



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9738/1
File Number: DWERVT9942
Duration of Permit: From 29 July 2022 to 29 July 2024

PERMIT HOLDER

City of Busselton

LAND ON WHICH CLEARING IS TO BE DONE

Metricup Road Reserve (PIN 11476584), Wilyabrup
Puzey Road Reserve (PIN 11476581), Wilyabrup

AUTHORISED ACTIVITY

The permit holder must not clear more than seven (7) trees of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. Avoid, minimise, and reduce impacts and extent of clearing

In determining the *native vegetation* authorised to be cleared under this permit, the permit holder must apply the following principles, set out in descending order of preference:

- (a) avoid the clearing of *native vegetation*;
- (b) minimise the amount of *native vegetation* to be cleared; and
- (c) reduce the impact of clearing on any environmental value.

2. Weed and dieback management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimise the risk of introduction and spread of *weeds* and *dieback*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *dieback* or *weed*-affected soil, *mulch*, *fill*, or other material is brought into the area to be cleared; and
- (c) restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

3. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner towards adjacent *native vegetation* to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

4. Fauna management – western ringtail possums and south-western brush-tailed phascogale

- (a) In relation to the area cross-hatched yellow in Figure 1 of Schedule 1, the permit holder must engage a *fauna specialist* to inspect that area immediately prior to, and for the duration of clearing activities, for the presence of western ringtail possum(s) (*Pseudocheirus occidentalis*) and south-western brush-tailed phascogale(s) (*Phascogale tapoatafa wambenger*).
- (b) Clearing activities must cease in any area where fauna referred to in condition 4(a) are identified until either:
 - (i) the western ringtail possum(s) and south-western brush-tailed phascogale(s) individual has moved on from that area to adjoining *suitable habitat*; or
 - (ii) the western ringtail possum(s) individual has been removed by a *western ringtail possum specialist*.
- (c) Any western ringtail possum(s) individual removed in accordance with condition 4(b)(ii) must be relocated by a *western ringtail possum specialist* to a *suitable habitat*.
- (d) Where fauna is identified under condition 4(a), the permit holder must within 14 calendar days provide the following records to the CEO:
 - (i) the number of individuals identified;
 - (ii) the date each individual was identified;
 - (iii) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
 - (iv) the number of individuals removed and relocated;
 - (v) the relevant qualifications of the *western ringtail possum specialist*

- undertaking removal and relocation;
- (vi) the date each individual was removed;
- (vii) the method of removal;
- (viii) the date each individual was relocated;
- (ix) the location where each individual was relocated to, recorded using a GPS unit set to GDA94, expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
- (x) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

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 <i>clearing</i> occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the direction of clearing; (e) the size of the area cleared (in hectares); (f) actions taken to avoid, minimise, and reduce the impacts and extent of <i>clearing</i> in accordance with <i>condition 1</i>; (g) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with <i>condition 2</i>; and (h) actions taken to manage and mitigate impacts to <i>Pseudocheirus occidentalis</i> (western ringtail possum) and <i>Phascogale tapoatafa</i> (south-western brush-tailed phascogales) in accordance with <i>condition 4</i>.

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 have the meanings defined.

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the <i>clearing</i> 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.
fauna specialist	means a person who holds a tertiary qualification specializing in environmental science or equivalent, has a minimum of two years work experience in fauna identification and surveys of fauna native to the region being inspected or surveyed and holds a valid fauna licence issued under the <i>Biodiversity Conservation Act 2016</i> ;
fill	means material used to increase the ground level, or to fill a depression.
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.
EP Act	<i>Environmental Protection Act 1986</i> (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.
suitable habitat <i>Pseudocheirus occidentalis</i> (western ringtail possum) and <i>Phascogale tapoatafa wambenger</i>	means habitat known to support: - <i>Pseudocheirus occidentalis</i> (western ringtail possum) within the known current distribution of the species, typically characterised by abundant foliage, presence of suitable nesting structures such as tree hollows, as well as high canopy cover and continuity. Known habitat includes <i>Agonis flexuosa</i> (peppermint) dominated

Term	Definition
(southwestern brush-tailed phascogale)	<p>woodlands, <i>Eucalyptus marginata</i> (jarrah) and <i>Corymbia calophylla</i> (marri) forests, riparian vegetation with a canopy of <i>Eucalyptus megacarpa</i> (Bullich) or <i>Eucalyptus rudis</i> (flooded gum), <i>Eucalyptus diversicolor</i> (karri) forests, <i>Allocasuarina fraseriana</i> (sheoak) dominated woodlands, and other stands of myrtaceous trees growing near swamps, watercourses or floodplains.</p> <p>- <i>Phascogale tapoatafa wambenger</i> (southwestern brush-tailed phascogale) within the known current distribution of the species, typically characterised by dry sclerophyll forests and open woodlands, with hollow-bearing trees (usually eucalypts) and sparse understorey.</p>
weeds	<p>means any plant –</p> <ul style="list-style-type: none"> (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



