



Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 9271/1
Permit type:	Purpose permit
Applicant name:	MME Underground Services Pty Ltd T/A Platinum Locating Services
Application received:	21 April 2021
Application area:	0.01 hectares of native vegetation
Purpose of clearing:	Drilling for power pole testing
Method of clearing:	Mechanical
Property:	Lot 500 on Deposited Plan 73964
Location (LGA area/s):	City of Wanneroo
Localities (suburb/s):	Yanchep

1.2. Description of clearing activities

The application is to clear up to 0.01 hectares of native vegetation located on the shoulder of the Yanchep Beach Road that separates a vast track of intact native vegetation within the Yanchep National Park (**Figure 1**, Section 1.5). The incidental clearing is required for the drilling for power pole testing.

1.3. Decision on application

Decision:	Granted
Decision date:	17 August 2021
Decision area:	0.01 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 14 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix E.1), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the importance of the power poles installation in the provision of electricity to the community.

In particular, the Delegated Officer has determined that:

- The applied clearing area is mapped within the Yanchep National Park, reserved for conservation and recreation. It is also mapped within a Bush Forever area and immediately adjacent to a Banksia Dominated Woodlands of the Swan Coastal Plain (Banksia Woodlands) Priority Ecological Community (PEC) (Priority 3), which is synonymous with the EPBC Act listed Banksia Woodlands Threatened Ecological Community

(TEC) (**Figure 2**). Given the Completely Degraded vegetation condition of the proposed clearing area, its location on the edge of a vast vegetation patch and road reserve, and the small extent of clearing, the proposed clearing is unlikely to significantly impact on the conservation values or maintenance of the National Park, the Bush Forever site or the TEC.

- Notwithstanding the small extent of clearing, the proposed clearing may introduce and spread weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent TEC, national park and their habitat values. Weed and dieback management measures can mitigate this potential impact and reduce the likelihood of the introduction and spread of weeds and dieback.
- Several records of Carnaby's and White-tailed cockatoo are known from the local area, with records within 200 metres of the application area. Given the absence of any trees within the application area, the Completely Degraded vegetation condition and the presence of vast tracks of vegetation suitable for Black cockatoo's roosting, breeding or feeding nearby, it is unlikely that the application area comprises significant habitat for Black cockatoos.

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 long-term adverse impacts on the conservation area, adjacent TECs and Black cockatoo habitat.

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

- avoid, minimise to reduce the impacts and extent of clearing
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

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)
- *Conservation and Land Management Act 1984* (WA) (CALM Act)
- *Country Areas Water Supply Act 1947* (WA) (CAWS Act)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Soil and Land Conservation Act 1945* (WA)

Relevant policies considered during the assessment include:

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 expressed commitment to avoid clearing in performing the works. Clearing will most likely be incidental. The Delegated Officer was satisfied that the applicant has made a reasonable effort to avoid and minimise potential impacts of the proposed clearing on environmental values.

3.2. Assessment of impacts on environmental values

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix A) and the extent to which the impacts of the proposed clearing present a risk to biological, conservation, or land and water resource values.

The assessment against the clearing principles (see Appendix B) identified the impacts of the proposed clearing are limited and able to be managed with standard avoid and minimise; and hygiene management conditions.

The assessment against the clearing principles (see Appendix B) identified that the impacts of the proposed clearing may present a risk to biological values (fauna, adjacent vegetation) and conservation areas. 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 and Threatened Ecological Community - Clearing Principles (a) and (b)

Fauna

Assessment

Forty conservation significant fauna have been recorded within a 10 kilometre radius of the application area. Being close to the ocean, many of these records are that of marine aquatic species which are not likely to be present in the application area. Migratory bird species commonly associated with the water bodies in the area may overfly the application area without utilising the habitat present. The Priority 4 Quenda (*Isoodon fusciventer*) may occur in the local area. The application area is void of tall vegetation and sparsely vegetated with native and non-native weed. Quenda is unlikely to occur within the application area given Quenda's preference for dense vegetation.

