



GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9695/1
File Number: DWERVT9981
Duration of Permit: From 7 October 2022 to 7 October 2024

PERMIT HOLDER

City of Swan

LAND ON WHICH CLEARING IS TO BE DONE

Benara Road reserve (PIN 11823056), CAVERSHAM
Unnamed Road reserve (PIN 12024803), CAVERSHAM

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.15 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

CONDITIONS

1. 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.

2. 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	(a) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 1994 (GDA94), expressing the geographical coordinates in Eastings and Northings;

No.	Relevant matter	Specifications
		(b) the date that the area was cleared; (c) the size of the area cleared (in hectares); and (d) actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 1.

3. Reporting

The permit holder must provide to the *CEO* the records required under condition 2 of this permit when requested by the *CEO*.

DEFINITIONS

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

Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	<i>Environmental Protection Act 1986</i> (WA)
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.

END OF CONDITIONS



Jessica Burton
A/MANAGER

NATIVE VEGETATION REGULATION

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

14 September 2022

SCHEDULE 1

The boundary of the area authorised to be cleared is shown in the map below (

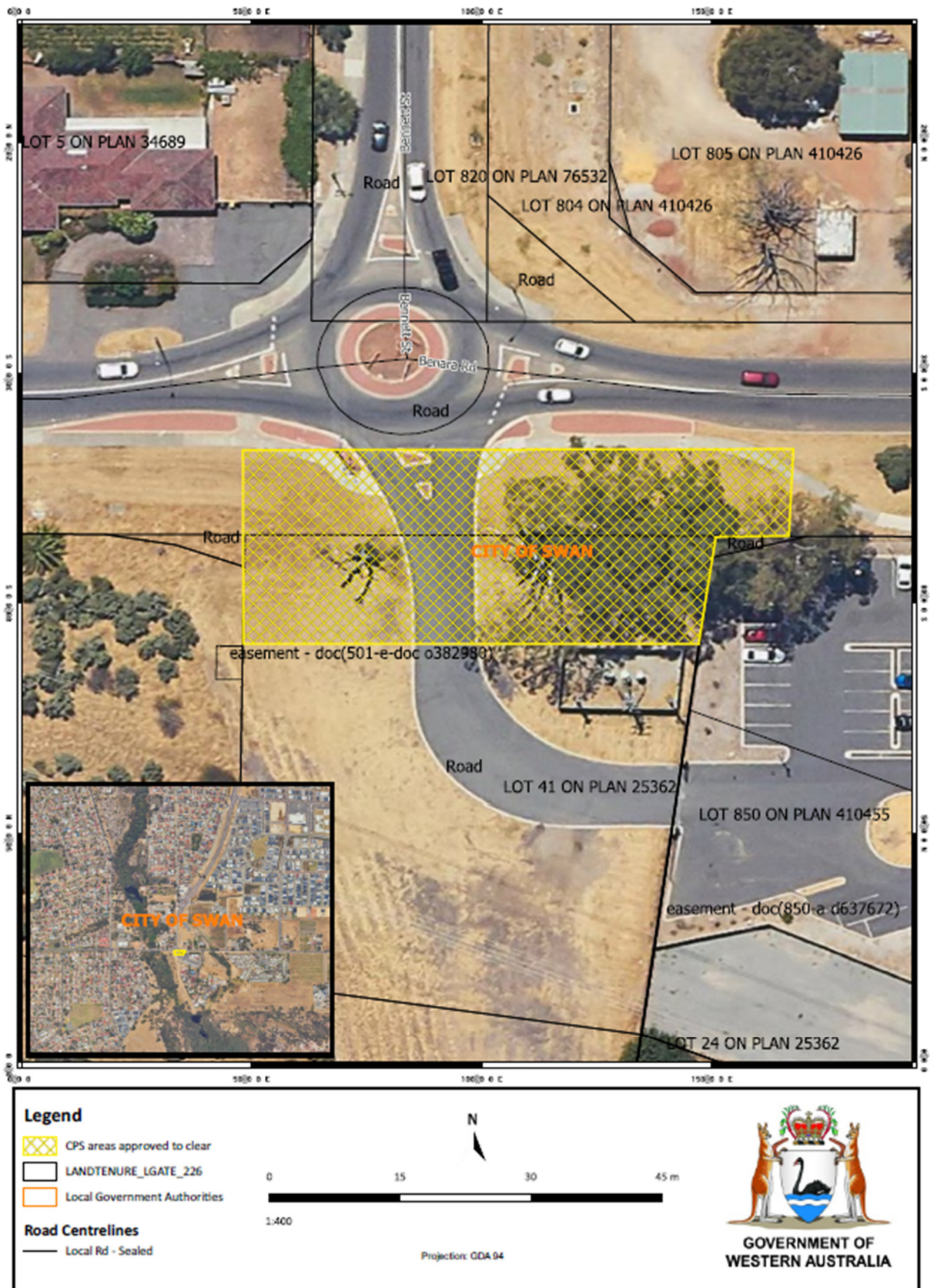


Figure 1).

