



## CLEARING PERMIT

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

### PERMIT DETAILS

Area Permit Number: CPS 9786/1  
File Number: DWERVT10471  
Duration of Permit: From 25 November 2022 to 25 November 2029

### PERMIT HOLDER

City of Bunbury

### LAND ON WHICH CLEARING IS TO BE DONE

Lot 300 on Plan 416277, South Bunbury

### AUTHORISED ACTIVITY

The permit holder must not clear more than 0.04 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

### CONDITIONS

**1. Period during which clearing is authorised**

The permit holder must not clear any *native vegetation* after 25 November 2024.

**2. Avoid, minimise, and reduce impacts and extent of clearing**

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

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

### 3. Weed and dieback management

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

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

### 4. Fauna management – western ringtail possum

- (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*).
- (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) 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 individual(s) removed in accordance with condition 4(b)(ii) must be relocated by a *western ringtail possum specialist* to a *suitable habitat*, or as otherwise approved by the *CEO*.
- (d) Where fauna is identified under condition 4(a), the permit holder must within two months 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 1994/2020 (GDA94/2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
  - (iv) whether the individual naturally dispersed;
  - (v) the number of individuals removed and relocated;
  - (vi) the relevant qualifications of the *western ringtail possum specialist* undertaking removal and relocation;
  - (vii) the date each individual was removed;
  - (viii) the method of removal;
  - (ix) the date each individual was relocated;

- (x) the location where each individual was relocated to, recorded using a GPS unit set to GDA94/2020, expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
- (xi) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

**5. Planting – mitigation**

- (a) The permit holder must, within 12 months of the commencement of clearing authorised under this permit:
  - (i) undertake deliberate *planting* of *Agonis flexuosa* (peppermint) trees cross-hatched red in Figure 2 of Schedule 1, at ratio of 1:2 for each tree cleared;
  - (ii) ensure only *local provenance* propagating material is used for *planting* activities;
  - (iii) ensure *planting* is undertaken at an *optimal time*; and
  - (iv) undertake *weed* control and watering of seedlings, as required, for at least two years post *planting*.
- (b) The permit holder must, within 24 months of *planting* the trees in accordance with condition 5(a)(i) of this permit:
  - (i) engage an *environmental specialist* to make a determination on the likelihood of survival of planted trees;
  - (ii) if the determination made by the *environmental specialist* under condition 5(b)(i) is that any planted trees will not survive, the permit holder must plant additional trees that will result in a ratio of 1:2 for each tree cleared persisting at the suitable location; and
  - (iii) where additional *planting* of trees is undertaken in accordance with condition 5(b)(ii), the permit holder must repeat the activities required under conditions 5(a)(ii)-(iv) and 5(b)(i)-(ii) of this permit.

**6. 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 location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994/2020 (GDA94/2020), expressing the geographical coordinates in Eastings and Northings;</li> <li>(b) the date that the area was cleared;</li> <li>(c) the size of the area cleared (in hectares);</li> <li>(d) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 2;</li> <li>(e) actions taken to minimise the risk of the introduction</li> </ul>

No.	Relevant matter	Specifications
		and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 3; and (f) actions taken in accordance with condition 4.
2.	In relation to <i>planting</i> pursuant to condition 5	(a) the size of the <i>planted</i> area; (b) the date(s) on which the <i>planting</i> was undertaken; (c) the boundaries of the area <i>planted</i> (recorded digitally as a shapefile); (d) a description of the <i>planting</i> activities undertaken pursuant to condition 4(a), including <i>planted</i> species composition and density, and actions taken to implement watering and <i>weed</i> control; (e) a copy of the <i>environmental specialist's</i> monitoring report and determination; and (f) a description of any remedial actions undertaken pursuant to conditions 5(b)(ii)-(iii), where the <i>environmental specialist</i> indicates that <i>planted</i> trees will not survive.