The application area is also within the modelled distribution of two species of black cockatoo known from the Perth metropolitan area; the Endangered Carnaby's cockatoo (*Calyptorhynchus latirostris*) and the Vulnerable Forest red-tailed Black cockatoo (*Calyptorhynchus banksii naso*). No records of the Forest red-tailed black cockatoo are known

from the local area. In contrast, 37,965 records of Carnaby's Cockatoo and 314 records of the Endangered White-tailed black cockatoo (*Calyptrorhynchus* sp.) are known from the local area, with records within 200 metres of the application area.

Black cockatoo habitat can be considered in terms of breeding, roosting and foraging habitat. Roost sites, which tend to be located in the largest trees within a particular area and in close proximity to both water and food supplies, are nearby. The nearest Black cockatoo roosting sites are located approximately 1 kilometre west and east of the application area, within the Yanchep National Park. The application area is unlikely to offer roosting habitat due to the absence of trees.

The Banksia woodlands immediately south and north of the application area offers foraging habitat for Black cockatoo, but the application area has not been mapped within the woodlands (**Figure 2**). Given the vegetation condition and type, the application area is unlikely to comprise feeding habitat for Black cockatoos. Within the local context, large areas of native vegetation surround the application area, with approximately 51 percent native vegetation cover within ten kilometres of the application area, or over 11,676 hectares. Most of this vegetation has also been mapped as Black cockatoo feeding areas, and much of it is within protected conservation tenure (Section 3.2.2).

No other conservation significant fauna is likely to utilise the habitat within the proposed clearing area.

Conclusion

Given the applied area's Completely Degraded (Keighery, 1994) vegetation condition, location and small size, the proposed clearing area is unlikely to comprise significant habitat for Black cockatoo or other conservation significant fauna. The proposed clearing is unlikely to impact on the conservation or maintenance of conservation significant fauna within the local context.

Conditions

No fauna management conditions required.

Priority and Threatened Ecological Communities (PEC/ TEC)

Assessment

The application area does not occur within any mapped priority or threatened ecological communities. It is however, surrounded by over 13,000 hectares of mapped PEC and TEC. The application area is immediately adjacent to 199 hectares of contiguous vegetation mapped as the Banksia Woodlands Priority 3 PEC, which is synonymous with the EPBC Act listed Banksia Woodlands TEC. On the other side of the road from the application area lies the Banksia Woodlands TEC as well as the Tuart Woodlands and Forrest of the Swan Coastal Plain (Priority 3 PEC), measuring over 72 hectares in size. Given its location outside the mapped TECs, the Completely Degraded vegetation condition and the small extent of clearing, the proposed clearing is unlikely to have a direct impact to the TECs. Notwithstanding the above, clearing could introduce and spread weeds and dieback into the adjacent TECs. Weed and dieback management measures must be put in place to mitigate this potential impact of clearing and reduce the likelihood of the introduction and spread of weeds and dieback.

Conclusion

Based on the above assessment, the Delegated Officer has determined that the proposed clearing is unlikely to significantly impact on the conservation and habitat values of surrounding TECs. In the absence of proper management measures, however, it may result in the introduction and spread of weeds and dieback into nearby TECs.

Conditions

To mitigate the indirect potential impact of clearing and reduce the likelihood of introduction and spread of weeds and dieback into the adjacent TECs, weeds and dieback management measures are required with this Permit.

