



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 8967/1
Permit Holder:	Shire of Bridgetown-Greenbushes
Duration of Permit:	From 12 November 2020 to 12 November 2025

The Permit Holder is authorised to clear native vegetation subject to the following conditions of this Permit.

PART I – CLEARING AUTHORISED

1. Purpose for which clearing may be done

Clearing for the purpose of road upgrades

2. Land on which clearing is to be done

Peninsula Road reserve (PIN 11478961), Bridgetown

3. Area of clearing

The Permit Holder must not clear more than 0.251 hectares of native vegetation within the area cross-hatched yellow on attached Plan 8967/1.

4. Application

This Permit allows the Permit Holder to authorise persons, including employees, contractors and agents of the Permit Holder, to clear native vegetation for the purposes of this Permit subject to compliance with the conditions of this Permit and approval from the Permit Holder.

PART II – MANAGEMENT CONDITIONS

5. Avoid, minimise and reduce the impacts and extent of clearing

In determining the amount of native vegetation to be cleared authorised under this Permit, the Permit Holder must have regard to the following principles, set out in order of preference:

- avoid the clearing of native vegetation;
- minimise the amount of native vegetation to be cleared; and
- reduce the impact of clearing on any environmental value.

6. Dieback and weed control

When undertaking any clearing or other activity authorised under this Permit, the Permit Holder must take the following steps to minimise the risk of the introduction and spread of *weeds* and *dieback*:

- clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- ensure that no known *weed*-affected soil, *mulch*, *fill* or other material is brought into the area to be cleared; and
- restrict the movement of machines and other vehicles to the limits of the areas to be cleared.

PART III – RECORD KEEPING AND REPORTING

7. Records to be kept

The Permit Holder must maintain the following records in relation to the clearing of native vegetation authorised under this Permit:

- (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 or decimal degrees;
- (b) the date(s) that the area was cleared;
- (c) the size of the area cleared (in hectares);
- (d) actions taken to avoid, minimise and reduce the impacts and extent of clearing in accordance with condition 5 of this Permit; and
- (e) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 6 of this Permit.

8. Reporting

The Permit Holder must produce the records required under condition 7 of this Permit when required by the *CEO*.

Definitions

The following meanings are given to terms used in this Permit:

CEO means the Chief Executive Officer of the Department responsible for the administration of the clearing provisions under the *Environmental Protection Act 1986*;

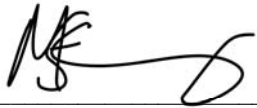
dieback means the effect of *Phytophthora* species on native vegetation;

fill means material used to increase the ground level, or fill a hollow;

mulch means the use of organic matter, wood chips or rocks to slow the movement of water across the soil surface and to reduce evaporation;

weed/s means any plant –

- (a) that is a declared pest under section 22 of the *Biosecurity and Agriculture Management Act 2007*; or
- (b) published in a Department of Biodiversity, Conservation and Attractions Regional Weed Rankings Summary, regardless of ranking; or
- (c) not indigenous to the area concerned.



Mathew Gannaway
MANAGER
NATIVE VEGETATION REGULATION

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

20 October 2020

Plan 8967/1

33.94853°S

33.94853°S

116.121421°E

116.127855°E







116.121421°E

116.127855°E

33.95149°S

33.95149°S

Legend

-  Imagery
-  Cadastre
-  Clearing Instruments Activities
-  Local Government Authority
-  Roads



0 100m

1:3,150

(Approximate when reproduced at A4)

GDA 94 (Lat/Long)

Geocentric Datum of Australia 1994

Mathew Gannaway Date 20 October 2020
Mathew Gannaway

Officer with delegated authority under Section 20 of the Environmental Protection Act 1986



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 WESTERN AUSTRALIA
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Clearing Permit Decision Report

1. Application details and outcome

1.1 Permit application details

Permit number:	CPS 8967/1
Permit type:	Purpose permit
Applicant name:	Shire of Bridgetown-Greenbushes
Application received:	14 July 2020
Proposed clearing:	0.251 hectares (ha) of native vegetation (as revised)
Purpose of clearing:	Road upgrades
Method of clearing:	Mechanical removal
Property:	Peninsula Road reserve (PIN 11478961)
Location (LGA area/s):	Shire of Bridgetown-Greenbushes
Localities (suburb/s):	Bridgetown

1.2 Description of clearing activities

The application area comprises selected trees and shrubs adjacent to an existing road formation, within a broader road reserve that has a part in maintaining connectivity between remnants in the local area¹. The application form states that the total area of clearing is 2 ha of native vegetation to widen the road formation from 8 metres to 11 metres in line with current standards. On digitising, this was amended to 0.251 ha of proposed clearing. The extent of the proposed clearing (as revised) is indicated in Figure 1 (see Section 1.5).