Mathew Gannaway
Manager

NATIVE VEGETATION REGULATION

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

5 July 2022

SCHEDULE 1

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

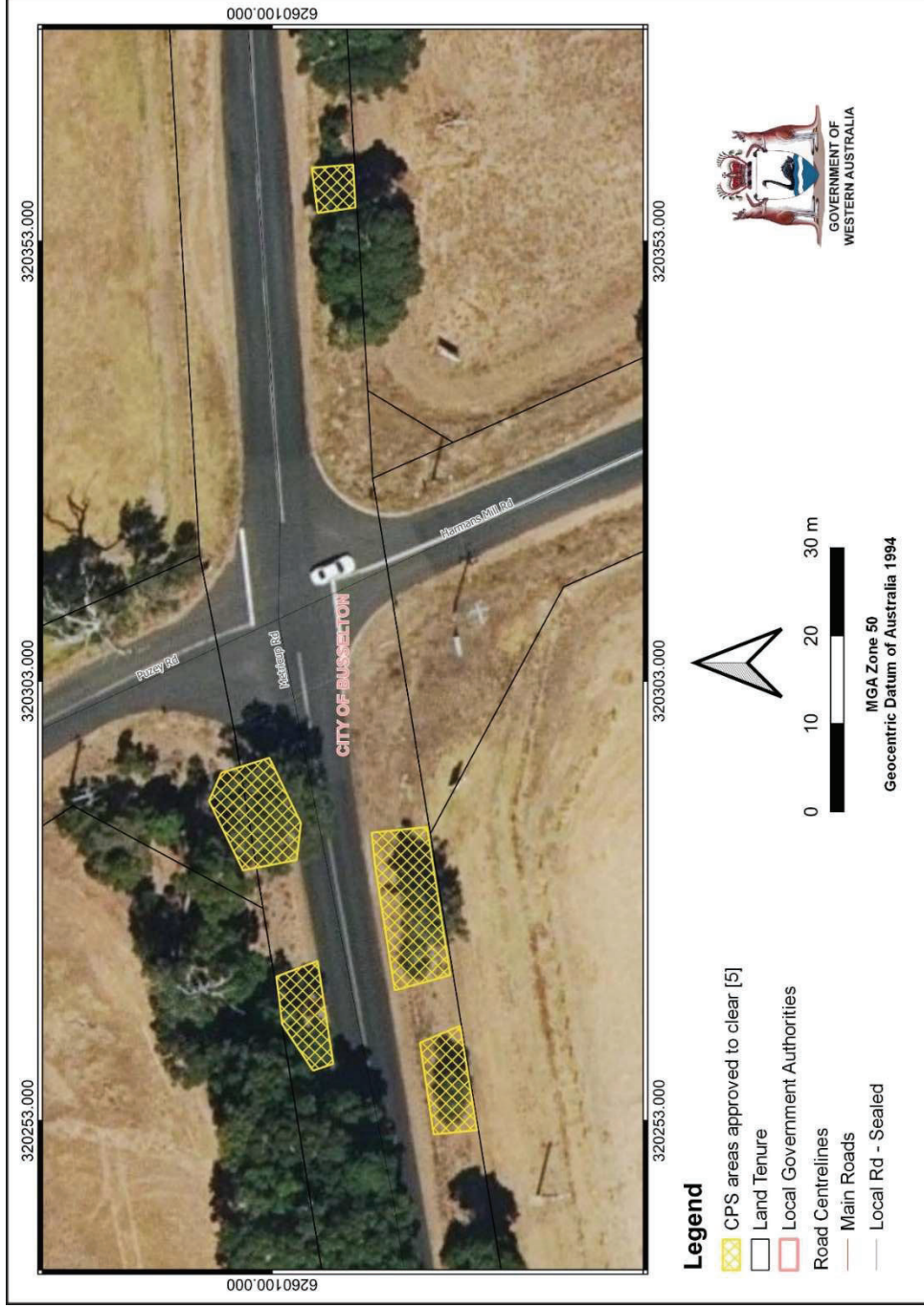


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9738/1
Permit type:	Area permit
Applicant name:	City of Busselton
Application received:	27 April 2022
Application area:	Seven (7) native trees
Purpose of clearing:	Road construction and upgrades
Method of clearing:	Mechanical Removal
Property:	Metricup Road Reserve (PIN – 11476584), Wilyabrup Puzey Road Reserve (PIN – 11476581), Wilyabrup
Location (LGA area/s):	Busselton, City of
Localities (suburb/s):	Wilyabrup

1.2. Description of clearing activities

The application is for an Area Permit to clear seven native trees within Metricup Road Reserve (PIN 11476584) and Puzey Road Reserve (PIN 11476581), Wilyabrup, for the purpose of road upgrades. The road upgrades are associated with a black spot project (Accendo, 2022).

1.3. Decision on application

Decision:	Granted
Decision date:	5 July 2022
Decision area:	Seven (7) native trees

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 14 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (Appendix B), relevant datasets (Appendix F.1), the images from a flora and vegetation survey (Appendix E), the clearing principles set out in Schedule 5 of the EP Act (Appendix C), relevant planning instruments and any other matters considered relevant to the assessment (Section 3). The Delegated Officer also took into consideration that the purpose of the clearing is to improve community safety and reduce the likelihood and/or severity of crashes by improving road width to accommodate traffic volumes, increase sightlines/driver visibility, remove risks from falling branches and trees being in close proximity to the road.

The assessment identified that the proposed clearing will result in:

- the loss of native vegetation that is potentially suitable habitat for *Pseudocheirus occidentalis* (western ringtail possums);

- loss of native trees that are potential habitat, foraging area and/or future breeding ground for *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo) and the *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 avoidance and mitigation measures (Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to appreciable land degradation or have long-term adverse impacts on conservation significant fauna or flora species and can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values. The applicant has suitably demonstrated avoidance and minimisation measures.

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

- avoid, minimise to reduce the impacts and extent of clearing.
- fauna management conditions for *Pseudocheirus occidentalis* (western ringtail possums)
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.



