

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 9772/1
Permit Holder:	Renergi Pty Ltd
Duration of Permit:	From 28 August 2022 to 28 August 2027

The permit holder is authorised to clear *native vegetation* subject to the following conditions of this permit.

PART I – CLEARING AUTHORISED

1. Clearing authorised (purpose)

The permit holder is authorised to clear *native vegetation* for the purpose of Utility installation.

2. Land on which clearing is to be done

Lot 500 on Deposited Plan 76826, Collie Gibbs Road Reserve (PIN 11485029), Collie Gavan Street Road Reserve (PIN 11485027), Collie Coombes Street Road Reserve (PIN 11485028), Collie

3. Clearing authorised

The permit holder must not clear more than 0.2 hectares of *native vegetation* within the area cross-hatched yellow in Figure 1 of Schedule 1.

4. Period during which clearing is authorised

The permit holder must not clear any native vegetation after 28 August 2027.

PART II – MANAGEMENT CONDITIONS

5. 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.

6. 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.

7. Wind erosion management

The permit holder must commence construction activities no later than three (3) months after undertaking the authorised clearing activities to reduce the potential for wind erosion.

PART III - RECORD KEEPING AND REPORTING

8. 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
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No.	Relevant matter	Spec	cifications
1.	In relation to the authorised clearing	(a)	the species composition, structure, and density of the cleared area;
	activities generally	(b)	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;
		(c)	the date that the area was cleared;
		(d)	the size of the area cleared (in hectares);
		(e)	actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition G6; 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 6; and
		(g)	the date that construction activities commenced.

9. Reporting

The permit holder must provide to the *CEO* the records required under condition 8 of this permit when requested by the *CEO*.

DEFINITIONS

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

 Table 2: Definitions

Term	Definition
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .
clearing	has the meaning given under section $3(1)$ of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
fill	means material used to increase the ground level, or to fill a depression.
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</i> <i>Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.
EP Act	Environmental Protection Act 1986 (WA)
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.
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

Mathew Gannaway MANAGER NATIVE VEGETATION REGULATION

Officer delegated under Section 20 of the Environmental Protection Act 1986

Schedule 1

The boundary of the area authorised to be cleared is shown in the map below (Figure 1).



Plan 9772/1

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

CPS 9772/1, 4 August 2022



Clearing Permit Decision Report

1 Application details	and outcome
1.1. Permit application	on details
Permit number:	CPS 9772/1
Permit type:	Purpose permit
Applicant name:	Renergi Pty Ltd
Application received:	13 June 2022
Application area:	0.2 hectares of native vegetation
Purpose of clearing:	Utility installation
Method of clearing:	Mechanical
Property:	Lot 500 on Deposited Plan 76826 Gibbs Road Reserve (PIN 11485029) Gavan Street Road Reserve (PIN 11485027) Coombes Street Road Reserve (PIN 11485028)
Location (LGA area/s):	Shire of Collie
Localities (suburb/s):	Collie

1.2. Description of clearing activities

The proposed clearing is for the purpose of installing infrastructure for easement for powerlines and water connection.

The vegetation proposed to be cleared is distributed across three areas, separated by Gibbs road and Goombes street (see Figure 1, Section 1.5). The proposed clearing to the south of Gibbs road is approximately 0.12 hectares of vegetation. The proposed clearings to the north of Gibbs road is 0.09 hectares along Gavan Street and Coombes Street road reserves.

1.3. Decision on application

Decision:	Granted
Decision date:	4 August 2022
Decision area:	0.2 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), site photographs (see Appendix D), relevant datasets (see Appendix E.1), the clearing principles set out in Schedule 5 of the EP Act (see 0), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3).

The assessment identified that the proposed clearing may result in:

• the potential introduction and spread of weeds and dieback into adjacent vegetation, which could impact on the quality of the adjacent vegetation and its habitat values and

• potential land degradation in the form of wind erosion.

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 environmental values and can be appropriately minimised and managed. The applicant has suitably demonstrated avoidance and minimisation measures.