1.3 Decision on application

Decision:	Granted
Decision date:	20 October 2020
Decision area:	0.251 ha of native vegetation (see Figure 1, Section 1.5)

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 application was advertised for 21 days and no public submissions were received.

In undertaking the assessment, the Delegated Officer had regard for the site characteristics (see Appendix B), relevant datasets (see Appendix F), the clearing principles set out in Schedule 5 of the EP Act (see Appendix C), fauna survey submitted in support of the clearing permit application and any other matters considered relevant to the assessment (see Section 3). The assessment identified that the proposed clearing will result in the loss of vegetation that occurs within an extensively cleared landscape and contains 'high quality' (but not significant) foraging habitat for three threatened black cockatoo species, and may contain suitable habitat for a further three other conservation-significant fauna.

The proposed clearing also has the potential to result in the introduction and spread of weeds and dieback into adjacent vegetation, which could impact on its habitat quality and connectivity.

The Delegated Officer considered the impacts of the proposed clearing are unlikely to have any long-term adverse impacts on the environmental values in the local area, and that weed and dieback management practices will mitigate any potential impacts to adjacent vegetation.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures, the Delegated Officer determined that the impacts of the proposed clearing could be minimised and managed to be environmentally acceptable. The Delegated Officer decided to grant a clearing permit subject to conditions to:

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

¹ For this application, the local area is defined as a 10-kilometre radius from the perimeter of the application area.

- take steps to minimise the risk of the introduction and spread of weeds and dieback.

1.5 Site map



Figure 1: Map of area approved to clear. The area cross-hatched 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 1.3), 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)
- *Conservation and Land Management Act 1984* (WA)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth)
- *Rights in Water and Irrigation Act 1914*.

The key guidance documents which inform this assessment are:

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

3. Detailed assessment of application

3.1 Avoidance and mitigation measures

The application form indicates that no alternatives that would avoid or minimise the need for clearing have been considered or applied. The applicant advised that the proposed clearing is limited to the whole of the northern portion of the road reserve.

The applicant undertook a habitat tree assessment to determine the presence of suitable black cockatoo breeding trees within the application area.

3.2 Assessment of environmental impacts

In assessing the application, the Delegated Officer has had regard for the site characteristics (see Appendix B), and considered the extent to which the impacts of the proposed clearing present a risk to environmental values and whether these can be managed to be environmentally acceptable. The assessment against the clearing principles is contained in Appendix C.

This assessment identified that the impacts of the proposed clearing present a risk to fauna habitat, adjacent vegetation and a significant remnant. 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 Fauna

Assessment: The vegetation proposed to be cleared comprises primarily jarrah (*Eucalyptus marginata*) and marri (*Corymbia calophylla*) trees of varying ages over occasional shrubs including grasstree (*Xanthorrhoea preissii*) and bracken (*Pteridium esculentum*), and a ground layer dominated by grassy weeds.

The proposed clearing is limited to the northern side of the Peninsula Road reserve. Mapping undertaken by the Roadside Conservation Committee in December 2010 identified that the vegetation within the section of the road reserve in which the application area is located had a 'low' conservation value. This mapping took into account the condition of the vegetation at that time based on structure, composition, floristic diversity and weed cover (Roadside Conservation Committee, 2010). The vegetation is currently in degraded to completely degraded condition.

Available aerial photography and spatial datasets indicate that the vegetation within the Peninsula Road reserve (including that proposed to be cleared) has connection with large areas of remnant vegetation on Crown land to the west and private property to the south via adjacent vegetated portions of road reserve. It is acknowledged that vegetation within the broader road reserve has a part in maintaining connectivity between remnants in the local area. As the proposed clearing is limited to the northern portion of the road reserve, the linkage will not be severed as vegetation remains within the southern portion of the road reserve.

