



## CLEARING PERMIT

*Granted under section 51E of the Environmental Protection Act 1986*

<b>Purpose Permit number:</b>	CPS 9055/1
<b>Permit Holder:</b>	Bunbury Harvey Regional Council
<b>Duration of Permit:</b>	From 22 December 2020 to 22 December 2025

The permit holder is authorised to clear native vegetation subject to the following conditions of this permit.

### **PART I – CLEARING AUTHORISED**

#### **1. Clearing authorised (purpose)**

The permit holder is authorised to clear native vegetation for the purpose of power installation.

#### **2. Land on which clearing is to be done**

Stanley Road reserve (PIN 1338670)

#### **3. Clearing authorised**

The permit holder must not clear more than 0.018 hectares of native vegetation within the area cross-hatched yellow in Figure 1 of Schedule 1.

### **PART II – MANAGEMENT CONDITIONS**

#### **4. 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.

#### **5. 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.

**6. Directional clearing**

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

**PART III - RECORD KEEPING AND REPORTING**

**7. 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"> <li>(a) the species composition, structure, and density of the cleared area;</li> <li>(b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;</li> <li>(c) the date that the area was cleared;</li> <li>(d) the size of the area cleared (in hectares); and</li> <li>(e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 4; and</li> <li>(f) actions taken to minimise the risk of the introduction and spread of weeds and dieback in accordance with condition 5.</li> </ul>

**8. Reporting**

The permit holder must provide to the *CEO* the records required under condition 7 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 clearing provisions under the <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
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 <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.

