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# Assessment Against the 10 Clearing Principles: 3000 Busselton Highway, Bunbury Health Campus

This information is provided as supporting documentation to assist with the Native Vegetation Clearing Permit Application (Purpose or Area Permit) for 3000 Busselton Highway, Bunbury Health Campus (the Site). Western Environmental Approvals Pty Ltd (WEPL) has undertaken this work at the request of the development contractor Multiplex on behalf of the landowner Department of Health. The Site occurs within the area surrounding Bunbury Hospital at Southwest Health Campus.

This assessment is informed by a detailed Biological Surveys completed by WEPL (2024). This assessment is provided as Attachment A.

This supporting document presents a preliminary assessment against the '10 Clearing Principles' in accordance with the Department of Water and Environmental Regulation (DWER) A guide to the assessment of application to clear native vegetation (DWER 2014). The assessment is supported by a Biological Survey and subsequent report undertaken by WEPL in 2024.

## Outcome of Assessment Against the 10 Clearing Principles

The proposed Clearing Area comprises 0.52 ha of .Fringing Wetland vegetation that is considered to be in Degraded condition. The vegetation includes a mix of planted native vegetation that is less than 20 years old.

An assessment of the potential clearing of native vegetation against the Ten Native Vegetation Clearing Principles contained in Schedule 5 of the *Environmental Protection Act, 1986* (EP Act) is provided in Table 1.

The proposed clearing within the Clearing Area is not at variance with any of the clearing principles.

Table 1: Assessment Against 10 Clearing Principles for 3000 Busselton Highway, Bunbury Health Campus.

Degraded

Total

0.52

0.52

100

100

Assessment Results	Data Source/Tools for Assessment	Conclusion			
Principle (a) - Native vegetation should not					
The Clearing Area occurs within the Swan Co (IBRA), located approximately 157.5 kilomet District, within the City of Bunbury.					
Detailed Fauna, Flora and Vegetation Surve WEPL.	<ul> <li>Protected Matter Search Tool (PMST) (DCCEEW, 2023).</li> </ul>	• Unlikely to be at variance.			
No Threatened and Priority flora species wit or were considered likely to occur under the	<ul> <li>Threatened Ecological Communities (DBCA- 038).</li> </ul>				
No Threatened Ecological Community (TEC) a the Clearing Area.	<ul> <li>Threatened and Priority Flora (DBCA-036).</li> </ul>				
One native vegetation type was identified w (VT04) with a vegetation condition of 'Degra *Eucalyptus camaldulensis, Casuarina obesa teretifolia, Kunzea glabrescens and *Acacia I maxima, *Fumaria capreolata mid open sed vegetation was previously cleared in 2001. Tendemic West Australian native species and vegetation present is natural regeneration b bushland (likely from drainage inflows).  Vegetation Condition Extent Summary in Cl	<ul> <li>Priority Ecological Communities list WA Version 35 (DBCA,2023).</li> <li>Western Australian Herbarium (WAH, 1998) records.</li> <li>Australia's Bioregions (DCCEEW, 2021).</li> <li>Field survey.</li> </ul>				
Condition Extent (ha)	% of Clearing Area				

#### **Assessment Results**

The low native flora species diversity and Degraded vegetation condition within the Clearing Area does not indicate high levels of biodiversity, and therefore the proposed clearing is unlikely to be at variance with this principle.

Principle (b) - 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 indigenous to Western Australia

The field surveys and desktop assessment identified six conservation significant vertebrate fauna species as occurring, or having a high or medium likelihood of occurrence in the overall Clearing Area. Species include:

- Pseudocheirus occidentalis (western ringtail possum) CE
- Isoodon fusciventer (quenda) P4
- Calyptorhynchus banksia naso (forest red-tailed black cockatoo) VU.
- Calyptorhynchus baudinii (Baudin's black cockatoo) EN.
- Calyptorhynchus latirostris (Carnaby's black cockatoo) EN
- Phascogale tapoatafa wambenger (southwestern brush-tailed phascogale) CD

The Clearing Area comprises 0.52 ha of core habitat for western ringtail possum and supporting habitat for quenda, southwestern brush-tailed phascogale and foraging habitat for black cockatoo species. Western ringtail possum and black cockatoos are discussed below.

## **Black Cockatoo Species**

The Clearing Area falls within the modelled distribution and breeding range for Baudin's black cockatoo, Carnaby's black cockatoo and the forest red-tailed black cockatoo.

