



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10925/1
Permit Holder:	Multiplex Perkins Joint Venture
Duration of Permit:	From 18/07/2025 to 18/07/2030

ADVICE NOTE

Monetary contribution to the Offsets Fund

The monetary contribution to the Offsets Fund referred to in condition 7 of this permit is intended to contribute towards the purchase, and conservation in perpetuity of at least 5.01 hectares of native vegetation that comprises critical habitat for Western Ringtail Possum (*Pseudocheirus occidentalis*).

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 an asset protection zone.

2. Land on which clearing is to be done

Lot 3000 on Deposited Plan 43553, College Grove

3. Clearing authorised

The permit holder must not clear more than 0.36 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 to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

7. Offset - monetary contributions to the Offsets Fund

Within 60 days of undertaking *clearing* authorised under this permit, the permit holder must provide documentary evidence to the *CEO* that funding of \$258,966.90 has been transferred to the Department of Water and Environmental Regulation for the purpose of establishing or maintaining native vegetation as an environmental offset for the clearing activities authorised under this permit.

8. Fauna management – Western ringtail possums

- (a) In relation to the areas 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 8(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(s) individual removed in accordance with condition 8(b)(ii) must be relocated by a *western ringtail possum specialist* to a *suitable habitat*.
- (d) Where fauna is identified under condition 8(a), the permit holder must within 14 calendar days provide the following records to the *CEO*: the number of individuals identified;
 - (i) the date each individual was identified;
 - (ii) the location where each individual was identified recorded using a Global Positioning System (GPS) unit set to Geocentric Datum

- Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings or decimal degrees;
- (iii) the number of individuals removed and relocated;
 - (iv) the relevant qualifications of the *western ringtail possum specialist* undertaking removal and relocation;
 - (v) the date each individual was removed;
 - (vi) the method of removal;
 - (vii) the date each individual was relocated;
 - (viii) the location where each individual was relocated to, recorded using a GPS unit set to GDA2020 expressing the geographical coordinates in Eastings and Northings or decimal degrees; and
 - (ix) details pertaining to the circumstances of any death of, or injury sustained by, an individual.

9. Fauna Management

- (a) Prior to undertaking any clearing authorised under this permit, the permit holder must inspect the area authorised to be cleared under this permit prior to works commencing and for the duration of the clearing for any native fauna that may be present.
- (b) Where fauna have been identified under condition 9(a), works must cease until the fauna have escaped into adjacent habitat ahead of the clearing activity or translocated into native vegetation.

PART III - RECORD KEEPING AND REPORTING

10. Records that must be kept

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

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	<ul style="list-style-type: none"> (a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to GDA2020, expressing the geographical coordinates in Eastings and Northings; (c) the date that the area was cleared; (d) the size of the area cleared (in hectares); and (e) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 4; and (f) actions taken to minimise the risk of the introduction and spread of <i>weeds</i> and <i>dieback</i> in accordance with condition 5;

No.	Relevant matter	Specifications
		<p>(g) actions taken to manage and mitigate impacts to western ringtail possums in accordance with condition 8; and</p> <p>(h) actions taken to manage and mitigate impacts to fauna in accordance with condition 9.</p>

11. Reporting

The permit holder must provide to the *CEO* the records required under condition 10 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.
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 surveyed, or who is approved by the <i>CEO</i> as a suitable fauna specialist for the bioregion, and who holds a valid fauna licence issued under the <i>Biodiversity Conservation Act 2016</i> .
fill	means material used to increase the ground level, or to fill a depression.
dieback	means the effect of <i>Phytophthora</i> species on native vegetation.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
mulch	means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation.
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
suitable (western possum) habitat ringtail	means habitat known 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>)

Term	Definition
	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> .

END OF CONDITIONS


C Robertson
9.46AM
24/06/2025

Caron Robertson
MANAGER
 NATIVE VEGETATION REGULATION

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

24 June 2025



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 10925/1
Permit type:	Purpose permit
Applicant name:	Multiplex Perkins Joint Venture
Application received:	23 January 2025
Application area:	0.36 hectares of native vegetation
Purpose of clearing:	Asset Protection Zone
Method of clearing:	Mechanical
Property:	Lot 3000 on Deposited Plan 43553
Location (LGA area/s):	City of Bunbury
Localities (suburb/s):	College Grove

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 establish an asset protection zone for new hospital buildings and an Acute Psychiatric Unit for Bunbury Hospital. This will allow the hospital to be located in a BAL rating on 10, the recommended rating for Class 9a buildings containing vulnerable people (Multiplex Perkins Joint Venture, 2025).

During the assessment process the applicant reduced the application area from 0.512 hectares to 0.36 hectares.

1.3. Decision on application

Decision:	Granted
Decision date:	24 June 2025
Decision area:	0.36 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 B), relevant datasets (see Appendix G.1), the findings of a flora, fauna and vegetation survey (see Appendix F), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C), 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 clearing being for an asset protection zone for a hospital.

