



CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10612/1
Permit Holder:	Southern Cross Wind Pty Ltd
Duration of Permit:	From 20 September 2024 to 20 September 2029

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 the construction of a new electrical transmission line connecting an existing transmission line to a windfarm.

2. Land on which clearing is to be done

Public Road Reserve (Glendower Road Reserve) (Land ID: 3744570, 3744569, 3744571, 3744575).

3. Clearing authorised

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

5. Period during which clearing is authorised

The permit holder must not clear any *native vegetation* after 20 September 2029.

PART II – MANAGEMENT CONDITIONS

6. 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.

7. Weed management

When undertaking any clearing authorised under this permit, the permit holder must take the following measures to minimize the risk of introduction and spread of *weeds*:

- (a) clean earth-moving machinery of soil and vegetation prior to entering and leaving the area to be cleared;
- (b) ensure that no known *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.

8. Directional clearing

The permit holder must:

- (a) conduct *clearing* authorised under this permit from one direction to the other towards adjacent *native vegetation*; and
- (b) allow a reasonable time for fauna present within the areas being cleared to move into adjacent *native vegetation* ahead of the *clearing* activity.

9. Fauna Management

The Permit Holder shall engage a fauna spotter to traverse the project area ahead of *clearing* machinery at the time of *clearing* and alert machinery operators to avoid fauna.

10. Fauna Management - Malleefowl

Where *clearing* authorised under this Permit is to occur between 1 September and 31 January, the Permit Holder shall:

- (a) Within two weeks prior to undertaking any clearing, engage an *environmental specialist* to conduct an inspection of the area to be cleared to identify *active (in use)* Malleefowl (*Leipoa ocellata*) mounds.
- (b) Where an *active (in use)* Malleefowl mound is identified under Condition 10(a) of this Permit, the Permit Holder shall ensure that no *clearing* occurs within 50 metres of the mound, during the months of September through to January, unless first approved by the *CEO*.

PART III - RECORD KEEPING AND REPORTING

11. 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	Specifications				
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 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);				
		actions taken to avoid, minimise, and reduce the impacts and extent of clearing in accordance with condition 6;					
		(f)	actions taken to minimise the risk of the introduction and spread of <i>weeds</i> in accordance with condition 7;				
		actions taken in accordance with conditions 8 and 9.					
2.	In relation to malleefowl management pursuant to condition 10	(a)	locations of active/potentially active Malleefowl mounds using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA2020), expressing the geographical coordinates in Eastings and Northings; actions taken to demonstrate and succid the				
		(b)	clearing of these mounds.				

12. Reporting

The permit holder must provide to the *CEO* the records required under condition 11 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						
active (in use)	means a mound with evidence of current Malleefowl (<i>Leipoa ocellata</i>) activity, such as: working of the mound; scratching; litter trails leading to the mound; or loose uncompacted surfaces. The form and structure of the mound will show that it is currently being prepared for" egg laying or it already contains eggs.						
CEO	Chief Executive Officer of the department responsible for the administration of the clearing provisions under the <i>Environmental Protection Act 1986</i> .						
clearing	has the meaning given under section $3(1)$ of the EP Act.						
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.						
department	means the department established under section 35 of the <i>Public Sector Management Act 1994</i> (WA) and designated as responsible for the administration of the EP Act, which includes Part V Division 3.						
environmental specialist	means a person who holds a tertiary qualification in environmental science or equivalent and has a minimum of 2 years work experience relevant to the type of environmental advice that an environmental specialist is required to provide under this permit, or who is approved by the CEO as a suitable environmental specialist.						
EP Act	Environmental Protection Act 1986 (WA)						
fill	means material used to increase the ground level, or to fill a depression.						
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

B.Walker.