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## END OF CONDITIONS



MEENU VITARANA  
A/MANAGER  
NATIVE VEGETATION REGULATION

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

27 November 2020

# Schedule 1

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

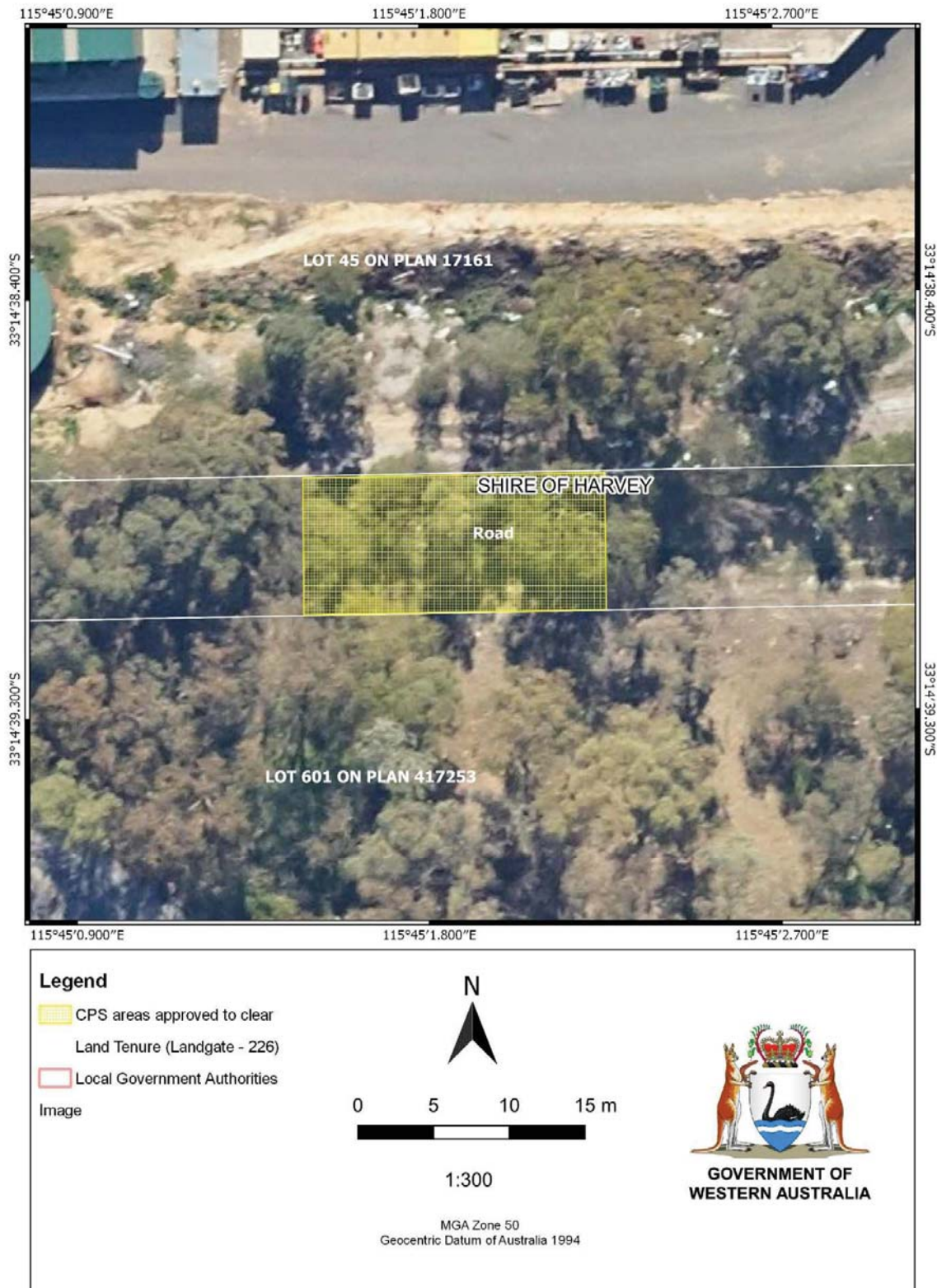


Figure 1: Map of the boundary of the area within which clearing may occur



# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1. Permit application details

Permit number:	CPS 9055/1
Permit type:	Purpose permit
Applicant name:	Bunbury Harvey Regional Council
Application received:	21 September 2020
Application area:	0.018 hectares of native vegetation
Purpose of clearing:	Power supply installation
Method of clearing:	Mechanical
Property:	Stanley Road reserve (PIN 1338670)
Location (LGA area):	Shire of Harvey
Localities (suburb):	Wellesley

### 1.2. Description of clearing activities

The application is to selectively clear 0.018 hectares of native vegetation within Stanley Road reserve (PIN 1338670), Wellesley, for the purpose of installing underground power supply for a compost facility. The vegetation proposed to be cleared is contained within a single contiguous area, comprising one *Corymbia calophylla* (marri) tree and several shrubs (Bunbury Harvey Regional Council, 2020; see Figure 1, Section 1.5).

### 1.3. Decision on application

Decision:	Granted
Decision date:	27 November 2020
Decision area:	0.018 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 Delegated Officer also took into consideration the purpose of the application for the installation of power supply for a compost facility, which may provide community benefit.

The assessment identified that the proposed clearing may result in the loss of 0.018 hectares of native vegetation mapped as Banksia Dominated Woodlands of the Swan Coastal (Priority 3), that incorporates potential foraging habitat for the *Calyptorhynchus baudinii* (Baudin's cockatoo), *Calyptorhynchus latirostris* (Carnaby's cockatoo) and *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo), collectively known as black cockatoos, and habitat that may be used by *Pseudocheirus occidentalis* (western ringtail possum). But the vegetation within the application