The assessment identified that the proposed clearing will result in:

- the loss of native vegetation that is suitable habitat for western ringtail possums (*Pseudocheirus occidentalis*)
- the potential introduction and spread of weeds into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to have adverse impacts on the environment subject to management, mitigation and offset measures being conditioned on the permit to mitigate the potential impacts identified above.

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

- avoid, minimise to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity
- western ringtail possum management conditions to minimise impacts to western ringtail possum individuals;
- fauna management conditions to minimise impacts to other fauna;
- provide a monetary contribution to the Part V Offsets Fund to mitigate impacts to western ringtail possum

Given the above and noting that the offset provided (see Section 4) counterbalances the significant residual impacts, the Delegated Officer determined that the proposed clearing is unlikely to lead to an unacceptable risk to the environment.

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.

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 polluter pays principle
- 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)
- *Planning and Development Act 2005* (WA) (P&D Act)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

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)
- *Environmental Offsets Guidelines* (August 2014)
- 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 following evidence was submitted by the applicant in their application (Multiplex Perkins Joint Venture, 2025) to demonstrate consideration of avoidance and mitigation measures:

- The location of the new clinical tower has been determined by the master planning of the hospital, placing the tower in the last available space on the site that allows for logical functional relationships;
- The Asset Protection Zone (APZ) standards allows some retention of vegetation. During clearing the Environmental Engineer and Bushfire Engineer will go through all vegetation and retain as much as possible within the limits of the APZ criteria. The area will be replanted with low native species <600mm high.

During the application, the applicant reduced the application area from 0.512 hectares to 0.36 hectares in consultation with their bushfire consultant (refer to Figure 2 below). The original application area contained 9 western ringtail possum (WRP) dreys; the revised application area impacts 2 dreys (WEPL, 2025b). The vegetation patches selected for retention were identified with consideration of WRP behaviour, as well as the location of WRP dreys, to meet both bushfire management and environmental requirements (WEPL, 2025b).



Figure 2. Areas removed from application area (green) and revised application area (blue-hatched area).

Following a request for evidence of further avoidance and mitigation measures, the applicant advised that any WRP individuals located within the areas to be cleared will be relocated to vegetation adjacent to the area to be cleared, within the possum's home range (WEPL, 2025b). This commitment has been conditioned on the permit.

After consideration of avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to western ringtail possum habitat was necessary. In accordance with the Government of Western Australia's *Environmental Offsets Policy* and *Environmental Offsets Guidelines*, these significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset provided are summarised in Section 4.

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 risk of impacts of the proposed clearing to biological values (fauna) and water resources required further consideration. 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 Land - Clearing Principles (a) and (b)

Assessment

According to available databases, 31 conservation significant fauna species have been recorded within the local area. Based on the location of the proposed clearing and the site characteristics (Appendix B), the application area may provide habitat for the following conservation significant species.

- *Botaurus dubius* - Australian Little Bittern (Priority 4)
- *Botaurus flavicollis australis* (southwest subpopulation) Black Bittern (Priority 2)
- *Isodon fusciventer* – Quenda (Priority 4)
- *Oxyura australis* – Blue-billed Duck (Priority 4)
- *Pseudocheirus occidentalis* - Western Ringtail Possum, Ngwayir (Critically Endangered)

Western ringtail possum

The western ringtail possum (WRP) (*Pseudocheirus occidentalis*) is a small arboreal nocturnal marsupial listed as critically endangered under the EPBC Act. According to the western ringtail possum recovery plan (DPAW, 2017a), habitat critical to the survival for western ringtail possum is not well understood and is therefore based on observations of where western ringtail possums are most commonly recorded. There are three key management zones: the Swan Coastal Plain, Southern Forest and South Coast zones, which are known to currently or previously support large numbers of the species. The common themes of these management zones include habitats with high nutrient foliage availability for food, suitable structure for protection and nesting, as well as canopy continuity to avoid and escape predation and other threats. Other important characteristics include vegetation communities with long unburnt mature remnants of peppermint woodlands with high canopy continuity and high foliage nutrients, jarrah /marri forests and woodlands with limited anthropogenic disturbance, coastal heath, jarrah/marri woodland and forest, peppermint (*Agonis flexuosa*) woodlands, myrtaceous heaths and shrublands, *Eucalyptus megacarpa* dominated riparian zones and karri forest. There are a number of threatening processes impacting the western ringtail possum including habitat loss and fragmentation, introduced predators, climate change, timber harvesting, fire, hollow competition, habitat tree declines and disease.

A total of 3,145 records of the Western Ringtail Possum (WRP) have been documented in the local area, with the nearest sighting approximately 270 metres from the proposed application site. A 2024 survey by Western Environmental (WEPL) (2024) confirmed suitable habitat and WRP presence within the application area, identifying two dreys and five spotlight sightings. The low woodland riparian vegetation containing *Agonis flexuosa* and *Melaleuca teretefolia* within the application area likely provides ideal conditions for WRP due to canopy connectivity, dense shelter, and diverse food sources. As most vegetation within the site is considered suitable habitat, the proposed clearing will remove 0.36 hectares of suitable habitat for WRP, which is likely to result in a significant residual impact on the WRP population. As such an offset has been conditioned on the permit to mitigate impacts to WRP (refer to Section 4 for details).

