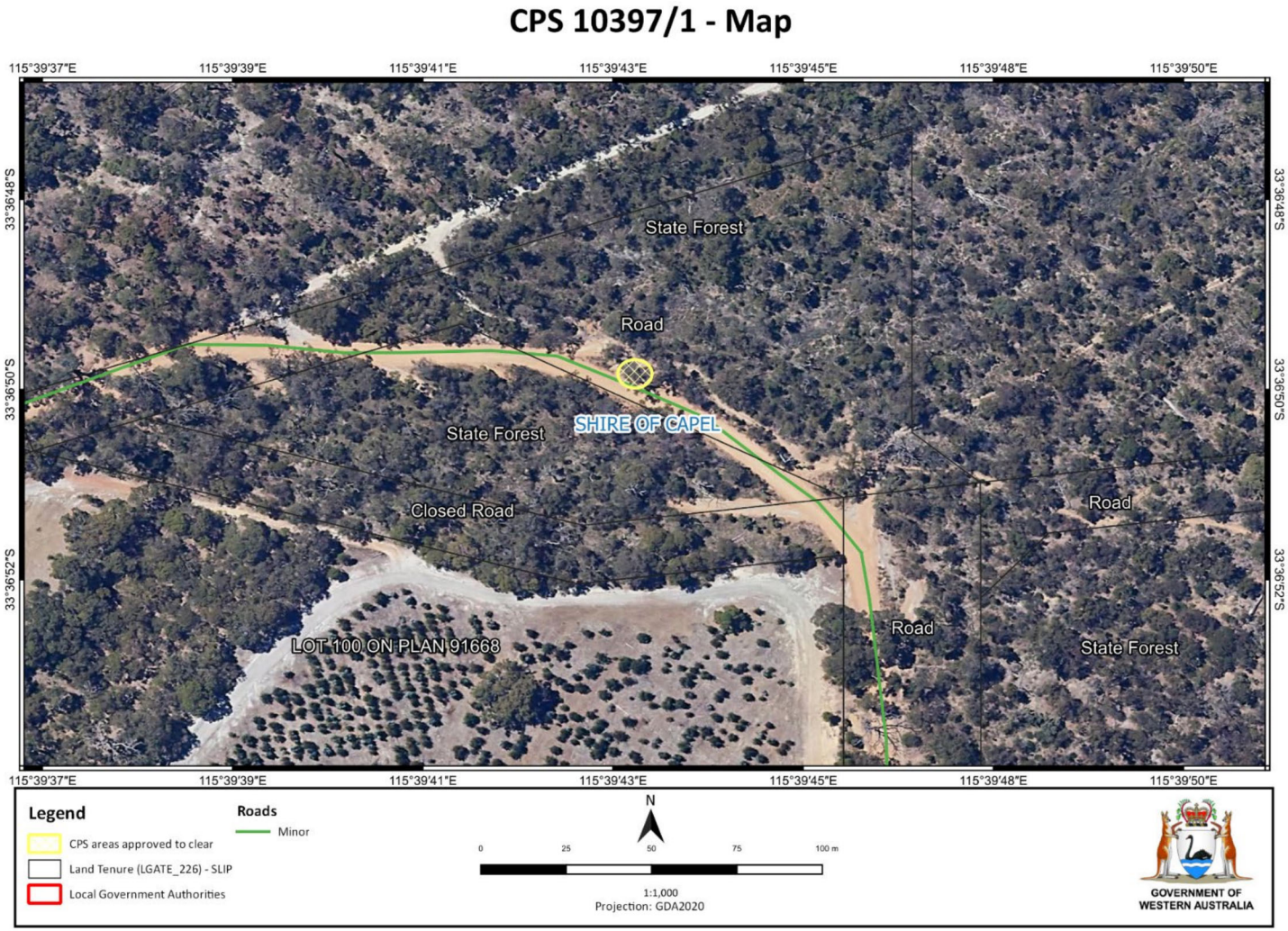


Figure 1: Map of the boundary of the area within which clearing may occur.

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10397/1
Permit type:	Area permit
Applicant name:	Shire of Capel
Application received:	27 October 2023
Application area:	One native tree
Purpose of clearing:	Road and drainage upgrades
Method of clearing:	Mechanical
Property:	Weld Road reserve (PIN 11543470)
Location (LGA area/s):	Shire of Capel
Localities (suburb/s):	Capel River

1.2. Description of clearing activities

The Shire of Capel is proposing to undertake the clearing of a single native tree within Weld Road Reserve, Capel River. The proposed clearing will facilitate upgrades to the road and drainage system (Shire of Capel, 2023a) (see Figure 1, Section 1.5).

1.3. Decision on application

Decision:	Granted
Decision date:	22 December 2023
Decision area:	One native tree, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix E.1), site photos (see Appendix D), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the purpose clearing is to upgrade road and drainage along Weld Road.

The assessment identified that the proposed clearing will result in:

- the loss of native vegetation that is suitable habitat for 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 unacceptable risk to the environment. The applicant provided sufficient evidence that the tree proposed to be cleared does not contain breeding habitat for black cockatoos and has minimal foraging habitat.