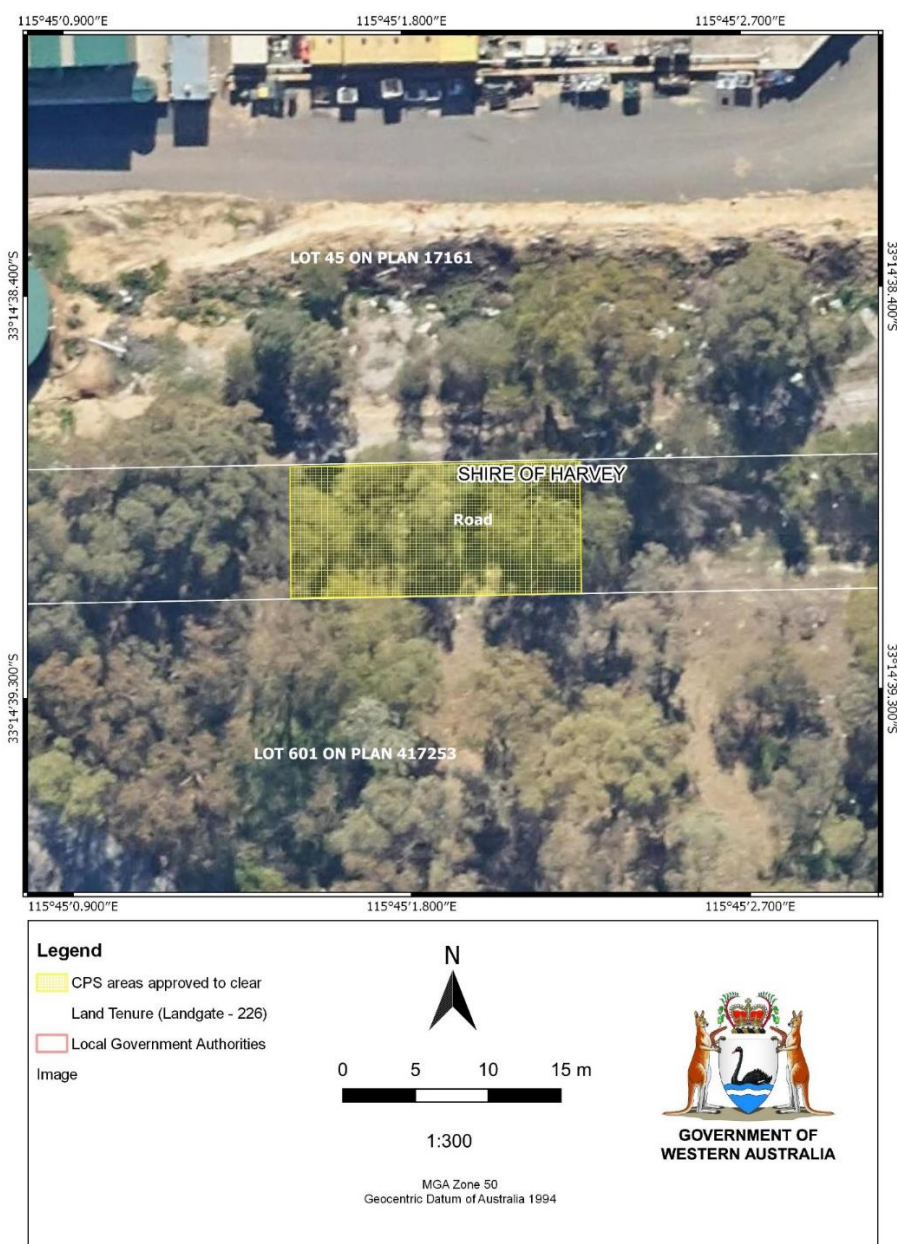


area is not likely to provide significant habitat for these species. The proposed clearing also has the potential to result in the introduction and spread of weeds and dieback into adjacent vegetation, which could impact on its habitat quality.

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 any long-term adverse impacts on the environmental and that weed and dieback management practices will mitigate any potential impacts to adjacent vegetation, and slow and directional clearing will allow fauna to move into adjacent native vegetation ahead of the clearing activity.

The applicant has suitably demonstrated avoidance and minimisation measures (see Section 3.1) and the Delegated Officer decided to grant a clearing permit subject to conditions to take hygiene steps to minimise the risk of the introduction and spread of weeds.

### 1.5. Site map



**Figure 1** Map of the application area

The area crosshatched yellow within Figure 1, 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

Bunbury Harvey Regional Council (2020) advised that both overhead and underground power installation options were considered and noted that overhead power supply would require extensive clearing. Underground power installation was deemed the best option given less vegetation clearing would be required (Bunbury Harvey Regional Council, 2020). 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 values. The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing present a risk to biological values. 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) – Clearing Principle (a)

##### Assessment

The vegetation within the application area occurs within a mapped occurrence of the Banksia Dominated Woodlands of the Swan Coastal Plain (Banksia Woodland; Priority 3) Priority Ecological Community (PEC), listed as endangered under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The Banksia Woodland PEC is known from 42 records (4,017 hectares) within the local area.