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 and dieback
- staged clearing to minimise wind erosion

1.5. Site map

Plan 9772/1



Figure 1 Map of the application area CPS 9772/1. The areas crosshatched yellow indicate the areas 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)
- Country Areas Water Supply Act 1947 (WA) (CAWS Act)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)
- Rights in Water and Irrigation Act 1914 (RIWI Act).

The key guidance documents which inform this assessment are:

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

B Detailed assessment of application

3.1. Avoidance and mitigation measures

Supporting information was submitted by the applicant, demonstrating that:

- The amounts of clearing will be minimised.
 - Renergi believes that the route of electrical cables chosen by Western Power is the shortest distance to supply the electricity to Renergi Pty Ltd. Renergi will work with its contractor to choose a cabling route by minimising the number trees to be removed where practical. For water supply, only a narrow trench will be dug for the water supply pipeline. Renergi will work with its contractor to design the trench so that the trench route will require a minimised number of trees to be removed.
 - After the water pipe (or, if necessary, underground electrical cable) is laid, the trench will be filled with soil to the same level as before, which would encourage the regrowth of native vegetation (Renergi, 2022b).

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 0) identified that the impacts of the proposed clearing present a risk to biological values (fauna and flora). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

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

Assessment

Twenty conservation significant fauna species have been recorded within the local area. The nearest record is the Priority 4 *Isoodon fusciventer* (quenda), located 0.75 kilometres from the application area. There are records of three known black cockatoo roost sites within the local area with the closest 2.32 kilometres away.

The likelihood of occurrence and potential for habitat within the application area was considered further for the following species:

- Isoodon fusciventer (quenda)
 - Phascogale tapoatafa (brush-tailed phascogale)
- Black cockatoos
 - o Calyptorhynchus banksii naso (forest red-tailed black cockatoo)
 - Zanda Calyptorhynchus (previously Calyptorhynchus baudinii) (Baudin's cockatoo)
 - Zanda Calyptorhynchus (previously Calyptorhynchus latirostris) (Carnaby's cockatoo)

Isoodon fusciventer (quenda, Priority 4)

According to available databases, 19 records of quenda occur in the local area with the closest record occurring 0.75 kilometres from the application area. Quenda are ground dwelling marsupials, typically inhabiting areas of dense vegetation including wetland fringes and heathlands. They have been observed in areas of native bushland (jarrah, marri, and karri forests and woodlands) and where exotic shrub species are prevalent. Quenda rarely venture from cover and will feed by digging in leaf litter and soil to find food and will construct nests under vegetation (DPaW 2017).

Given the degraded condition of a large portion of the application area, the lack of understory and the minimal clearing to be undertaken, it is unlikely that quendas will be present or that habitat will be significantly impacted as a result of the proposed clearing.

Phascogale tapoatafa (brush-tailed phascogale, Conservation Dependant)

The brush-tailed phascogale is known from nine records within the local area, with the nearest record occurring 1.03 kilometres from the application area. Phascogale's are associated with dry sclerophyll forests and open woodlands that contain hollow bearing trees, characterised by high canopy cover connectivity (DEC, 2012).

Site photographs indicate that the application area does not contain high canopy cover connectivity or trees large enough to contain hollows. Due to the lack of suitable habitat and the extent of clearing, it is considered unlikely that the brush tailed phascogale would be present or that habitat will be significantly impacted as a result of the proposed clearing.

Black cockatoos

According to available databases, the application area is mapped within the known distribution of all three species of Threatened black cockatoo. Records of all three species are present within 1.5 – 3 kilometres of the application area (see Appendix A.2Appendix C.A.2). Aerial imagery and site photographs indicate a large portion of the application area is devoid of any trees or canopy species. Therefore, the application area does not provide preferred foraging, roosting or nesting habitat for Carnaby's cockatoo, Baudin's cockatoo or forest red-tailed cockatoo (DAWE, 2022). Given the above, the proposed clearing area is not likely to significantly impact habitat for Carnaby's cockatoo, Baudin's cockatoo and forest red-tailed cockatoo.

