



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

PERMIT DETAILS

Area Permit Number: CPS 9675/1
File Number: DWERVT9682
Duration of Permit: From 22 April 2023 to 22 April 2026

PERMIT HOLDER

Mr Todd Exell

LAND ON WHICH CLEARING IS TO BE DONE

Lot 11 on Diagram 91290, Warner Glen

AUTHORISED ACTIVITY

The permit holder must not clear more than 0.045 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. 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.

3. Erosion management

The permit holder must only undertake *clearing* during the driest period of the year, between November and April.

4. 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 <i>clearing</i> activities generally	<ul style="list-style-type: none"> (a) the species composition, structure, and density of the cleared area; (b) the location where the <i>clearing</i> 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 <i>clearing</i> in accordance with condition 1; 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 2

5. Reporting

The permit holder must provide to the *CEO* the records required under condition 5 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.
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)
native vegetation	has the meaning given under section 3(1) and section 51A of the EP Act.
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.

END OF CONDITIONS



Meenu Vitarana
MANAGER
NATIVE VEGETATION REGULATION

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

29 March 2023

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 9675/1
Permit type:	Area permit
Applicant name:	Todd Exell
Application received:	25 March 2022
Application area:	0.045 hectares of native vegetation
Purpose of clearing:	Road Construction
Method of clearing:	Mechanical
Property:	Lot 11 on Diagram 91290
Location (LGA area/s):	Shire of Augusta-Margaret River
Localities (suburb/s):	Warner Glen

1.2. Description of clearing activities

The vegetation proposed to be cleared is contained within a single continuous area (see Figure 1, Section 1.5). The application is to clear a previously clear area to allow access to the dwelling on the property. The area proposed to be cleared is approximately 0.045 hectares of native and non-native vegetation.

1.3. Decision on application

Decision:	Granted
Decision date:	29 March 2023
Decision area:	0.045 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 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 that the purpose of the clearing is to access a dwelling.

The assessment identified that the proposed clearing will result in:

- potential short-term deterioration of surface water quality through localised sediment in storm water runoff

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 water quality within the wetland 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 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
- clearing and constructing works during the dry season

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)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)
- *Rights in Water and Irrigation Act 1914* (RIWI Act)
- *Soil and Land Conservation Act 1945* (WA)

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 proposed clearing will allow access from the road to the dwelling without the applicant needing to cross through neighbouring properties. The application area was chosen as it is within the narrow-most area of the vegetated wetland, has previously been cleared and consists mostly of non-native weeds.

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 to be environmentally acceptable. However, consideration of impacts to fauna adjacent flora and vegetation and land degradation and surface water required further consideration and are set out below.

3.2.1. Environmental Value: Biological values (fauna) - Clearing Principles (b)

Assessment

The desktop assessment identified 28 conservation significant fauna recorded within 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, and
- their recorded proximity to the application area (See Appendix A.4).

Nine species were considered possible to occur during the desktop assessment (See Appendix A.4) however given the condition of the vegetation, the application area is not considered to contain significant habitat for these species.

***Geocrinia alba* (white-bellied frog)**

The white-bellied frog has an area of occupancy of less than 2.5 square kilometre (DCCEEW 2023). This species prefers drainage depressions with swampy floors. Breeding habitat consists of sandy soils, dense overstorey vegetation and a dense ground layer of rhizomatous vegetation (DPAW 2015). The White-bellied Frog occurs in permanently moist sites which have adequate moss cover (DCCEEW 2023; DPAW 2015). This species has very low potential for dispersal.

Historical aerial imagery and photographs provided by the applicant indicate the application area has previously been cleared and remains in a degraded condition (See Appendix D). Additionally, aerial imagery indicates the application area does not retain ground vegetation to the extent of the surrounding vegetation within the drier season. The application area is unlikely to represent significant habitat for white-bellied frogs.

***Hydromys chrysogaster* (water-rat, rakali)**

Rakali live in burrows on the banks of rivers and wetlands. Intact riparian vegetation is critical to their survival (DWER 2023). They have a home range of 1-4km of waterways. As rakali are semiaquatic, the proposed clearing is not likely to impact habitat connectivity for this species if present in the application area. Given the small size and degraded condition of the application area, it is unlikely to represent significant habitat for this species.

Migratory shorebirds

Multiple species of shorebirds may be transient visitors to the application area: *Plegadis falcinellus* (glossy ibis), *Actitis hypoleucos* (common sandpiper), *Calidris ferruginea* (curlew sandpiper), *Calidris ruficollis* (red-necked stint), *Hydroprogne caspia* (Caspian Tern). Given the size and condition of the application area, the better-quality habitat present within the local area, and that none of these species have breeding habitat within Australia, clearing the application area is unlikely to affect the conservation status of these species.