The vegetation within application area is situated on edge of a larger remnant. The application area is bounded by the Stanley Road Waste Management Facility to the north and the Kemerton industry buffer to the south (Appendix A). Information provided with the application indicate the vegetation within the application area comprises one marri tree and several shrubs in good to degraded (Keighery, 1994) condition, with a dense weed understorey (Appendix A and Appendix D). Noting the extent of the Banksia Woodland PEC mapped within the local area (4,017 hectares) and the vegetation condition, the loss of 0.018 hectares of vegetation proposed to be cleared is not likely to significantly impact or cause a decline in the ecological functioning of the Banksia Woodland PEC in the local area.

The vegetation within the application area is not likely to comprise significant habitat for conservation significant flora or fauna and does not form part of a conservation area or significant ecological linkage (Section 3.2.2, Appendix C and Appendix D). However, the vegetation within the application area does form part of a larger remnant of vegetation that is also mapped as Banksia Woodland PEC. The adjacent remnant vegetation may be susceptible to the introduction and spread of environmental weeds and dieback disease (*Phytophthora* species). The implementation of dieback and weed management strategies during the clearing will mitigate impacts to adjacent vegetation.

##### Conclusion:

Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable subject to relevant conditions in relation to this environmental value. It is considered that the impacts of

the proposed clearing to ecological communities and remnant vegetation can be managed through the implementation of weed and dieback hygiene management conditions and does not constitute a significant residual impact.

Conditions:

To address the above impacts, management measures will be required as conditions on the clearing permit including weed and dieback management measures to mitigate impacts to adjacent vegetation.

### **3.2.2. Biological values (fauna): Clearing Principle (b)**

Assessment

The vegetation within the application area may provide suitable foraging habitat for black cockatoos (Appendix A and Appendix B). Photographs provided with the application indicate that the vegetation within the application area does not provide suitable breeding habitat for black cockatoos. The vegetation within the application area may be utilised by western ringtail possum (Appendix A and Appendix B). Noting the photographs provided with the application, the small extent of 0.018 hectares proposed (one marri and several shrubs), the good to degraded (Keighery, 1994) vegetation condition, the extent of vegetation remaining (Appendix A2), and the land uses directly adjacent to the proposed clearing, the proposed clearing is not likely to remove significant habitat for black cockatoos, western ringtail possum or other conservation significant fauna.

Given the absence of understory vegetation, the small extent of the clearing proposed and the primarily degraded vegetation condition (Appendix A and Appendix D), ground-dwelling and other fauna may use the vegetation within the application area, however the proposed clearing area is not likely to provide significant habitat. The application area occurs adjacent to remnant vegetation with similar habitat values that fauna are able to disperse to. The application area does not comprise the whole, or a part of, nor is it necessary for the maintenance of a significant habitat for fauna, and large areas of similar habitat in the same or better condition are present within the local area. However, adjacent vegetation may be susceptible to dieback disease (*Phytophthora* species) and weed invasion which the clearing process may exacerbate.

Outcome:

Based on the above assessment, the Delegated Officer has determined that the proposed clearing is considered acceptable subject to relevant conditions in relation to this environmental value.

Conditions:

To mitigate potential impacts from clearing, the following conditions will be added to the permit:

- Weed and dieback management measures to mitigate impacts to adjacent vegetation.
- Slow and directional clearing to allow fauna to move into adjacent native vegetation ahead of the clearing activity.

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

The application area comprises 0.018 hectares of native vegetation an unformed portion of Stanley Road reserve. The Shire of Harvey is the public authority that manages this portion of the application area and has provided the applicant with the authority to access this portion of the application area (Bunbury Harvey Regional Council, 2020). The Shire of Harvey (2020) did not have any objections to the proposed clearing.