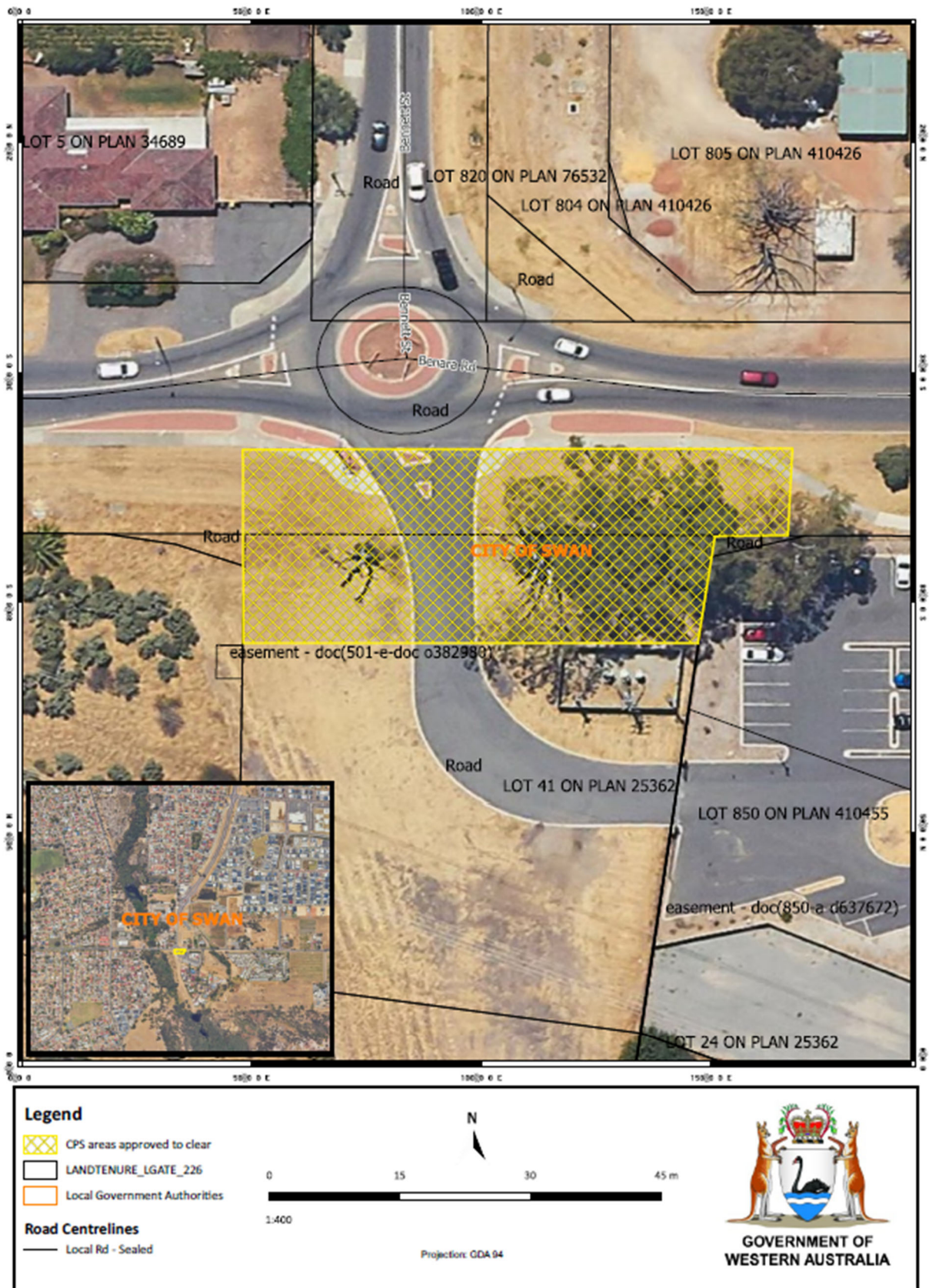


Figure 1: Map of the boundary of the area within which clearing may occur



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9695/1
Permit type:	Area permit
Applicant name:	City of Swan
Application received:	8 April 2022
Application area:	0.15 hectares of native vegetation
Purpose of clearing:	Road widening
Method of clearing:	Mechanical Removal
Property:	Benara Road reserve (PIN 11823056), CAVERSHAM Unnamed Road reserve (PIN 12024803), CAVERSHAM
Location (LGA area/s):	City of Swan
Localities (suburb/s):	CAVERSHAM

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single contiguous area and consists of seven trees over grassy weeds (see Figure 1, Section 1.5). The application is to clear 0.15 hectares of native vegetation to widen Benara Road reserve (PIN 11823056) and reconstruct the existing roundabout to a dual carriage way. The area proposed to be cleared is an approximately 63 metre strip on the southern side of Benara Road reserve.

1.3. Decision on application

Decision:	Granted
Decision date:	14 September 2022
Decision area:	0.15 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 C), relevant datasets (see Appendix H.1), photographs of the application area (see Appendix F), the clearing principles set out in Schedule 5 of the EP Act (see Appendix D), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration that the proposed clearing is to facilitate road upgrades.

The assessment identified that the proposed clearing will result in:

- the loss of seven native trees which may comprise suitable foraging and night rooting habitat for black cockatoos species.

After consideration of the available information, including that nearby vegetation is likely to contain a higher quality foraging and night roosting habitat for black cockatoos than the application area, the Delegated Officer determined the proposed clearing is unlikely to have long-term adverse impacts on environmental values and can be managed to be unlikely to lead to an unacceptable risk to environmental values.

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

- avoid, minimise and reduce the impacts and extent of clearing

1.5. Site map



Figure 1 Map of the application area