To mitigate impacts to WRP individuals inhabiting the application area, fauna management conditions have been applied to the permit, requiring any WRP to move from the clearing area or be removed and translocated into suitable vegetation prior to clearing. It is noted that the clearing may result in entrapment of WRP individuals within remnant vegetation around the lake. WRP individuals will have the opportunity to traverse the internal road to the east of the application area at night to reach larger areas of remnant vegetation. The applicant has advised that this road is currently only used by construction vehicles and is not used at night (M. McIntyre, WEPL, pers. comm), providing sufficient opportunity for individuals to relocate if required. Given the risk of vehicle strike at night, it is preferred for any entrapped WRP to naturally disperse themselves, rather than unnecessarily translocating WRP individuals, which may cause undue harm.

Other species

It is considered that Australian Little Bittern, Black Bittern and Blue-billed Duck may be transient visitors to the application area. However, none of these species were considered likely to occur or were found within the application area by WEPL (2024), and noting the type and condition of vegetation present, it is unlikely to comprise preferred or significant habitat for any of these species.

Quenda inhabit dense understorey, such as around swamps or in Banksia woodlands (DBCA, 2017). Quenda were found in vegetation to the east of the application area by WEPL (2024), who considered that the application area was likely to provide habitat for this species. While the application area may provide suitable habitat for quenda, given the condition of the vegetation to be cleared and extent of the clearing in the context of the range of this species, the application area is not considered to comprise significant habitat this species. It is also noted that the applicant has advised the area will be replanted with low native species (Multiplex Perkins Unincorporated Joint Venture, 2025), which will reinstate habitat for quenda.

Fauna management conditions will manage impacts to any individuals of these species present. Ground dwelling fauna individuals within the application area, including quenda, will have the opportunity to traverse the internal road to the east of the application area at night to reach the larger areas of remnant vegetation to the east.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.36 hectares of high quality WRP habitat. It is considered that this constitutes a significant residual impact requiring an offset in accordance with the WA Offset Policy is required. While the application area may provide suitable habitat for Australian Little Bittern, Black Bittern, Blue-billed Duck and quenda, the application area is not considered to comprise significant habitat for these species.

Conditions

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

- slow directional clearing to allow fauna to move into adjacent vegetation ahead of the clearing activity will minimise impact to individuals;
- western ringtail possum management conditions to ensure that WRP inhabiting trees within the application area are not impacted by the clearing;
- general fauna management conditions, to ensure other fauna inhabiting the application area have moved out of the application area prior to clearing; and
- provision of an offset to counterbalance the significant residual impacts to the loss of WRP habitat (see Section 4).

3.2.2. Water resources - Clearing Principles (f) and (i)

Assessment

Vegetation within the application area surrounds a wetland, is part of a wider mapped 'Multiple Use' palusplain wetland and includes riparian vegetation species. This is a constructed wetland, established during hospital development as a drainage basin and previously cleared in 2001 (WEPL, 2025a). 'Multiple Use' wetlands are described as 'wetlands with few remaining important attributes and functions'. As such, and noting the Degraded condition of the vegetation to be cleared with high proportion of non-native species, the wetland is unlikely to hold significant ecological values. As such the removal of this vegetation is unlikely to compromise ecological values of a wetland.

While clearing may result in some erosion, which may impact water quality in this manmade wetland, given the low risk of water and wind erosion these impacts are considered likely to be minor and temporary. It is also noted that the applicant has advised the area will be replanted with low native species (Multiplex Perkins Joint Venture, 2025), and this reinstated vegetation is likely to prevent erosion in the future. Furthermore, noting this manmade wetland is unlikely to hold significant environmental value, it is considered unlikely that any changes to water quality would have significant environmental impacts.

The application area is mapped within environmentally significant water resource areas including:

- the Bunbury groundwater area proclaimed under the Rights in Water and Irrigation Act 1914,
- the Bunbury Water Reserve, classed as a Priority 3 Public Drinking Water Source Area,
- a Wellhead Protection Zone.

Water supply sources can coexist with other land uses, such as urban development, including the proposed asset protection zone. Wellhead protection zones are circular areas defined around groundwater bores (300 metres radius in P3 areas) in order to protect the drinking water source from contamination in the immediate vicinity of the bores.

Conclusion

While the proposed clearing will remove riparian vegetation surrounding a man-made lake and may temporarily result in water quality impacts to this lake, given the lake is man-made and is unlikely to hold significant ecological values, these impacts are not considered to be significant.

Given no groundwater quality impacts are expected as a result of the clearing, the protected water resources are not likely to be at risk of degradation.