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



## Appendix A. Site characteristics

### 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 DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

Characteristic	Details
Local context	The area proposed to be cleared is part of a larger remnant of native vegetation in the intensive land use zone of Western Australia. The application area is zoned as a 'no zone' (DPLH-071), and is bounded by the Stanley Road Waste Management Facility to the north and the Kemerton industry buffer (DPLH-071) to the south. The land use in the broader context comprises land cleared for extractive industry and waste management, interspersed with remnant vegetation. Spatial data indicates the local area (10-kilometre radius) retains approximately 31.5 per cent of the original native vegetation cover.
Ecological linkage	There are no mapped ecological linkages within the application area. The South West Ecological Linkage is located approximately 470 metres from the application area. The vegetation within the application area is connected to this linkage via a thin, linear strip of remnant vegetation.
Conservation areas	There are no conservation areas mapped within the application area. The application area is situated approximately 740 metres south east from land legislated by Department of Biodiversity, Conservation and Attractions (DBCA; Section 34A). The nearest conservation park is Leschenault Peninsula Conservation Park, located approximately 5.5 kilometres west from the application area, and separated by previously cleared land, road infrastructure and ocean.
Vegetation description	Photographs and information supplied by the applicant indicate the vegetation within the application area consists of one <i>Corymbia calophylla</i> (marri) and several shrubs (Bunbury Harvey Regional Council, 2020). Representative photographs are available in Appendix D. The vegetation type mapped within the application area is Bassendean Complex-Central and South, described as vegetation that ranges from woodland of <i>Eucalyptus marginata</i> (jarrah) - <i>Allocasuarina fraseriana</i> (sheoak) - Banksia species to low woodland of Melaleuca species, and sedgelands on the moister sites. This area includes the transition of <i>E. marginata</i> to <i>Eucalyptus todtiana</i> (Pricklybark) in the vicinity of Perth (Hedde <i>et al</i> , 1980). The mapped vegetation type retains approximately 26.87 per cent of the original extent (Government of Western Australia, 2019).
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in good to degraded (Keighery, 1994) condition, described as: <ul style="list-style-type: none"> <li>- 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 (Keighery, 1994).</li> <li>- 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.</li> </ul> The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.
Climate and landform	The proposed clearing area occurs at an elevation of 20 metres Australian Height Datum (AHD). The average rainfall and evapotranspiration rate for the area is 900 and 800 millimetres, respectively. Annual mean maximum temperature is 25.4°C and annual mean minimum temperature is 10.9°C.
Soil description	The soils within the application area is mapped as: <ul style="list-style-type: none"> <li>- Spearwood S1c Phase subsystem (211Sp), described as Dune ridges with deep bleached grey sands with yellow-brown subsoils, and slopes up to 15%.</li> <li>- Bassendean B1 Phase subsystem (212Bs), described as Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep</li> </ul>