The area crosshatched yellow indicates the area authorised to be cleared under the granted clearing permit.

2 Legislative context

The clearing of native vegetation in Western Australia is regulated under the EP Act and the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004* (Clearing Regulations).

In addition to the matters considered in accordance with section 51O of the EP Act (see Section 1.4), the Delegated Officer has also had regard to the objects and principles under section 4A of the EP Act, particularly:

- the precautionary principle
- the principle of intergenerational equity
- the principle of the conservation of biological diversity and ecological integrity.

Other legislation of relevance for this assessment include:

- *Biodiversity Conservation Act 2016* (WA) (BC Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

The key guidance documents which inform this assessment are:

- *A guide to the assessment of applications to clear native vegetation* (DER, December 2013)
- *Procedure: Native vegetation clearing permits* (DWER, October 2019)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant advised that due to the limited space within the road reserve, there is no alternative to avoid the clearing of native vegetation. 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 C) 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 D) identified that the impacts of the proposed clearing present a risk to biological values (fauna) and significant remnant within an extensively cleared landscape. The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

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

Assessment

According to available databases, 48 threatened fauna species have been recorded in the local area. In forming a view on the likelihood of each species occurring within the application area, the following was considered:

- the preferred habitat and vegetation types of the species,
- their recorded proximity to the application, and
- the total number of records within the local area (See Appendix C.4).

Photographs and habitat survey (Terrestrial Ecosystems, 2019) provided by the applicant show the vegetation consists of seven *Eucalyptus gomphocephala* (Tuart) trees over grassy weeds and occurs in a completely degraded (Keighery, 1994) condition.

