



# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1. Permit application details

Permit number:	CPS 9979/1
Permit type:	Area permit
Applicant name:	City of Albany
Application received:	23 November 2022
Application area:	0.023 hectares
Purpose of clearing:	Road maintenance
Method of clearing:	Mechanical clearing
Property:	Sand Pit Road Reserve (PIN 1270688)
Location (LGA area/s):	City of Albany
Localities (suburb/s):	Robinson

### 1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area (see Figure 1, Section 1.5). The application is to selectively clear trees and shrubs that are distributed along an existing gravel road in order to realign the road slightly to the south. Currently the road is located too close to a property to the north.

### 1.3. Decision on application

Decision:	Granted
Decision date:	14 February 2023
Decision area:	0.023 hectares of native vegetation, as depicted in Section 1.5, below.

### 1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and 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), 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 assessment identified that the proposed clearing will result in:

- the potential impact on western ringtail possum individuals that may transition across the application area at the time of clearing

The subsequent activities of the vegetation clearing (road maintenance) may cause the potential impacts on the underground water quality. The impacts on underground water quality can be minimized by following best practice guidance documents (specified in section 3.3).

Based on the extent and condition of vegetation within the application area, its isolation from other areas of suitable habitat and the presence of larger, better-quality remnants of surrounding vegetation in the local area, the Delegated Officer determined that the proposed clearing was unlikely to impact significant habitat for any other conservation significant fauna species or to result in long-term impacts to conservation significant flora or water quality. 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 have long-term adverse impacts on the biological, conservation, or land and water resource values and can be minimised and managed to be unlikely to lead to an unacceptable risk to environmental values.

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

- avoid, minimise to reduce the impacts and extent of clearing
- engage a fauna specialist to inspect the area prior to, and for the duration of clearing activities and if required, appropriately remove/relocate any individual western ringtail possums if present during the clearing to suitable habitat prior to the clearing.

It is advised that the applicant needs to follow best practice guidance documents (stated in section 3.3) to minimize adverse impacts of the road maintenance activities on the underground water quality of the area.