Clearing Permit Decision Report

1.5. Site map

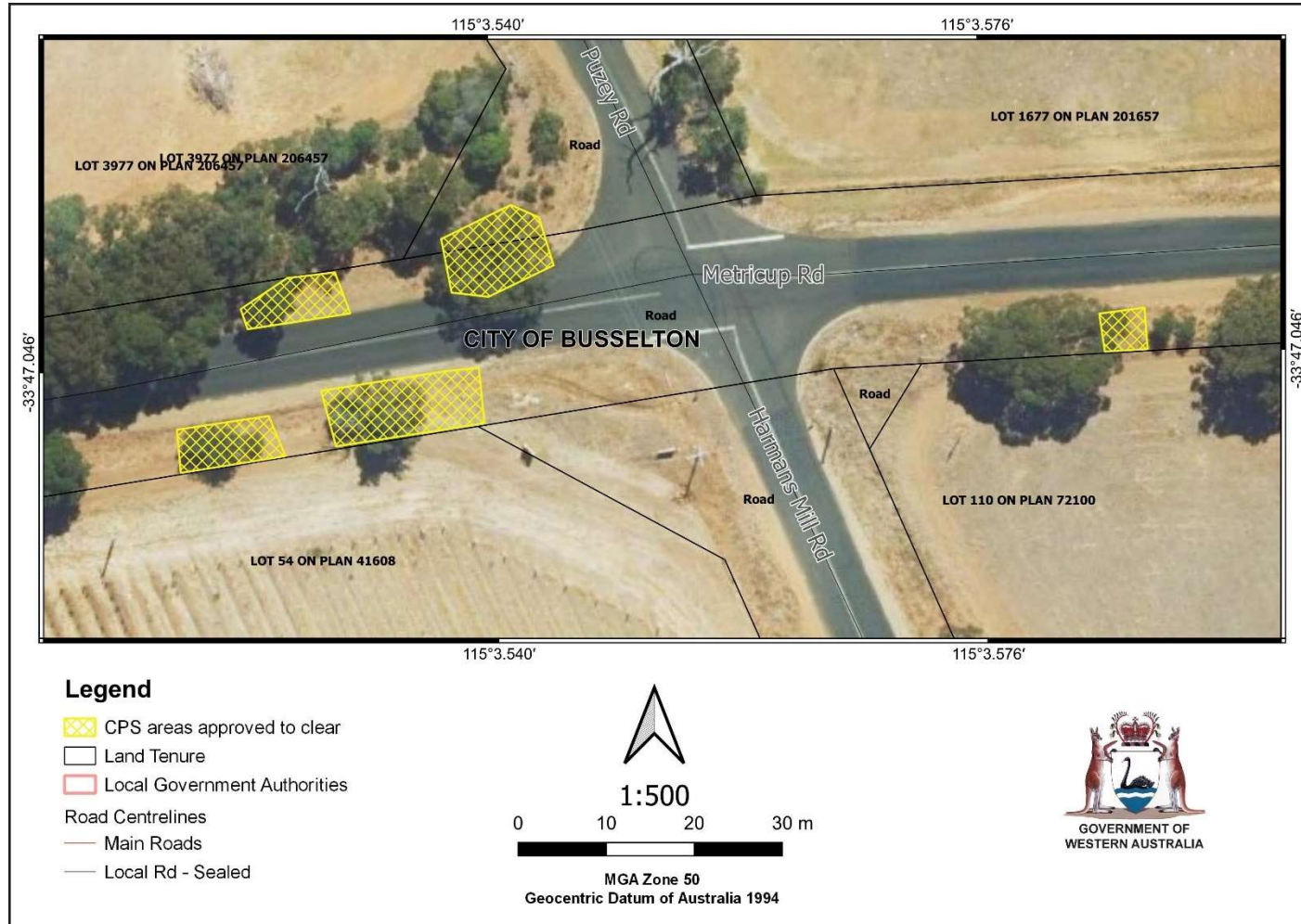


Figure 1: Map of the application area CPS 9738/1. The areas crosshatched yellow indicates the areas authorised to be cleared under the granted clearing permit.



Clearing Permit Decision Report

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)*.
- *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).
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016).

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

Evidence was submitted by the applicant, demonstrating that avoidance and mitigation measures had been considered, in particular, Accendo (2022) provided the following comments:

Avoidance

- The road reserve has been purposefully surveyed in order to determine the minimum clearing requirements, whilst ensuring public safety. As far as practicable, roadside vegetation has been retained.

Mitigation

To avoid any direct or indirect impacts to other vegetation within or adjacent to these trees, the applicant has committed to the following mitigation measures:

- Prior to clearing commencing, the seven trees will be clearly demarcated with flagging tape;
- No vehicular access or parking within vegetated areas in the reserve; and
- No stockpiling of cleared vegetation or storage of equipment within the reserve.

Accendo also mentioned in their survey report that:

- A fauna management measure requiring a fauna spotter onsite during clearing, to ensure that any *Pseudocheirus occidentalis* (western ringtail possums) relocate to adjoining vegetation, will further minimise the potential impact to this species.

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

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (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 (Appendix C) identified that the impacts of the proposed clearing present a risk to 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 (fauna) - Clearing Principle (b)

Assessment

Within the local area (10 kilometre radius of the application area), 31 conservation significant fauna species have been recorded. Of these recordings, 18 species occur within marine waters, freshwater and/or coastline habitats not represented within the application area. The application area does not contain a dense understorey (Accendo, 2022), so is not considered to provide permanent habitat for ground dwelling species, but is likely to provide an ecological linkage.

The application area is likely to provide habitat for arboreal species recorded within the local area including, but not limited to; *Pseudocheirus occidentalis* (western ringtail possum), *Phascogale tapoatafa wambenger* (south-western brush-tailed phascogale), *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo) and the *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo). It must be noted that *Calyptorhynchus sp.* (white-tailed black cockatoo) have been recorded in the local area. These records were obtained when the data collector could not definitively distinguish if they spotted a *Calyptorhynchus baudinii* (Baudin's cockatoo) or a *Calyptorhynchus latirostris* (Carnaby's cockatoo), therefore the *Calyptorhynchus sp.* (white-tailed black cockatoo) category was created to incorporate these records.

***Pseudocheirus occidentalis* (western ringtail possum)**

The application area is within the Swan Coastal Management Zone for the *Pseudocheirus occidentalis* (western ringtail possum) as described within the 'Western Ringtail Possum Recovery Plan' (DPaW, 2017) (Figure 2). The management plan outlines strategies to slow the decline in population size, extent and area of occupancy through managing major threatening processes affecting the subpopulations and their habitats and allowing the persistence of the species in each of the identified key management zones: Swan Coastal Plain, southern forests and south coast (DPaW, 2017).

Agonis flexuosa (peppermint trees) are important habitat for western ringtail possum, listed as Critically Endangered under the BC Act and the EPBC Act. Populations in the Swan Coastal Plain management zone are associated with stands of myrtaceous trees (usually *Agonis flexuosa*) growing near swamps, watercourses or floodplains, and at topographic low points which provide cooler and often more fertile conditions. Habitat critical to survival for *Pseudocheirus occidentalis* (western ringtail possum) comprises long unburnt mature remnant peppermint woodlands with high canopy continuity and high nutrient foliage with minimal periods of summer moisture stress, and habitat connecting patches of remnants.