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

- avoid, minimise to reduce the impacts and extent of clearing, and
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

1.5. Site maps

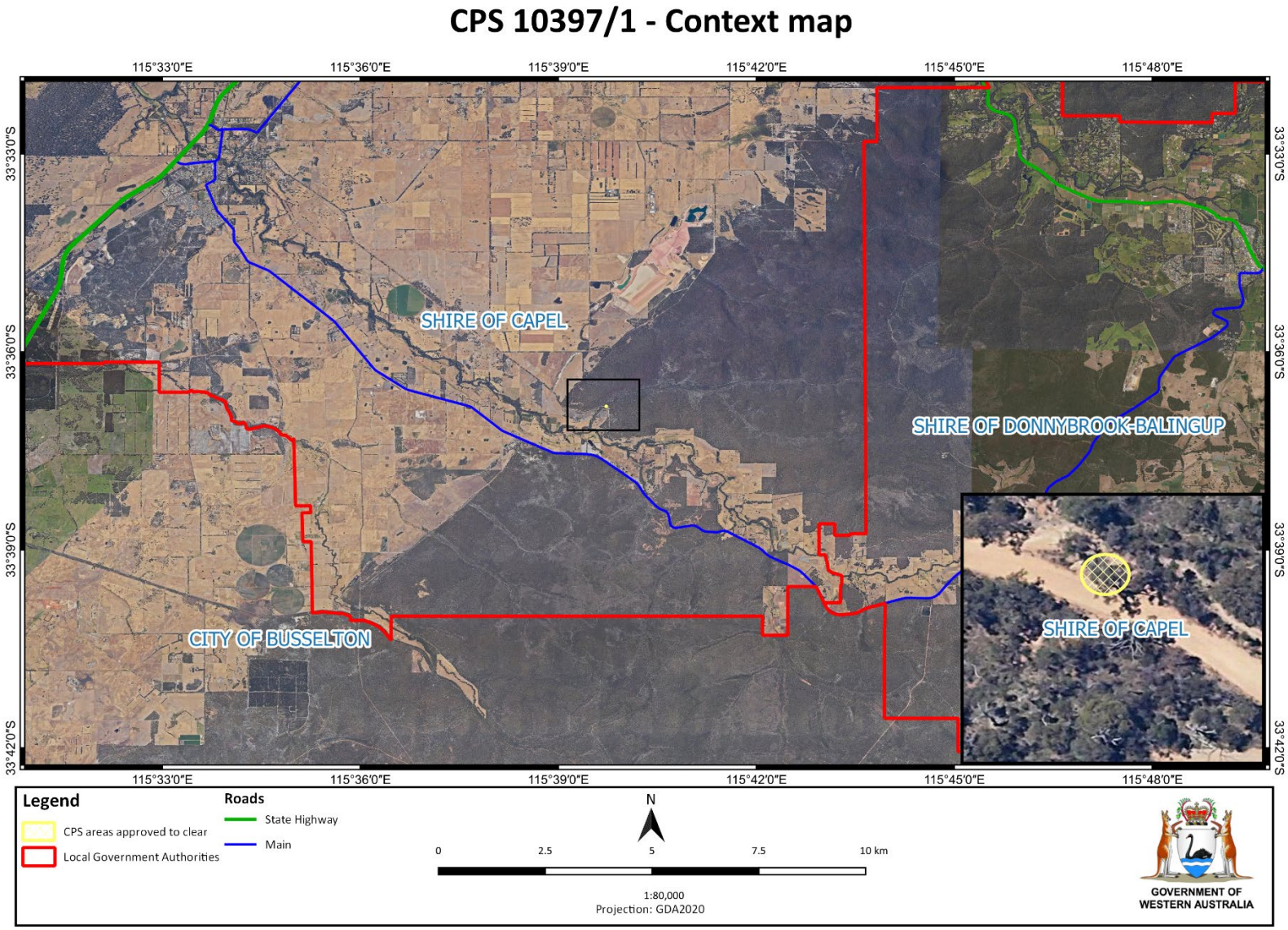


Figure 1: Context map of the application area the area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

CPS 10397/1 - Map

Figure 2: Map of the application area the area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit

2 Legislative context

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

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

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

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant advised that one tree is required to be cleared to enable upgrades and maintenance of Weld Road and the drainage system. Other options considered in the upgrade Weld Road and associated drainage system involved the clearing of more vegetation and larger trees on the opposite of the road. The applicant chose the current proposed clearing due to the reduced clearing footprint. No other vegetation will be damaged during the proposed clearing (Shire of Capel, 2023a).

The applicant submitted site photos demonstrating that the tree proposed to be cleared does not have hollows suitable for being utilised by black cockatoos (Shire of Capel, 2023b).

The Delegated Officer was satisfied that the applicant had made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see **Error! Reference source not found.**) 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. Biological values (biodiversity, fauna) - Clearing Principles (a) and (b)

Assessment

According to available databases, 18 conservation significant fauna species have been recorded within the local area comprising of one Priority (P) 3, three P4, three Endangered, three Vulnerable (VU), two critically endangered (CR), four migratory, one specially protected species (OS), and one conservation dependent fauna taxon. Noting the habitat requirements, the distribution of the recorded species, the mapped vegetation types, and the condition of the vegetation within the application area, the application area may comprise of suitable habitat for the following species:

- *Bettongia penicillata ogilbyi* (Woylie) (VU)
- *Calyptorhynchus banksii naso* (Forest red-tailed black cockatoo) (VU)
- *Dasyurus geoffroii* (Chuditch) (CR)
- *Isoodon fusciventer* (Quenda) (VU)
- *Phascogale tapoatafa wambenger* (South-western brush-tailed phascogale) (P4)

- *Pseudocheirus occidentalis* (Western ringtail possum) (CR)
- *Zanda baudinii* (Baudin's cockatoo) (EN)
- *Zanda latirostris* (Carnaby's cockatoo) (EN)