Conditions

Nil

3.3. Relevant planning instruments and other matters

The City of Bunbury (the City) advised DWER that;

“The clearing permit relates to the proposed Bunbury Hospital Redevelopment which is currently being determined by the Department of Planning, Lands and Heritage. The City has been a referral agency for the development application for forward works and for the development application for the redevelopment. The City has not yet received a copy of the determination for either application at this stage, however the asset protection area is consistent with the application.” (City of Bunbury, 2025).

4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- Up to 0.36 hectares of Western Ringtail Possum (WRP) habitat

The applicant proposed an environmental offset consisting of a monetary contribution. The Delegated Officer considers that this adequately counterbalances the significant residual impacts listed above. The justification for the values used in the offset calculation is provided in Appendix E.

Financial offset (monetary contribution)

The applicant has agreed to contribute \$258,966.90 to the Part V Offsets Fund, to counterbalance the significant residual impacts of the proposed clearing. In this instance, DWER considers that a monetary contribution to the Part V Offset Fund is acceptable to counterbalance the significant residual impact to WRP habitat, noting:

- the applicant has investigated the surrounding areas for a potential land acquisition/revegetation offset. This investigation has included review of properties currently available for sale in proximity to the site, and liaison with DBCA to identify if they are aware of any potentially suitable offset sites to purchase. No suitable offset sites have been identified;
- the magnitude of the significant residual impact to WRP is less than 0.5 hectares; and
- ongoing searches for other suitable and preferred offsets will delay the progress of creating an asset protection zone for the Bunbury Hospital and have a risk to the public.

DWER has identified that a monetary contribution to fund the purchase of 5.01 hectares of native vegetation that provides high quality foraging habitat for WRP will counterbalance 100 per cent of the significant residual impacts associated with the clearing.

The size of the offset required was determined using the Western Australia Environmental Offsets Assessment Guide and the WA Offset Calculator. The monetary contribution amount required is based on the ‘rate per hectare’ value selected from a table of land values in different local government authorities, provided to the department by Landgate in 2023. In the assessment of the proposed offset, the Delegated Officer considered the prospects of acquiring land containing similar or better-quality foraging habitat through the Part V Offsets Fund and determined that a per-hectare land value, in this instance, is appropriate and consistent with the WA Environmental Offsets Policy (2011).

Conclusion

The Delegated Officer considers the offset proposed adequately counterbalances the significant residual impacts listed above and is consistent with the Government of Western Australia’s Environmental Offsets Policy (2011) and the WA Environmental Offsets Guidelines (2014). The justification for the values used in the offset calculations are provided in Appendix E.

End

Appendix A. Additional information provided by applicant

Summary of comments	Consideration of comment
Applicant response to request for information letter (WEPL, 2025b), explaining reduction in the size of the application area and avoidance and mitigation measures	Considered in Section 3.1

Appendix B. Site characteristics

B.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of a 0.36-hectare isolated patch of native vegetation in the intensive land use zone of Western Australia. The proposed clearing area surrounds a wetland and is adjacent to Bunbury Hospital.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 27.71 per cent of the original native vegetation cover.</p>
Ecological linkage	The application area is mapped within the Bunbury Regional Scheme ecological linkage (EPA, 2003). However noting the vegetation is a small patch of degraded vegetation fragmented from other nearby vegetation by roads and buildings, it is functionally unlikely to contribute to the values of this linkage.
Conservation areas	There are no conservation areas within the application area, the closest being Kalgulup regional park 400 metres from the application area.
Vegetation description	<p>Vegetation survey (WEPL, 2024) indicates the vegetation within the proposed clearing area consists of fringing wetland vegetation. The full survey descriptions and maps are available in Appendix F.</p> <p>The survey describes the vegetation as:</p> <ul style="list-style-type: none"> Previously cleared as of 2001. Now an area of mixed plantings of non-endemic West Australian native species and Bunbury region endemic species. A significant portion of vegetation present is natural regeneration by endemic species that have established from adjacent bushland (likely from drainage inflows).(WEPL, 2024). <p>Native vegetation species recorded within the application are partially consistent with the mapped vegetation types:</p> <ul style="list-style-type: none"> Karrakatta Complex Central and South (49), which is described as predominantly open forest of <i>Eucalyptus gomphocephala</i> (Tuart) - <i>Eucalyptus marginata</i> (Jarrah) - <i>Corymbia calophylla</i> (Marri) and woodland of <i>Eucalyptus marginata</i> (Jarrah) - <i>Banksia</i> species. <i>Agonis flexuosa</i> (Peppermint) is co-dominant south of the Capel River; and Yoongarillup Complex (56), which is described as Woodland to tall woodland of <i>Eucalyptus gomphocephala</i> (Tuart) with <i>Agonis flexuosa</i> in the second storey. Less consistently an open forest of <i>Eucalyptus gomphocephala</i> (Tuart) - <i>Eucalyptus marginata</i> (Jarrah) - <i>Corymbia calophylla</i> (Marri). South of Bunbury is characterized by <i>Eucalyptus rudis</i> (Flooded Gum)-<i>Melaleuca</i> species open forests.(Heddl et al, 1980) <p>The mapped vegetation types retain approximately 23.5 and 35.81 per cent of their original extents respectively (Government of Western Australia, 2019b).</p>
Vegetation condition	Vegetation survey (WEPL, 2024) indicates the vegetation within the proposed clearing area is degraded (Keighery, 1994) condition, described as:

Characteristic	Details																
	<ul style="list-style-type: none"> 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. <p>The full Keighery (1994) condition rating scale is provided in Appendix D. The full survey descriptions and mapping are available in Appendix F.</p>																
Climate and landform	<ul style="list-style-type: none"> Average Rainfall: 800-900 millimetres per annum Average Evapotranspiration: 800 millimetres per annum Groundwater Salinity (<i>Total Dissolved Solids</i>): 500-1000 mg/L Geology: Alluvial, shoreline, and eolian deposits and Marine and continental sedimentary rocks 																
Soil description	The soil is mapped as Spearwood S4c Phase, which can be described as: flat to gently undulating sandplain with deep, yellow-brown or dark brown siliceous sands that are seasonally inundated.																
Land degradation risk	<p>The land degradation risk can be found in the table below:</p> <table border="1"> <thead> <tr> <th>Risk categories</th><th>Land Unit 1</th></tr> </thead> <tbody> <tr> <td>Wind erosion</td><td>M1: 10-30% of the map unit has a high to extreme hazard</td></tr> <tr> <td>Water erosion</td><td>L1: <3% of map unit has a high to extreme water erosion risk</td></tr> <tr> <td>Subsurface Acidification</td><td>H2: >70% of map unit has a high subsurface acidification risk or is presently acid</td></tr> <tr> <td>Water Repellence</td><td>M1: 10-30% of the map has a high water repellence risk</td></tr> <tr> <td>Flood risk</td><td>L1: <3% of the map unit has a moderate to high hazard</td></tr> <tr> <td>Water logging</td><td>H2: >70% of map unit has a moderate to very high waterlogging risk</td></tr> <tr> <td>Phosphorus export risk</td><td>H2: >70% of map unit has a high to extreme phosphorus export risk</td></tr> </tbody> </table>	Risk categories	Land Unit 1	Wind erosion	M1: 10-30% of the map unit has a high to extreme hazard	Water erosion	L1: <3% of map unit has a high to extreme water erosion risk	Subsurface Acidification	H2: >70% of map unit has a high subsurface acidification risk or is presently acid	Water Repellence	M1: 10-30% of the map has a high water repellence risk	Flood risk	L1: <3% of the map unit has a moderate to high hazard	Water logging	H2: >70% of map unit has a moderate to very high waterlogging risk	Phosphorus export risk	H2: >70% of map unit has a high to extreme phosphorus export risk
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Water logging	H2: >70% of map unit has a moderate to very high waterlogging risk																
Phosphorus export risk	H2: >70% of map unit has a high to extreme phosphorus export risk																
Waterbodies	The desktop assessment and aerial imagery indicated that the application area surrounds a perennial manmade wetland and is part of a broader mapped Multiple Use palusplain wetland.																
Hydrogeography	<p>The application area is mapped within the Bunbury groundwater area proclaimed under the <i>Rights in Water and Irrigation Act 1914</i>, is within the Bunbury Water Reserve, classed as a Priority 3 Public Drinking Water Source Area, and within a Wellhead Protection Zone within this reserve.</p> <p>Priority 3 areas are declared over land where water supply sources need to coexist with other land uses, such as urban development. Wellhead protection zones are circular areas defined around groundwater bores (300 metres radius in P3 areas) in order to protect the drinking water source from contamination in the immediate vicinity of the bores.</p>																
Flora	<p>31 conservation significant flora species are recorded within the local area (10-kilometre buffer). The nearest record is <i>Pterostylis frenchi</i>, 400 metres from the application area. Of these, three species have been recorded within the same mapped vegetation type as the application area, and one of species (<i>Acacia flagelliformis</i>) has been recorded within the same mapped soil and vegetation type within the local area.</p> <p>The survey results (WEPL, 2024) did not record any conservation significant flora species within the application area.</p>																
Ecological communities	<p>There are no threatened or priority ecological communities mapped within the application area. A mapped occurrence of a state Priority 3 and EPBC Act listed Threatened ecological community, the Banksia woodlands of the Swan Coastal Plain (Banksia woodlands PEC/TEC) is 20 metres to the east.</p> <p>A vegetation survey (WEPL, 2024) did not record any conservation significant ecological communities within the application area. The survey confirmed that a patch of the Banksia woodlands PEC/TEC is present in vegetation to the east and across the road from of the application area.</p>																