1.5. Site map

# CPS 9979/1

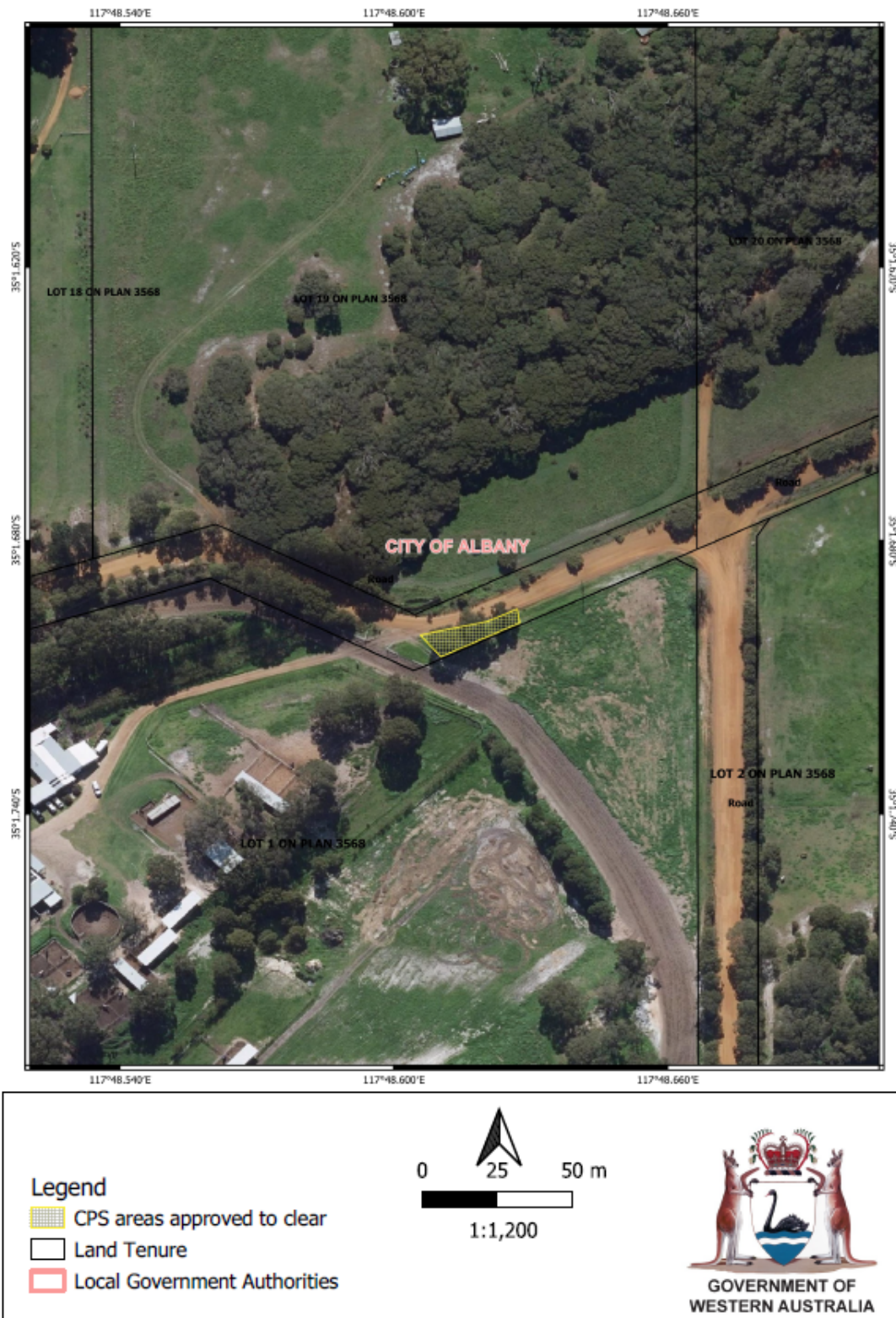


Figure 1 Map of the application area

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)
- *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 proposed area of 0.023 hectare comprises 10 peppermint trees, a few *Hybberbia cuneiformis* shrubs and weed. The applicant has noted that only 6 peppermint trees will be cleared for the purpose of road maintenance. The remaining trees and shrub will be retained. 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 (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 Appendix B) identified that the impacts of the proposed clearing present a risk to biological values (flora and 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 Principles (a) and (b)

##### Assessment

The proposed clearing area is an isolated vegetation patch comprising of peppermint trees, *Hybberbia cuneiformis* shrubs and introduced grasses (City of Albany, 2022b) (see photos in Appendix D). A desktop assessment identified that there are 92 conservation significant fauna species recorded in the 20-kilometre radius of the application area (local area), including 57 bird species, 16 mammal species, three reptile species, six invertebrate species and ten fish species.

##### Birds

Based on known distribution and habitat preference of bird species recorded, three threatened species of black cockatoo, including the vulnerable *Calyptorhynchus banksii naso* (Forest red-tailed black cockatoo), the endangered *Zanda latirostris* (Carnaby's black cockatoo) and *Zanda Calyptorhynchus* (Baudin's cockatoo), most likely occur over the application area. There are 28 roosting sites recorded in the local area with the closest record only 320 metres away from the application area, however, the application area does not fall within broadly mapped potential black cockatoo feeding area (GIS database).

There are three key components of black cockatoo habitat: foraging habitat; roosting habitat; and breeding habitat. The quality of black cockatoo foraging habitat to support populations at breeding sites or night roosting sites varies depending upon how black cockatoos utilise the habitat in that particular location. Any tall trees, generally close to riparian environment, can be potential roosting habitat of black cockatoos (DSEWPC 2012). A tree suitable for a black cockatoo breeding is defined as a tree with a diameter of 50 centimetres or greater at a height of 1.5 metres

above the ground (Strategen 2020). For a black cockatoo breeding site to be viable, there must be sufficient foraging habitat available within 6 to 12 kilometres of a nesting site (DSEWPC 2012).

Peppermint tree is a potential food resource for Carnaby's black cockatoo (Groom, 2011) but not the common food items consumed by the black cockatoos (DSEWPC, 2012). In addition, due to the location of the trees within the landscape (isolated, close to a denser vegetation patch) it is unlikely that trees within the application area will provide significant foraging for roosting and breeding populations. Further, roosting is typically noted to occur within suitable trees close to an important water source and within an area of quality foraging habitat (DSEWPC, 2012). In the context of the application area, black cockatoos are most likely to utilise the landscape to the north and northeast where extensive tracts of native vegetation occur. The possibility of black cockatoos using the trees within the application area is minimal.