Nine threatened, five priority, two 'conservation dependent' and one 'other specially protected' fauna have been recorded in the local area. In forming a view on the likelihood of these species occurring within the application area, the preferred habitat types and typical home ranges of these species and their recorded proximity to the application area were considered, along with the type and condition of the vegetation within the application area.

Three threatened, one priority, one 'conservation dependent' and one 'other specially protected' fauna have been recorded in close proximity to the application area and/or from similar vegetation/habitat as found within the application area:

- Carnaby's black cockatoo (*Calyptorhynchus latirostris*; Endangered), Baudin's black cockatoo (*Calyptorhynchus baudinii*; Endangered) and forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*; Vulnerable): Published literature sets out the habitat preferences of these species, which includes jarrah and marri for foraging, roosting and breeding (Department of Environment and Conservation, 2008; Department of Parks and Wildlife, 2013; Department of Sustainability, Environment, Water, Population and Communities, 2012; Department of the Environment and Energy, 2017; Department of the Environment, Water, Heritage and the Arts, 2009). These species have been recorded approximately 2.2 km, 0.59 km and 1.5 km from the application area respectively. The application area is mapped as foraging habitat; this foraging habitat is considered to be of 'high quality' based on Commonwealth guidance, that is, the vegetation proposed to be cleared comprises native *Eucalyptus* woodland and forest, in particular marri and/or jarrah, including along roadsides (Department of the Environment and Energy, 2017). The application area is approximately 1.5 km from the nearest confirmed roosting site, and approximately 32 km from the nearest confirmed breeding site. As set out in Appendix A, a habitat tree assessment did not identify hollows of suitable size for use by these species within the application area.
- Masked owl (*Tyto novaehollandiae* subsp. *novaehollandiae*; Priority 3): This species is a nocturnal, secretive bird which roosts by day in dense foliage of tall trees (forest and woodland with adjacent clearings) or in hollow tree trunks, or sometimes in caves and holes between rocks (Owl Pages, 2016). The nearest record is approximately 1.5 km from the application area. This species may utilise trees within the application area for roosting. As set out in Appendix A, a habitat tree assessment did not identify hollows of suitable size for use by this species within the application area.
- South-western brush-tailed phascogale/wambenger (*Phascogale tapoatafa* subsp. *wambenger*; Conservation Dependent): In the south-west, this species is typically found in jarrah forest, and has been observed in dry sclerophyll forests and open woodlands that contain hollow-bearing trees (Department of Environment and Conservation, 2012). The nearest record is approximately 0.59 km from the application area, and is described as sightings on Democrat Close and Jayes Road (which are located approximately 3.6 km and 11.1 km from the application area). Notwithstanding the distances, the application area includes jarrah trees which may comprise suitable habitat for this species. As set out in Appendix A, a habitat tree assessment did not identify hollows of suitable size for use by this species within the application area.
- Peregrine falcon (*Falco peregrinus*; Other Specially Protected): The Australian Museum website states that this species 'is found in most habitats, from rainforests to the arid zone, and at most altitudes, from the coast to alpine areas. It requires abundant prey and secure nest sites, and prefers coastal and inland cliffs or open woodlands near water, and may even be found nesting on high city buildings' (Australian Museum, 2020). The nearest record is approximately 7.4 km from the application area. This species is widespread and highly mobile, and is found in various habitats, and may utilise the application area.

Significant habitat refers to the resources (breeding, resting and feeding), connectivity or habitat area for a species or community that is critical for its survival. Noting the narrow, linear shape of the application area and with regard for adjacent large patches of remnant vegetation, the application area is unlikely to be significant for the survival of indigenous fauna or be necessary for the maintenance of significant habitat.

Noting that the western extents of the application area adjoins remnant vegetation within adjacent portions of the road reserve, there is potential that the proposed clearing activities could result in the introduction or spread of weeds and dieback into this adjacent vegetation, which could impact on its habitat quality.