Characteristic	Details
Fauna	<p>There are records of 57 conservation significant fauna species in the local area, the nearest record of which was <i>Zanda latirostris</i> (Carnaby's cockatoo) 0.5 kilometres from the application area.</p> <p>The survey results (WEPL, 2024) show that there is evidence of <i>Pseudocheirus occidentalis</i> (western ringtail possum) within the application area (refer to Section 3.2.1 for further details). No other conservation significant fauna were recorded by WEPL (2024) within the application area.</p> <p>WEPL (2024) noted that three <i>Eucalyptus camaldulensis</i> (river red gum) trees within the application area were potential black cockatoo nesting trees (with no hollows), however these trees are non-native and therefore their removal is not subject to this clearing permit assessment. WEPL (2024) also described vegetation in the application area as being low to moderate quality foraging habitat for Carnaby's and Baudin's cockatoo, however, while <i>Eucalyptus camaldulensis</i> (river red gum) may provide foraging habitat, the native vegetation species recorded within the application area are unlikely to provide foraging habitat for black cockatoo species.</p>

B.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	15,691.63	4,926.97	31	2,294.43	14.62
Vegetation complex					
Karrakatta Complex-Central and South (49)**	53,080.99	12,467.20	23.49	4,282.73	8.07
Yoongarillup Complex (56)**	27,977.93	10,018.13	35.81	5,151.57	18.41
Local area					
10km radius	19981	5669	28.37	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

B.3. Flora analysis table

Species name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)	Number of known records in local area	Are surveys adequate to identify? [Y, N, N/A]
<i>Acacia flagelliformis</i>	4	Y	Y	Y	1.28	10	Y
<i>Acacia semitrullata</i>	4	Y	Y	N	2.26	9	Y
<i>Schoenus benthamii</i>	3	Y	Y	N	0.87	5	Y
<i>Stylidium longitubum</i>	4	Y	Y	N	2.16	2	Y

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

B.4. Fauna analysis table

Species name – Common Name	Conservation status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records in local area	Are surveys adequate to identify? [Y, N, N/A]
<i>Botaurus dubius</i> - Australian Little Bittern	P4	Y	Y	3.61	1	Y
<i>Botaurus flavicollis australis</i> (southwest subpopulation) – Black Bittern	P2	Y	Y	4.46	1	Y
<i>Hydromys chrysogaster</i> - Water-Rat, Rakali	P4	Y	Y	2.79	8	Y
<i>Isoodon fusciventer</i>	P4	Y	Y		31	Y
<i>Oxyura australis</i> – Blue-billed Duck	P4	Y	Y	2.24	73	Y
<i>Pseudocheirus occidentalis</i> - Western Ringtail Possum, Ngwayir	CR	Y	Y	0.27	3145	Y

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

B.6. Land degradation risk table

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

Appendix C. Assessment against the clearing principles

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: biological values		
<p><u>Principle (a):</u> “Native vegetation should not be cleared if it comprises a high level of biodiversity.”</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared contains individuals and critical habitat for western ringtail possums. It is not likely to contain significant ecological communities or flora.</p>	At variance	Yes Refer to Section 3.2.1, above.
<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>	At variance	Yes Refer to Section 3.2.1, above.

Assessment against the clearing principles	Variance level	Is further consideration required?
<u>Assessment:</u> <p>The area proposed to be cleared contains critical habitat for western ringtail possum (<i>Pseudocheirus occidentalis</i>). While the application area may provide habitat for other conservation significant fauna, impacts to these species is not likely to be significant.</p>		
<u>Principle (c):</u> “Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.” <u>Assessment:</u> <p>The findings from the WEPL (2024) survey provided indicate that the application area includes invasive species and no records of threatened flora found within the application area.</p>	Not likely to be at variance	No
<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.” <u>Assessment:</u> <p>The area proposed to be cleared does not contain species indicative of a threatened ecological community.</p>	Not likely to be at variance	No
Environmental value: significant remnant vegetation and conservation areas		
<u>Principle (e):</u> “Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.” <u>Assessment:</u> <p>The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001). The local area retains approximately 28 per cent native vegetation cover, and one of the mapped vegetation types within the application retains approximately 23 per cent of its Pre-European extent. These extents are inconsistent with the national biodiversity targets.</p> <p>Although it is within a mapped ecological linkage, it is considered unlikely to functionally contribute to linkage values. However, vegetation within the application area is considered to be significant remnant vegetation, noting it provides significant habitat for western ringtail possum.</p> <p>In constrained areas, modified targets of 10% retention are used (EPA, 2008). This application falls within a constrained area. The extents of native vegetation in the local area and the mapped vegetation types are consistent with this modified target. As such, vegetation within the application area is considered significant as a remnant of native vegetation in an area that has been extensively cleared. The clearing proposed is consistent with the modified targets for biodiversity conservation and therefore no significant residual impact is expected as a result of clearing.</p>	At variance	No
<u>Principle (h):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.” <u>Assessment:</u> <p>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of or nearby conservation areas.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: land and water resources		
<p><u>Principle (f):</u> “Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland.”</p> <p><u>Assessment:</u></p> <p>The application area surrounds a wetland and contains riparian vegetation.</p>	At variance	Yes Refer to Section 3.2.2, above.
<p><u>Principle (g):</u> “Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation.”</p> <p><u>Assessment:</u></p> <p>The mapped soils are not susceptible to land degradation. 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> “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.”</p> <p><u>Assessment:</u></p> <p>The application area is fringing vegetation to a man-made lake and the proposed clearing may temporarily impact surface water quality in this lake. Given the condition and extent of the vegetation to be cleared it is considered unlikely to impact upon ground water quality.</p>	May be at variance	Yes Refer to Section 3.2.2
<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, as well as the extent and condition of the vegetation to be cleared, indicate the proposed clearing is unlikely to contribute to increased incidence or intensity of flooding or 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.