Majority of the remaining bird species recorded in the local area are associated with coastal, estuarine or wetland habitat which are most likely not to occur in the application area due to the differences in habitat. Some exceptions are peregrine falcon (*Falco peregrinus*) and the western whipbird (*Psophodes nigrogularis*).

The peregrine falcon typically nests on rocky ledges in tall, vertical cliff faces and gorges, or in tall trees associated with drainage lines, and can hunt in a range of habitat types including timbered watercourses, riverine environments, wetlands, plains, open woodlands, and pylons and spires of buildings (Australian Museum, 2019). Given its woodland structure and proximity to existing records, the application area may provide suitable foraging habitat for the peregrine falcon. However, noting that the peregrine falcon is a highly mobile species with a large home range that does not rely on special niche habitats, the peregrine falcon is likely to be transient in the application area and it is unlikely that the application area represents significant habitat for the species. Further, noting that the application area is a disturbed regrowth vegetation from historical clearing and extensive tracts of native vegetation exist within the vicinity of the application area, it is unlikely that the peregrine falcon would be reliant on the application area for foraging in the local area.

The western whipbirds need a habitat of dense, well-connected vegetation patches to allow them to facilitate their genetic flow as well as to escape in harsh conditions (DEH, 2006). Given its isolated nature and poor vegetation condition, the proposed clearing area may not provide a suitable habitat for the foraging, nesting and breeding for the western whipbirds and the clearing activity may likely not significantly affect the habitat of this species.

The applicant's inspection has also noted that there are no bird nests identified in the trees within the application area (City of Albany, 2022a).

### **Mammals**

Among 16 mammal species recorded in the local area, four species including the vulnerable western quoll/chuditch (*Dasyurus geoffroii*), critically endangered western ringtail possum (*Pseudocheirus occidentalis*), Priority 4 quenda (*Isoodon fusciventer*) and Priority 4 western brush wallaby (*Notamacropus Irma*) may likely occur in the application due to the proximity and number of individuals recorded in the local area.

#### ***Western ringtail possum***

The western ringtail possum (WRP) is a medium sized, nocturnal species that roams through the trees at night, feeding on leaves of eucalypt, marri and peppermint trees and other fruits and flowers. It has a long, thin tail with a white tip that helps it to move through the trees and carry nesting material (DCCEE, 2023). The current distribution of the western ringtail possum is patchy and largely restricted to the moister south-western corner of Western Australia (de Tores, 2008), especially near coastal areas of peppermint woodland and peppermint/tuart associations from the Australind/Eaton area to the Waychinicup National Park (DEC, 2012a). WRP is listed as critically endangered under the Western Australia's *Biodiversity Conservation Act 2016* (BC Act) and under the federal *Environment Protection and Biodiversity Conservation Act 1999*. The main identified threats to the western ringtail possum are habitat loss and fragmentation, predation, especially by introduced predators and changing fire regimes. Potential threats include climate change, competition with brushtail possum, road traffic, loss of coastal peppermint trees from dieback caused by *Phytophthora cinnamomi*, insect attack, and myrtle rust (*Puccinia psidii*) (DoEE, 2013).

South Coast zone, where is the application area located, is one of the three key zones for management of the WRP. This species' habitat in this zone is associated with the near-coastal limestone heath, riparian, jarrah marri thicket woodland and forest, peppermint woodland and karri forest vegetation (DPAW, 2017). There are 725 records of WRP identified within the local area (20-kilometres radius). However, the application area is not mapped within a Western Ringtail Possum habitat suitability zone and the closest record is approximately 1.5 kilometres from the application area (QGIS dataset). Noting the extent of proposed clearing area, the vegetation condition and the disconnection with surrounding remnant vegetation, the application area may not provide suitable habitat for western ringtail possum and therefore, the proposed clearing is unlikely to cause a significant impact to this species. The applicant has also noted that there are no possum dreys identified within the application area during their field inspection (City of Albany, 2022a).

However, noting the vegetation type present within the application area (peppermints) and the presence of connecting vegetation on the other side of the road (towards the north of the application area), there is a chance that the proposed clearing may result in impacts to western ringtail possum individuals, if they happen to be transiting across the application area during the time of the clearing.