From the above, the application area comprises suitable habitat for indigenous fauna, including species of conservation significance, however is unlikely to comprise significant habitat for these species.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not likely to impact significant habitat for fauna. There will not be a significant residual impact from the proposed clearing.

Conditions: To mitigate potential impacts from the clearing, a weed and dieback condition will be added to the permit. Weed and dieback management that requires earth-moving machinery to be clean of weeds and soil when entering and exiting the clearing area, ensure that no known weed or dieback affected soil, mulch, fill or other material is brought into the area to be cleared and restrict the movement of machines and other vehicles to the limits of the area to be cleared.

3.2.2 Flora and vegetation

Assessment: Four priority flora have been recorded in the local area; no threatened flora have been recorded. In forming a view on the likelihood of these species occurring within the application area, the preferred habitat types of

these species and their recorded proximity to the application area were considered, along with the vegetation/soil types and landforms within the application area. These are considered in further detail below.

- *Caladenia validinervia* (Priority 1): The Florabase website (Western Australian Herbarium, 1998-) indicates that this species is known from nine records (some may overlap) from the local government areas of Bridgetown-Greenbushes, Collie, Cranbrook, Manjimup and West Arthur. Records on the Florabase website indicate that this species is herbaceous (orchid), growing in sandy gravels and sandy loams in forest and woodland vegetation, with cream flowers in September to October. The nearest record is about 6.1 km from the application area, from the same soil type as mapped within the application area. Noting the condition of the vegetation, in particular the absence of an intact understorey, this species is unlikely to be present.
- *Carex tereticaulis* (Priority 3): The Florabase website indicates that this species is known from 18 recorded populations (some may overlap) from the local government areas of Bridgetown-Greenbushes, Bunbury, Dardanup, Gosnells, Harvey, Manjimup, Nannup, Plantagenet, Serpentine-Jarrahdale, Swan and Waroona. The Florabase website describes this species as a rhizomatous, tufted perennial, grass-like or herb (sedge) to 0.7 m high, growing in black peaty sand, with brown flowers in September to October. The nearest record is about 5.1 km from the application area, from a different mapped soil type. Noting the condition of the vegetation, in particular the absence of an intact understorey, this species is unlikely to be present.
- *Dampiera heteroptera* (Priority 3): The Florabase website indicates that this species is known from 18 recorded populations (some may overlap) from the local government areas of Augusta Margaret River, Bridgetown-Greenbushes, Busselton and Nannup. The Florabase website describes this species as an erect to semi-prostrate perennial, herb or shrub to 0.3-0.6 m high, growing in sandy soils associated with swampy areas, with blue flowers in September to October. The nearest record is about 3.4 km from the application area, from a different mapped soil type. Noting the habitat preferences of this species and the absence of swampy areas within the application area, this species is unlikely to be present.
- *Grevillea ripicola* (Priority 4): The Florabase website indicates that this species is known from 22 recorded populations (some may overlap) from the local government areas of Bridgetown-Greenbushes, Collie and Donnybrook-Balingup. The Florabase website described this species as a spreading, much-branched, non-lignotuberous shrub to 0.6-2(-3) m high and 4 m wide, growing in sandy clay, clay or gravelly loam associated with swampy flats, granite outcrops and along watercourses, with red/red-orange flowers in January or March to April or November to December. The nearest record is about 6.6 km from the application area, from a different mapped soil type. Noting the habitat preferences of this species and the absence of swampy areas, granite outcrops and watercourses within the application area, this species is unlikely to be present.

Given the above and the noting the condition of the vegetation proposed to be cleared, in particular the absence of an intact understorey, it is considered that the above priority flora species are unlikely to be present.

Outcome: Based on the above assessment, the Delegate Officer has determined that the proposed clearing is not likely to impact upon priority flora or comprise a high biological diversity.

3.2.3 Significance as a remnant

Assessment

The national objectives and targets for biodiversity conservation in Australia has a target to prevent clearance of ecological communities with an extent below 30 per cent of that present pre-1750, below which species loss appears to accelerate exponentially at an ecosystem level (Commonwealth of Australia, 2001).

The mapped Vegetation Complex has less than 30 per cent of its pre-European extent remaining (29.38 per cent), and is considered to be extensively cleared. The local area retains approximately 32.99 per cent of its pre-European native vegetation cover.