Condition	Description
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. Offset calculator value justification

Appendix F. Offset – Conservation offset for Western Ringtail Possums (Critically Endangered).

Field Name	Description	Justification for value used
Area of impact (habitat/community) or Quantum of impact (features/individuals)	The area of habitat/community impacted, or number of features/individuals impacted	0.36 hectares of native vegetation representing high quality habitat for the Western ringtail possums (WRP). Based on the findings of biological surveys (WEPL, 2024).
Quality of impacted area (habitat/community)	The quality score for area of habitat/community being impacted - a measure of how well a particular site supports a particular threatened species or ecological community and contributes to its ongoing viability	Based on the recording of Western Ringtail Possums and dreys within the application area, noting the location of the application area on the southern section of the Swan Coastal Plain and taking into account the condition and connectivity provided by the vegetation within the application area.
Time over which loss is averted (habitat/community)	This describes the timeframe over which changes in the level of risk to the proposed offset site can be considered and quantified	20 - As the acquired land will be incorporated into the conservation estate, it will be protected in perpetuity. The maximum value is therefore applied
Time until ecological benefit (habitat/community) or Time horizon (features/individuals)	This describes the estimated time (in years) that it will take for the main benefit of the quality (habitat/community) or value (features/individuals) improvement of the proposed offset to be realised	1- No change to ecological values is expected, therefore the minimum value is input.
Start area (habitat/community) or Start value (features/individuals)	The area of habitat/community or number of features/individuals proposed to offset the impacts	5.01 - An area of 5.01ha is required to be protected to counterbalance 100% of significant residual impact of the proposed clearing.
Start quality (habitat/community)	The quality score for the area of habitat/community proposed as an offset - a measure of how well a particular site supports a particular threatened species or ecological	7 - The geographic spread of the quality values reflects that the locations of offset sites likely to be associated with those impact sites will vary in quality. The values themselves are based on the Department's understanding of land

	community and contributes to its ongoing viability	potentially available and the Department's previous experience in delivering land acquisitions. Score of 7 is used where the impact is on the southern Swan Coastal Plain.
Future quality without offset (habitat/community) or Future value without offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site without the offset	8 – In the absence of specific site information that might indicate threatening processes, it is assumed no change in quality in the absence of the offset.
Future quality with offset (habitat/community) or Future value with offset (features/individuals)	The predicted future quality score (habitat/community) or value (features/individuals) of the proposed offset site with the offset	8 – As monetary contributions do not generally account for management actions that would improve site quality, it is assumed no change in quality.
Risk of loss (%) without offset (habitat/community)	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future without an offset	15% - Land zoned 'rural' is typically acquired as offsets. 15% is a conservative risk of loss score that can be applied for this zoning. It is consistent with most direct offsets accepted by the Department.
Risk of loss (%) with offset (habitat/community)	This describes the chance that the habitat/community on the proposed offset site will be completely lost (i.e. no longer hold any value for the protected matter of concern) over the foreseeable future with an offset	5% - As the acquired land will be incorporated into the conservation estate, the lowest risk of loss score is therefore applied.
Confidence in result (%)	The capacity of measures to mitigate risk of loss of the proposed offset site	90% - The Department is confident that an acquisition will occur; monetary contributions for offsets with low likelihood of being acquitted will generally not be accepted.
% of impact offset	% of the significant residual impact that would be offset by the proposed offset (note: the offset calculations combined should equate to 100% for each residual impact)	100% - obtained through the input of variables explained above.

Appendix F. Biological survey information excerpts

VT04 – Fringing wetland (native vegetation)

**Eucalyptus camaldulensis*, *Casuarina obesa* and *Agonis flexuosa* low woodland over *Melaleuca teretifolia*, *Kunzea glabrescens* and **Acacia longifolia* tall shrubland over *Machaerina juncea*, **Briza maxima*, **Fumaria capreolata* mid open sedgeland/open tussock grassland/open forbland.

This vegetation was previously cleared as of 2001. Now an area of mixed plantings of non-endemic West Australian native species and Bunbury region endemic species. A significant portion of

vegetation present is natural regeneration by endemic species that have established from adjacent bushland (likely from drainage inflows).