Conclusion

Based on the size and condition of the proposed clearing area, it is unlikely that the application area provides significant habitat for fauna of conservation significance. The remaining vegetation to the north of the application area and the fringing vegetation of the Blackwood River provide areas of higher vegetation quality within the local area.

Conditions

No fauna management conditions required.

3.2.2. Environmental value: biological values (flora) – Clearing Principle (a) and (c)

Assessment

There are no conservation significant flora records within the application area. The closest flora record is 3.24 kilometres from the application area (*Machaerina ascendens*). Five species of threatened flora have been recorded within the local area.

Reedia spathacea, *Boronia exilis* and *Grevillea brachystylis subsp. Australis* were considered possible to occur due to occurring on the same soil system as the application area. However, none of these species occur within the same soil subsystem as the application area.

As the application area has been previously cleared and is in a degraded to completely degraded condition, it is unlikely to contain threatened flora. Given the size and linear nature of the proposed clearing, if threatened flora species are present within the application area, the proposed clearing is unlikely to affect the conservation status of these species.

Conclusion

Given no threatened flora occur within the same soil subsystem as the application area, the degraded condition of the vegetation, including that the application area is previously cleared, and that appropriate habitat requirements are not present, threatened flora are unlikely to be present in the application area.

Conditions

No flora management conditions required.

3.2.3. Environmental Value: Land and Water resources - Clearing Principles (f), (i) and (i)

Assessment

The application area is within a mapped Palusplain, seasonally waterlogged flat, which is also an unnamed tributary of the Blackwood River. This wetland is six to seven kilometres in length and runs east to west. The proposed clearing occurs at the western end of the wetland, approximately 400 metres from Blackwood River. The vegetation proposed to be cleared is riparian vegetation.

The clearing may generate localised sediment in storm water runoff. This can cause deterioration of the surface water quality within the wetland. Additionally, a flow on effect of increased turbidity within the immediate vicinity of the works may occur until the site stabilises.

The proposed clearing is not expected to result in changes to groundwater levels or quality given the extent and purpose of the clearing.

Conclusion

The applicant has applied for an s17 permit to interfere with the bed and banks of a watercourse. Culvert designs have been submitted to ensure sufficient water flow allowances with the construction of the crossover. DWER has advised that water impacts can be managed by clearing and constructing works during the dry season (DWER 2022).

Given the extent of clearing, previous disturbances and the condition of vegetation within the application area, the proposed impacts of the clearing on wetland environmental values are considered to be minimal and short term.

Conditions

To address the above impacts, the following management measure will be required as a condition on the clearing permit:

- undertake clearing during the driest period of the year.

3.3. Relevant planning instruments and other matters

Other relevant authorisations required for the proposed land use include:

- Section 17 Permit to interfere with bed and banks under the *Rights in Water and Irrigation Act 1914*.

DWER's Water Licencing branch has advised that the required Section 17 Permit is proposed to be approved subject to confirmation of a clearing permit for the proposed access road being granted (DWER 2022). DWER advised "there is potential that the disturbed area associated with the works may generate some localised sediment runoff in storm water, which may increase turbidity in the immediate vicinity of the work until the site stabilises and grasses re-establish." DWER advised these impacts can be managed by constructing works during the dry season.

The department sought comment from the Shire of Augusta Margaret River however no comment or advice was received.

The department sought comment from the Lower Blackwood LCDC however no comment or advice was received.

One Aboriginal site of significance is 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. Site characteristics