Considering the application area contains very isolated individual *Agonis flexuosa* (peppermint trees) and is not well linked with canopy within the surrounding area, the application area is not likely to provide significant habitat for the western ringtail possum. However, Metricup and Puzey Roads may act as an ecological linkage between larger remnants of native vegetation within the local area. Western ringtail possums may traverse the application area moving between the larger remnants. Deaths to individuals that may be present at the time of clearing is the greatest threat. Pre-clearance inspections will ensure that impacts to individuals are minimised.

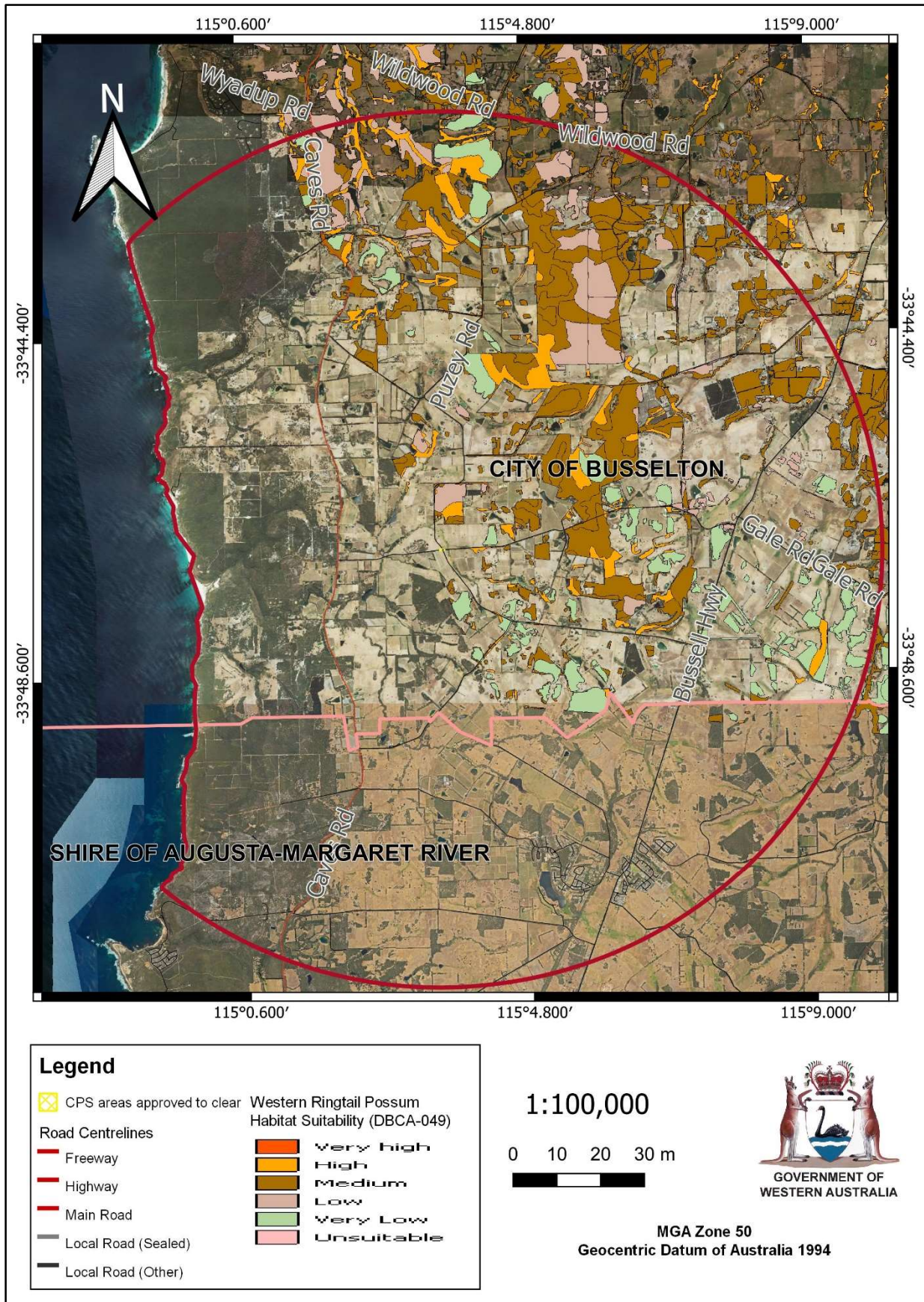


Figure 2: Map of the location of *Pseudocheirus occidentalis* (western ringtail possum) habitat suitability within the local area (10-kilometre radius of the application area) of application area CPS 9738/1.

Black Cockatoo species

Calyptorhynchus bauhini (Baudin's cockatoo) and *Calyptorhynchus latirostris* (Carnaby's cockatoo) are listed as Endangered and the *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) is listed as Vulnerable under the BC Act and EPBC Act.

The application area is within the known distribution of Baudin's cockatoo, Carnaby's cockatoo and forest red-tailed black cockatoo (Figure 3). While habitat requirements for the three species of black cockatoos differ, the requirements in general can be categorised as breeding habitat, foraging habitat and night roosting habitat.

Breeding habitat

Breeding habitat for species of black cockatoos is described within the document 'EPBC Act referral guidelines for four threatened black cockatoo species' (Commonwealth of Australia, 2012) includes trees of species known to support breeding within the range of the species which either, have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow. For most tree species, suitable DBH is 500 mm.

Supporting documents with the application noted that five of the trees were *Corymbia calophylla* (marri), four of which were juvenile and one of which did not contain any hollows (Accendo, 2022). Therefore, these five trees are unlikely to provide breeding habitat for black cockatoos.