Belinda Walker EXECUTIVE DIRECTOR GREEN ENERGY

Officer delegated under Section 20 of the Environmental Protection Act 1986

27 August 2024

Schedule 1

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



CPS 10612/1

OFFICIAL



Clearing Permit Decision Report

1 Application details and outcome								
1.1. Permit application details								
Permit number:	CPS 10612/1							
Permit type:	Purpose permit							
Applicant name:	Southern Cross Wind Pty Ltd							
Application received:	10 May 2024							
Application area:	3 hectares of native vegetation							
Purpose of clearing:	To allow for the construction of a new electrical transmission line connecting an existing transmission line to a windfarm							
Method of clearing:	Mechanical removal							
Property:	Public Road Reserve (Glendower Road Reserve) (Land ID: 3744570, 3744569, 3744571, 3744575)							
Location (LGA area/s):	Shire of Yilgarn							
Localities (suburb/s):	Town of Southern Cross							

1.2. Description of clearing activities

The area proposed to be cleared is three hectares of native vegetation within a permit boundary of 20.54 hectares, within a public road reserve (Glendower Road Reserve) for the purpose of constructing a new electrical transmission line which will connect the applicants windfarm to the existing electrical transmission grid (see Figure 1, Section 1.5).

The construction work involves the following clearing activities:

- Clearing of edges of an existing road through the reserve (approximately four kilometres in length and six metres wide)
- Removal of all tree vegetation and vegetation that will hinder construction of the transmission line

1.3. Decision on app	lication
Decision:	Grant
Decision date:	27 August 2024
Decision area:	3 hectares of native vegetation, as depicted in Section 1.5, below.

1.4. Reasons for decision

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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). 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 findings of a flora and vegetation survey (see Appendix D), 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 3.3). The Delegated Officer also took into consideration that the purpose for the application is to build a transmission line from an existing windfarm to the existing power grid, ensuring that future renewable energy will become available to the public. In addition, low ground vegetation will be allowed to re-establish once the transmission line has been constructed.

The assessment identified that the proposed clearing will result in:

- potential impacts to conservation significant fauna if present during clearing activities; and
- risk of potentially introducing and spreading weeds and dieback into adjacent vegetation, which may impact on the quality of the adjacent vegetation and its habitat values.

After consideration of the available information, as well as the applicant's reports and minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined the proposed clearing is unlikely to lead to any long-term adverse impacts on the environmental values of the local area.

Potential impacts of clearing can be minimised and managed to lead to an unacceptable risk to environmental values by imposing management conditions to the Permit.

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;
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity and have a fauna spotter present to remove fauna at risk;
- engage a fauna specialist prior to clearing to identify malleefowl (*Leipoa ocellata*) nesting mounds. The applicant must avoid active nesting mounds and surrounding mound habitat that is critical for the health and long-term survival of malleefowl.



Figure 1 Map of the application area

The areas crosshatched yellow indicate 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 510 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 polluter pays principle)
- 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)
- Land Administration Act 1997 (WA)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act)
- Native Title At 1993 (Cth)

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)
- Technical guidance Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016)
- Technical guidance Terrestrial Fauna Surveys for Environmental Impact Assessment (EPA, 2016)

3 Detailed assessment of application

3.1. Avoidance and mitigation measures

The applicant has provided information on avoidance and mitigation (Bowman & Partners, 2024) which describes the following:

Minimisation

The applicant commits to minimise impacts of clearing to native vegetation through:

- Pruning two hollow bearing trees that might interfere with the future transmission line rather than clearing; and
- Low ground level vegetation will be retained where possible and will be rolled or brush harvested to retain their root structures.

Avoidance

The applicant states that they aim to avoid impacts to seven hollow bearing trees within the clearing area (the proponent advised that these trees can be retained considering the initial alignment) given the flexibility with the larger permit boundary.