Weeds have the potential to out-compete native flora, reducing the biodiversity of an area and the quality of habitat. Potential impacts to biodiversity as a result of the introduction and spread of weeds and dieback may be minimised by the implementation of a weed and dieback management condition.

Conclusion

Given the above assessment, it is considered unlikely that quenda, brush-tailed phascogales or black cockatoos will be present within the application area or that the proposed clearing will have any significant impact on the habitat of these species. The proposed clearing has the potential to impact the biodiversity and habitat quality of the surrounding vegetation as a result of the introduction and spread of weeds and dieback. This can be minimised by the implementation of a weed and dieback management condition.

Conditions

The permit holder is required to take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback.

3.2.2. Biological values (Threatened flora) - Clearing Principle (c)

Assessment

The local area contains one record of Threatened flora, *Drakaea confluens* (late hammer orchid), located 5.63 kilometres south-east of the application area. The late hammer orchid occurs on white-grey sand, found in open areas within Myrtaceae dominated heathland and *Banksia attenuata* woodland amongst Jarrah forest (Western Australian Herbarium, 1998-). According to available databases, the application area occurs on the same soil type as the record of late hammer orchid. It is known from three distinct populations. The application area is disjunct from these three populations, located north west of the most northern population. The site photographs provided indicate that the application area does not contain suitable habitat for this species. Given the above, it is considered unlikely that this species occurs in the proposed clearing areas.

Conclusion

Given the above assessment, it is unlikely that the application area provides suitable habitat for the Threatened flora species *Drakaea confluens*. The proposed clearing is not considered to be necessary for the continued existence of Threatened flora.

Conditions

No flora management conditions required

3.3. Relevant planning instruments and other matters

The Shire of Collie advised DWER that the Shire has no objections to the proposed clearing (Shire of Collie, 2022).

The proposed clearing site lies within the CAWS Act Wellington Dam Catchment Area. Advice received noted that the proposed clearing is located in Zone D, a low salinity risk part of the catchment where DWER Policy and Guidelines for the "Granting of Licences to Clear Indigenous Vegetation" provide for clearing licences to be granted for any purpose subject to their being greater than one-tenth of the land in question remaining under native vegetation. The land holder of the subject lands, the Shire of Collie, has ample bushland under its tenure to ensure this criteria is met. The application are is not located within a public drinking source proclaimed under the CAWS Act.

The application area is located within the Collie River irrigation district and Collie groundwater area proclaimed under the RiWi Act. Applicant does not require a groundwater licence as there is no intention to abstract ground water for the purpose of 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

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

Characteristic	Details
Local context	The application area is located approximately 2.20 kilometres east of the Collie townsite in the intensive land use zone of Western Australia. The proposed clearing is distributed across two areas, separated by Gibbs Road. The proposed clearing to the south of Gibbs Road is approximately 0.12 hectares of partially cleared vegetation. The proposed clearing to the north of Gibbs Road is approximately 0.24-kilometre strip (0.09 hectares) on the western side of the Gavan Street and Coombes Street road reserves.
	Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 65 per cent of the original native vegetation cover.
Ecological linkage	The application area is not mapped within any formal or informal ecological linkages. Given the fragmented nature of the vegetation in the local area, the vegetation within the application area is likely to be contributing to linking values from the State Forest to the north east to the surrounding remnant vegetation. However, noting the vegetation within the application area is Good to Degraded with portions of the proposed clearing area occurring along existing vehicle tracks, the application area is not considered to be contributing significantly to the values of any formal or informal ecological linkages in the local area.
Conservation areas	The closest conservation area is the Collie State Forest, located approximately 0.09 kilometres to the east of the application area. The application area and State Forest are separated by the railway bordering the State Forest.
Vegetation description	The application area occurs within the Murchison IBRA region and is mapped by Mattiske and Havel (1998) as the south-west forest vegetation complex Muja, which is described as open woodland of <i>Melaleuca preissiana-Banksia littoralis-Banksia ilicifolia</i> with some <i>Eucalyptus patens</i> on moister sites, <i>Banksia</i> spp. on drier sites of valley floors in the subhumid zone. Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is partially consistent with the Muja vegetation complex. The vegetation
	within the application area includes scattered <i>Eucalyptus</i> spp., <i>Melaleuca preissiana</i> , <i>Xanthorrhoea</i> spp. over various small sedges and grasses. Vehicle tracks occur throughout the southern area of the proposed clearing areas. Representative photos are available in 0.
Vegetation condition	Photographs supplied by the applicant indicate the vegetation within the proposed clearing area is in Good to Degraded (Keighery, 1994) condition. The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in 0.
Climate and landform	Rainfall – The mean annual rainfall for the application area is 1100 mm Evapotranspiration – The areal actual evapotranspiration is 700 mm
	The topography of the application area ranges from 185 m AHD at the lowest elevation in the south of the application area, to 195-200 m AHD at the northern extent.
Soil description	The soil is mapped as Muja gentle slopes phase
Land degradation risk	 The application area has the following land degradation risks: Flood risk: <3% of the map unit has a moderate to high hazard (DPIRD-007) Salinity risk: <3% of the map unit has a moderate to high hazard (DWER-026) Phosphorous export risk: 10-30% of map unit has a high to extreme phosphorus export risk (DPIRD-010) Substrate acidification risk: >70% of the map unit has a high to extreme hazard (DPIRD-011)