Foraging habitat

Foraging habitat differs between the three species of black cockatoos:

- *Calyptorhynchus baudinii* (Baudin's cockatoo) - Mostly marri (seeds, flowers, nectar and grubs) and proteaceous trees and shrubs. Also other native seeds and introduced fruits; insects and insect larvae; pith of *Anigozanthos flavidus* (kangaroo paw); juice of ripe persimmons; tips of *Pinus* spp. and seeds of apples and pears.
- *Calyptorhynchus latirostris* (Carnaby's cockatoo) - Seeds, flowers and nectar of native proteaceous plant species (for example, *Banksia* spp., *Hakea* spp., and *Grevillea* spp.), eucalypts and *Callistemon*. Also seeds of introduced species including *Pinus* spp., *Erodium* spp., wild radish, canola, almonds and pecan nuts; insects and insect larvae; occasionally flesh and juice of apples and persimmons.
- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo) - Mostly seeds of marri and jarrah, also *Eucalyptus caesia*, *E. erythrocorys* and some introduced eucalypts such as *E. camaldulensis* (river red gum) and *E. grandis* (flooded gum), *Allocasuarina* cones, fruits of *Persoonia longifolia* (snottygobble) and *Corymbia haematoxylon* (mountain marri).

The flora and vegetation survey provided with the application (Accendo, 2022) noted the vegetation types within the application area include woodlands of marri. Noting the above listed foraging preferences of black cockatoo species, the application area will provide foraging habitat for black cockatoos.

Food resources within the range of roost sites are important to sustain populations of black cockatoos, and foraging resources should therefore be viewed in the context of the proximity to the known night roosting sites to the application area. Available databases show that there are nine records of black cockatoo roost sites within the local area but no mapped breeding locations. Black cockatoos will generally forage up to 12 kilometres from an active breeding site. Following breeding, they will flock in search of food, usually within six kilometres of a night roost (Commonwealth of Australia, 2012), but may range up to 20 kilometres.

Whilst the application area is within the foraging distance of known roosts, the proposed clearing of five trees that provide suitable foraging habitat in the context of amount of native vegetation remaining within the local area is not likely to be significant.

Night Roost sites

Black cockatoo night roosts are usually located in the tallest trees of an area, and in close proximity to both a food supply and surface water (Commonwealth of Australia, 2012). Given the juvenile trees within the application area and the absence of hollows (Accendo, 2022), it is unlikely to provide night roosting habitat for black cockatoos.

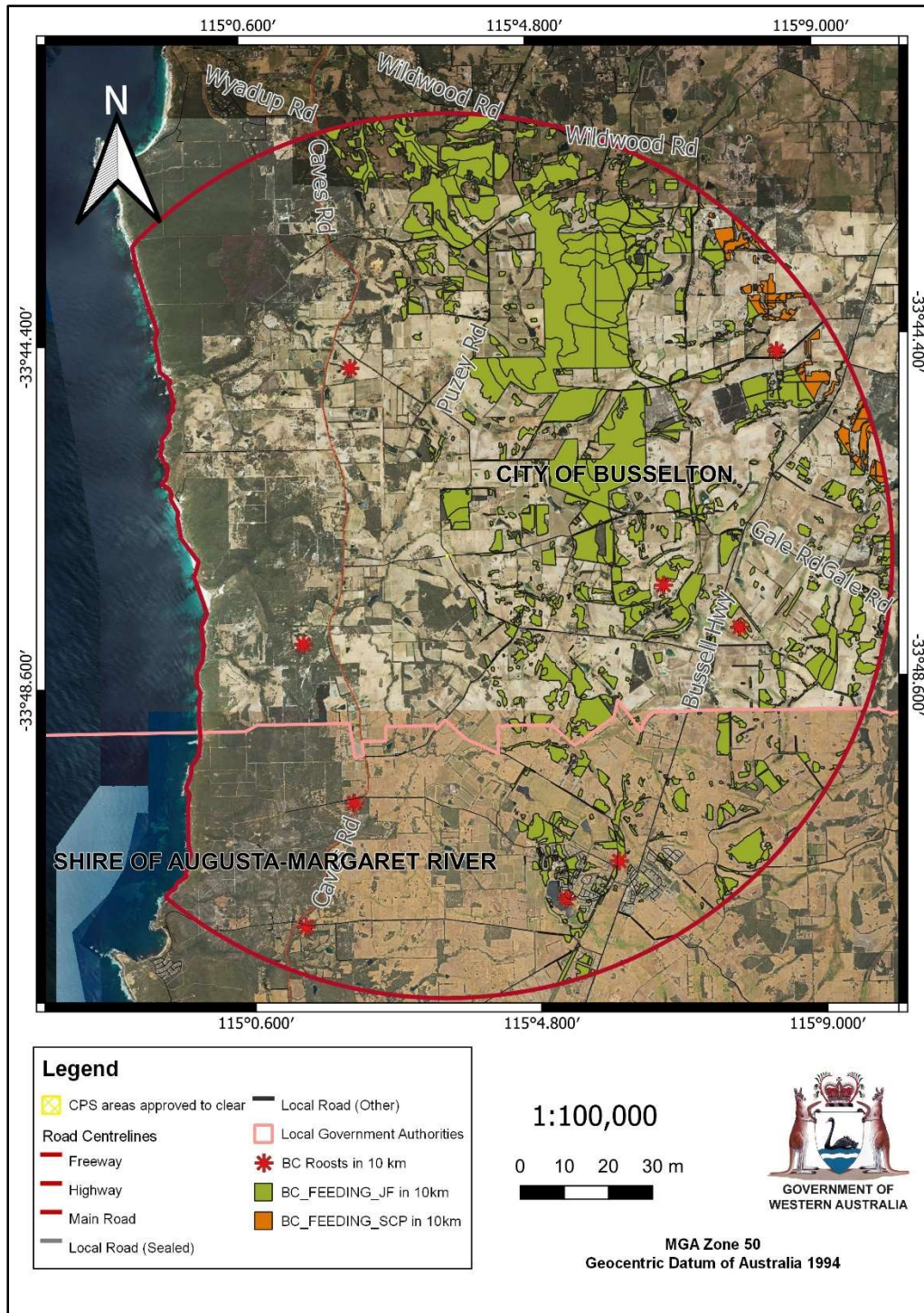


Figure 3: Map of the location of black cockatoo roosts and feeding locations within the local area (10-kilometre radius of the application area) of application area CPS 9738/1.