The Delegated Officer was satisfied that the applicant has made a reasonable effort to minimise and avoid 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 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

In determining the likelihood of conservation significant fauna occurring within the application area, consideration was given to the preferred habitat types within the application area, records of conservation significant fauna within the application and local area, and the type and condition of the vegetation within the application area. No fauna survey was conducted within the application area. The results from the fauna survey of the applicant's adjoining windfarm (Ecoscape, 2023), the interpretation of vegetation types and available databases were used to assess likelihood of occurrence for conservation significant fauna. Based on these factors and the desktop assessment of the local area (20 kilometre radius), the application area is likely to provide suitable habitat for the following species (See A.4 for fauna analysis table):

- Leipoa ocellata (Malleefowl) (VU)
- Dasyurus geoffroii (Chuditch, Western Quoll) (VU)
- Notamacropus irma (Western Brush Wallaby) (P4)

Malleefowl

Malleefowl are predominantly found in semi-arid to arid zones, in shrubland and low woodlands dominated by mallee and associated habitats (Benshemesh, 2007) such as Broombush (*Melaleuca uncinata*) (Woinarski, 1989) and Scrub Pine (*Callitris verrucosa*) (DPAW, 2016). In Western Australia, they are also found in shrublands dominated by *Acacia* sp. and occasionally in Eucalypt woodlands dominated by Wandoo, *Corymbia calophylla* and *Eucalyptus astrigens* (Benshemesh, 2007). The National Recovery Plan for Malleefowl notes that habitat loss, habitat fragmentation and predation are major threats to the species (Benshemesh, 2007). The Eucalypt woodlands within the application area represent potential foraging/breeding habitat for the species. There are seven records of this species within the local area and 128 records within the region (50 kilometre radius), with the closest record approximately 8 kilometres from the application area (GIS Database). As the application area contains similar vegetation types, it is likely to contain habitat for malleefowl. Although it is possible for Malleefowl to make use of the habitat present in the application area, the proposed clearing of vegetation along the road is not likely to impact on the maintenance and conservation of the species. No evidence of Malleefowl was found during the flora and vegetation survey (PGV Environmental, 2024), however the applicant has committed to conduct a search for Malleefowl mounds prior to clearing in case any newly established mounds are present within the application area (PGV Environmental, 2024).

Chuditch

Chuditch can be found in areas dominated by sclerophyll forest, drier woodland, heath, and mallee shrubland, like the application area (Van Dyck and Strahan, 2008; NESPTSRH, 2019). Chuditch requires large areas of uncleared vegetation that provide enough food and refuge resources (NESPTSRH, 2019). Within the local area there are 15 records of this species, with the closest record approximately 5 kilometres from the application area (GIS Database). Given the application area includes woodland and scrub open to dense understorey, the application area could provide suitable foraging/dispersal habitat for Chuditch. The vegetation on either side of the road is not likely to comprise any critical habitat for the species, however, and due to the highly mobile nature of the species and their large home ranges (DEC, 2012), the proposed clearing is not likely to impact on critical habitat for this species.

Western Brush Wallaby

The Western Brush Wallaby is endemic to the southwest of Western Australia and occurs in open forests or woodlands (Van Dyck and Strahan, 2008). The Western Brush Wallaby is likely to occur in shrubland and woodland habitats, including recently burnt habitats. There is one record of this species approximately 5 kilometres from the application area (GIS Database). There are several existing records of the Western Brush Wallaby in Forrestania (GIS Database), and it is therefore likely that the species could interact with the application area albeit in a vagrant manner. The proposed clearing of vegetation in a linear nature along the existing road is not likely to impact critical habitat for this species.

Conclusion

Given the above, the application area provides some suitable habitat for conservation significant fauna. The extent of impact to these species habitat resulting from the proposed clearing is not likely to be significant. The use of a fauna spotter and undertaking slow, progressive clearing towards adjacent native vegetation will minimise impacts to any fauna present at the time of clearing.

Conditions

To address the above impacts, the following management measures will be required as conditions on the clearing permit:

• Undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity.

- Engage a fauna spotter for the duration of clearing activities.
- Avoidance and minimisation to reduce the impacts and extent of clearing.