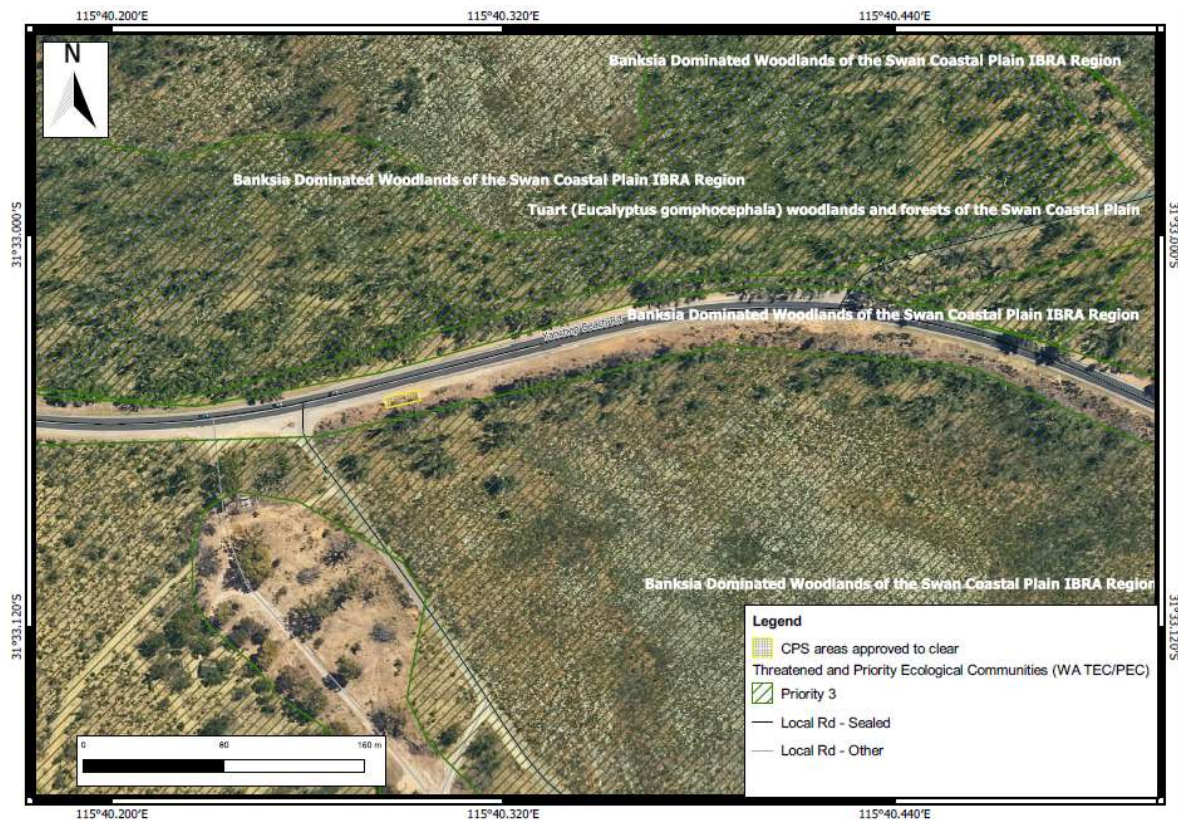


Figure 2. The application area (crosshatched yellow) is immediately adjacent to Banksia Woodlands and Tuart Woodlands and Forrest of the Swan Coastal Plain PEC/TEC.

3.2.2. Environmental value: Conservation areas – Clearing Principle (h)

Assessment

The proposed clearing area, including the Yanchep Beach Road Reserve, occurs within the Yanchep National Park managed by the Department of Biodiversity, Conservation and Attraction. It is also located within Bush Forever Site (#288) area under the Metropolitan Regional Scheme (MRS).

The application area is located on the shoulder of the Yanchep Beach Road which fragments the DBCA and MRS managed lands. Being on the edge of the vegetation patch cleared for the road over an extended period of time, the vegetation in the application area is in Completely Degraded condition and does not significantly contribute to the environmental values of the National Park. Given the minimal clearing and area size, the proposed clearing will not likely impact the National Park or the Bush Forever Site.

Conclusion

Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not likely to impact on this environmental value.

Condition

Weed and dieback management measures will mitigate potential impacts from clearing adjacent to vegetation within the National Park and Bush Forever site.

3.3. Relevant planning instruments and other matters

The application area is located within the Yanchep National Park managed by DBCA and a Bush Forever site managed by MRS. DBCA has provided its consent for the Applicant to access the area and to apply for a clearing permit for the works required.