Black cockatoos

When considering the habitat of Black Cockatoos, it can be categorized into three distinct groups: foraging, breeding, and roosting. Black Cockatoos typically forage within a 12-kilometre radius of their active breeding site (Commonwealth of Australia, 2022). Black cockatoos will flock in search of food sources within six kilometres of their night roost (Commonwealth of Australia, 2022). However, they may travel up to 20 kilometres or more (Commonwealth of Australia, 2022). To maintain their populations, it is crucial to have an abundance of food resources within the range of breeding and roosting sites. Consequently, foraging resources are evaluated based on known breeding and night roosting sites, primarily within 12 kilometres of a breeding or roosting site (Commonwealth of Australia, 2022). The application area is located within the modelled range for Carnaby's cockatoo and the core distributed range of the Forest Red-tailed Black-cockatoo and Baudin's cockatoo. The range of black cockatoo species has contracted west and south from their historical range.

Foraging habitat

Baudin's, Carnaby's, and Forest Red-tailed Black-cockatoo forage on a variety of seeds, nuts, flowers, and plants, including Proteaceous species (*Banksia* spp., *Hakea* spp., and *Grevillea* spp.), as well as *Allocasuarina*, *Eucalyptus* spp., *Corymbia calophylla* (Marri), and a range of introduced species (Valentine & Stock, 2008). According to spatial data, there is one record of black cockatoo breeding within 12 kilometres of the application area, approximately 2.85 kilometres from the application area. Although the application tree is a *Eucalyptus marginata* (Jarrah) tree, the site photos (see Appendix D) indicate that the tree has approximately <40 per cent canopy coverage with little to no black cockatoo food. With the local area (10 kilometres radius from the application area) retaining over 52 per cent vegetation remaining, it is unlikely that the proposed clearing will negatively impact available foraging resources of any black cockatoo species.

Breeding Habitat

Black cockatoo species are known to nest in hollows of live and dead trees, including Marri, Jarrah, *Eucalyptus diversicolor* (karri), *Eucalyptus wandoo* (Wandoo), *Eucalyptus gomphocephala* (Tuart), *Eucalyptus rudis* (Flooded gum), 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 ≥ 50 centimetres for most tree species (Commonwealth of Australia, 2022). Based on the site photos, the Jarrah tree has a DBH >50cm, with the tree potentially containing hollows (see Appendix D). The Shire of Capel (2023b) provided additional drone site photos that demonstrated the apparent hollows were not suitable to be utilised by black cockatoos for breeding. The branches did not have any bite marks around the hollow rim or any other sign of fauna activity, both historically or currently. The loss of the Jarrah tree due to the proposed clearing is unlikely to significantly impact the availability of potential breeding habitat for black cockatoos.

Roosts

Black cockatoo species will utilise a wide range of native and non-native trees situated within a variety of land-use types to roost. Black cockatoos will usually roost in tall (average of >25 metres) tree species that have a relatively thick trunk (DBH of 1 metre) and medium foliage density (average of 50%) (Le Roux, 2017). According to available databases, there are three known roost sites within the local area. The closest known roost site for black cockatoo species is approximately 2.85 kilometres from the application area. The application tree may be greater than 25 meters in height. However, even if the application tree provides suitable roost habitat, the removal of one tree within an environment that has 52 per cent vegetation remaining is unlikely to significantly impact the availability of black cockatoo roosting habitat. No evidence of roosting by fauna species was apparent in the additional photos provided by the Shire of Capel (2023b).

Ground-dwelling and arboreal fauna species

Chuditch

Chuditch are carnivorous marsupials, typically associated with riparian Jarrah Forest or other forest, woodland or shrubland habitats that contain suitable den sites, including hollow logs and tree hollows, and sufficient prey biomass (DEC, 2012a). There is one record of this species within the local area, being approximately 2.92 kilometres from the

application area. Given the application is a Jarrah, it may provide suitable habitat for chuditch. However, noting that it is only a single tree species and the presence of extensive high quality habitat surrounding the application area, the proposed clearing is unlikely to result in impacts to significant habitat for the Chiditch.

Quenda

In their natural habitat, Quendas live in dense understories in swampland areas, Banksia, and Jarrah woodlands. However, Quendas have adapted to urban and suburban habitats in recent years (DBCA, 2018). There are 13 records of Quenda within 10 kilometres of the application area, with the closest being 1.47 kilometres from the application area. Given that the species is exclusively ground-dwelling, the footprint of the clearing proposed and the amount of remnant native vegetation immediately adjacent, the application area is not considered significant habitat for Quenda.

South-western brush-tailed phascogale

The south-western brush-tailed phascogale is an arboreal Dasyurid, associated with dry sclerophyll forests and open woodlands that contain hollow-bearing trees, characterised by high canopy cover and connectivity (DEC, 2012b). Thirteen records of this species are mapped within the local area with the closest record approximately 3.58 kilometres from the application area. Noting the small extent of the clearing area, the location along a road, and the existence of adjacent remnant vegetation, with no suitable hollows present within the Jarrah tree, the proposed clearing area is unlikely to comprise significant habitat for this species.