***Phascogale tapoatafa wambenger* (south-western brush-tailed phascogale)**

In south-west WA, *Phascogale tapoatafa wambenger* (south-western brush-tailed phascogales) are known to occur in dry sclerophyll forests and open woodlands that contain hollow bearing trees, with records less common in higher rainfall areas. This species is said to occur in highest densities in Perup/Kingston area, Collie River valley, and near Margaret River and Busselton (DEC, 2012). According to available databases, this species has been recorded 36 times within the local area. A survey of the application area, conducted by Accendo Australia in March 2022, did not observe any signs of this species, however, it is known that the species is active between dusk and dawn so may have been missed during the survey.

In the absence of a targeted fauna survey and noting the habitat for the species can include hollow tree limbs, rotten stumps and bird nests, it is considered the application area may provide habitat for these species. Noting the clearing is only for seven native trees, the area is not likely to be significant habitat for phascogales. However, phascogales may use the road reserve to traverse between larger remnants of native vegetation. Impacts to individuals present at the time of clearing remain the greatest threat. Pre-clearance survey will mitigate this risk.

Conclusion

Based on the above assessment, the application area includes foraging habitat for black cockatoos, south-western brush-tailed phascogale and western ringtail possum. Noting the proposed clearing is only for seven juvenile trees and the amount of native vegetation remaining within the local area, clearing of this habitat is not likely to be significant. However, the proposed clearing may result in potential impacts on individual south-western brush-tailed phascogale and western ringtail possum that may be present at the time of clearing.

The application area may function as an ecological linkage for fauna moving between larger remnants of native vegetation within the local area. The ecological linkage values will not likely be severed by the proposed clearing, noting native vegetation will remain with the road reserve.

For the reasons set out above, it is considered that the impacts of the proposed clearing on biological values can be managed through the avoidance and minimisation measures committed to by the applicant including conditions as specified in the permit.

Conditions

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

- Avoidance and minimisations measures.
- A fauna specialist to be present to monitor clearing and to take steps as specified in the permit conditions if nominated fauna species are present during the clearing.
- Weeds and dieback management measures as specified in the clearing permit.

3.2.2. Relevant planning instruments and other matters

The application area is located within the Busselton-Capel Groundwater Area - 32, the Cape-to-Cape North Surface Water Area - UFI 51 and the South West Wilyabrup Brook catchment - UFI 189 proclaimed under the *Rights in Water and Irrigation Act 1914* (RIWI Act), but not within a surface water area. As no watercourses are present within the application area, approvals under the RIWI Act will not be required.

The application area is located within the boundaries of the South West Boojarah #2 Indigenous Land Use Agreement. No Aboriginal Heritage Places have been mapped within the application area.

There are several Aboriginal Heritage Places within the local area (10 kilometre radius from the centre of the area proposed to be cleared) with the closest being Moses Cave (Place ID - 5851) skeletal material / burial site (approximately 4.5 kilometre west of the application site) and the next closest being Wilyabrup Brook (Place ID - 5825) artefacts / scatter (approximately 4.5 kilometre west of the application site). It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

End



Clearing Permit Decision Report

Appendix A. Additional information provided by applicant

The applicant submitted a flora and fauna report completed by Accendo Australia in March 2022. They supplied information on avoidance and mitigation, addressed the ten clearing principles outlined in Schedule 5 of the EP Act and photos of the seven subject trees within the application to be cleared (Appendix E). This information has been taken into consideration by the Delegated Officer in determining the outcome of this application.

Appendix B. Site Characteristics

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

B.1. Site characteristics

Characteristic	Details
Local context	<p>The native vegetation, comprised of seven native trees proposed to be cleared, is located along a road reserve within an intensive land use zone of Western Australia. The majority of this roadside vegetation is adjacent to cleared paddocks used for agricultural purposes. The proposed clearing area contributes to an ecological linkage in an east west direction between parcels of native vegetation.</p> <p>Aerial imagery and Spatial data indicate the local area (10 kilometre radius from the centre of the area proposed to be cleared) retains approximately 34.8 percent of the original remnant vegetation cover.</p>
Ecological linkage	<p>Puzey Road, which intersects the application area from the north to the south, was allocated as a roadside conservation – road centreline (DBCA-030) area in December 2008.</p> <p>Metricup Road acts as an ecological linkage in an east west direction between parcels of native vegetation.</p>
Conservation areas	<p>The closest conservation area is Yelverton National Park located approximately 2.743 kilometres to the north-east of the application area.</p>
Vegetation description	<p>The seven trees propose to be cleared comprise of five <i>Corymbia calophylla</i> (Marri) and two <i>Agonis flexuosa</i> (Peppermint) trees (Accendo, 2022)</p> <p>A vegetation survey (Accendo, 2022) indicated that the vegetation complex found within the proposed clearing area is consistent with original Matiske and Havel 1998 vegetation complex mapping in the area:</p> <ul style="list-style-type: none">Wilyabrup, W2, Open forest of <i>Corymbia calophylla</i>-<i>Allocasuarina decussata</i>-<i>Agonis flexuosa</i> on deeply incised valleys in perhumid and humid zones. <p>Representative photos, survey descriptions and a map is available in Appendix E.</p> <p>Wilyabrup, W2, vegetation type has retained 78.80 per cent of the original extent (Government of Western Australia, 2019).</p>
Vegetation condition	<p>Vegetation survey (Accendo, 2022) provided by the applicant indicates the vegetation within the application area is in Completely Degraded condition (Keighery, 1994).</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix D. The full survey descriptions and photos are available in Appendix E.</p>
Climate and landform	<p>Rainfall: 1100 millilitres per annum and 1200 millilitres per annum Evapotranspiration: 800 millilitres per annum.</p>
Soil description	<p>The application area is located within the Wilyabrup Valleys System (Wilyabrup gentle slope Phase - 216WvWL3) of relict foredunes and gently undulating beach ridge plain with deep uniform calcareous sands (Schoknecht, <i>et al.</i> 2004).</p>