A.1. Site characteristics

Characteristic	Details
Local context	<p>The area proposed to be cleared is part of an 8.6-hectare isolated patch of native vegetation in the intensive land use zone of Western Australia. The proposed clearing area is part of a small, isolated remnant surrounded by cleared farmland.</p> <p>Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 51 per cent of the original native vegetation cover.</p>
Ecological linkage	The clearing area does not intersect with an ecological linkage. The closest ecological linkage is a South West Regional Ecological Linkage (ID 116), over 400 m away.
Conservation areas	The clearing area does not intersect with a conservation area. The closest conservation area is an unnamed National Park (R 46400) located approximately 1.5 km north of the application area. It is separated from the application area by cleared farmland and the Blackwood River.
Vegetation description	<p>Photographs supplied by the applicant indicate the vegetation within the application area consists of native reeds, rushes and weeds. The applicant further provided that the application area is bordered by tea trees. Representative photos are available in Appendix D.</p> <p>This is inconsistent with the mapped vegetation type, Blackwood Plateau and Plain which is described as Woodland to low forest of <i>Melaleuca raphiophylla</i>, tall shrubland of <i>Melaleuca incana</i> and closed heath of <i>Agonis</i> spp. on depressions in the perhumid zone (Mattiske and Havel, 1998).</p> <p>The mapped vegetation type retains approximately 50.58 per cent of the original extent (<i>Government of Western Australia, 2019</i>).</p>
Vegetation condition	<p>Photographs supplied by the applicant indicate the vegetation within the proposed clearing area ranges from Degraded to Completely degraded (Keighery, 1994) condition, described as:</p> <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. • 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. <p>The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix D.</p>
Climate and landform	The mean annual rainfall for 2021 was approximately 950.2 mm and 807.1 mm for 1991 to 2020.
Soil description	The soil is mapped as Blackwood River wet valleys Phase, described as drainage depressions within broad swampy floors, and mixed alluvial and sandy soils.
Land degradation risk	Land Degradation risks mapped over the application area are provided in table A5.
Waterbodies	The desktop assessment and aerial imagery indicates that a palusplain (seasonally waterlogged flat) categorised as an Environmentally Sensitive Area (ESA) is intersected by the proposed clearing. The application area intersects a watercourse which is an unnamed tributary of the Blackwood River.
Hydrogeography	The proposed clearing is within the Blackwood Groundwater Area and Lower Blackwood River Surface Water Area (RIWI Act 1914)
Flora	The desktop assessment identified 33 conservation specific flora taxa within the local area (10 km) which comprises of five threatened flora and 28 priority flora taxa. The nearest record is a Priority 2 species, <i>Machaerina ascendens</i> , located approximately 3.2 kilometres from the application area.

Characteristic	Details
Ecological communities	The desktop assessment identified one Priority Ecological Community mapped within the local area (10 km). Reedia Swamps Blackwood Plateau (Priority 2) is mapped 4.9 kilometres from the application area. There are no Threatened Ecological Communities (TEC) within the local area.
Fauna	<p>The desktop assessment identified 28 conservation significant fauna in the local area (10km). The closest record is a <i>Geocrinia alba</i> (white-bellied frog) recorded 1.35 kilometres from the application area.</p> <p>The application area is mapped as black cockatoo feeding and is within Baudin's cockatoo, Carnaby's cockatoo and forest red-tailed black cockatoo known distribution zones. There are three known black cockatoo roost sites within the local area, located 4.2, 6.8 and 8.4 kilometres from the application area.</p>

A.2. Vegetation extent

	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	% Current Extent in All DBCA-Managed Land
IBRA bioregion*					
Jarrah Forest	4,506,660.25	2,399,838.15	53.25	1,673,614.25	37.14
Vegetation complex**					
Blackwood	3,267.81	1,652.81	50.58	491.52	15.04
Local area					
10 km radius	30,841.10	15,707.28	50.93	-	-

*Government of Western Australia (2019a)

**Government of Western Australia (2019b)

A.3. Flora analysis table

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

Species name	Conservation status	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)
<i>Machaerina ascendens</i>	2	Y	Y	3.24
<i>Reedia spathacea</i>	T	Y	Y	3.40
<i>Lepyrodia heleocharoides</i>	3	Y	Y	3.48
<i>Boronia exilis</i>	T	Y	Y	4.72
<i>Leucopogon wheelerae</i>	3	Y	Y	5.78
<i>Verticordia lehmannii</i>	4	Y	Y	6.46
<i>Grevillea papillosa</i>	3	Y	Y	6.74

Species name	Conservation status	Suitable vegetation type? [Y/N]	Suitable soil type? [Y/N]	Distance of closest record to application area (km)
<i>Hemigenia sp. Nillup (R.D. Royce 98)</i>	2	Y	Y	6.74
<i>Leptinella drummondii</i>	3	Y	Y	6.74
<i>Calothamnus lateralis var. crassus</i>	3	Y	Y	6.90
<i>Pultenaea pinifolia</i>	3	Y	Y	7.15
<i>Netrostylis sp. Blackwood River (A.R. Annels 3043)</i>	3	Y	Y	7.39
<i>Aotus carinata</i>	4	Y	Y	8.63
<i>Banksia meisneri subsp. ascendens</i>	4	Y	Y	8.68
<i>Leucopogon alternifolius</i>	3	Y	Y	8.78
<i>Boronia anceps</i>	3	Y	Y	9.47
<i>Stylidium gloeophyllum</i>	4	Y	Y	9.49
<i>Netrostylis sp. Nannup (P.A. Jurjevich 1133)</i>	1	Y	Y	9.63
<i>Adenanthos detmoldii</i>	4	Y	Y	9.88