- Threatened and Priority Fauna List (DBCA,2023b).
- Carnaby's Cockatoo
   Confirmed Roost Sites
   (DBCA-050).
- Carnaby's Cockatoo
   Confirmed Breeding
   Areas (DBCA-054).
- Unlikely be at variance.
- Black Cockatoo
   Roosting Sites (DBCA-064).
- Protected Matters
   Search tool (DCCEEW,
   2023).

Foraging evidence (chewed marri nuts) for all three species was recorded during the field survey. Foraging evidence or observation of individuals were recorded at one location for Baudin's black cockatoo, Carnaby's cockatoo and forest red-tailed cockatoo. The native vegetation of FHT-01 contains foraging species for all three black cockatoo species.

No evidence of current or previous nesting behaviour such as chew marks at hollow entrance attributed to black cockatoos, or flushed individuals were recorded. Three potential nesting tree, a River Red Gum, was identified within the Clearing Area, however, they did not contain a suitable hollow.

Known roost sites are present <6km from the Clearing Areas, with one buffer zone intersecting with the Clearing Area. No evidence of scat marking, branch clipping or feather dropping was recorded suggesting that the location is not a highly frequented roosting location. Within the Clearing Area there are no isolated stands of tall (>10 m) eucalyptus to provide suitable night roosting habitat.

#### Western Ringtail Possum

Four Western Ringtail Possum Spotlight observations (across two separate nights of survey), and 10 Drey/Nest observations were made within the Clearing Area. FHT-01 (native vegetation) was assessed as comprising core habitat, with individuals recorded in these habitat types. A total of 0.52 ha habitat for Western Ringtail Possum habitat is included within the Clearing Area.

As presented in the Western Ringtail Possum Recovery Plan (DPaW, 2017) home range of individuals is variable based on habitat with larger ranges averaging 2.7ha reported in jarrah forest and smallest average ranges of 0.4-0.3ha in better quality peppermint woodland habitat. Further it is reported that western ringtail possum generally use between two and seven refuges (such as dreys) in their home range, but can use an average of 20 or more refuges over a year (DPaW, 2017).

The native vegetation present within the Clearing Area does not comprise whole or part of, nor is it likely to be necessary for the maintenance of a TEC. Consequently, the proposed clearing is not likely to be at variance with this principle.

- Threatened Ecological Communities (DBCA-038).
- Unlikely to be at variance.

• Field survey.

### Principle (e) - Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been significantly cleared

The Clearing Area is within a constrained area (Swan Coastal Plain). Regional vegetation for the Swan Coastal Plain (at vegetation complex level) was mapped by Heddle et al. (1980) and are maintained in digital form by DBCA (2018).

- Beard (1990).
- Pre-European Vegetation at v dataset (DPIRD-006).

Unlikely to be at variance.

The Survey Area intersect two vegetation complexes:

- Karrakatta Complex-Central and South (49)- Predominantly open forest of Eucalyptus gomphocephala
   (Tuart) Eucalyptus marginata (Jarrah) Corymbia calophylla (Marri) and woodland of Eucalyptus
   marginata (Jarrah) Banksia species. Agonis flexuosa (Peppermint) is co-dominant south of the Capel
   River.
- Yoongarillup Complex (56)- Eucalyptus marginata (Jarrah) Corymbia calophylla (Marri). South of Bunbury is characterized by Eucalyptus rudis (Flooded Gum) - Melaleuca species open forests.

The vegetation complexes identified from the Survey Area (Heddle et al, 1980) and the pre-European and current extents are listed in the Table below (DBCA, 2018).

#### **Pre-European Regional Vegetation Complexes**

Vegetation Complex Name	System 6 Mapping Unit Number	Original Extent (ha)	Current Extent (ha)	% Remaining	% Managed for Conservation
Karrakatta Complex- Central and South	49	53,080.99	12,465.24	23.48	3.87
Yoongarillup Complex	56	27,977.93	10,018.14	35.81	13.95

Due to the Degraded condition of the Clearing Area, the low native species diversity and the prevalence of planted non endemic species within the Clearing Area, it is considered that the vegetation is not representative of an significant remnant in a significantly cleared area.

The proposed clearing is therefore unlikely to be at variance with this principle.