The application area does not include a mapped significant ecological linkage, significant habitat for fauna is unlikely to be required to maintain ecosystem services (such as hydrological processes) or compensate for a high degree of fragmentation, and with regard for the composition and condition of the vegetation, is unlikely to be biologically diverse.. On this basis, and noting the extent and the condition of the proposed clearing, the application area is not considered to be significant as a remnant of native vegetation.

Outcome: Based on the above assessment, the Delegated Officer has determined that the proposed clearing is not considered to be a significant remnant within an extensively cleared landscape. There will not be a significant residual impact from the proposed clearing.

3.3 Relevant planning instruments and other matters

No registered Aboriginal sites of significance are mapped within the application area. The nearest registered site is an Aboriginal Heritage Place known as 'Geegeelup Ceremonial Grounds', located approximately 80 m from the application area, separated by cleared farmland. Given the separation distance, the proposed clearing is unlikely to impact on this site. In any event, 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.

Appendix A – Additional information provided by applicant

During assessment of the original application, the Department of Water and Environmental Regulation (DWER) identified that the trees proposed to be cleared include some jarrah (*Eucalyptus marginata*) and/or marri (*Corymbia calophylla*) trees with an estimated diameter at breast height of more than 30 centimetres (cm), which may contain hollows suitable for use by:

- Baudin's black cockatoo (*Calyptorhynchus baudinii*; Endangered)
- Carnaby's black cockatoo (*Calyptorhynchus latirostris*; Endangered)
- Forest red-tailed black cockatoo (*Calyptorhynchus banksii* subsp. *naso*; Vulnerable)
- Masked owl (*Tyto novaehollandiae* subsp. *novaehollandiae*; Priority 3)
- South-western brush-tailed phascogale/wambenger (*Phascogale tapoatafa* subsp. *wambenger*; Conservation Dependent).

DWER invited the applicant to provide further information in relation to this matter, including to undertake a formal assessment of these trees for the presence of suitable hollows for these species.

The applicant provided a habitat tree assessment, 'Habitat Tree Assessment of Proposed Clearing Areas (CPS 8967/1), undertaken by Greg Harewood' (Harewood, 2020). The habitat tree assessment did not identify any trees with hollows suitable for use by the abovementioned species.

Appendix B – Site characteristics

The information below are the findings of a desktop assessment based on the best information available to the Department of Water and Environment Regulation (DWER) at the time of this assessment, and described the key characteristics of the application area. This information was used to inform the assessment of the clearing against the clearing principles (see Appendix C).