Characteristic	Details																								
	bleached grey sands sometimes with a pale yellow B horizon or a weak iron-organic hardpan at depths generally greater than 2 metres; banksia dominant.																								
Land degradation risk	Land degradation risk ratings mapped over the application area are provided in the table below (DPIRD 2017).																								
	<table border="1"> <thead> <tr> <th>Risk categories</th> <th>Spearwood S1c Phase subsystem</th> <th>Bassendean B1 Phase (212Bs)</th> </tr> </thead> <tbody> <tr> <td>Wind erosion</td> <td>&gt;70% of map unit has a high to extreme wind erosion risk</td> <td>50-70% of map unit has a high to extreme wind erosion risk</td> </tr> <tr> <td>Water erosion</td> <td>&lt;3% of map unit has a high to extreme water erosion risk</td> <td>&lt;3% of map unit has a high to extreme water erosion risk</td> </tr> <tr> <td>Salinity</td> <td>&lt;3% of map unit has a moderate to high salinity risk or is presently saline</td> <td>&lt;3% of map unit has a moderate to high salinity risk or is presently saline</td> </tr> <tr> <td>Subsurface Acidification</td> <td>50-70% of map unit has a high subsurface acidification risk or is presently acid</td> <td>&gt;70% of map unit has a high subsurface acidification risk or is presently acid</td> </tr> <tr> <td>Flood risk</td> <td>&lt;3% of the map unit has a moderate to high flood risk</td> <td>&lt;3% of the map unit has a moderate to high flood risk</td> </tr> <tr> <td>Waterlogging</td> <td>&lt;3% of map unit has a moderate to very high waterlogging risk</td> <td>3-10% of map unit has a moderate to very high waterlogging risk</td> </tr> <tr> <td>Phosphorus export risk</td> <td>50-70% of map unit has a high to extreme phosphorus export risk</td> <td>&gt;70% of map unit has a high to extreme phosphorus export risk</td> </tr> </tbody> </table>	Risk categories	Spearwood S1c Phase subsystem	Bassendean B1 Phase (212Bs)	Wind erosion	>70% of map unit has a high to extreme wind erosion risk	50-70% of map unit has a high to extreme wind erosion risk	Water erosion	<3% of map unit has a high to extreme water erosion risk	<3% of map unit has a high to extreme water erosion risk	Salinity	<3% of map unit has a moderate to high salinity risk or is presently saline	<3% of map unit has a moderate to high salinity risk or is presently saline	Subsurface Acidification	50-70% of map unit has a high subsurface acidification risk or is presently acid	>70% of map unit has a high subsurface acidification risk or is presently acid	Flood risk	<3% of the map unit has a moderate to high flood risk	<3% of the map unit has a moderate to high flood risk	Waterlogging	<3% of map unit has a moderate to very high waterlogging risk	3-10% of map unit has a moderate to very high waterlogging risk	Phosphorus export risk	50-70% of map unit has a high to extreme phosphorus export risk	>70% of map unit has a high to extreme phosphorus export risk
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Waterbodies	The desktop assessment and aerial imagery indicates there are no mapped wetlands or watercourses within the application area. The nearest mapped watercourse is the Collie River, located approximately 715 metres south east from the application. The closest Geomorphic Wetland is located approximately 600 metres south east of the application area (conservation category dampland wetland).																								
Hydrogeography	The application area is located within the Bunbury Groundwater Area as proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act). Groundwater salinity within the application ranges between 500-1,000 milligrams per litre (mg/L) total dissolved solids (TDS).																								
Flora	There are 105 conservation significant flora records in the local area (10-kilometre radius; Western Australian Herbarium, 1998-). The nearest mapped priority flora records that occur within the same mapped soil and vegetation types as those within the application area include <i>Verticordia attenuata</i> (Priority 3) and <i>Carex tereticaulis</i> (Priority 3), located approximately 0.9 kilometres and 0.8 kilometres from the application area, respectively. <i>Verticordia attenuata</i> is known from winter-wet depressions and <i>Carex tereticaulis</i> from black peaty sand (Western Australian Herbarium, 1998-). These habitat characteristics are likely absent from the application area. Five threatened flora are known from the local area. The nearest records are <i>Drakaea elastica</i> and <i>Drakaea micrantha</i> , located approximately 1.2 kilometres and 1.4 kilometres from the application area, respectively.																								
Ecological communities	The vegetation within the application area occurs within a mapped record of the Banksia Dominated Woodlands of the Swan Coastal Plain (Priority 3) Priority Ecological Community (PEC), listed as endangered under the Environment <i>Protection and Biodiversity Conservation Act 1999</i> (EPBC Act). No threatened ecological communities (TECs) endorsed by the Western Australian Minister for the Environment have been mapped within the local area.																								

Characteristic	Details
Fauna	<p>There are 558 conservation significant fauna records within the local area (10-kilometre radius). The nearest record is <i>Calyptorhynchus baudinii</i> (Baudin's cockatoo) located approximately 500 metres west from the application area. One unconfirmed and one known black cockatoo roost site have been recorded within approximately 1 kilometre and 2.8 kilometres from the application area. Baudin's cockatoo, <i>Calyptorhynchus latirostris</i> (Carnaby's cockatoo) and <i>Calyptorhynchus banksii naso</i> (forest red-tailed black cockatoo) have been recorded within the location area.</p> <p>The application area is partially mapped within an area identified for <i>Pseudocheirus occidentalis</i> (western ringtail possum) habitat suitability. The nearest western ringtail possum record is located approximately 0.63 kilometres from the application area.</p>