## 7. Reporting

The permit holder must provide to the *CEO* the records required under condition 6 of this permit when requested by the *CEO*.

## DEFINITIONS

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

**Table 2: Definitions**

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
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)
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent, and has a minimum of two (2) years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.
fauna specialist	means a person who holds a tertiary qualification specialising in environmental science or equivalent and has a minimum of 2 years work experience in fauna identification and surveys of fauna native to the region being inspected or

Term	Definition
	surveyed, or who is approved by the CEO as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the <i>Biodiversity Conservation Act 2016</i> .
local provenance	means native vegetation seeds and propagating material from natural sources within the same IBRA subregion of the area cleared.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
optimal time	"means the period from May to September for undertaking planting and seeding.
planting/ed	means the re-establishment of vegetation by creating soil conditions and planting seedlings of the desired species.
suitable habitat (western ringtail possum)	means habitat known to support to support western ringtail possums ( <i>Pseudocheirus occidentalis</i> ) 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 peppermint ( <i>Agonis flexuosa</i> ) dominated woodlands, jarrah ( <i>Eucalyptus marginata</i> ) and marri ( <i>Corymbia calophylla</i> ) forests, riparian vegetation with a canopy of Bullich ( <i>Eucalyptus megacarpa</i> ) or flooded gum ( <i>Eucalyptus rudis</i> ), karri ( <i>Eucalyptus diversicolor</i> ) forests, sheoak ( <i>Allocasuarina fraseriana</i> ) dominated woodlands, and other stands of myrtaceous trees growing near swamps, watercourses or floodplains.
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.
western ringtail possum specialist	means a <i>fauna specialist</i> who holds a tertiary qualification specialising in environmental science or equivalent, has a minimum of two years of work experience in western ringtail possum ( <i>Pseudocheirus occidentalis</i> ) identification, surveys of western ringtail possums and capture and handling of western ringtail possums, and holds a valid fauna licence issued under the <i>Biodiversity Conservation Act 2016</i> .

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## END OF CONDITIONS



Meenu Vitarana  
 MANAGER  
 NATIVE VEGETATION REGULATION

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

2 November 2022

# SCHEDULE 1



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



**Figure 2: Map of the boundary of the area within which replanting may occur**



# Clearing Permit Decision Report

## 1 Application details and outcome

### 1.1. Permit application details

<b>Permit number:</b>	CPS 9786/1
<b>Permit type:</b>	Area permit
<b>Applicant name:</b>	City of Bunbury
<b>Application received:</b>	28 June 2022
<b>Application area:</b>	0.04 hectares of native vegetation
<b>Purpose of clearing:</b>	Construction of a larger pavilion and improved vehicle access including more space for parking.
<b>Method of clearing:</b>	Mechanical
<b>Property:</b>	Lot 300 on Plan 416277
<b>Location (LGA area/s):</b>	City of Bunbury
<b>Localities (suburb/s):</b>	South Bunbury

### 1.2. Description of clearing activities

The vegetation proposed to be cleared is 12 peppermint trees within the Forrest Park Railway, Bunbury, mainly in the vicinity of the existing pavilion and access road (see Figure 1, Section 1.5). It is proposed that a new enlarged pavilion and improved vehicle access including more space for parking will be constructed (City of Bunbury, 2022a).

### 1.3. Decision on application

<b>Decision:</b>	Granted
<b>Decision date:</b>	2 November 2022
<b>Decision area:</b>	0.04 hectares, 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 B), relevant datasets (see Appendix F.1F.1), the findings of an ecological survey (see Appendix E), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C C), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration that the purpose of the proposed clearing was to improve facilities to service the community.

The assessment identified that the proposed clearing would result in:

- the loss of 12 trees of native vegetation that is suitable habitat for western ringtail possum.

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 have long-term adverse impacts on



environmental values and can be further minimised and managed by fauna management and replanting conditions. The applicant has suitably demonstrated avoidance and minimisation measures (see Section 4).