The City of Wanneroo (the City) advised DWER that local government approvals are not required, and that the proposed clearing is consistent with the Shire's Local Planning Scheme. The City does not have any objections to the proposed clearing.

Several Aboriginal sites of significance have been mapped within the local 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. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	The area proposed to be cleared is located on the shoulder of the Yanchep Beach Road separating an expansive track of native vegetation within the Yanchep National Park. The vegetation proposed to be cleared comprise of native and non-native shrubs over bare ground. Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 51 percent per cent of the original native vegetation cover.
Ecological linkage	The application area is mapped within the Gngangara Mound Ecological Linkage.
Conservation areas	The application area is mapped within Yanchep National Park. It is also mapped within a Bush Forever (#288) area under the Metropolitan Regional Scheme.
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area consists of native and non-native shrubs and weeds over bare ground. Representative photos are available in Appendix D.</p> <p>The vegetation complex within the application area is mapped as the Cottesloe Complex – North of the Swan Coastal Plain (Beard) which is described as (Shepherd et al, 2001) a predominantly low open forest and low woodland of <i>Banksia attenuata</i> (Slender Banksia) - <i>Banksia menziesii</i> (Firewood Banksia) - <i>Eucalyptus tottiana</i> (Pricklybark); closed heath on the Limestone outcrops.</p> <p>The mapped vegetation type retains approximately 59 per cent of the original extent (Government of Western Australia, 2019)</p>
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Completely Degraded condition (Keighery, 1994)</p> <p>The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.</p>
Soil description	Soils within the application area are identified as Spearwood Sand Phase (211Sp), characterised by irregular banks of karst depressions, with some limestone outcrop, shallow brown sands over Banksia spp. woodlands.
Land degradation risk	The application area has low to medium land degradation risks due to flooding, water logging, water erosion, salinity and nutrient export. The local area has been mapped as having high risks to wind erosion and subsurface acidification.
Waterbodies	The desktop assessment and aerial imagery indicated that the application area does not transect any watercourses or waterbodies. The nearest wetland is the Loch Ness System, listed as an important wetland of WA.
Hydrogeography	The application area is within the consanguineous wetland suite 51 that covers the area between Yanchep and Kingsley including the Loch McNess within the Yanchep National Park. It is also within an area overlaying the Gngangara groundwater system.
Flora	Fifteen conservation significant flora have been recorded in the local area, one of which is a Threatened species (<i>Eucalyptus argutifolia</i>). The nearest record is <i>Sphaerolobium calcicola</i> , located within Yanchep National Park, approximately 1.1 km from the application area. The application area does not resemble the preferred the habitat types of these flora species. Photographs of vegetation within the application area do not indicate any of these species.
Ecological communities	The application area is not mapped within any PEC/ TEC, however, it is surrounded by the Banksia Woodlands and Tuart Woodlands and Forrest of the Swan Coastal Plain TECs (Figure 2). The application area is immediately adjacent to these TECs.
Fauna	Forty conservation significant fauna have been recorded within the local area. Many of which are marine aquatic species and migratory birds associated with waterbodies. Four Black cockatoo roosting sites are recorded within 4 kilometres radius from the

Characteristic	Details
	application area, the closest being 1.1 kilometres to the west. It is mapped within the Carnaby's distribution and the Black cockatoo feeding area.

A.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre-European extent in all DBCA managed land
IBRA bioregion*					
Swan Coastal Plain	1,501,209	587,889	39	195,834	33
Vegetation complex					
Cottesloe Complex North	43,474	25,165	58	16435	83
Local area: 10km radius	22,980	11,676	51	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), impacts to the following conservation significant flora required further consideration.