Conclusion

Principle (f) - Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or a wetland

The Clearing Area shown in Figure 1 is mapped as a 'Multiple Use' category wetland (UFID 15492) (DBCA-019).

This are no watercourses mapped within the Clearing Area. There is no vegetation associated with watercourses or wetlands noted within or in the vicinity of the Clearing Area. There are no nationally significant wetlands within a 15 km radius of the Clearing Area.

The native vegetation within the Clearing Area is growing in association with a constructed wetland built as part of hospital construction as a drainage basin. Although a wetland is present the Degraded condition, prior clearing and 'Multiple Use' category wetland classification makes it unlikely that the wetland retains significant values.

 Geomorphic wetlands, Swan Coastal Plain (DBCA-019).

Unlikely to be at variance.

Therefore, the proposed clearing is considered unlikely to be at variance to this principle.

Principle (g) - Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation

The Clearing Area is situated on the Spearwood S4c phase, which is characterised by flat to gently undulating sandplain with deep, yellow-brown or dark brown siliceous sands that are seasonally inundated. Soils of this nature generally have a high permeability and therefore are unlikely to contribute to on-site/off-site run-off. As the soil type is predominantly sand, it is less likely to be prone to water and/or wind erosion due to the particle size. Additionally, waterlogging is unlikely due to the nature of these soils.

The mapped average annual rainfall in the local area, according to the Australian Bureau of Meteorology, is 716.4 mm. The Clearing Area resides on flat ground and therefore is unlikely to heavily contribute to a potential for wind/water erosion and on-site/off-site runoff.

- Australian Bureau of Meteorology (2023).
- Soil Landscape Mapping Best Available dataset (DPIRD-027).
- Groundwater Salinity Statewide dataset (DWER-026).

Unlikely to be at variance.

The Clearing Area is mapped as having a Moderate to Low probability of Acid Sulfate Soils (ASS) occurring. Localised soil acidity is unlikely to occur as a result of exposure of pyritic material to air and rainfall as a result of clearing.

The closest groundwater conductivity reading to the Clearing Area identified 2300mS/m, therefore, if there is a rise in the water table, there is a potential risk of salinisation. However, given the sparsity of vegetation present and the largely cleared nature of the Clearing Area, any additional clearing is not expected to have any significant impact on water table levels or salinisation.

The potential clearing will expose a small area to the potential for increased erosion; however, the locality and conditions render the eventuation of serious erosion, nutrient transport to sensitive receptors or alteration to any surrounding surface water regimes (none noted in Clearing Area vicinity) are unlikely. Given the small area of proposed clearing and the nature of soils within the Clearing Area, it is unlikely that appreciable land degradation will result and therefore the proposed clearing is unlikely to be at variance with this clearing principle.

Principle (j) - Native vegetation should not be cleared if the clearing of the vegetation is likely to cause or exacerbate the incidence or intensity of flooding.

Most of the Clearing Area falls within a 'Multiple Use' category wetland (UFID 15492), with a 'Conservation' category wetland (UFID 916) intersecting the southern boundary of the Clearing Area.

The soil and conditions onsite show >70% of the Spearwood S4c phase system is Moderate to Very Highly susceptibility to waterlogging or generating surface water run-off. With 10-30% of soil system Low to Extremely Low soil water storage.

- Soil Landscape Mapping Best Available dataset (DPIRD-027).
- A guide to the assessment of applications to clear
- Unlikely to be at variance.

Assessment Results	Data Source/Tools for Assessment	Conclusion
The Department of Environment and Regulations document "a guide to the assessment of applications to clear native vegetation" states the following for Principle (j): "Consideration of this principle may require extensive modelling of the whole catchment and should only be considered for large clearing projects. For smaller applications, clearing should not cause waterlogging (localised flooding)."	native vegetation (DWER,2014).  • PMST (DCCEEW, 2023).	
Given the very low vegetation clearing proposed within the Clearing Area, additional clearing is unlikely to increase or exacerbate the incidence of waterlogging or localised flooding.		

The proposed clearing is therefore unlikely to be at variance with this principle.