Western ringtail possum

The western ringtail possum (WRP) is a medium-sized, nocturnal species that roam through the trees at night, feeding on leaves of eucalypt, marri and peppermint trees and other fruits and flowers. The species has a long, thin tail with a white tip that helps it to move through the trees and carry nesting material (DCCEEW, 2013). The current distribution of the WRP is patchy and restricted mainly to the moister south-western corner of Western Australia (DCCEEW, 2013), especially near coastal areas of peppermint woodland and peppermint/tuart associations from the Australind/Eaton area to the Waychinicup National Park (DCCEEW, 2013). The main identified threats to the WRP are habitat loss and fragmentation, predation, especially by introduced predators and changing fire regimes. There are 77 records of WRP identified within the local area (10-kilometre radius). However, considering that only one tree is proposed to be cleared and a large amount of adjacent vegetation, with no suitable hollows present within the Jarrah tree, the proposed clearing is unlikely to cause a significant impact on the WRP.

Woylie

The Woylie is an omnivorous marsupial species, feeding on predominantly seasonal fruits/berries, roots, invertebrates, and leaves (DCCEEW, 2009). The species is predominantly nocturnal, resting during the day in a well-concealed nest built over a shallow depression, most commonly constructed of long strands, preferably grassed, but also other material (DEC, 2012c). The Woylie has only four indigenous populations within South West Western Australia. However, they have been re-established in 16 additional locations throughout Western Australia, with the location closest to the application area failing to re-establish the species (DCCEEW, 2009). There is only a single record of the Woylie within the radius of the application area being approximately 2.92 kilometres from the application area. The Woylie may be within the surrounding area. However, removing a single Jarrah tree is unlikely to negatively impact the species if it is within the vicinity of application area.

Conclusion

Given the size of the clearing and the abundant vegetation in relation to its position in the landscape and lack of suitable hollows, it is unlikely that the removal of an individual Jarrah tree would negatively impact any black cockatoo populations. For the reasons set out above, it is considered that some Ground-dwelling and arboreal fauna individuals may utilise the tree in transit, however the proposed clearing is unlikely to negatively impact these species.

Conditions

No fauna management conditions required.

3.3. Relevant planning instruments and other matters

Several Aboriginal sites of significance have been mapped within the local 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. Site characteristics

A.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 the department 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.

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td>Local context</td><td>The area proposed to be cleared is a single Eucalyptus marginata (Jarrah) tree in the intensive land use zone of Western Australia. It is surrounded Corymbia calophylla-Eucalyptus marginata woodland and borders the Boyanup State Forrest.

Spatial data indicates the local area (10-kilometre radius from the centre of the area) proposed to be cleared retains approximately 52.85 per cent of the original native vegetation cover.</td></tr>
<tr><td>Ecological linkage</td><td>The application area is not attached to any formal ecological linkages, the closest ecological linkage is the Southwest regional ecological linkage (36), being approximately 237 meters from the application area.

The clearing of the single Jarrah tree is unlikely to sever any formal or unformal ecological linkages</td></tr>
<tr><td>Conservation areas</td><td>There are 35 conservation areas within a 10-kilometre radius of the application area. The closest is Boyanup State Forest, surrounding the application area, only separated by a road. Below are the closest first instances of conservation areas:

<table>
<tr><th>Conservation area type</th><th>Name/ID</th><th>Approximate Distance from application area (km)</th><th>Direction from application area</th></tr>
<tr><td>Boyanup State Forest</td><td>4207</td><td>0.01</td><td>South</td></tr>
<tr><td>Timber Reserve</td><td>4215</td><td>0.56</td><td>West</td></tr>
<tr><td>Jarrahwood State Forest</td><td>4198</td><td>2.11</td><td>South</td></tr>
<tr><td>DBCA land reserve</td><td>4000/451</td><td>7.17</td><td>Southwest</td></tr>
<tr><td>Reserve</td><td>1256</td><td>8.79</td><td>East</td></tr>
<tr><td>Millbrook State Forest</td><td>4216</td><td>9.45</td><td>Southwest</td></tr>
<tr><td>Conservation of Flora and Fauna</td><td>9546</td><td>9.52</td><td>Southwest</td></tr>
</table>
The clearing of a single tree outside of any conservation area is unlikely to impact any conservation areas nearby.</td></tr>
<tr><td>Vegetation description</td><td>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of a single Eucalyptus marginata (Jarrah) tree. Representative photos are available in Appendix D.

This is consistent with the mapped vegetation type:
• Blackwood Plateau and Plain (243): Woodland to open forest of Corymbia calophylla (Marri), Eucalyptus marginata subsp. marginata (Jarrah), Xylomelum occidentale (woody pear) on slopes and tall shrubland of Agonis linearifolia in valley floors in the humid zone.

The mapped vegetation type retains approximately 75.28 per cent of the original extent (Government of Western Australia, 2019).</td></tr>
<tr><td>Vegetation condition</td><td>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in very good to excellent (Keighery, 1994) condition.

The full Keighery (1994) condition rating scale is provided in Appendix C.
Representative photos are available in Appendix D.</td></tr>
<tr><td>Climate and landform</td><td>The climate experienced in the application is Mediterranean, characterized by hot and dry summers and cool and wet winters. According to the Bureau of Meteorology (2021), an average of 735.8 millimetres of rainfall is recorded annually from the Paynedale Alert</td></tr>
</table>

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td></td><td>WA station (no. 9987), which is the closest weather station, located approximately 4.87 kilometres from the application area. The majority of this rainfall is received between the months of May and September (BoM 2022).