## 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	1,501,222	579,814	38.6	153,955	10.3
Vegetation complex**					
Bassendean Complex-Central and South	87,476	23,509	26.9	7,614	5.0
Local area (calculation - delete if not required)					
10 km radius	7,881	2,482	31	-	-

\*Government of Western Australia (2019a)

\*\*Government of Western Australia (2019b)

## 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> <i>“Native vegetation should not be cleared if it comprises a high level of biodiversity.”</i></p> <p><u>Assessment:</u> Noting habitat preferences, the degraded vegetation condition, surrounding land use and the small clearing extent of 0.018 hectares proposed, the vegetation within the application area does not likely comprise significant habitat for conservation significant flora or fauna. The application area is located within an area mapped as Banksia Dominated Woodlands of the Swan Coastal Plain (Priority 3) priority ecological community (PEC), however is not representative of this PEC.</p>	May be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (b):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna.”</i></p> <p><u>Assessment:</u> Noting the small clearing extent of 0.018 hectares proposed comprising one marri tree and several shrub species, the degraded vegetation condition, the presence of similar vegetation adjacent to the application, and based on photographs provided with the application that indicate an absence of breeding habitat, the vegetation within the application area is not likely to comprise significant habitat for fauna.</p>	Not likely to be at variance	Yes Refer to Section 3.2.2, above.
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u> Given the habitat preferences and the degraded vegetation condition and the small extent of 0.018 hectares of clearing proposed, the vegetation within the application area is not likely to comprise significant habitat for threatened flora (Appendix A and Appendix D). The proposed clearing is not likely to significantly impact on the conservation status of threatened flora.</p>	Not likely to be at variance	No
<p><u>Principle (d):</u> <i>“Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community.”</i></p> <p><u>Assessment:</u> No threatened ecological communities (TECs) endorsed by the Western Australian Minister for the Environment have been mapped within the local area. The vegetation within the application is not likely to comprise the whole or a part of, or is necessary for the maintenance of, a TEC.</p>	Not likely to be at variance	No
<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> The extent of the native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The mapped vegetation type retains approximately 26.87 per cent of the original extent. The Environmental Protection Authority (EPA) recognises the Greater Bunbury Region to be a constrained area, within which a minimum 10 per cent representation threshold for ecological communities is recommended (EPA, 2003). Therefore, the extent of the mapped vegetation type remaining exceeds the EPA (2003) targets for a constrained area.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<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> Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of adjacent or 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> Given no mapped watercourses or wetlands are recorded within 0.6 kilometres from the application area, and noting the extent and purpose of the clearing proposed, the proposed clearing is not likely 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> The mapped soils are not susceptible to water erosion, salinity, or waterlogging, but are mapped as high risk for wind erosion, subsurface acidification and phosphorus export risk. Noting the small clearing extent of 0.018 hectares proposed within a larger remnant, 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 water courses or wetlands are recorded within 0.6 kilometres from the application area and no surface water areas proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act) are in the vicinity of the application area, the proposed clearing is unlikely to impact surface water quality. The application area is located within the Bunbury Groundwater Area as proclaimed under the RIWI Act. The extent of the clearing proposed is minimal and is unlikely to cause any deterioration in the quality of underground water.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.”</i></p> <p><u>Assessment:</u> The mapped soils and topographic contours in the surrounding area indicate the proposed clearing is not likely to contribute to increased incidence or intensity of flooding. Given no watercourses or wetlands are recorded within approximately 0.6 kilometres of the application area, the proposed clearing is not likely to contribute to waterlogging. The risk of waterlogging and flooding is low (DPIRD 2017). The application area is located well outside of any recognised floodplain areas (DWER-020), or areas subject to flooding or inundation, with the closest occurring approximately 0.65 kilometres to the south-east. The minor clearing proposed is unlikely to cause, or exacerbate, the 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 of the application area, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from Keighery (1994).

**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**



**Figure F1.** Representative photograph of vegetation proposed to be cleared under CPS 9055/1 (Bunbury Harvey Regional Council, 2020).



## 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)
- 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
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- 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

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)

### E.2. References

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