The black-cockatoo habitat tree survey provided (Terrestrial Ecosystems, 2019) identified no hollows occurred within the trees under application. The understorey is highly degraded and not likely to provide habitat for species which rely on dense understorey. It is unlikely that many ground-dwelling species would occupy the application area on a permanent bases as it is subject to disturbance from the adjacent roads.

Of the fauna species within the local area, three species had the potential to occur within the application area based on preferred habitat:

- *Zanda Calyptorhynchus* (previously *Calyptorhynchus baudinii*) (Baudin's cockatoo)
- *Zanda latirostris* (previously *Calyptorhynchus latirostris*) (Carnaby's cockatoo)
- *Calyptorhynchus banksii naso* (forest red-tailed black cockatoo)

Black Cockatoos

The application area is mapped as Carnaby's cockatoo unconfirmed breeding and roosting area and is within Baudin's cockatoo and forest red-tailed black cockatoo known distribution zones. Carnaby's cockatoo and Baudin's cockatoo are listed as endangered, and the forest red-tailed cockatoo is listed as vulnerable under the *Biodiversity Conservation Act 2016* (BC Act).

All remnant black cockatoo habitat on the Swan Coastal Plain is considered significant as the area has been extensively cleared. The local area contains 12.7% remnant vegetation. There are 39 black cockatoo roost sites recorded in the local area – three roost sites are within two km's of the application area.

According to the referral guideline for threatened black cockatoo species, published by the Department of Agriculture, Water and the Environment (2022), habitat critical for recovery of black cockatoos includes foraging habitat (including remnant patches of vegetation), night roosting habitat and nesting trees for breeding.

Suitable breeding habitat for black cockatoos includes trees which have a suitable nest hollow. As the black cockatoo habitat survey did not observe trees with any hollows, the application area is not considered black cockatoo breeding habitat (Terrestrial Ecosystems, 2019).

Black cockatoos will roost in tall trees often near riparian environments or a permanent water source (DAWE, 2022). The large tuarts within the application area could be used as night roosting habitat by black cockatoos as there are multiple permanent water sources near the application area. There is also a mapped water source within a nearby (65 metres southwest of application area) occurrence of Banksia Woodlands TEC, an area which likely contains higher quality black cockatoo night roosting habitat than the application area.

Tuarts are listed as a less important food source for forest red-tailed black cockatoos (DAWE, 2022). The application area does not meet the scoring requirements of foraging habitat for Carnaby's or Baudin's cockatoo, using the DAWE (2022) foraging quality scoring tool as it is not Jarrah or Marri woodland and / or forest, or on the edge of Karri forest, and Wandoo and Blackbutt do not occur within the site. Tuarts are not listed as foraging species for Baudin's and Carnaby's cockatoos. Alternatively, all three black cockatoo species forage on seeds of native proteaceous plant species, including *Banksia* species – the vegetation mapped in the nearby Banksia Woodlands TEC. Banksia Woodlands TEC flora includes a distinctive upper sclerophyllous layer of low trees typically dominated or co-dominated by *Banksia* species, a sometimes-present emergent tree layer of medium or tall *Eucalyptus* or *Allocasuarina* species and a highly species-rich understorey (Threatened Species Scientific Committee 2016).

The nearby Banksia Woodlands TEC is higher quality black cockatoo foraging and roosting habitat than the application area. It is subject to less disturbance than the application area which is located entirely within a road reserve. The application area consists of low-quality foraging habitat for forest red-tailed black cockatoos. Clearing the application area is not likely to affect foraging or night roosting for black cockatoos in the local area.

Closest recorded fauna

The closest recorded fauna was *Hydromys chrysogaster* (rakali) recorded 125m from the application area. Clearing the application area is not likely to affect this species as it prefers to inhabit permanent freshwater aquatic habitat and there are no permanent water courses in the application area.

Conclusion

Based on the above assessment, the application area does not contain significant breeding habitat for black cockatoos, may contain night roosting habitat for black cockatoos and contains low-quality foraging habitat for forest red-tailed black cockatoos. The nearby vegetation is likely to provide better value foraging and roosting habitat than the application area. It is considered that the proposed clearing will not have a significant impact on habitat for black cockatoo species.

Conditions:

No conditions required.