Characteristic	Details
	 Wind erosion risk: 70% of the map unit has a high to extreme hazard (DPIRD-016) Water erosion: <3% of the map unit has a very high to extreme hazard (DPIRD-013)
Waterbodies	The desktop assessment and aerial imagery indicated that a perennial lake associated with the collie river occurs 0.26 kilometres south of the application area and the Collie River occurs to 0.71 kilometres to the east of the application area.
Hydrogeography	The application area is located within the Wellington Dam Catchment Area (CAWS Act, Zone D). The application area also occurs within the Collie Groundwater Area and Collie River Irrigation District, proclaimed under the RIWI Act.
Flora	Seventeen conservation significant flora species have been recorded within the local area, comprising one Threatened, one Priority 1, two Priority 2, seven Priority 3 and six Priority 4 species. The nearest record is the Priority 1 species <i>Caladenia validinervia</i> , located 2.26 kilometres south-west of the application area. Of the 17 flora, four are found on the same soil type as the application area.
Ecological communities	No Priority or Threatened ecological communities (PEC/TEC's) are found within the application area or local area. The nearest PEC is located 21 kilometres east of the application area.
Fauna	Twenty conservation significant fauna species have been recorded within the local area. The nearest record is the Priority 4 <i>Isoodon fusciventer</i> (quenda), located 0.75 kilometres from the application area. There are records of three known black cockatoo roost sites within the local area with the closest 2.32 kilometres away.

A.1. Flora analysis table

With consideration for the site characteristics set out above, relevant datasets (see Appendix E.1), and site photographs, 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 (total)	Are surveys adequate to identify? [Y, N, N/A]
Drakaea confluens	Т	N	N	Y	5.63	1	N/A
Synaphea hians	P3	N	N	Y	2.47	5	N/A
Grevillea ripicola	P4	N	N	Y	2.26	42	N/A
Hypolaena robusta	P4	N	N	Y	2.42	1	N/A

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

A.2. Fauna analysis table

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Isoodon fusciventer (quenda)	P4	N	N	0.75	19	N/A
<i>Phascogale tapoatafa</i> (brush-tailed phascogale)	CD	N	Y	1.03	9	N/A

Species name	Conservation status	Suitable habitat features ? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Calyptorhynchus banksii naso (forest red-tailed black cockatoo)	VU	N	Y	2.20	9	N/A
Zanda Calyptorhynchus (Baudin's cockatoo)	EN	N	Y	1.58	28	N/A
Zanda Calyptorhynchus (Carnaby's cockatoo)	EN	N	Y	1.92	12	N/A