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

- avoid, minimise to reduce the impacts and extent of clearing;
- engage a western ringtail possum 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 prior to the clearing; and
- undertake revegetation using peppermint plants to provide suitable habitat for western ringtail possums, at a ratio of 1:2 for each tree cleared.

## 1.5. Site map



**Figure 1 Map of the application area**

The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.



**Figure 2 Map of the revegetation area**

The areas crosshatched red indicate the areas conditioned for revegetation of western ringtail possum habitat 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)
- Technical guidance – *Flora and Vegetation Surveys for Environmental Impact Assessment* (EPA, 2016)
- Technical guidance – *Terrestrial Fauna Surveys for Environmental Impact Assessment* (EPA, 2016)

## 3 Detailed assessment of application

### 3.1. Avoidance and mitigation measures

The City of Bunbury advised that the existing Forrest Park Pavilion is not fit for purpose, as it does not meet current access and inclusion standards or include adequate facilities to meet the needs of the community. The existing Forrest Park Pavilion will be demolished to make way for the construction of a new pavilion that will include adequate facilities to service the community (City of Bunbury, 2022a).

During the concept phase, the building footprint area was adjusted to avoid potential impacts to a mature tuart tree. The initial concept building footprint area was 2,414 m<sup>2</sup> and would have required clearing of 29 trees (City of Bunbury, 2022a). The tree clearing was further reduced, with the design phase to work within a revised and constrained building footprint of 1,905 m<sup>2</sup> thereby only requiring the removal of 12 peppermint trees, one of which is dead. The revised proposed clearing area includes an informal approach to parking that will enable the retention of the majority of the existing trees (City of Bunbury, 2022a).

The City of Bunbury has indicated that they will plant 24 *Agonis flexuosa* (peppermint) in the north-west pocket of Forrest Park. It is proposed that the trees will be supplied through a propagation program in partnership with the Activ Foundation, who are able to provide medium sized saplings (<60cm in size) that are 1-2 years old for the proposed planting.

The location of the 24 peppermint trees aim to provide increased connectivity of the canopy within the immediate area. By strategically choosing planting location, it is hoped to decrease traffic and movement of vehicle through this area, helping to minimise compaction of the ground and impacts from vehicles to any western ringtail possums that might inhabit the area (City of Bunbury, 2022b).

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

### 3.2.1. Biological values - Clearing Principles (b)

#### Assessment

According to available databases, 61 conservation significant fauna species have been recorded within the local area (10-kilometre radius from the centre of the area proposed to be cleared), which includes 19 migratory species and 13 marine species. The closest record to the application area is a western ringtail possum, ngwayir (*Pseudocheirus occidentalis*) (WRP). This species has been recorded 2104 times within the local area.

One conservation significant species was considered likely to occur within the application area based on their known habitat preferences and the habitat available within the application areas, namely western ringtail possum.

Noting the proximity of records of black cockatoos, the application area may also provide habitat for black cockatoo species. However, peppermints are not a preferred foraging, roosting or breeding tree species for black cockatoos, and given the availability of other food sources, including tuart and pecan trees nearby, the proposed clearing is unlikely to have a significant impact on threatened black cockatoo species.

An Ecological survey of the entire Forest Park, including the application area, was undertaken by Natural Area Holdings Pty Ltd (Natural Area) in March 2021 to confirm the presence of species likely to occur. The survey included a targeted survey for WRP (Natural Area, 2021).

#### **Western Ringtail Possum (WRP)**

*The Western Ringtail Possum (Pseudocheirus occidentalis) Recovery 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). The application area is located within the Swan Coastal Plain Zone.

Noting the habitat preferences of this species, the mapped vegetation type within the application area, the presence of *Agonis flexuosa* and local records of the species, it is considered likely that WRP occur within the application area. However, Natural Area (2021) recorded no WRPs or dreys within the clearing area during the survey. The survey did note one *Agonis flexuosa* (peppermint) in the south-west corner in a larger denser vegetated area of the Forrest Park, showed signs of scratch marks on the trunk indicating the presence of possums. Due to the highly disturbed and modified nature of the parkland, it is more likely that western ringtail possums may utilise the site transiently for foraging or movement rather than having a resident population (Natural Area, 2021).