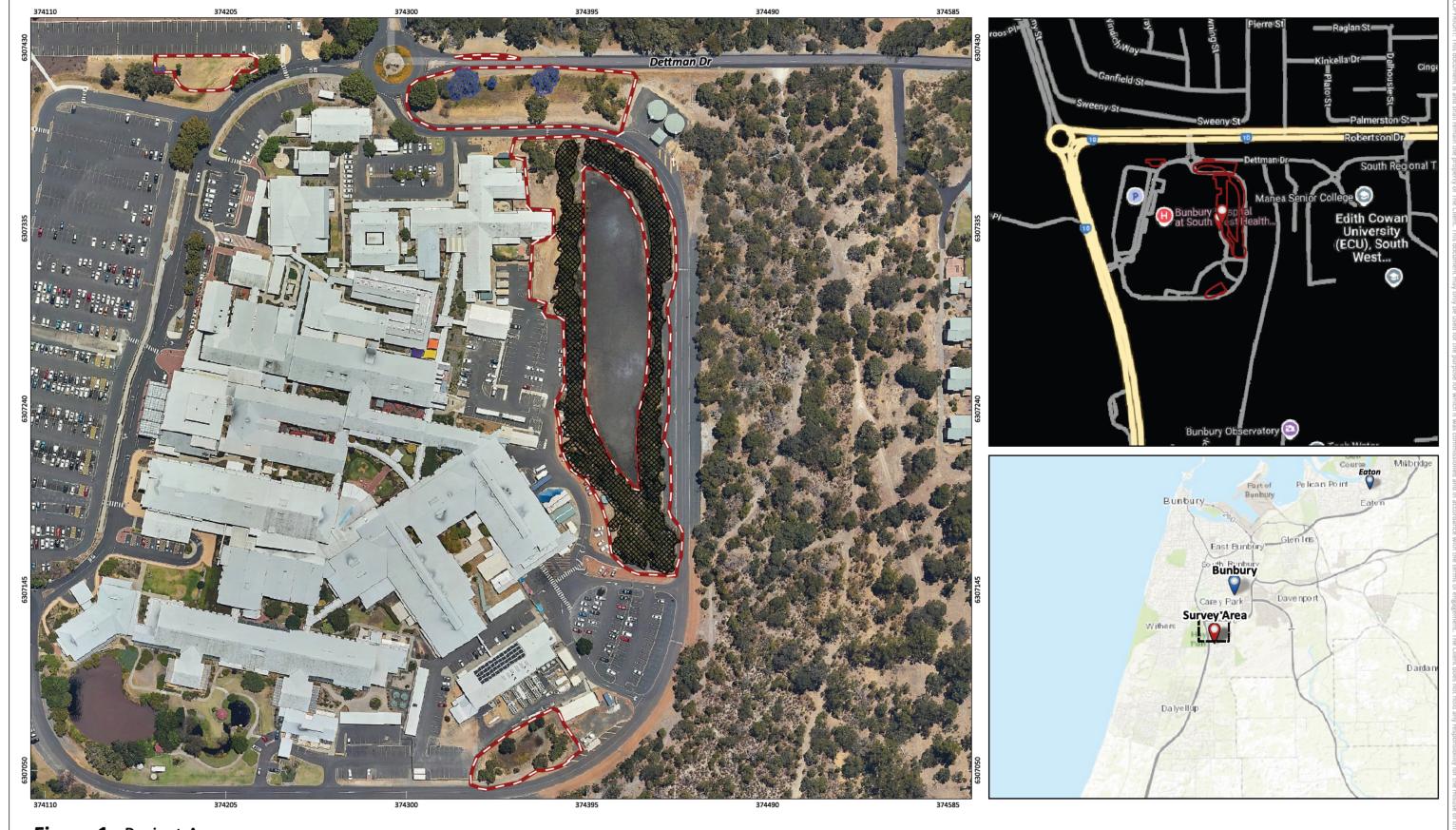


Figure 1: Project Area

1 N	0	28	56	84	112 m	PROJECT/REPORT NAME  Bunbury Health Campus Multiplex EPBC Referral  3000 Busselton Highway, Busselton-Bunbury Health Campus		
1:1,890			A3 COLOUR			CLENT Multiplex		
	COORDINATE REFERENCE SYSTEM GDA2020 / MGA zone 50			PROJECT NUMBER P24.096	VERSION 0			
LANDGATE A	DATA SOURCE LANDGATE AERIAL IMAGERY NOW			DRAWN BY / REVIEWED BY JP/MM	DATE 15/1/2025			

Legend
Project Area
Clearing Area

Avoidance Area

NOTES:

Cadastral boundary (JGATE-002), Base map 1
Topo, Townsites (JGATE-48).



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