Site characteristics

Site characteristic	Details																
Local context	<p>The application area comprises native vegetation adjacent to an existing road formation, within a broader road reserve that has a part in maintaining connectivity between remnants in the local area.</p> <p>The local area considered in the assessment of this application is defined as a 10-kilometre (km) radius from the perimeter of the application area, and retains approximately 32.99 per cent of native vegetation cover.</p>																
Vegetation description	<p>The application area is mapped as:</p> <ul style="list-style-type: none"> South West Forest Balingup (BL) Complex, described as: Open forest of jarrah (<i>Eucalyptus marginata</i> subsp. <i>marginata</i>)-marri (<i>Corymbia calophylla</i>) on slopes and woodland of flooded gum (<i>Eucalyptus rudis</i>) on the valley floors in the humid zone. <p>Vegetation composition was determined from supporting information (photographs) provided by the applicant. The vegetation proposed to be cleared comprises primarily jarrah (<i>Eucalyptus marginata</i>) and marri (<i>Corymbia calophylla</i>) trees of varying ages over occasional shrubs including grasstree (<i>Xanthorrhoea preissii</i>) and bracken (<i>Pteridium esculentum</i>), and a ground layer dominated by grassy weeds.</p>																
Vegetation condition	Vegetation condition was determined from available aerial imagery and photographs provided by the applicant. The vegetation within the application area ranges from degraded to completely degraded condition on the scale described by Keighery (1994) (see Appendix D).																
Soil description	<p>The application area is mapped as:</p> <ul style="list-style-type: none"> Balingup moderate slopes Phase (255LvBL4), described as: Balingup Subsystem, moderate slope phase, slopes 15-35%, relief 60-120 m. 																
Land degradation risk	<p>Mapped land degradation risk factors (as percentage of map unit)</p> <table border="1"> <thead> <tr> <th>Risk categories</th> <th>255LvBL4</th> </tr> </thead> <tbody> <tr> <td>Wind erosion</td> <td><3% of map unit has a high to extreme risk</td> </tr> <tr> <td>Water erosion</td> <td>>70% of map unit has a high to extreme risk</td> </tr> <tr> <td>Salinity</td> <td>30-50% of map unit has a moderate to high risk</td> </tr> <tr> <td>Subsurface acidification</td> <td><3% of map unit has a high risk</td> </tr> <tr> <td>Flood risk</td> <td><3% of map unit has a moderate to high risk</td> </tr> <tr> <td>Waterlogging</td> <td><3% of map unit has a moderate to very high risk</td> </tr> <tr> <td>Phosphorus export</td> <td>>70% of map unit has a high to extreme risk</td> </tr> </tbody> </table>	Risk categories	255LvBL4	Wind erosion	<3% of map unit has a high to extreme risk	Water erosion	>70% of map unit has a high to extreme risk	Salinity	30-50% of map unit has a moderate to high risk	Subsurface acidification	<3% of map unit has a high risk	Flood risk	<3% of map unit has a moderate to high risk	Waterlogging	<3% of map unit has a moderate to very high risk	Phosphorus export	>70% of map unit has a high to extreme risk
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Phosphorus export	>70% of map unit has a high to extreme risk																
Waterbodies	<p>The nearest mapped watercourse (a non-perennial tributary of the Blackwood River) is located approximately 0.13 km from the application area, separated by cleared farmland.</p> <p>A further 12 watercourses (and no wetlands) are mapped in the local area.</p>																
Conservation areas	<p>Forty-six conservation areas occur within the local area, comprising 19 lands managed by the Department of Biodiversity, Conservation and Attractions (DBCA) and 27 privately-managed conservation areas. Those within 2 km of the application area are outlined below.</p> <table border="1"> <thead> <tr> <th>Theme</th> <th>Description</th> <th>Proximity (m)</th> </tr> </thead> <tbody> <tr> <td>DBCA Land for Wildlife Sites</td> <td>578</td> <td>1069</td> </tr> <tr> <td>DBCA Land for Wildlife Sites</td> <td>2046</td> <td>1148</td> </tr> <tr> <td>DBCA Land for Wildlife Sites</td> <td>2364</td> <td>1339</td> </tr> </tbody> </table>	Theme	Description	Proximity (m)	DBCA Land for Wildlife Sites	578	1069	DBCA Land for Wildlife Sites	2046	1148	DBCA Land for Wildlife Sites	2364	1339				
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Site characteristic	Details		
		DBCA Land for Wildlife Sites	1066
	DBCA Managed Lands	Conservation Commission Of WA	1865
Climate and landform	Rainfall: 900 Evapotranspiration: 800 Geology: Granite and gneiss Acid Sulfate Soil Risk: No Groundwater Salinity (Total Dissolved Solids): 500-1,000 mg/L.		
Hydrology and hydrogeology	The application area is within the 'Western Darling Range' hydrological zone, and the 'Hardy Estuary – Blackwood River' hydrographic catchment.		

Flora, fauna and ecosystem analysis

Ecological Linkages: A number of mapped significant ecological linkages occur in the local area.²

Roadside Conservation Committee roadside conservation values: Low (December 2010).

The following conservation-significant species have been recorded from the local area (no threatened or priority ecological communities have been mapped in the local area). With consideration for the site characteristics set out above, relevant datasets (see Appendix F), and photographs provided by the applicant (see Appendix E), the likelihood of these species' occurrences within the application area has been assessed.