Characteristic	Details																		
Land degradation risk	<table border="1"> <thead> <tr> <th>Risk categories</th> <th>Application Area</th> </tr> </thead> <tbody> <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>L2: 3-10% of map unit has a high to extreme water erosion risk</td> </tr> <tr> <td>Water logging</td> <td>L1: <3% of map unit has a moderate to very high waterlogging risk</td> </tr> <tr> <td>Water Repellence</td> <td>L1: <3% of map unit has a high water repellence risk</td> </tr> <tr> <td>Sub-surface Acidification</td> <td>H2: >70% of map unit has a high subsurface acidification risk or is presently acid</td> </tr> <tr> <td>Phosphorous export</td> <td>M1: 10-30% of map unit has a high to extreme phosphorus export risk</td> </tr> <tr> <td>Salinity</td> <td>L1: 30-50% of map unit has a moderate to high salinity risk or is presently saline</td> </tr> <tr> <td>Flooding</td> <td>L1: <3% of the map unit has a moderate to high flood risk</td> </tr> </tbody> </table>	Risk categories	Application Area	Wind erosion	H2: >70% of map unit has a high to extreme wind erosion risk	Water erosion	L2: 3-10% of map unit has a high to extreme water erosion risk	Water logging	L1: <3% of map unit has a moderate to very high waterlogging risk	Water Repellence	L1: <3% of map unit has a high water repellence risk	Sub-surface Acidification	H2: >70% of map unit has a high subsurface acidification risk or is presently acid	Phosphorous export	M1: 10-30% of map unit has a high to extreme phosphorus export risk	Salinity	L1: 30-50% of map unit has a moderate to high salinity risk or is presently saline	Flooding	L1: <3% of the map unit has a moderate to high flood risk
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Salinity	L1: 30-50% of map unit has a moderate to high salinity risk or is presently saline																		
Flooding	L1: <3% of the map unit has a moderate to high flood risk																		
Waterbodies	No wetlands or waterways are mapped as occurring within the application area. The nearest waterway is minor river Wilyabrup Brook, which runs in a north-west direction located approximately 82m east of the application area.																		
Hydrogeography	The application area is in the Leeuwin hydrological zone which is comprised of highly compartmentalised aquifers in shallow regolith. The application area also lies within the Cape-to-Cape North Surface Water Area - UFI 51 (proclaimed under the <i>Rights in Water and Irrigation Act 1914</i>), the Busselton-Capel Groundwater Area - UFI 32 (also proclaimed under the RIWI Act) and South West Wilyabrup Brook catchment - UFI 189. According to available databases, the groundwater salinity ranges from 1000 to 3000 milligrams to litres total dissolved solids which can be described as brackish to saline.																		
Flora	There are records of 31 conservation significant flora within the local area. The closest record is a Priority 3 species <i>Acacia inops</i> , recorded approximately 640 metres from the application area. There are no records of conservation significant flora within the application area and no conservation significant flora were noted within the application area (Accendo, 2022).																		
Ecological communities	There are four conservation significant ecological communities within the local area: <ul style="list-style-type: none"> • Shrublands of near permanent wetlands in creek lines of the Whicher Scarp (Whicher Scarp community G2) (P1) • Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region (EN) • West Whicher Scarp Banksia attenuata woodland (Swan Coastal Plain centred woodlands of grey/white sands community B2) (P1) • Low shrublands on acidic grey-brown sands of the Gracetown soil-landscape system (P1) None of these ecological communities are mapped as occurring within the application area. No conservation significant ecological communities were noted within the application area (Accendo, 2022).																		
Fauna	There are records of 31 conservation significant fauna species found in the local area. The application area is within the <i>Calyptorhynchus baudinii</i> (Baudin's cockatoo), <i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo) and <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo) distribution area. There are nine records of black cockatoo roost trees within 10 kilometres of the application area. There are no confirmed black cockatoo breeding trees within the application area (Accendo, 2022), however, with roosts being identified within 6 kilometres of the application area, it is possible that the application area and surrounds are used as foraging habitat. The closest confirmed forest red-tailed black cockatoo breeding site is approximately 15.31 kilometres to the north-north-east of the application area and the closest confirmed white-tailed black cockatoo breeding site is approximately 29.59 kilometres south-west of the application area.																		

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 all DBCA managed land
IBRA bioregion*					
Warren	833,985.56	659,432.21	79.07	558,485.38	66.97
Vegetation complex					
Wilyabrup, W2	8,620.69	7,602.19	88.19	6,793.40	78.80
Remnant vegetation*					
Remnant vegetation mapped within 10 km	27,324	9,498	34.8	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.3. Fauna analysis table

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Actitis hypoleucos</i> (common sandpiper)	MI	N	N	6.58	1	N/A
<i>Ardenna carneipes</i> (flesh-footed shearwater, fleshy-footed shearwater)	VU	N	N	5.36	1	N/A
<i>Austroassiminea lethra</i> (Cape Leeuwin freshwater snail)	VU	N	N	5.76	2	N/A
<i>Calidris ruficollis</i> (red-necked stint)	MI	N	N	4.54	1	N/A
<i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo)	VU	Y	Y	3.20	9	Y
<i>Calyptorhynchus baudinii</i> (Baudin's cockatoo)	EN	Y	Y	1.06	36	Y
<i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo)	EN	Y	Y	2.37	40	Y
<i>Calyptorhynchus</i> sp. 'white-tailed black cockatoo' (white-tailed black cockatoo)	EN	Y	Y	2.91	35	Y
<i>Caretta caretta</i> (loggerhead turtle)	EN	N	N	8.2	2	N/A
<i>Dasyurus geoffroyi</i> (chuditch, western quoll)	VU	N	N	4.38	3	N/A
<i>Diomedea exulans</i> (wandering albatross)	VU	N	N	4.54	1	N/A
<i>Engaewa pseudoreducta</i> (Margaret River burrowing crayfish)	CR	N	N	8.20	1	N/A
<i>Engaewa reducta</i> (Dunsborough burrowing crayfish)	EN	N	N	2.00	38	N/A
<i>Falco peregrinus</i> (Peregrine falcon)	OS	Y	N	4.54	2	N/A
<i>Hydromys chrysogaster</i> (Water-rat, rakali)	P4	N	N	5.61	6	N/A
<i>Hydroprogne caspia</i> (Caspian Tern)	MI	N	N	4.54	1	N/A
<i>Isoodon fusciventer</i> (quenda, southwestern brown bandicoot)	P4	Y	Y	2.42	26	N
<i>Leipoa ocellata</i> (malleefowl)	VU	N	N	5.57	1	N/A