The elevation of the application area on the 50 meters Isohyet and gently slopes down as towards the west to 45 meters Isohyet.</td></tr>
<tr><td>Soil description</td><td>The soil type across the application area is mapped as the following:

<table>
<tr><td>Name</td><td>Goodwood Valleys System</td></tr>
<tr><td>Soils</td><td>214GvRO3</td></tr>
<tr><td>Description</td><td>Low valley slopes (relief of 30-60 m and gradients of 5-20%). Valleys, of the Donnybrook Sunkland. Sandy gravel, loamy gravel and deep sand. Jarrah-marri forest and woodland.</td></tr>
</table></td></tr>
<tr><td>Land degradation risk</td><td>The degradation risk factors mapped over the application area are detailed below:

<table>
<tr><th></th><th>214GvRO3</th></tr>
<tr><td>Wind erosion</td><td>H2: >70% of map unit has a high to extreme wind erosion risk</td></tr>
<tr><td>Water erosion</td><td>M1: 10-30% of map unit has a high to extreme water erosion risk</td></tr>
<tr><td>Salinity risk</td><td>L1: <3% of map unit has a moderate to high salinity risk or is presently saline</td></tr>
<tr><td>Phosphorous export</td><td>M2: 30-50% of map unit has a high to extreme phosphorus export risk</td></tr>
<tr><td>Waterlogging</td><td>L1: <3% of map unit has a moderate to very high waterlogging risk</td></tr>
</table>
<table>
<tr><td>Subsurface acidification</td><td>H2: >70% of map unit has a high subsurface acidification risk or is presently acid</td></tr>
<tr><td>Acid sulphate soils</td><td>No ASS</td></tr>
</table>
<table>
<tr><td>Flooding</td><td>L1: <3% of the map unit has a moderate to high flood risk</td></tr>
<tr><td>Floodplains</td><td>No</td></tr>
</table></td></tr>
<tr><td>Waterbodies</td><td>The desktop assessment and aerial imagery indicated that the closest river to the application area is Capel River (minor river), approximately 10 meters from the application area. The main Capel River body is located approximately 710 meters from the application area.

The clearing is unlikely to affect the Capel River running through the application area. Contrarily the clearing is to facilitate an upgrade to the drainage system to help water movement through the application area.</td></tr>
<tr><td>Hydrogeography</td><td>
<table>
<tr><td>Hydrological Zone</td><td>Donnybrook</td></tr>
<tr><td>Basin</td><td>Busselton Coast (610)</td></tr>
<tr><td>Hydrographic Catchment</td><td>Capel River</td></tr>
</table>
<table>
<tr><td>RIWI Act Surface Water and Irrigation District</td><td>Yes</td><td>Capel River System</td></tr>
<tr><td>RIWI Act Rivers</td><td>No</td><td></td></tr>
<tr><td>RIWI Act Groundwater Areas</td><td>Yes</td><td>Busselton-Capel</td></tr>
<tr><td>CAWS Act Clearing Control Catchment</td><td>No</td><td></td></tr>
<tr><td>Public Drinking Water Source Areas</td><td>No</td><td></td></tr>
<tr><td>Wellhead Protection Zone</td><td>No</td><td></td></tr>
</table></td></tr>
</table>

Characteristic	Details
	Reservoir Protection Zone: No The salinity of the application area is mapped at 500-1000 total dissolved solids milligrams per litre.
Flora	According to available database, 55 conservation significant flora species have been recovered within the local area (10-kilometre buffer). Comprising seven Priority 1, four Priority 2, 20 Priority 3, seven Priority 4, and 17 threatened flora taxa. As the proposed clearing is a single Jarrah tree with no remnant native understorey, it is unlikely that the clearing will negatively impact any conservation significant flora.
Ecological communities	According to available databases, ten conservation-significant ecological communities have been mapped within the local area (10-kilometre buffer). None of these records occur over the application area. However, the closest Priority Ecological Community (PEC) is the Whicher Scarp Jarrah woodland of deep-coloured sands, located approximately 0.08 kilometres east of the application area. Given that the application area is a single tree, the proposed clearing is unlikely to negatively impact any Threatened Ecological Communities (TECs) or PECs.
Fauna	According to available database, 18 conservation significant fauna species have been recorded within the local area comprising of one Priority 3, three Priority 4, three Endangered, three Vulnerable, two critically endangered, four migratory, one specially protected species (OS), and one conservation dependent fauna taxon. All three species of black cockatoo species, the Carnaby's cockatoo (*Zanda latirostris*), Baudin's cockatoo (*Zanda baudinii*), and forest red-tailed black cockatoo (*Calyptorhynchus banksii naso*) have been recorded within a 12-kilometre radius of the application area. The application area is within the distribution of the species habitat. There are three black cockatoos' roosts within a 12-kilometre radius of the application area, with the closest being 2.85 kilometres from the application area. One white-tailed black cockatoos' (Baudins and Carnabys) hollow has been recorded within 6.64 kilometres of the application area. Based on the distance from the application area, the habitat requirements and vegetation type, the following species may be affected by the proposed clearing: • *Bettongia penicillata ogilbyi* • *Calyptorhynchus banksii naso* • *Dasyurus geoffroii* • *Isoodon fusciventer* • *Phascogale tapoatafa wambenger* • *Pseudocheirus occidentalis* • *Zanda baudinii* • *Zanda latirostris*

A.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 all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	222,916.97	14.85
Vegetation complex					
Blackwood Plateau and Plain (243)	17,240.71	12,979.04	75.28	11,447.43	66.40
Local area					
10km radius	31,455.29	16,622.57	52.85	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Flora analysis table