Species / Ecological Community	Distance to nearest record (km)	Suitable soil type?	Suitable vegetation type?	Suitable habitat features?	Surveys adequate to identify?
Fauna					
Baudin's black cockatoo (<i>Calyptorhynchus baudinii</i> ; Endangered)	Approximately 0.59 km		Y	Y	Y
Red-tailed phascogale/kenngoor (<i>Phascogale calura</i> ; Conservation Dependent)	Approximately 0.59 km		N		N/a
South-western brush-tailed phascogale/wambenger (<i>Phascogale tapoatafa</i> subsp. <i>wambenger</i> ; Conservation Dependent)	Approximately 0.59 km		Y	Y	Y
Carter's freshwater mussel (<i>Westralunio carteri</i> ; Vulnerable)	Approximately 1.2 km			N	N/a
Forest red-tailed black cockatoo (<i>Calyptorhynchus banksii</i> subsp. <i>naso</i> ; Vulnerable)	Approximately 1.5 km		Y	Y	Y
Black bittern (southwest population) (<i>Ixobrychus flavicollis</i> subsp. <i>australis</i> ; (Priority 2)	Approximately 1.5 km			N	N/a
Masked owl (<i>Tyto novaehollandiae</i> subsp. <i>novaehollandiae</i> ; Priority 3)	Approximately 1.5 km			Y	N/a
Woylie/brush-tailed bettong (<i>Bettongia penicillata</i> subsp. <i>ogilbyi</i> ; Critically Endangered)	Approximately 1.9 km			N	N/a

² As described in: Molloy, S., Wood, J., Hall, S., Wallrodt, S. and Whisson, G. (2009) *South West Regional Ecological Linkages Technical Report*. Western Australian Local Government Association (WALGA) and Department of Environment and Conservation (DEC), Perth.

Species / Ecological Community	Distance to nearest record (km)	Suitable soil type?	Suitable vegetation type?	Suitable habitat features?	Surveys adequate to identify?
Numbat (<i>Myrmecobius fasciatus</i> ; Endangered)	Approximately 1.9 km			N	N/a
Bilby/Dalgyte (<i>Macrotis lagotis</i> ; Vulnerable)	Approximately 1.9 km			N	N/a
Water-rat/rakali (<i>Hydromys chrysogaster</i> ; Priority 4)	Approximately 1.9 km			N	N/a
South-western brown bandicoot/quenda (<i>Isodon fusciventer</i> ; Priority 4)	Approximately 1.9 km			N	N/a
Carnaby's black cockatoo (<i>Calyptorhynchus latirostris</i> ; Endangered)	Approximately 2.2 km		Y	Y	Y
Western brush wallaby (<i>Notamacropus irma</i> ; Priority 4)	Approximately 3.1 km			N	N/a
Chuditch/western quoll (<i>Dasyurus geoffroyi</i> ; Vulnerable)	Approximately 4.4 km			N	N/a
Western ringtail possum (<i>Pseudocheirus occidentalis</i> ; Critically Endangered)	Approximately 5.4 km			N	N/a
Peregrine Falcon (<i>Falco peregrinus</i> ; Other Specially Protected)	Approximately 7.4 km			Y	N/a
Flora					
<i>Dampiera heteroptera</i> (Priority 3)	Approximately 3.4 km				N/a
<i>Carex tereticaulis</i> (Priority 3)	Approximately 5.1 km				N/a
<i>Caladenia validinervia</i> (Priority 1)	Approximately 6.1 km				N/a
<i>Grevillea ripicola</i> (Priority 4)	Approximately 6.6 km				N/a

Vegetation extent

	Pre-European (ha)	Current extent (ha)	Current extent (%)	Current extent (ha) in DBCA ³ -managed lands	Current extent (%) in DBCA-managed lands
IBRA⁴ bioregion (as at March 2019)⁵					
Jarrah Forest	4,506,660.25	2,399,838.15	53.25	1,777,041.28	39.43
South West Forest Vegetation Complex (as at March 2019)⁶					
Balingup (BL) Complex	59,446.57	17,446.47	29.38	9,120.37	15.34
Local area					
10-kilometre radius	32,324.59	10,664.47	32.99	N/a	N/a

³ Current extent as proportion of pre-European extent within DBCA-managed lands.

⁴ Interim Biogeographic Regionalisation for Australia.