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]
<i>Macronectes halli</i> (northern giant petrel)	MI	N	N	4.54	1	N/A
<i>Macrotis lagotis</i> (bilby, dalgyte, ninu)	VU	N	N	5.29	1	N/A
<i>Notamacropus irma</i> (western brush wallaby)	VU	N	N	6.10	2	N/A
<i>Numenius phaeopus</i> (whimbrel)	MI	N	N	6.58	1	N/A
<i>Pandion cristatus</i> (osprey, eastern osprey)	MI	N	N	3.49	2	N/A
<i>Phascogale tapoatafa wambenger</i> (south-western brush-tailed phascogale, wambenger)	CD	Y	Y	3.17	36	N
<i>Pseudocheirus occidentalis</i> (western ringtail possum, ngwayir)	CR	Y	Y	0.02	87	N
<i>Setonix brachyurus</i> (quokka)	VU	N	N	7.69	3	N/A
<i>Sterna hirundo</i> (common tern)	MI	N	N	4.54	1	N/A
<i>Thalassarche chlororhynchos</i> (Atlantic yellow-nosed albatross)	MI	N	N	4.54	2	N/A
<i>Thalasseus bergii</i> (crested tern)	MI	N	N	4.54	7	N/A
<i>Thinornis rubricollis</i> (hooded plover, hooded dotterel)	P4	N	N	4.54	10	N/A
<i>Westralunio carteri</i> (Carter's freshwater mussel)	VU	N	N	2.78	2	N/A

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

B.4. 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)	Are surveys adequate to identify? [Y, N, N/A]
Shrublands of near permanent wetlands in creeklines of the Whicher Scarp (Whicher Scarp community G2)	Priority 1	N	N	N	5.44	Y
Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region	Endangered	N	N	N	6.27	Y
West Whicher Scarp Banksia attenuata woodland (Swan Coastal Plain centred woodlands of grey/white sands community B2)	Priority 1	N	N	N	6.87	Y
Low shrublands on acidic grey-brown sands of the Gracetown soil-landscape system	Priority 2	N	N	N	9.27	Y

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

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> “Native vegetation should not be cleared if it comprises a high level of biodiversity.”</p> <p><u>Assessment:</u> The area proposed to be cleared is not likely to contain local or regionally significant flora, fauna, habitats, or assemblages of plants.</p>	Not likely to be at variance	No
<p><u>Principle (b):</u> “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.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains habitat for <i>Pseudocheirus occidentalis</i> (western ringtail possum), <i>Phascogale tapoatafa wambenger</i> (south-western brush-tailed phascogale), <i>Calyptorhynchus baudinii</i> (Baudin's cockatoo), <i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo) and the <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo) (Accendo, 2022).</p>	May be at variance	Yes <i>Refer to Section 3.2.1. above.</i>
<p><u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain Threatened flora. A Flora and Vegetation Survey found no conservation significant flora species within the application area (Accendo, 2022).</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> “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.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain species that represent 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> “Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</p> <p><u>Assessment:</u></p> <p>The extent of the mapped vegetation type and the 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> “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.”</p> <p><u>Assessment:</u></p> <p>Given the distance to the nearest conservation area and the lack of topographical connectivity from the application area to conservation areas, the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<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 water courses or wetlands are recorded within the application area, and the distance from any waterbody within the local area, the proposed clearing is unlikely to impact an environment associated with a watercourse or wetland.</p>	Not likely to be at variance	No
<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>One soil type was mapped within the application area. Noting the extent and location of the application area and the vegetation remaining within the road reserve, the proposed clearing is not likely to have an appreciable impact on land degradation.</p>	Not likely to be at variance	No
<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 major rivers are recorded within two kilometres of the application area, the proposed clearing is unlikely to impact surface or ground water quality.</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 mapped soil type within the application area has a moderate to high risk of flooding. These occurrences are aligned with the numerous non-perennial watercourses in the local area, however, none intersect or come within 80 metres of the application area.</p> <p>As a result of the distance between the application area and any floodplain boundaries of neighbouring watercourses and the size of the clearing, it is considered that the proposed clearing is unlikely to contribute to increased incidence or intensity of flooding.</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 and photographs of the vegetation



Plate 1. Tree 1 - A single juvenile *Corymbia calophylla* tree. The tree does not constitute breeding habitat for the three threatened species of black cockatoos, and provides very limited foraging habitat.



Plate 2. Tree 2 - A single *Corymbia calophylla* tree. This tree does not constitute black cockatoo breeding habitat. Furthermore, the tree does not contain any hollows.

Figure 4: Vegetation photographs of application area from Accendo survey in March 2022 (Accendo, 2022).



☉ 170°S (T) ● 33°47'2"S, 115°3'31"E ±13ft ▲ 305ft



Plate 3. Trees 3 and 4 - Two juvenile *Corymbia calophylla* trees. The trees do not provide black cockatoo habitat in consideration of their limited size and absence of hollows.



☉ 358°N (T) ● 33°47'2"S, 115°3'31"E ±13ft ▲ 314ft



Plate 4. Tree 5 - A juvenile *Corymbia calophylla* tree. The tree does not provide black cockatoo habitat in consideration of its limited size and the absence of hollows.

Figure 5: Vegetation photographs of application area from Accendo survey in March 2022 (Accendo, 2022).



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Plate 5. Tree 6 and 7 - Two *Agonis flexuosa* trees. These trees are very unlikely to provide habitat to any threatened fauna species given its roadside location and the absence of native vegetation in proximity to the tree.



Figure 6: Vegetation photograph of application area and map indicating location of trees in relation to photos in Figure 4 to 6 from Accendo survey in March 2022 (Accendo, 2022).

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)
- 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)
- 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

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

Accendo Australia (2022) *Supporting information for clearing permit application CPS 9738/1*, received 22 March 2022 (DWER Ref: DWERT9942~2).

City of Busselton (2022) *Clearing permit application CPS 9738/1*, received 27 April 2022 (DWER Ref: DWERT605519).

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

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