Figure 3. Description of vegetation mapped within the application area (WEPL, 2024)

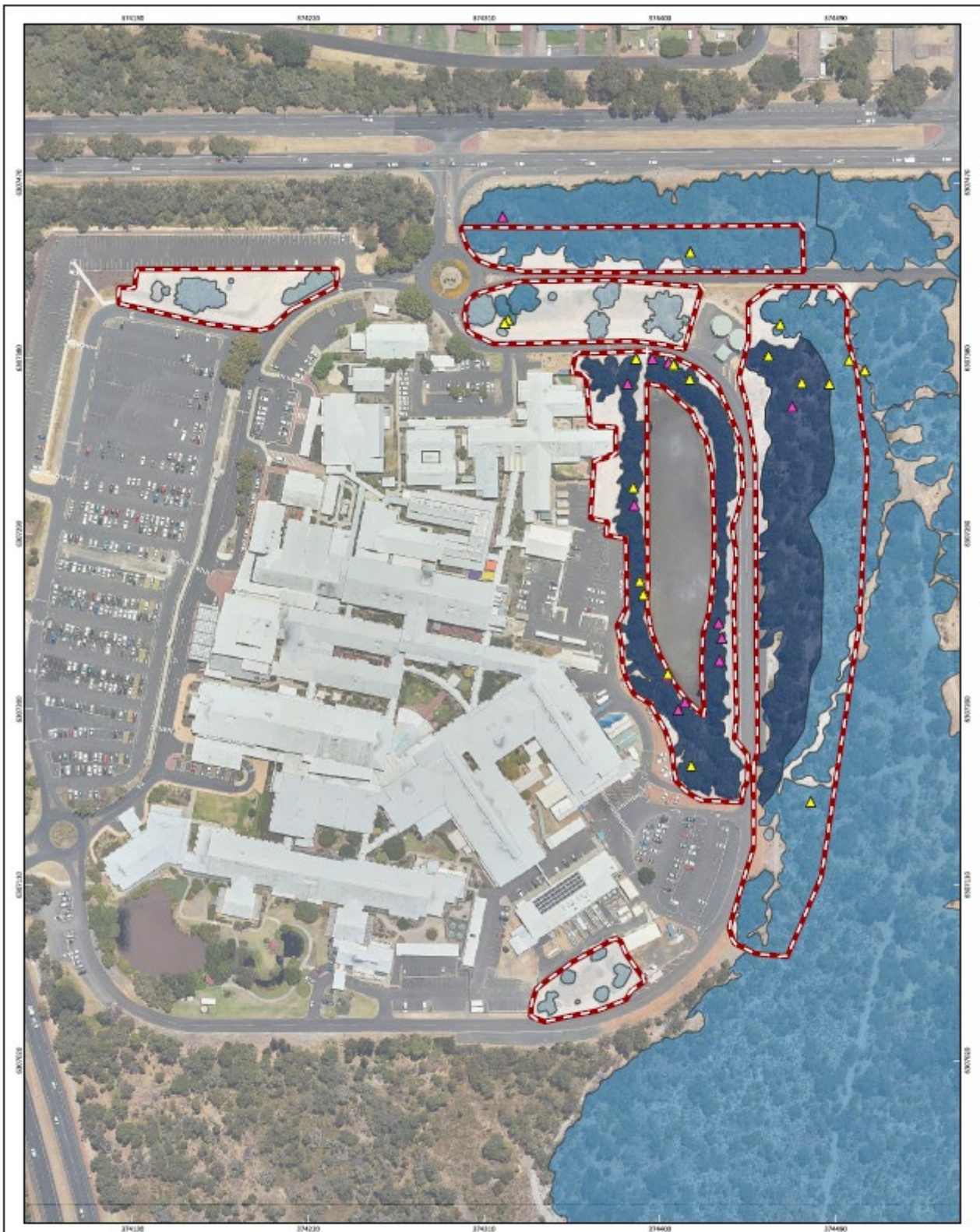


Figure 15: Western Ringtail Possum Habitat

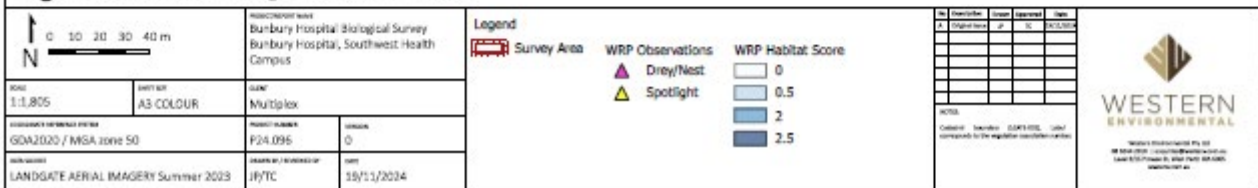


Figure 4: A map highlighting the results from the targeted WRP survey



Figure 5: Photo of the wetland and the application area

Appendix G. Sources of information

G.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics

- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)
- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems

Restricted GIS Databases used:

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

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