3.2.2. Biological values (Biodiversity and Flora) - Clearing Principles (a), (c) and (d)

Assessment

Conservation significant flora

According to available databases a total of 33 conservation significant flora species have been recorded within the local area (20 kilometre radius) (GIS Database). Of the conservation significant flora species recorded in the local area, the application area is likely to provide suitable and potentially significant habitat for the following species (WA Herbarium, 1998-; GIS Database):

- Acacia desertorum var. nudipes (P3)
- Acacia filifolia (P3)
- Balaustion grandibracteatum subsp. grandibracteatum (P3)
- Daviesia macrocarpa (CE)
- Eucalyptus calycogona subsp. miraculum (P1)
- Eutaxia actinophylla (P3)
- Goodenia heatheriana (P1)
- Millotia newbeyi (P1)

According to available databases, there are no conservation significant flora records within the application area. The closest known flora record is the Priority 3 *Eutaxia actinophylla*, recorded approximately one kilometre from the application area (GIS Database). Given the distance between these records and the application area, the proposed clearing is unlikely to significantly impact this population.

A detailed flora and vegetation survey (including a targeted survey for spring flowering orchids) was undertaken by PVG Environmental (2024) on 28 – 29 September 2023, consistent with the EPA Technical guidance (EPA, 2016). No Threatened or Priority flora species were recorded within the application area (PVG Environmental, 2024).

Ecological communities

No Priority Ecological Communities were recorded within the application area, with the closest PEC recorded 12 kilometres removed from the application area (GIS Database). The vegetation in the application area is not representative of any of the recorded PEC's in the local area, therefore the proposed clearing is unlikely to result in any impact to these communities.

Available databases suggest that the application area could contain the Western Australian Wheatbelt Threatened Ecological Community (TEC) (GIS Database). According to the 'Key Diagnostic Characteristics for the Ecological Community' contained within the Approved Conservation Advice for the Eucalypt woodlands of the Western Australian Wheatbelt (TSSC, 2015), the application area does not meet the first key diagnostic for this TEC as it is outside the IBRA bioregions and subregions required for the TEC (PGV, 2024).

Furthermore, while the Eucalypts on the site are similar to those listed as occurring in the Eucalypt woodlands of the Western Australian Wheatbelt TEC, the conservation advice for the TEC states that: Woodlands that have the same key eucalypt species but occur in adjacent bioregions, notably the Coolgardie, Esperance Sandplains, Yalgoo and Geraldton Sandplains bioregions are not part of the national ecological community. All woodlands that occur in bioregions outside the wheatbelt, as defined in this conservation advice, are not part of the WA Wheatbelt Woodland ecological community (PGV, 2024; TSSC, 2015).

Conclusion

Based on the above assessment, the proposed clearing is not likely to impact on the biodiversity of the local area. Potential impacts to vegetation within the road reserve can be managed by the conditions below.

Conditions

To address potential impacts, the following management measures will be required as conditions on the clearing permit:

- Take hygiene steps to minimise the risk of the introduction and spread of weeds to adjacent vegetation.
- Avoidance and minimisation to reduce the impacts and extent of clearing.

3.3. Relevant planning instruments and other matters

The application was advertised on the Department's website for 21 days and no submissions were received.

The Shire of Yilgarn did not have any objections to the proposed clearing, and advised that the applicant has lodged the required approvals with the Shire.

The Delegated Officer noted that the application area is zoned 'Rural/Mining' under the Shire of Yilgarn Local Planning Scheme No. 2 and that the purpose of the proposed clearing is consistent with this zoning. The Shire of Yilgarn informed DWER that the Shire's Local Planning Scheme has no provisions, nor does it have any strategies or policies that would see the clearing opposed (Shire of Yilgarn, 2024).