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)
<i>Geocrinia alba</i> (white-bellied frog)	CR	N	Y	1.35
<i>Engaewa reducta</i> (Dunsborough burrowing crayfish)	EN	N	Y	2.19
<i>Hydromys chrysogaster</i> (water-rat, rakali)	P4	N	Y	6.92
<i>Isoodon fusciventer</i> (quenda, southwestern brown bandicoot)	P4	N	Y	7.45
<i>Plegadis falcinellus</i> (glossy ibis)	MI	N	Y	8.00
<i>Actitis hypoleucos</i> (common sandpiper)	MI	N	Y	<10km
<i>Calidris ferruginea</i> (curlew sandpiper)	CR	N	Y	<10km
<i>Calidris ruficollis</i> (red-necked stint)	MI	N	Y	<10km
<i>Hydroprogne caspia</i> (Caspian Tern)	MI	N	Y	<10km

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

A.5. Land degradation risk table

Risk categories	Land Unit 1
Wind erosion	M2: 30-50% of the map unit has a high to extreme hazard
Water erosion	M2: 30-50% of the map unit has a very high to extreme hazard
Salinity	L1: <3% of the map unit has a moderate or high hazard or is presently saline
Subsurface Acidification	H2: >70% of the map unit has a high susceptibility
Flood risk	M2: 30-50% of the map unit has a moderate to high hazard
Water logging	H2: >70% of the map unit has a moderate to very high to risk
Phosphorus export risk	H1: 50-70% 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> "Native vegetation should not be cleared if it comprises a high level of biodiversity."</p> <p><u>Assessment:</u></p> <p>Given the extent of clearing and the condition of the vegetation proposed to be cleared, the application area is unlikely to comprise a high level of biodiversity.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<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> <p><u>Assessment:</u></p> <p>The area proposed to be cleared potentially contains habitat for conservation significant fauna, however potential impacts are not considered to be significant.</p>	May be at variance	Yes <i>Refer to Section 3.2.1, above.</i>
<p><u>Principle (c):</u> "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared is not likely to contain habitat for flora species listed under the BC Act.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.2, above.</i>
<p><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."</p> <p><u>Assessment:</u></p> <p>The area proposed to be cleared does not contain species that can indicate a threatened ecological community. Reedia Swamps Blackwood Plateau is the closest mapped ecological community, located approximately 5 km from the application area.</p>	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
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 native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be cleared is not considered to be part of a significant ecological linkage in the local area.</p>	Not likely to be at variance	No
<p><u>Principle (h)</u>: <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.”</i></p> <p><u>Assessment</u>:</p> <p>Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of any conservation areas.</p>	Not likely to be at variance	No
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 application area occurs within a mapped wetland.</p>	At variance	Yes <i>Refer to Section 3.2.3, above.</i>
<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 application area is mapped as moderately susceptible to wind and water erosion and highly susceptible to water logging and subsurface acidification. Advice received under the <i>Rights in Water and Irrigation Act 1914</i> (RIWI Act) indicated that while the area is mapped as low to medium risk of acid sulfate soils, the scope of proposed work means this risk is low (DWER 2022).</p> <p>Noting the extent of the application area and the condition of the vegetation, the proposed clearing is not likely to cause appreciable land degradation.</p>	Not likely to be at variance	No
<p><u>Principle (i)</u>: <i>“Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water.”</i></p> <p><u>Assessment</u>:</p> <p>Given the application area is within a mapped seasonally waterlogged wetland, the proposed clearing may impact surface water quality.</p>	May be at variance	Yes <i>Refer to Section 3.2.3, above.</i>
<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 proposed clearing may contribute to waterlogging that would naturally occur within the wetland. The crossover will be constructed with culverts to allow for the continual flow of water within the wet seasons.</p> <p>The size and purpose of the clearing indicate that the proposed clearing is unlikely to cause, or exacerbate, the incidence or intensity of flooding beyond the extent of the Palusplain.</p>	Not likely to be at variance	Yes <i>Refer to Section 3.2.3, above.</i>

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) *Bushland Plant Survey: A Guide to Plant Community Survey for the Community*. Wildflower Society of WA (Inc). Nedlands, Western Australia.

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

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

Appendix D. Photographs of the vegetation



Picture 3: Image from 2007 showing the area cleared of existing native vegetation. Source Landgate



Picture 4: Image from 2017 showing limited vegetation regrowth over a 10 year period. Source Landgate

Figure 2. Aerial imagery from Landgate provided by applicant shows the application area has been previously cleared.



Pictures 5, 6, 7 & 8: Taken from within the proposed clearing area showing how the area is now primarily made up of kikuyu and other weeds



Figure 3. Representative photographs of the application area

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)
- Geomorphic Wetlands – Augusta to Walpole
- 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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