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

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Acacia flagelliformis	P4	N	Y	N	1.26	8	N/A
Acacia semitrullata	P4	N	N	N	4.49	5	N/A
Adelphacme minima	P3	N	Y	N	9.73	2	N/A
Andersonia ferricola	P1	N	Y	Y	5.57	1	N/A
Aponogeton hexatepalus	P4	N	N	N	9.80	2	N/A
Banksia mimica	T	N	Y	Y	6.13	2	N/A
Banksia nivea subsp. *uliginosa*	T	N	Y	N	8.41	2	N/A
Banksia squarrosa subsp. *argillacea*	T	N	Y	Y	3.83	4	N/A
Blennospora doliiformis	P3	N	N	N	4.15	2	N/A
Boronia anceps	P3	N	N	Y	9.37	2	N/A
Boronia capitata subsp. *gracilis*	P3	N	N	N	1.96	1	N/A
Boronia humifusa	P1	N	Y	N	1.14	36	N/A
Boronia tetragona	P3	N	Y	N	8.04	4	N/A
Caladenia huegelii	T	N	Y	N	7.61	2	N/A
Caladenia procera	T	N	N	Y	4.81	1	N/A
Caladenia speciosa	P4	N	Y	N	1.53	3	N/A
Caladenia uliginosa subsp. *patulens*	P1	N	Y	N	5.04	1	N/A
Calothamnus quadrifidus subsp. *teretifolius*	P4	N	N	Y	3.75	5	N/A
Caustis sp. Boyanup (G.S. McCutcheon 1706)	P3	N	Y	N	5.39	2	N/A
Chamaescilla gibsonii	P3	N	Y	Y	9.82	1	N/A

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Chamelaucium roycei	T	N	Y	Y	9.45	7	N/A
Chordifex gracilior	P3	N	N	Y	9.01	2	N/A
Cyathochaeta teretifolia	T	N	N	Y	3.75	1	N/A
Darwinia whicherensis	T	N	Y	Y	4.32	5	N/A
Daviesia elongate	T	N	N	N	2.23	3	N/A
Dillwynia sp. Capel (P.A. Jurjevich 1771)	P3	N	Y	Y	5.68	2	N/A
Franklandia triaristata	P4	N	Y	Y	4.64	4	N/A
Gastrolobium modestum	T	N	Y	N	5.88	1	N/A
Gastrolobium papilio	T	N	N	Y	9.78	1	N/A
Grevillea bronweniae	P3	N	Y	Y	7.89	1	N/A
Grevillea elongate	T	N	N	N	8.17	2	N/A
Grevillea maccutcheonii	T	N	N	N	9.75	2	N/A
Hakea oldfieldii	P3	N	Y	N	9.43	1	N/A
Isopogon formosus subsp. *dasylepis*	P3	N	N	Y	9.26	3	N/A
Lambertia echinata subsp. *occidentalis*	T	N	N	Y	9.77	2	N/A
Leucopogon sp. Busselton (D. Cooper 243)	P2	N	Y	N	9.01	2	N/A
Meionectes tenuifolia	P3	N	N	N	9.37	3	N/A
Myriophyllum echinatum	P3	N	N	Y	8.16	6	N/A
Orianthera wendyae	P1	N	N	N	2.46	2	N/A
Petrophile latericola	T	N	N	N	9.64	4	N/A
Platytheca anasima	P2	N	Y	N	0.07	18	N/A
Pultenaea skinneri	P4	N	Y	Y	6.76	1	N/A
Schoenus pennisetis	P3	N	N	Y	2.01	1	N/A
Stenanthemum sublineare	P2	N	N	Y	6.44	1	N/A
Stylidium acuminatum subsp. *acuminatum*	P2	N	Y	N	9.21	1	N/A
Stylidium nitidum	P1	N	Y	Y	0.41	3	N/A
Stylidium paludicola	P3	N	Y	N	1.43	3	N/A
Synaphea hians	P3	N	Y	N	9.78	2	N/A
Synaphea petiolaris subsp. *simplex*	P3	N	Y	Y	9.36	6	N/A
Synaphea polypodioides	P3	N	Y	Y	8.43	3	N/A
Synaphea sp. Argyle (R. Butcher RB 1323)	P1	N	Y	Y	0.01	1	N/A
Synaphea sp. Redgate Road (J. Scott 16)	P1	N	Y	N	2.04	1	N/A
Verticordia attenuata	P3	N	N	N	8.11	5	N/A
Verticordia densiflora var. *pedunculata*	T	N	Y	N	4.22	12	N/A
Verticordia plumosa var. *vassensis*	T	N	Y	Y	7.36	2	N/A