The removal of 12 *Agonis flexuosa* trees, one that is dead and two which show signs of ghost moth larvae and are in poor health, is not likely to impact on the conservation status of the WRP, or persistence of suburban WRP populations within the local area. For the reasons set out above, it is considered that the impacts of the proposed clearing on WRP can be managed by the engagement of an experienced western ringtail possum specialist to monitor clearing activities.

#### Conclusion

Based on the above assessment, the proposed clearing may result in impacts to individual fauna if present during the clearing, however, this is not likely to impact on the conservation status of any species that may have potential to occur within the application areas.

#### Conditions

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

- fauna management conditions requiring a pre-clearing inspection of the application area for presence of, western ringtail possum,
- Revegetation – mitigation, which requires the revegetation of suitable habitat (peppermint trees) for western ringtail possum, at a ratio of 1:2 for each tree cleared.

### 3.3. Relevant planning instruments and other matters

City of Bunbury has a licence (GWL151138 (4) – Bunbury Yarragadee) to take water under the *Rights in Water and Irrigation Act 1914* (RIWI Act) for the recreational parks and gardens at Forrest Park. No further groundwater licence approvals are required for the proposal to construct the building at the site.

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. Additional information provided by applicant

On request from the DWER, the applicant provided additional information of mitigation measure namely that they will plant 24 *Agonis flexuosa* (Peppermint) in the north-west pocket of Forrest Park. The location of the 24 peppermint trees aim to provide increased connectivity of the canopy within the immediate area. By strategically choosing planting location, it is hoped to decrease traffic and movement of vehicle through this area, helping to minimise compaction of the ground and impacts from vehicles to any western ringtail possums that might inhabit the area (City of Bunbury, 2022b).

## Appendix B. Site characteristics

### B.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is 12 paddock peppermint trees in the intensive land use zone of Western Australia.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 24.17 per cent of the original native vegetation cover.</p>
Ecological linkage	<p>The 12 trees proposed to be cleared are within a parkland setting and do not form part of any ecological linkage.</p>
Conservation areas	<p>The Big Swamp Parkland is located 880 metres west of the application area, separated by urban development and roads. The Koombana Park Reserve is located 1.8 kilometres north of the application area, also separated by urban development and roads from the application area.</p>
Vegetation description	<p>Photographs supplied by the applicant and the ecological survey (Natural Area, 2022) indicate the vegetation within the Forrest Park consists of two vegetation types, these include:</p> <ul style="list-style-type: none"><li>• Cleared parkland of maintained turf, including sporting oval and associated sporting buildings,</li><li>• Parkland of <i>Agonis flexuosa</i> (Peppermint) and <i>Eucalyptus gomphocephala</i> (tuart) over maintained grassed areas.</li></ul> <p>The proposed clearing area is Parkland of <i>Agonis flexuosa</i> (Peppermint), and does not include tuart trees. Representative photos and the survey descriptions and maps are available in Appendix E.</p>