3.2.2. Biological values (threatened ecological communities) - Clearing Principle (d)

The seven trees within the application area were identified as *Eucalyptus gomphocephala* (tuart). The threatened ecological community 'Tuart (*Eucalyptus gomphocephala*) woodlands and forests of the Swan Coastal Plain' (Tuart Woodlands TEC) is listed as critically endangered under the EPBC Act. The approved conservation advice summarises Tuart Woodlands TEC as "woodlands or forests or other structural forms where the primary defining feature is the presence of *Eucalyptus gomphocephala* (Tuart) trees in the uppermost canopy layer" (DAWE 2022). While the application area meets the key diagnostic criteria for Tuart Woodlands TEC, the vegetation is in poor condition and does not meet the condition threshold to be considered a patch of Tuart Woodlands TEC.

Conclusion

It is not considered for the vegetation under application to represent the Tuart Woodland TEC.

Conditions:

No conditions required.

3.2.3. Significant remnant vegetation - Clearing Principle (e)

The National Objectives and Targets for Biodiversity Conservation 2001-2005 include a target to have clearing controls in place that prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750 (i.e., pre-European settlement) (Commonwealth of Australia, 2001). This is the threshold level below which species loss appears to accelerate exponentially.

The mapped vegetation community over the application area is the Southern River Complex (System 42), which is described as open woodland of *Corymbia calophylla* (marri) - *Eucalyptus marginata* (jarrah) - *Banksia* species with fringing woodland of *Eucalyptus rudis* (flooded gum) - *Melaleuca raphiophylla* (swamp paperbark) along creek beds (Government of Western Australia, 2019). This community is highly cleared, with 18.43% vegetation remaining (Table C.2.). As the vegetation within the application area consists of Tuart trees over grassy weeds and is not representative of this vegetation community. In addition, the application area is not considered to contain a high biodiversity or contain habitat for threatened flora or fauna and is therefore not considered a significant remnant.

The local area (10-kilometre radius from the centre of the area proposed to be cleared) has been extensively cleared (12.7% native vegetation remaining). However, the application area has not been found to provide any significant environmental values and is not considered significant as remnant vegetation within the local area.

The application area occurs on the eastern edge of a mapped ecological linkage and is separated from other vegetation within the linkage by roads and cleared land. The application area is not likely to be necessary for maintaining this linkage.

Conclusion

The proposed clearing is not considered significant as a remnant of native vegetation.

Conditions:

No conditions required.

3.3. Relevant planning instruments and other matters

Several 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

Information	Description
Compliance under CPS 8015/1 permit conditions	No clearing was carried out under previous expired permit CPS 8015/1 that covers the application area.
Black Cockatoo Tree Assessment (Terrestrial Ecosystems, 2019)	A black cockatoo habitat tree assessment was completed by Terrestrial Ecosystems, 2019. Each tree was assessed for the presence of a hollow. The field assessment was completed on 19 February 2019.

Appendix C. Site characteristics

C.1. Site characteristics

The information provided below describes the key characteristics of the area proposed to be cleared and is based on the best information available to DWER at the time of this assessment. This information was used to inform the assessment of the clearing against the Clearing Principles, contained in Appendix B.