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

A.4. Fauna analysis table

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Birds						
Actitis hypoleucos (common sandpiper)	MI	N	N	7.98	3	N/A
Botaurus poiciloptilus (Australasian bittern)	EN	N	N	9.01	2	N/A
Calyptorhynchus banksii naso (forest red-tailed black cockatoo)	VU	Y	Y	2.84	9	N/A
Falco peregrinus (peregrine falcon)	OS	N	N	7.14	6	N/A
Oxyura australis (blue-billed duck)	P4	N	N	7.98	1	N/A
Pandion haliaetus (osprey)	MI	N	N	7.98	1	N/A
Plegadis falcinellus (glossy ibis)	MI	N	N	7.98	1	N/A
Tringa nebularia (common greenshank)	MI	N	N	7.98	1	N/A
Zanda baudinii (Baudin's cockatoo)	EN	Y	Y	5.76	16	N/A
Zanda latirostris (Carnaby's cockatoo)	EN	Y	Y	1.71	15	N/A
Mammals						
Bettongia penicillata ogilbyi (woylie, brush-tailed bettong)	VU	Y	Y	2.92	2	N/A
Dasyurus geoffroii (chuditch, western quoll)	CR	Y	Y	2.92	1	N/A
Hydromys chrysogaster (water-rat, rakali)	CD	N	N	0.82	10	N/A
Isoodon fusciventer (quenda, southwestern brown bandicoot)	VU	Y	Y	1.47	13	N/A
Phascogale tapoatafa wambenger (south-western brush-tailed phascogale, wambenger)	P4	Y	Y	3.58	13	N/A
Pseudocheirus occidentalis (western ringtail possum, ngwayir)	CR	Y	Y	1.42	77	N/A
Setonix brachyurus (quokka)	P4	N	Y	4.58	3	N/A
Fish						
Geotria australis (pouched lamprey)	P3	N	N	9.81	1	N/A

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

A.5. Ecological community analysis table

Community name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Banksia Woodlands of the Swan Coastal Plain ecological community	P3	Y	Y	Y	0.87	278	N/A
Central Whicher Scarp Mountain Marri woodland	P1	Y	Y	N	6.95	1	N/A
Corymbia calophylla – Kingia australis woodlands on heavy soils (floristic community type 3a as originally described in Gibson et al. 1994)	CR	Y	Y	N	4.79	3	N/A
Corymbia calophylla woodlands on heavy soils of the southern Swan Coastal Plain (floristic community type 1b as originally described in Gibson et al. 1994)	CR	Y	Y	N	9.05	1	N/A
Herb rich saline shrublands in clay pans (floristic community type 7 as originally described in Gibson et al. 1994)	EN	N	N	N	4.22	1	N/A
Shrublands on dry clay flats (floristic community type 10a as originally described in Gibson et al. 1994)	EN	N	N	N	9.31	1	N/A
Shrublands on southern Swan Coastal Plain Ironstones (Busselton area) (floristic community type 10b as originally described in Gibson et al. 1994)	CR	N	N	N	9.34	1	N/A
Southern wet shrublands, Swan Coastal Plain (floristic community type 2 as originally described in Gibson et al. 1994)	CR	N	N	N	4.86	1	N/A
Swan Coastal Plain Paluslope Wetlands	P1	N	N	N	3.46	4	N/A
Whicher Scarp Jarrah woodland of deep coloured sands	P1	Y	Y	Y	0.08	18	N/A

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

Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
Principle (a): *"Native vegetation should not be cleared if it comprises a high level of biodiversity."* Assessment: The area proposed to be cleared does not contain locally or regionally significant flora or fauna habitats or unique assemblage of plants. It does contain a small amount of foraging habitat for fauna species.	May be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (b): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."* Assessment: The area proposed to be cleared does contain foraging habitat for black cockatoo species.	May be at variance	Yes *Refer to Section 3.2.1, above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: Given the proposed clearing, the application area does not contain threatened flora species.	Not at variance	No
Principle (d): *"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community."* Assessment: The area proposed to be cleared is a single tree, it is unlikely that the clearing will negatively affect any threatened ecological communities.	Not at variance	No
Environmental value: significant remnant vegetation and conservation areas		
Principle (e): *"Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."* Assessment: The extent of the mapped vegetation type and native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia.	Not at variance	No
Principle (h): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."* Assessment: Although the application area is 0.01 kilometres from the nearest conservation area, the clearing is only a single tree. Therefore, the clearing is not likely to have an impact on the environmental values of adjacent and conservation areas. Weed and dieback management practices will minimise any risk to the adjacent conservation area.	Not at variance	No
Environmental value: land and water resources		
Principle (f): *"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."* Assessment: Although the application area is 10 meters from the Capel River minor stream, the clearing is only a single tree. The tree being cleared is not in an environment associated with a watercourse or wetland. The proposed clearing is unlikely to impact on- or off-site hydrology and water quality.	Not at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."*	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Assessment: The mapped soils are highly susceptible to wind, phosphorous export, and subsurface acidification and moderately susceptible to water erosion, salinity risk and flooding. Noting the extent of the application area, the proposed clearing is not likely to have an appreciable impact on land degradation.		
Principle (i): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."* Assessment: Given no water courses, 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.	Not at variance	No
Principle (j): "*Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding or waterlogging.	Not 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.

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 D. Photographs of the vegetation (Shire of Capel, 2023a; 2023b)

Figure 3: Tree proposed to be cleared (centre) *Eucalyptus marginata* (Jarrah), photo taken facing West.