Characteristic	Details																																
	<p>This is inconsistent with the Vasse Complex mapped vegetation type:</p> <ul style="list-style-type: none"> <li>Vasse Complex (37), which is described as Mixture of the closed scrub of <i>Melaleuca</i> species fringing woodland of <i>Eucalyptus rudis</i> (Flooded Gum) – <i>Melaleuca</i> species and open forest of <i>Eucalyptus gomphocephala</i> (Tuart) – <i>Eucalyptus marginata</i> (Jarrah) – <i>Corymbia calophylla</i> (Marri). Will include areas dominated by <i>Tecticornia</i> and <i>Sarcocornia</i> species (Samphire) near Mandurah and south of the Capel River.</li> </ul> <p>The mapped vegetation type retains approximately 31.4 per cent of the original extent (Government of Western Australia, 2019).</p>																																
Vegetation condition	<p>Photographs supplied by the applicant and the ecological survey (Natural Area, 2022) indicate the vegetation within the proposed clearing area is in Completely Degraded (Keighery, 1994) condition due to the complete lack of understorey in the parkland setting.</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix D0. Photographs supplied by the applicant and Ecological survey (Natural Area, 2022) are available in Appendix E.</p>																																
Climate and landform	<p>The climate experienced in the area is Mediterranean, with dry, hot summers and cool, wet winters. The site is relatively flat at 2 m Australian Height Datum (AHD).</p>																																
Soil description	<p>The soil is mapped as Spearwood S4a Phase: described as a flat to gently undulating sand plain with deep, pale and sometimes bleached sands with yellow-brown subsoils.</p>																																
Land degradation risk	<table border="1"> <thead> <tr> <th>RISK</th> <th>LIKELIHOOD</th> <th>DESCRIPTION</th> <th>RISK LEVEL</th> </tr> </thead> <tbody> <tr> <td>subsurface acidification</td> <td>M1</td> <td>10-30% of map unit has a high to extreme water erosion risk</td> <td>Medium</td> </tr> <tr> <td>Flood risk</td> <td>L1</td> <td>&lt;3% of the map unit has a moderate to high flood risk</td> <td>Low</td> </tr> <tr> <td>salinity risk or is presently saline</td> <td>L1</td> <td>&lt;3% of map unit has a moderate to high salinity risk or is presently saline</td> <td>Low</td> </tr> <tr> <td>waterlogging risk</td> <td>L1</td> <td>&lt;3% of map unit has a moderate to very high waterlogging risk</td> <td>Low</td> </tr> <tr> <td>water erosion risk</td> <td>L1</td> <td>&lt;3% of map unit has a high to extreme water erosion risk</td> <td>Low</td> </tr> <tr> <td>wind erosion risk</td> <td>H2</td> <td>&gt;70% of map unit has a high to extreme wind erosion risk</td> <td>High</td> </tr> <tr> <td>phosphorus export risk</td> <td>M1</td> <td>10-30% of map unit has a high to extreme phosphorus export risk</td> <td>Medium</td> </tr> </tbody> </table>	RISK	LIKELIHOOD	DESCRIPTION	RISK LEVEL	subsurface acidification	M1	10-30% of map unit has a high to extreme water erosion risk	Medium	Flood risk	L1	<3% of the map unit has a moderate to high flood risk	Low	salinity risk or is presently saline	L1	<3% of map unit has a moderate to high salinity risk or is presently saline	Low	waterlogging risk	L1	<3% of map unit has a moderate to very high waterlogging risk	Low	water erosion risk	L1	<3% of map unit has a high to extreme water erosion risk	Low	wind erosion risk	H2	>70% of map unit has a high to extreme wind erosion risk	High	phosphorus export risk	M1	10-30% of map unit has a high to extreme phosphorus export risk	Medium
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Waterbodies	<p>The desktop assessment and aerial imagery indicated that no watercourses transect the application area.</p>																																
Hydrogeography	<p>The application area is within the Bunbury Groundwater Area as proclaimed under the <i>R/W/ Act 1914</i>.</p>																																
Flora	<p>According to available databases, there are records of 29 conservation significant flora species within the local area.</p>																																
Ecological communities	<p>The closest ecological community of conservation significance to the application area is the State listed Priority 3 <i>Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region</i> TEC, located approximately 1.4 kilometres west of the application area.</p>																																
Fauna	<p>According to available databases, 61 conservation significant fauna species have been recorded within the local area, 19 migratory species, 13 marine species. The closest record to the application area is a western ringtail possum, ngwayir (<i>Pseudocheirus occidentalis</i>). This species has been recorded 2104 times within the local area.</p>																																