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of a 0.06-hectare isolated patch of native vegetation in the intensive land use zone of Western Australia. It is surrounded by highly cleared residential and rural areas and is 65 metres east of a Bush Forever site. The proposed clearing area is a small, isolated remnant in a highly cleared landscape.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 12.7 per cent of the original native vegetation cover.</p>
Ecological linkage	<p>A mapped Perth Regional Ecological Linkage and Gnangara Mound Ecological Conceptual Linkage transect the application area. These linkages act as stepping-stones of high-quality habitat thereby facilitating the maintenance of ecological processes and the movement of organisms within and across a landscape (Molloy et al, 2009).</p> <p>The application area occurs on the eastern edge of the mapped ecological linkage and is separated from other vegetation within the linkage by roads and cleared land. The application area is not likely to be necessary for maintaining the ecological linkage.</p>
Conservation areas	<p>The western edge of the application area borders a mapped Bush Forever area (site no. 205) which is comprised of the Commonwealth-listed TEC 'Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region'. Based on aerial imagery, there is 40-50m of cleared land between the edge of the application area and the vegetation of the Bush Forever site.</p>
Vegetation description	<p>Photographs supplied by the applicant show the application area consists of seven large trees over grass (Appendix F). The habitat tree survey (Terrestrial Ecosystems 2019) identified the seven trees within the proposed clearing area as <i>Eucalyptus gomphocephala</i> (Tuart).</p> <p>This is not consistent with the Swan Coastal Plain mapped vegetation type:</p> <ul style="list-style-type: none"> Southern River Complex (System 42), which is described as open woodland of <i>Corymbia calophylla</i> (marri) - <i>Eucalyptus marginata</i> (jarrah) - <i>Banksia</i> species with fringing woodland of <i>Eucalyptus rudis</i> (flooded gum) - <i>Melaleuca raphiophylla</i> (swamp paperbark) along creek beds (Government of Western Australia, 2019). <p>The mapped vegetation type retains approximately 18.43 per cent of the original extent (Government of Western Australia, 2019; See Appendix C.2).</p>

Characteristic	Details
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Completely Degraded (Keighery, 1994) condition, described as:</p> <ul style="list-style-type: none"> 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. <p>The full Keighery (1994) condition rating scale is provided in Appendix E. Representative photos are available in Appendix F.</p>
Climate	The southwest of WA has a Mediterranean climate with mild wet winters and hot dry summers. The average annual rainfall received over the application area is 600-1000 millimetres.
Soil description	The soil is mapped as Karrakatta grey sand (Bassendean), described as moderately deep light grey sand over yellow sand (sand dune) (DPIRD, 2019).
Land degradation risk	<p>The mapped soil over the application area is highly susceptibility to subsurface acidification, water repellence and wind erosion (DPIRD, 2019).</p> <p>Due to the small size of the application area and the proposed final land use, clearing the application area would result in minimal land degradation.</p>
Waterbodies	<p>The application area is mapped over the Coastal Plain hydrological zone of Western Australia, described as:</p> <ul style="list-style-type: none"> Coastal and fixed sand dunes and calcarenite. Non-calcareous sands, podsolised soils with low-lying wet areas. Further inland, alluvial deposits, colluvial deposits adjacent to the Darling Scarp. Clayey to sandy alluvial soils with wet areas. <p>The desktop assessment and aerial imagery indicated that no natural or permanent watercourses intersect the application area. A major urban drain is mapped within the application area.</p> <p>The application area is approximately 65 metres from a 'conservation category' wetland (West Bennett Brook), and 65 metres and 100 metres from 'multiple use' wetlands. Two minor rivers are located 80 m and 150 m from the application area.</p>
Hydrogeography	The application area falls within the Swan River System Surface Water Area and the Swan Groundwater Area as proclaimed under the Rights in Water and Irrigation Act 1914 (RIWI Act). The application area is not subject to an area protected under the Country Water Supply Act 1917 or a Public Drinking water source area. The groundwater salinity level (Total Dissolved Solids) is mapped as 1000-1500 milligrams per litter.
Flora	The desktop assessment identified 63 conservation specific flora taxa within the local area which comprises of nine threatened flora and 55 priority flora taxa. The nearest records are two Priority 3 species, <i>Carex tereticaulis</i> and <i>Meionectes tenuifolia</i> , both located approximately 1 kilometre from the application area.
Ecological communities	<p>No conservation significant ecological communities are mapped over the application area. The closest mapped TEC is the Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region located approximately 60 metres south-west of the application area.</p> <p>The seven trees within the application area were identified as <i>Eucalyptus gomphocephala</i> (tuart), however the vegetation within the application area does not meet the definition of a patch for the TEC 'Tuart (<i>Eucalyptus gomphocephala</i>) woodlands and forests of the Swan Coastal Plain' (Tuart Woodlands TEC), listed as critically endangered under the EPBC Act. The application area does not meet the definition of a patch as it does not contain any areas which meet the minimum condition threshold.</p>
Fauna	The desktop assessment identified 48 conservation significant fauna species within the local area. The closest record is of a <i>Hydromys chrysogaster</i> (rakali) recorded 100 metres from the application area. The most frequently occurring species within the