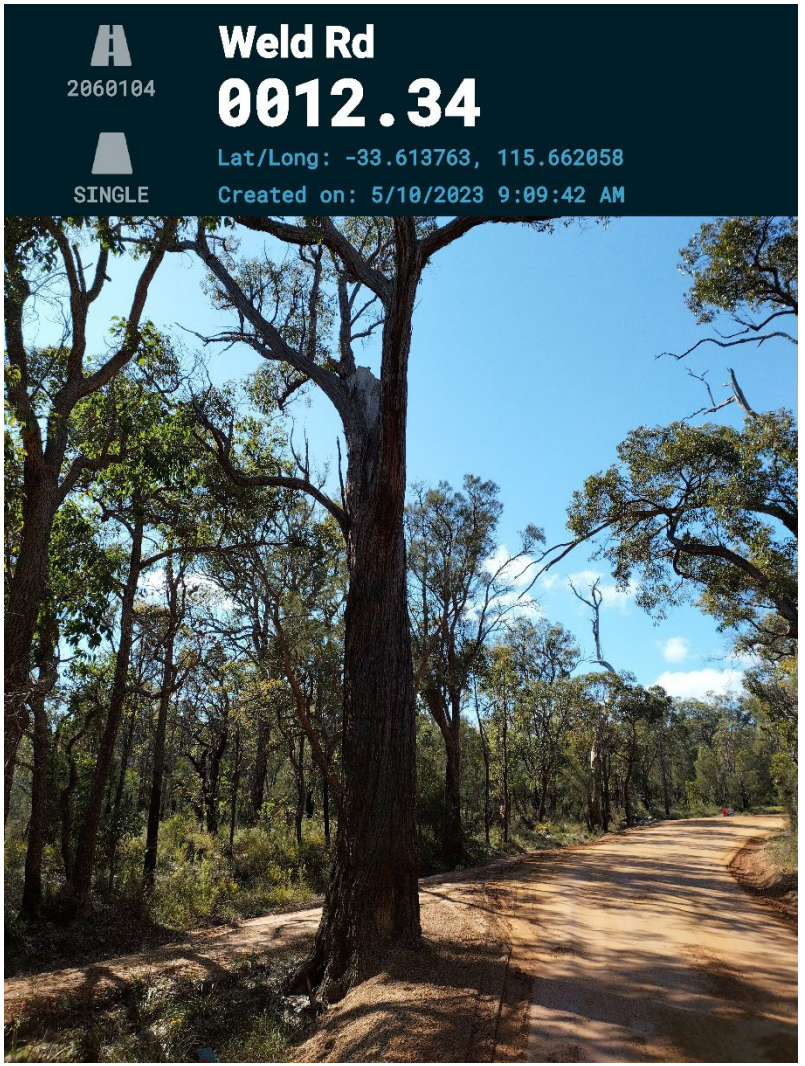


Figure 4: Tree proposed to be cleared (centre) *Eucalyptus marginata* (Jarrah), photo taken facing East, vegetation foliage comprises approximately 40% coverage of Jarrah.

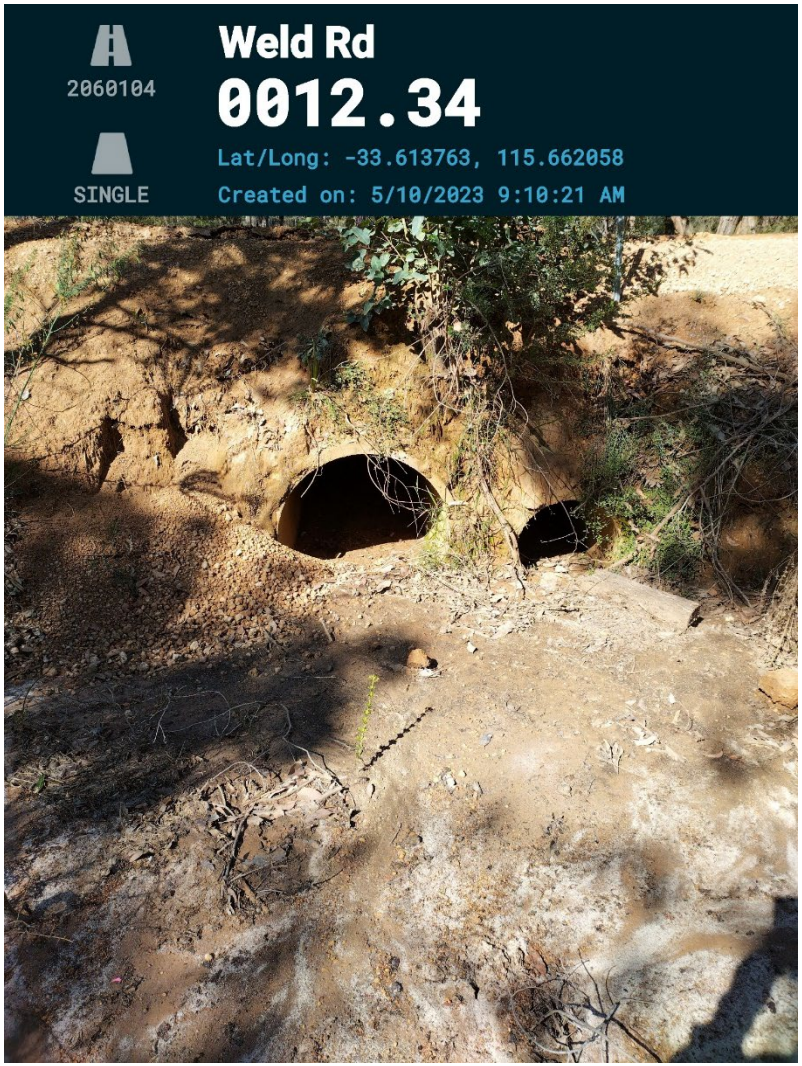


Figure 5: Photograph of the drainage system that the application tree is blocking.

Figure 6: Drone photo of the application tree *Eucalyptus marginata* (Jarrah) hollows.

Figure 7: Drone photo of the application tree *Eucalyptus marginata* (Jarrah) hollows.

Figure 8: Drone photo of the application tree *Eucalyptus marginata* (Jarrah) hollows.

Figure 9: Drone photo of the application tree *Eucalyptus marginata* (Jarrah) hollows.

Appendix E. Sources of information

E.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)

- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

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