## Appendix C. 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></p> <p>The area proposed to be cleared does not contain locally significant flora, fauna, habitats and assemblages of plants.</p>	Not likely to be at variance	No
<p><u>Principle (b):</u> <i>"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."</i></p> <p><u>Assessment:</u></p> <p>There are 61 records of conservation significant fauna within a 10 km radius of the proposed clearing area. This include the western ringtail possum (<i>Pseudocheirus occidentalis</i>), which are recorded within 340 metres from the application area. Clearing may have impact on the habitat of this species. The applicant has committed to undertake mitigation planting at a ratio 1:2 which is adequate to mitigate impacts in accordance with the WA offset calculator.</p>	At variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain habitat for flora species listed under the BC Act.</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></p> <p>The area proposed to be cleared is not within any threatened ecological community listed under the BC Act or EPBC Act.</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></p> <p>The extent of 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> <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>	Not likely to be at variance	No



Assessment against the clearing principles	Variance level	Is further consideration required?
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.		
<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>Given no water courses or wetlands are recorded within 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 highly susceptible to wind erosion, moderately susceptible to nutrient export and subsurface acidification risk. Noting the extent of the application area and the condition of the vegetation, 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 proposed clearing and associated works will not intercept any water courses or local groundwater. It is unlikely to impact on the quality of surface or groundwater.</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 soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p> <p>Given no water courses are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.</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. Ecological survey information excerpts and photographs of the trees

Natural Area Consulting Management Services (Natural Area) was commissioned by the City of Bunbury (the City) to undertake ecological surveys within Forrest Park, Bunbury. Ecological surveys included a basic flora and fauna survey, as well as targeted searches for Western Ringtail Possum and black cockatoos. Findings from this survey informed native vegetation clearing permit application associated with the proposed upgrading and future development of facilities at Forrest Park.

The surveys undertaken aimed to determine:

- the extent and boundaries of vegetation type and condition
- flora species (native and introduced) present
- the location of declared rare or priority flora and or ecological communities
- the location of individual tree species and the mapping of habitat trees (DBH >500 mm)
- fauna species (native and introduced) present
- evidence of fauna presence through indicators such as tracks, scats, dens, warrens, and calls
- targeted survey for Western Ringtail Possums and Black Cockatoos.

The basic flora and vegetation survey confirmed:

- a total of 23 flora species from seven families
- a total of seven native and 16 introduced flora species
- no threatened or priority species were identified

- no threatened or priority ecological communities were present within the survey area
- two vegetation types, cleared parkland of maintained turf, including sporting oval and associated sporting buildings and Parkland of *Agonis flexuosa* (Peppermint) and *Eucalyptus gomphocephala* (Tuart) over maintained grassed areas
- vegetation condition across the entire site is Completely Degraded with no native middle or understorey present.

The fauna survey confirmed:

- a total of 12 vertebrate fauna species, eight bird species, one mammal, one reptile, and two invertebrates
- the presence of wood boring larvae, Ghost Moth (*Hepialidae*) were present within four *Agonis flexuosa* trees and adversely affecting their health
- one conservation significant species, the threatened Forest Red-tailed Black Cockatoo (3 individuals) recorded within a Tuart tree
- no evidence of nesting or foraging by black cockatoos was observed during the survey
- a total of 138 potential habitat trees which meet the size requirements of a Diameter at Breast Height (DBH) of >500 mm were recorded. Of these, 39 are preferred habitat tree species for threatened black cockatoos (*Eucalyptus gomphocephala*, *Eucalyptus marginata* etc.)
- of the habitat trees recorded, two exhibited hollows which have the potential to provide nesting habitat for black cockatoos, with eight trees containing hollows which are not a sufficient size for black cockatoos
- the survey area contains approximately 2.45 ha of *Agonis flexuosa* habitat for the Western Ringtail Possum, with the habitat comprising of trees over managed turf areas
- no individuals of the Western Ringtail Possum, scats or dreys were observed during the survey, although one tree shown signs of scratch marks from the presence of possums.