Characteristic	Details
	<p>local area was <i>Zanda latirostris</i> (Carnaby's cockatoo) with 950 records. There are three known black cockatoo roost sites within two kilometres of the application area.</p> <p>The application area is mapped as Carnaby's cockatoo unconfirmed breeding and roosting area and is within Baudin's cockatoo and forest red-tailed black cockatoo known distribution zones.</p>

C.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,221.93	579,813.47	38.62	38.45	14.85
Vegetation complex**					
Southern River Complex	58,781.48	10,832.18	18.43	940.36	1.60
Local area					
10km radius	31,252.48	3,960.80	12.67	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

C.3. Fauna analysis table

Species 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 (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Zanda latirostris</i>	EN	Y	Y	1.2	950	Y
<i>Zanda calyptorhynchus</i>	EN	Y	Y	3.1	16	Y
<i>Calyptorhynchus banksii naso</i>	VU	Y	Y	2.9	25	Y

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

Appendix D. 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 habitat for conservation significant fauna species, however, habitat in better quality occurs within the surrounding area of the proposed clearing. The application area does not contain suitable habitat for conservation significant ecological communities or flora.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
<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>The area proposed to be cleared contains habitat for conservation significant fauna recorded from the local area. However, is not considered significant habitat.</p>	Not likely to be at variance	Yes Refer to Section 3.2.1, above.
<p><u>Principle (c):</u> <i>“Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora.”</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is <i>unlikely to contain habitat for flora species listed under the BC Act</i>. The application area is highly degraded with little to no native understorey present. The species recorded in the application area are not 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 contains species that indicate a threatened ecological community, however, the application area does not meet the definition of a patch for the Tuart Woodlands TEC.</p>	Not likely to be at variance	Yes Refer to Section 3.2.2, above
Environmental value: significant remnant vegetation and conservation areas		
<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 the mapped vegetation type and the native vegetation in the local area is not consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation within the application area is not representative of the mapped vegetation community. The application area is not considered as remnant vegetation of this community.</p> <p>The vegetation proposed to be cleared is not significant as a remnant of native vegetation in the local area.</p> <p>The application area occurs on the eastern edge of a mapped ecological linkage however is separated from this linkage by roads and cleared land. The proposed clearing is not considered likely to impact the function of this ecological community.</p>	Not likely to be at variance	Yes Refer to Section 3.2.3, above
<p><u>Principle (h):</u> <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment:</u></p> <p>The proposed clearing is not likely to have an impact on the environmental values of the adjacent conservation areas. The vegetation in the application area is separated from the vegetation in the adjacent Bush Forever site by 40-50 metres of mostly cleared land. Therefore, the proposed clearing is not likely to introduce weeds or dieback into the Bush Forever site.</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>Given no natural or permanent 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 at variance	No
<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 highly susceptible to subsurface acidification, water repellence and wind erosion. Noting the extent of the proposed clearing, the condition of the vegetation within the application area and the urbanised landscape, 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>Given no natural or permanent water courses, wetlands or Public Drinking Water Sources Areas are recorded within the application area, the proposed clearing is unlikely to impact surface or ground water quality.</p>	Not likely to be at variance	No
<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 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 natural or permanent water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.</p>	Not likely to be at variance	No

Appendix E. 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.

Condition	Description
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 F. Photographs of the vegetation



Photograph of application area (City of Swan, 2022a)



Plate 1. Tree 1



Plate 2. Tree 2



Plate 3. Tree 3

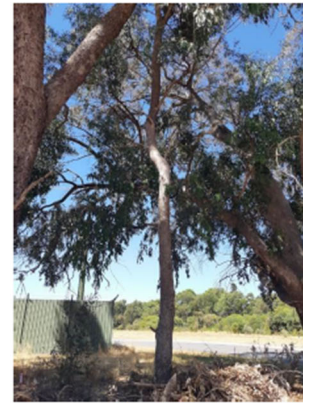


Plate 4. Tree 4



Plate 5. Tree 5



Plate 6. Tree 6



Plate 7. Tree 7

Photographs of seven trees to be cleared (Terrestrial Ecosystems 2019)

Appendix H. Sources of information

H.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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