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 within 10 km radius
<i>Conostylis bracteata</i>	P3	N	Y	Y	3.42	5
<i>Eucalyptus argutifolia</i>	T	N	Y	Y	6.29	5
<i>Haloragis luminosa</i>	P1	N	Y	Y	6.92	3
<i>Lasiopetalum membranaceum</i>	P3	N	Y	Y	3.94	2
<i>Lepidium pseudotasmanicum</i>	P4	N	Y	Y	3.42	1
<i>Leucopogon</i> sp. Yanchep (M. Hislop 1986)	P3	N	Y	Y	3.94	3
<i>Pimelea calcicola</i>	P3	N	Y	Y	2.67	3
<i>Sphaerolobium calcicola</i>	P3	N	Y	Y	1.12	2
<i>Stylidium maritimum</i>	P3	N	Y	Y	3.94	1
<i>Styphelia filifolia</i>	P3	N	Y	Y	5.84	1
T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority						

A.4. 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)
<i>Calyptrorhynchus latirostris</i> (Carnaby's cockatoo)	EN	N	N	0.21	37965
<i>Calyptrorhynchus</i> sp. 'white-tailed black cockatoo' (White-tailed black cockatoo)	EN	N	N	0.99	314
<i>Delma concinna major</i> (Javelin legless lizard (Shark Bay))	P1	N	N	5.44	1
<i>Idiosoma sigillatum</i> (Swan Coastal Plain shield-backed trapdoor spider)	P3	N	N	1.12	1
<i>Isodon fusciventer</i> (Quenda, southwestern brown bandicoot)	P4	N	N	1.12	22
<i>Notamacropus Irma</i> (Western brush wallaby)	P4	N	N	6.76	1
<i>Synemon gratiosa</i> (Graceful sunmoth)	P4	N	N	1.97	787
T: threatened, CR: critically endangered, EN: endangered, VU: vulnerable, P: priority					

A.5. Ecological community analysis table

Community name	Conservation status (State WA)	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 within 10 km radius
Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region	P3	N	Y	Y	0.007	136
Aquatic Root Mat Community Number 1 of Caves of the Swan Coastal Plain	CR	N	N	N	1.081	7
Woodlands over sedgeland in Holocene dune swales of the southern Swan Coastal Plain (original description; Gibson et al. (1994).	CR	N	N	N	2.917	1
Northern Spearwood shrublands and woodlands	P3	N	Y	Y	9.698	2
<i>Melaleuca huegelii</i> - <i>Melaleuca systema</i> shrublands on limestone ridges (floristic community type 26a as originally described in Gibson et al. (1994))	EN	N	N	Y	2.047	31
Tuart (<i>Eucalyptus gomphocephala</i>) woodlands and forests of the Swan Coastal Plain	P3	N	N	Y	0.014	100

A.6. Land degradation risk table

Risk categories	<i>Land Unit 1</i>
Wind erosion	H2: >70% of the map unit has a high to extreme wind erosion risk
Water erosion	L2: 3-10% of the map unit has a very high to extreme hazard
Salinity	L1: <3% of the map unit has a moderate to high hazard
Subsurface Acidification	H1: 50-70 % of the map unit has a high susceptibility
Flood risk	L1: <3% of the map unit has a moderate to high hazard
Water logging	L2: 3-10% of the map unit has a moderate to high thazard
Phosphorus export risk	M1: 10-30% of the map unit has a high to extreme hazard

Appendix B 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> <i>"Native vegetation should not be cleared if it comprises a high level of biodiversity."</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is small and does not contain significant flora, fauna, habitats or assemblages of plants. It is however, immediately surrounded by the Banksia Dominated Woodlands of Swan Coastal Plain communities listed under the EPBC Act.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (b):</u> <i>"Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is within 4 kilometre radius of known Black cockatoos roosting sites. It may provide foraging habitat to Black cockatoo species. However, given the small extent of clearing, vegetation condition, and the absence of any trees, it is unlikely that the proposed clearing area provide significant habitat to Black cockatoo species.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> <i>"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</i></p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is unlikely to contain Threatened flora species. The nearest conservation significant flora record is located approximately 3 kilometres from the application area.</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 does not contain species that can indicate a state-listed threatened ecological community.</p>	Not likely to be at variance	No
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 extents of the mapped vegetation type (59%) and native vegetation in the local area (51%) are consistent with the national objectives and targets for biodiversity conservation in Australia.</p>	Not likely to be at variance	No
<p><u>Principle (h):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area."</i></p> <p><u>Assessment:</u></p> <p>The vegetation proposed to be cleared is mapped within the Yanchep National Park, reserved for conservation and recreation purposes. It is also within a Bush Forever site. Given the vegetation condition and minor extent of clearing, the proposed clearing is unlikely to directly impact on the environmental values of the conservation areas. Indirect impact of clearing</p>	May be at variance	Yes <i>Refer to Section 3.2.2, above.</i>