The proposed development is in the planning phase, with the clearing envelope not yet determined. As such, it is assumed that the entire Forrest Park will be cleared. The potential clearing of Forrest Park has been assessed against the ten clearing principles and is suggested to be at variance with two of these principles.

Due to the presence of habitat for the Western Ringtail Possum and threatened black cockatoos it is recommended to discuss any proposed actions with the Department of Agriculture, Water and Environment (DAWE) as referral may be required.

Natural Area has the following additional recommendations to aid in reducing any potential environmental impacts to the site:

- Apply local protection methods to important individual trees including the retention of mature habitat trees (DBH >500 mm) where possible, particularly those with hollows which provide nesting for all bird species.
- Native habitat trees (*Eucalyptus gomphocephala* and *Agonis flexuosa*) including both alive and dead trees, with DBH >500mm and hollows of any size, should be prioritised for retention.
- Habitat trees (DBH >500mm) should be retained where possible. If they are proposed to be removed, these should be replaced with native species representative of the area, including *Eucalyptus gomphocephala* and *Agonis flexuosa*.
- If clearing is to occur, prioritise the retention of Western Ringtail Possum habitat, with clearing of non-native trees preferable with the development of areas which contain no native species prioritised to mitigate impact to threaten fauna habitat for both the Western Ringtail Possum and black cockatoos.
- If clearing of trees is to occur it is recommended to be conducted outside of peak breeding season (spring) when avian species may utilise trees as potential nesting sites.







**Figure 3** Photographs of the 12 trees proposed to be cleared (City of Bunbury, 2022)

## Appendix F. Sources of information

### F.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

## F.2. References

- City of Bunbury (2022a) *Clearing permit application CPS 9786/1*, received 28 June 2022 (DWER Ref: DWERDT623480).
- City of Bunbury (2022b) Additional information on clearing permit application CPS 9786/1, received 14 October 2022 (DWER Ref: DWERDT671965).
- Department of Parks and Wildlife (2017). Western Ringtail Possum (*Pseudocheirus occidentalis*) Recovery Plan. Wildlife Management Program No. 58. Department of Parks and Wildlife, Perth, WA.
- Department of Water and Environmental Regulation (DWER) (2019). *Procedure: Native vegetation clearing permits*. Joondalup. Available from: [https://dwer.wa.gov.au/sites/default/files/Procedure\\_Native\\_vegetation\\_clearing\\_permits\\_v1.PDF](https://dwer.wa.gov.au/sites/default/files/Procedure_Native_vegetation_clearing_permits_v1.PDF).
- Environmental Protection Authority (EPA) (2016). *Technical Guidance - Flora and Vegetation Surveys for Environmental Impact Assessment*. Available from: [http://www.epa.wa.gov.au/sites/default/files/Policies\\_and\\_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey\\_Dec13.pdf](http://www.epa.wa.gov.au/sites/default/files/Policies_and_Guidance/EPA%20Technical%20Guidance%20-%20Flora%20and%20Vegetation%20survey_Dec13.pdf).
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- Government of Western Australia. (2019) *2018 Statewide Vegetation Statistics incorporating the CAR Reserve Analysis (Full Report). Current as of March 2019*. WA Department of Biodiversity, Conservation and Attractions. <https://catalogue.data.wa.gov.au/dataset/dbca-statewide-vegetation-statistics>
- Keighery, B.J. (1994) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.
- Mattiske, E.M. and Havel, J.J. (1998) *Vegetation Complexes of the South-west Forest Region of Western Australia*. Maps and report prepared as part of the Regional Forest Agreement, Western Australia for the Department of Conservation and Land Management and Environment Australia.
- Natural Area (2021). *City of Bunbury, Forrest Park Ecological Survey*. Received 28 June 2022 (DWER Ref: DWERDT623480).