### ***Other mammal species***

The western quoll is the largest carnivorous marsupial occurring in WA. Majority of its population is associated with the eucalyptus forests and woodlands, mallee heath and shrubland in the south and south-west coast of the state. This species forages mostly at night and on the ground. They consume invertebrates, insects, mammals, birds, lizards and some small fruits, flowers and seeds (DEC, 2012b). Quendas are ground-dwelling marsupials, typically associated with forest or woodlands near watercourses, where understorey consists of dense scrub and leaf litter is abundant (DEC, 2012c). The western brush wallaby was common in WA in the past, but its population reduces significantly due to agricultural development. Their preferable habitat is associated with open, seasonally wet flats with low grasses and open scrubby thickets (DEC, 2012d).

The degraded nature of the native vegetation, and in particular the lack of midstory and understorey, combined with the isolation of the application area from areas of native vegetation in good or better condition excludes the likelihood of many of conservation significant terrestrial mammals occurring over the application area. Given the location and extent of the proposed clearing, the condition of the vegetation, the presence and use of roads around the application area which limit its suitability to provide habitat for fauna species, and the extent of suitable habitat available in the local area, the application area is not considered likely to comprise significant habitat for the abovementioned mammal species.

### **Other fauna**

The vulnerable species of main's assassin spider (*Zephyrarchaea mainae*) may likely occur in the application area according to the assessment based on this species' recorded number and proximity within the local area. This spider species has been recorded in some specific habitats including sifting sedges (*Lepidosperma sp.*), curly grass (*Empodisma gracillimum*) and low shrubs in dense coastal or near-coastal groves of peppermint trees (*Agonis sp.*) (Rix & Harvey, 2012). Given the poor vegetation structure of the application area with the lack of midstory and understorey and the isolated location of the group of trees proposed to be cleared, the application area may be unlikely to support a significant population or comprise significant habitat for this species.

### **Conclusion**

None of the species identified within the local area were recorded within the application area during the desktop assessment.

Given the size of the clearing and the degraded condition of the vegetation in relation to its position in the landscape (surrounding by roads, proximity to a better-quality remnant vegetation), and the location of recorded individuals and mapped foraging habitat, it is unlikely that the application area represent an important habitat to support fauna species within the local area. However, the proposed clearing may result in impacts to western ringtail possum individuals if present in the application area during the clearing.

### **Conditions**

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

- western ringtail possum management condition requiring a pre-clearing inspection of the application area for presence of western ringtail possum.

## **3.2.2. Biological values (flora) - Clearing Principles (a) and (c)**

### **Assessment**

Spatial data indicates that 88 conservation significant flora have been recorded in the local area (20-kilometre radius). Thirteen of these species are listed as Threatened and the rest are listed as Priority 1,2, 3 and 4. Although none of these records occur within the application area, the likelihood of their occurrence has been assessed based on soil type, habitat preference and proximity to the application area, and one threatened species which is *Calectasia cyanea* is identified as likely to occur in the application area.

There are 18 records of *Calectasia cyanea* mapped in the local area, with the closest individual recorded 1.85 kilometres from the application area. This woody perennial herb of between 0.1 to 0.6 m high is often found on white, grey or yellow sand, gravel (DEC, 2009). In the local area, majority of known *Calectasia cyanea* individuals recorded in the large continuous coastal vegetation patch in the south and southeast of the application area. This suggests that this flora species is more likely to be present within the area where the vegetation is in much better condition, in its suitable habitat.

Conclusion:

Based on the above assessment, it is unlikely that the proposed clearing has a detrimental impact on the flora diversity and habitat of threatened flora within the local context.

Condition:

Nil conditions

### **3.3. Relevant planning instruments and other matters**

The application area is within the South Coast Water Reserve (priority 2 - P2) Public Drinking Water Source Area. The Water Source Protection Planning Branch, Department of Water and Environmental Regulation (DWER) advised that the clearing purpose of road maintenance is compatible with conditions in P2 areas regulated under the WQPN 25 - Land use compatibility tables for public drinking water source areas (PDWSAs) (DWER, 2022). Water Source Protection Planning Branch, DWER also advised that the proposed land use and its associated activities should be undertaken consistent with the following best practice guidance documents:

- Roads to reuse: Product specification – recycled road base and recycled drainage rock (do not use recycled drainage rock in PDWSAs)
- WQPN 10: Contaminant spills – emergency response plan
- WQPN 28: Mechanical servicing and workshops
- WQPN 29: Mobile mechanical servicing and cleaning
- WQPN 44: Roads near sensitive water resources
- WQPN 56: Tanks for fuel and chemical storage near sensitive water resources
- WQPN 83: Infrastructure corridors near sensitive water resources
- WQPN 84: Rehabilitation of disturbed land in PDWSAs
- Brochure: Construction depots near sensitive water resources.