Assessment against the clearing principles	Variance level	Is further consideration required?
including spread of weeds and dieback could take place unless proper management measures are implemented.		
Environmental value: land and water resources		
<p><u>Principle (f):</u> <i>"Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."</i></p> <p><u>Assessment:</u></p> <p>The proposed clearing will not intersect any water courses or wetlands. The nearest wetland is the Loch McNess System located 1 kilometre east of the application area. Given the small extent of clearing and the types of works required, the proposed clearing is unlikely to impact on the hydrology of the wetland.</p>	Not likely to be at variance	No
<p><u>Principle (g):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."</i></p> <p><u>Assessment:</u></p> <p>The mapped soils are not susceptible to risks associated with water erosion, flooding, water logging, nutrient export, and salinity. The soils in the area, however, are highly susceptible to wind erosion and surface acidification. Noting the small extent of clearing within the context of vastly vegetated area immediately surrounding it, the proposed clearing is not likely to have an appreciable impact on land degradation due to wind erosion nor surface acidification.</p>	Not likely to be at variance	No
<p><u>Principle (i):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."</i></p> <p><u>Assessment:</u></p> <p>The proposed clearing will not intercept any watercourses or waterbodies. It is unlikely to impact surface or ground water quality.</p>	Not likely to be at variance	No
<p><u>Principle (j):</u> <i>"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."</i></p> <p><u>Assessment:</u></p> <p>The mapped soils and topographic contours in the surrounding area do not indicate the proposed clearing is likely to contribute to increased incidence or intensity of flooding.</p>	Not likely to be at variance	No

Appendix C Vegetation condition rating scale

Vegetation condition is a rating given to a defined area of vegetation to categorise and rank disturbance related to human activities. The rating refers to the degree of change in the vegetation structure, density and species present in relation to undisturbed vegetation of the same type. The degree of disturbance impacts upon the vegetation's ability to regenerate. Disturbance at a site can be a cumulative effect from a number of interacting disturbance types.

Considering 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).

Measuring vegetation condition for the South West and Interzone Botanical Province (*Keighery, 1994*)

Condition	Description
Pristine	Pristine or nearly so, no obvious signs of disturbance.
Excellent	Vegetation structure intact, with disturbance affecting individual species; weeds are non-aggressive species.
Very good	Vegetation structure altered, with obvious signs of disturbance. For example, disturbance to vegetation structure caused by repeated fires, the presence of some more aggressive weeds, dieback, logging and/or grazing.
Good	Vegetation structure significantly altered by very obvious signs of multiple disturbances. Retains basic vegetation structure or ability to regenerate it. For example, disturbance to vegetation structure caused by very frequent fires, the presence of some very aggressive weeds at high density, partial clearing, dieback and/or grazing.
Degraded	Basic vegetation structure severely impacted by disturbance. Scope for regeneration but not to a state approaching good condition without intensive management. For example, disturbance to vegetation structure caused by very frequent fires, the presence of very aggressive weeds, partial clearing, dieback and/or grazing.
Completely degraded	The structure of the vegetation is no longer intact and the area is completely or almost completely without native species. These areas are often described as 'parkland cleared' with the flora comprising weed or crop species with isolated native trees or shrubs.

Appendix D Photographs of the vegetation (*Platinum Locating Services, 2021*)



Figure 3 (A to F). Vegetation within the application area comprises small shrubs of native and non-native species.

Appendix E. Sources of information

E.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
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

E.2. References

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