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

Environmental value: biological values <u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."		required?
<u>Principle (a):</u> "Native vegetation should not be cleared if it comprises a high level of biodiversity."		
	Not likely to be at	No
Assessment:	Valiance	
The 0.2 hectare area proposed to be cleared consists of road reserves and areas of Degraded vegetation. The application area is not considered likely to contain locally and/or regionally significant flora, fauna, habitats or uniques assemblages of plants.		
Principle (b): "Native vegetation should not be cleared if it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna."	Not likely to be at variance	Yes Refer to Sectior 3.2.1, above.
Assessment:		0.2.7, 0.0000.
It is unlikely that the application area contains significant habitat for any of the twenty conservation significant fauna species recorded in the local area.		
In particular the vegetation within the application area is not considered suitable habitat for the Priority 4 <i>Isoodon fusciventer</i> (quenda), the Conservation Dependent <i>phascogale tapoatafa</i> (brush-tailed phascogale) the Critically endangered <i>Pseudocheirus occidentalis</i> (western ringtail possum) or the vulnerably listed black cockatoos.		
Principle (c): "Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."	Not likely to be at	Yes Refer to Section
Assessment:	Valiance	3.2.2, above.
One species of threatened flora has been recorded within the local area, 5.63 kilometres from the application area. This species, <i>Drakaea confluens</i> (T) is found on grey sand in Banksia and Jarrah woodlands. The vegetation within the application area is only considered partially suitable habitat for this species.		
Principle (d): "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."	Not likely to be at variance	No
Assessment:		
The area proposed to be cleared consists predominantly of <i>Eucalyptus</i> spp. and <i>Melaleuca preissiana</i> open woodland in Good to Degraded condition. The vegetation within the application area does not contain species that indicate a threatened ecological community.		
Environmental value: significant remnant vegetation and conservation a	areas	
Principle (e): "Native vegetation should not be cleared if it is significant as a remnant of native vegetation in an area that has been extensively cleared."	Not likely to be at	No
Assessment:	valiance	
The extent of the mapped vegetation type and native vegetation in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia. The vegetation proposed to be		

Assessment against the clearing principles	Variance level	Is further consideration required?
tracks), it is not considered to be part of a significant ecological linkage in the local area.		
<u>Principle (h):</u> "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."	Not likely to be at variance	No
Assessment:		
The closest conservation area is the State Forest located 0.09 kilometres east of the proposed clearing area. The application area and State Forest are separated by local roads and the railway bordering the State Forest. The proposed clearing is therefore not likely to have an impact on the environmental values of the adjacent conservation area.		
Environmental value: land and water resources		
Principle (f): "Native vegetation should not be cleared if it is growing in, or in association with, an environment associated with a watercourse or wetland."	Not at variance	No
Assessment:		
Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact an environment associated with a watercourse or wetland.		
Principle (g): "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."	Not likely to be at	No
Assessment:	variance	
The mapped soils are highly susceptible to wind erosion and substrate acidification, which may be exacerbated by the clearing of vegetation. However, noting the extent and condition of vegetation within the application area, the proposed clearing is not likely to have an appreciable impact on land degradation.		
<u>Principle (i):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water."	Not likely to be at variance	No
Assessment:		
Given the closest water bodies are a small perennial lake 0.26 kilometres south of the application area and the Collie River, 0.71 kilometres to the east of the application area, and the extent of the clearing, it is unlikely that the proposed clearing will result in significant impacts to surface or ground water quality.		
<u>Principle (j):</u> "Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."	Not likely to be at variance	No
Assessment:		
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.		
Due to the scale of clearing, the proposed clearing is not likely to cause, or exacerbate, the incidence or intensity of flooding.		

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.

Photographs of the vegetation (Appendix D.



Figure 1

Site 1 vegetation



Figure 3 Site 3 vegetation



Figure 2 Site 2 vegetation



Figure 4 Site 4 vegetation



Gibbs, State Route 107, Collie WA Figure 5 Site 7 vegetation



Figure 7 Site 9 vegetation



Figure 6 Site 8 vegetation



Figure 8 Site 10 vegetation



Figure 9 Site 11 vegetation



Figure 10 Site 12 vegetation



Figure 11 Site 13 vegetation

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)
- 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)
- 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

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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