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

**End**

## Appendix A. Site characteristics

### A.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is a 0.023-hectare isolated patch of native vegetation in the intensive land use zone of Western Australia. It is adjacent parallelly to an existing unsealed road running west to east. The proposed clearing area is a small isolated patch in a cleared landscape.</p> <p>Spatial data indicates the local area (20-kilometre radius from the centre of the area proposed to be cleared) retains approximately 38 per cent of the original native vegetation cover.</p>
Ecological linkage	<p>The application area does not lie in any formally mapped ecological linkages. Given the application area consists of isolated trees, it is not considered to be contributing significantly to the values of the nearby mapped linkages or to any formal or informal ecological linkages in the local area.</p>
Conservation areas	<p>The nearest conservation area to the application area is the Gledhow Nature Reserve which is located approximately three kilometres from the application area</p>
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of <i>Agonis flexuosa</i> (Peppermint tree), <i>Hybbertia cuneiformis</i> (Cutleaf Hibbertia) and introduced grasses. Representative photos are available in Appendix D.</p> <p>This is somewhat consistent with the mapped vegetation type of Torndirrup (Beard 423), which is described as Shrublands; Acacia scrub-heath unknown spp (Shepherd et al, 2001)</p>
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in degraded to completely degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> <li>Degraded: Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management.</li> <li>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.</li> </ul> <p>The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.</p>
Climate and landform	<p>Climate: Mean maximum temperature is 19.5 degrees Celsius.  Mean minimum temperature is 11.8 degrees Celsius.</p> <p>Rainfall: Mean annual rainfall is 925.2 millimetres.</p> <p>Landform: interdunal flats</p>
Soil description	<p>The soil is mapped as 242MeMRf, briefly described as podzols on interdune plains; banksia-bulch-yate woodland; pale deep sands and some semi wet soils.</p>



Characteristic	Details
Land degradation risk	The soil types within the application area are mapped as having a low risk of land degradation resulting from water erosion, salinity, and flooding; as having moderate risk of water logging and phosphorous export; but as having a high to extreme risk of wind erosion and subsurface acidification (DPIRD, 2021).
Waterbodies	The desktop assessment and aerial imagery indicated that no wetlands or waterbodies transecting the application area.
Hydrogeography	The application area falls within the South Coast Water Reserve (priority 2) Public Drinking Water Source Area. Groundwater salinity within the application area is mapped as from 500 to 1000 milligrams per litre total dissolved solids.
Flora	There are records of 88 native flora within the local area (excluding the ocean), including 13 threatened species. None of these is recorded within the application area. The closest recorded threatened species is <i>Calectasia cyanea</i> , located approximately 1.85 kilometres from the application area. There are four species (one threatened species of <i>Caladenia harringtoniae</i> ) found on the same soil type and 20 species (five are categorized as threatened) found in the same vegetation type as the application area.
Ecological communities	The desktop assessment identified that the closest state-listed priority ecological community (PEC) is an occurrence of the <i>Astartea scoparia</i> Swamp Thicket, located approximately two kilometres north-east of the application area.
Fauna	The desktop assessment identified that a total of 92 threatened or priority fauna species have been recorded within the local area (excluding the ocean), including 48 threatened fauna species, one extinct species, 14 priority fauna species, and 29 specially protected fauna species. There are 28 roosting sites identified in the local area with the closest one recorded approximately 320 metres from the application area.