⁵ Government of Western Australia (2019b)

⁶ Government of Western Australia (2019a)

Appendix C – Assessment against the Clearing Principles

Assessment against the Clearing Principles	Variance level	Is further consideration required?
<p><u>Principle (a):</u> “Native vegetation should not be cleared if it comprises a high level of biodiversity.”⁷</p> <p><u>Assessment:</u> The vegetation proposed to be cleared comprises primarily trees over limited understorey, and is considered to be in degraded to completely degraded condition. The application area may comprise suitable habitat for conservation-significant fauna, however is unlikely to comprise significant habitat for fauna or include conservation-significant flora.</p>	Not likely to be at variance	Yes Sections 3.2.1 and 3.2.2
<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> The vegetation within the Peninsula Road reserve (including that proposed to be cleared) has connection with large areas of remnant vegetation on Crown land to the west and private property to the south via adjacent vegetated portions of road reserve. The application area comprises foraging habitat for three threatened black cockatoo species, and may comprise suitable habitat for a further three species of conservation-significant fauna. Noting the extent of the proposed clearing, the habitat is not likely to constitute significant habitat for indigenous fauna. No suitable hollows for fauna were observed within the application area.</p>	Not likely to be at variance	Yes Section 3.2.1
<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> No threatened flora have been recorded in the local area.</p>	Not likely to be at variance	No
<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.”⁸</p> <p><u>Assessment:</u> No threatened ecological communities have been recorded in the local area.</p>	Not likely to be at variance	No
<p><u>Principle (e):</u> “Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared.”</p> <p><u>Assessment:</u> The application area includes vegetation that comprises habitat for threatened fauna and is mapped as a Vegetation Complex that is below the national target and objective for biodiversity conservation (that is, less than 30 per cent pre-European extent remaining).</p>	Not likely to be at variance	Yes Section 3.2.3
<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> No wetlands or watercourses traverse the application area. The nearest water feature is a watercourse located approximately 0.13 km from the application area.</p>	Not likely to be 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> The main land degradation risks associated with the soil type mapped across the application area are high to extreme risks of water erosion and phosphorus export, and a moderate to high risk of salinity. Noting the extent and purpose of the proposed clearing and its location</p>	Not likely to be at variance	No

⁷ The *Biodiversity Conservation Act 2016* defines ‘biodiversity’ as ‘the variability among living organisms and the ecosystems of which those organisms are a part and includes the following – (a) diversity within native species and between native species; (b) diversity of ecosystems; (c) diversity of other biodiversity components’.

⁸ The *Biodiversity Conservation Act 2016* defines ‘threatened ecological community’ as ‘an ecological community that – (a) is listed as a threatened ecological community under section 27(1); or (b) is to be regarded as a threatened ecological community under section 33’. Section 27(1) refers to TECs listed by the WA Minister for Environment; section 33 refers to the listing and de-listing of collapsed TECs.

Assessment against the Clearing Principles	Variance level	Is further consideration required?
adjacent to an existing road, the proposed clearing is unlikely to cause appreciable land degradation.		
<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>: The nearest conservation area is located approximately 1 km from the application area. With regard for the separation distance, the proposed clearing is unlikely to impact on the environmental values of this nearby conservation area.</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>: Noting the high to extreme risk of wind erosion associated with the mapped soil type, the potential for an increase in surface water run-off has the potential to lead to mobilisation of sediments. Noting the extent and purpose of the proposed clearing and its location adjacent to an existing road, impacts to surface water quality are expected to be minimal and limited to the duration of the proposed clearing activities. Taking into account the topography and the underlying groundwater salinity, the proposed clearing is unlikely to cause deterioration in underground 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>: The soil type mapped within the application area has a low flood risk.</p>	Not likely to be at variance	No

Appendix D – Vegetation condition rating scale

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

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 E – Photographs of the vegetation

Map and photographs of the Peninsula Road reserve provided as supporting information by the applicant. This supporting information is published on the Department of Water and Environmental Regulation’s website at <ftp://ftp.dwer.wa.gov.au/permit/8967/>.



Clearing zone (yellow) from SLK 0.81 to SLK 1.34 - Northern side of Peninsula Road to reserve boundary.







Appendix F – References and databases

GIS datasets

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Consanguineous Wetlands Suites (DBCA-020)
- 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)
- 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)
- Remnant Vegetation, All Areas
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- RIWI Act, Groundwater Areas (DWER-034)

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

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