## 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*					
Warren	833,985.56	659,432.21	79.07	558,485.38	66.97
Vegetation complex					
Beard vegetation association 423*	15,176.26	11,983.36	78.96	4,481.50	29.53
Local area					
20 km radius	75,021.14	28,785.74	38.37	-	-

\*Government of Western Australia (2019)

### A.3. Land degradation risk table

Risk categories	Land Unit 1
Wind erosion	H1: 50-70% of map unit has a high to extreme wind erosion risk
Water erosion	L1: <3% of map unit has a high to extreme water erosion risk
Salinity	L1: <3% of map unit has a moderate to high salinity risk or is presently saline
Subsurface Acidification	H2: >70% of map unit has a high subsurface acidification risk or is presently acid
Flood risk	L1: <3% of the map unit has a moderate to high flood risk
Water logging	M1: 10-30% of map unit has a moderate to very high waterlogging risk
Phosphorus export risk	M2: 30-50% of map unit has a high to extreme phosphorus export risk

### Appendix B. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
<b>Environmental value: biological values</b>		
<p><u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>Consisting of some isolated Peppermint trees (<i>Agonis flexuosa</i>) which are likely the regrowth following previous clearing, heath of <i>Hybbertia cuneiformis</i> and weeds (introduced grasses), the application area is not considered likely to comprise a high level of biodiversity.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1 and 3.2.2, above.</i>
<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 may contain potential foraging habitat for conservation significant fauna.</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>No threatened flora has been recorded in the application area from the desktop assessment. There is one threatened species mapped in the same soil type and five threatened species recorded in the same vegetation type as the application area. However, given that the small extent and the poor condition of the vegetation proposed to be cleared, the likelihood for these species to occur is considered very low. The application area is considered unlikely to be necessary for the continued existence of these species.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<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>	Not at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<p>There are no threatened ecological communities (TECs) identified in the 20-kilometre radius from the application area. The closest TEC mapped is approximately 47 kilometres from the application area. Given the distance and separation from the nearest TEC, the proposed clearing is not likely to impact or be necessary for the maintenance of any TEC.</p>		
<b>Environmental value: significant remnant vegetation and conservation areas</b>		
<p><u>Principle (e):</u> <i>“Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</i></p> <p><u>Assessment:</u></p> <p>The vegetation proposed to be cleared comprises isolated vegetation within a historically cleared area and is not considered to be part of a significant ecological linkage in the local area. In addition, there is approximately 38 percent of remnant vegetation in the local area. Considering the above and the small clearing area, the proposed clearing is not likely to be at variance to this clearing principle.</p>	Not likely to be at variance	No
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u></p> <p>Gledhow Nature Reserve is the closest conservation area, approximately three kilometres from the application area. Given the distance to the nearest conservation area, 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
<b>Environmental value: land and water resources</b>		
<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>No wetlands are recorded within 20 kilometres radius of the application area. The closest inland watercourse is approximately one kilometre away from the application area. The proposed clearing is unlikely to impact on- or off-site hydrology and water quality.</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>The mapped soils are susceptible to risks of wind erosion and subsurface acidification. Noting the extent of the proposed clearing and that the final land use will be a gravel road that will not leave bare ground exposed to weathering for extended periods, 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>The closest surface watercourse is approximately one kilometre at the north of the application area. Noting the extent of the application area and its distance from the closest watercourse, the proposed clearing is not likely to impact the surface water quality.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.3, above.</i>

Assessment against the clearing principles	Variance level	Is further consideration required?
The application area falls within the South Coast Water Reserve (priority 2) Public Drinking Water Source Area. Subsequent activities of the vegetation clearing (road maintenance) in the application area may cause impacts on the underground water quality.		
<p><u>Principle (j)</u>: “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</p> <p><u>Assessment</u>:</p> <p>The mapped soils and topographic contours in the surrounding area do not indicate that the application area is susceptible to flooding. Noting this, the extent of the proposed clearing, and the condition of the vegetation, the proposed clearing itself is unlikely to contribute to increased incidence or intensity of flooding.</p>	Not likely to be at variance	No

### Appendix C. Vegetation condition rating scale

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

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

The application area comprises 10 peppermint trees, a few *Hybbertia cuneiformis* shrubs and weed. The applicant has noted that only 6 peppermint trees will be cleared, the remaining trees and shrub will be retained ( City of Albany, 2022b)



Figure F-1: Trees to be cleared



Figure F-2: Trees and shrub to be retained

## Appendix E. Sources of information

### E.1. GIS databases

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

- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- 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
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Public Drinking Water Source Areas (DWER-033)
- Remnant Vegetation, All Areas
- 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

Restricted GIS Databases used:

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- Threatened Fauna
- Threatened Ecological Communities and Priority Ecological Communities

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