End

Appendix A. Site characteristics

A.1. Site characteristics

Characteristic	Details							
Local context	Road Reserve), directly adjacent to the Great Western Woodlands and otherwise surrounded by agricultural areas, in the extensive land use zone of Western Australia (GIS Database). It is located in the Coolgardie Bioregion, in the locality of the town of Southern Cross. Available databases indicate the local area (20 kilometre radius) retains approximately 46.61 per cent of its original native vegetation cover (GIS Database).							
Ecological linkage	There are no mapped ecological linkages within the application area and the combined local area (20 kilometre radius) (GIS Database). The application area lies within a road reserve that is likely to have linkage values to surrounding patches of native vegetation, but the proposed is unlikely to impact on these values.							
Conservation areas	The nearest conservation area to the application area is Wockallarry Nature Reserve which is located approximately 15.8 kilometres to the southwest of the application area.							
Vegetation description	 The flora and vegetation surveys of PGV Environmental (2024) indicate that the vegetation within the proposed clearing area consists of seven vegetation types: Es: Eucalyptus salmonophloia Low Woodland over Eremophila scoparia/E. oppositifolia Low Shrubland EIEs: Eucalyptus loxophleba/E. salmonophloia Woodland EsEIEy: Eucalyptus salmonophloia /E. loxophleba/E. yilgarnensis Woodland EIEsp: Eucalyptus loxophleba/Eucalyptus spathulata Woodland Ey: Eucalyptus yilgarnensis Low Woodland over Melaleuca hamata Tall Open Shrubland EspAa: Eucalyptus spathulata Low Woodland over Acacia acuminata Tall Shrubland Aa: Acacia acuminata Tall Shrubland 							
Vegetation condition	The flora and vegetation surveys of PGV Environmental (2024) indicate that the existing vegetation within the proposed clearing area is in Very Good to Excellent condition (Keighery, 1994). Areas of the clearing application area that are bordering the agricultural areas were described to be in Very Good condition (some disturbance through grazing, few weeds) and the areas associated with the Road Reserve were described to be in Excellent condition.							

Characteristic	Details
Climate and landform	The annual average temperatures for the application area range from 16.8°C to 34.8°C, with a mean annual temperature of 26°C. The average annual rainfall received over the application area is 316.8 millimetres (BOM, 2024).
	The application area is situated at an elevation of 370 to 390 meters above sea level (GIS Database).
Soil description	The soils within the application area are mapped as:
	• 261Gt_1Qc (Garratt 1Qc Phase) - Lower slopes and foot slopes adjacent to salt lakes in the eaten Zone of Ancient Drainage.
	 261Gt_1Qa (Garratt 1Qa Phase) - Alluvial flats adjacent to salt lakes in the eaten Zone of Ancient Drainage. Loamy earth (mostly calcareous), hard cracking clay and alkaline shallow duplex.
	• 261Gr_3 (Greenmount 3 Subsystem) - Rolling low hills in the eastern Zone of Ancient Drainage. Loamy earth (mostly calcareous) and clay.
	• 261GrPE (Greenmount, Perilya Subsystem) - Tributary valley floors on greenstone, in the Southern Cross Zone. Calcareous loamy earths and shallow duplex.
Land degradation risk	The mapped soils are not susceptible to land degradation risks, except for two soil types that have a moderate to very high risk of water logging.
Waterbodies	The desktop assessment and aerial imagery indicated that no wetlands or watercourses either lie within or transect the area proposed to be cleared (GIS Database).
Hydrogeography	The application area is located within the Southern Cross Hydrozone as proclaimed under the <i>Rights in Water and Irrigation Act 1914</i> (RiWI Act). The groundwater salinity level is mapped as 14,000-3,500 milligrams per litre (GIS Database).
Flora	No significant flora was recorded in the application area during the flora and vegetation survey of PGV Environmental (2024).
	Within the local area, the desktop assessment identified 129 records of priority flora across 33 species. One threatened flora species was recorded within the local area, <i>Daviesia macrocarpa</i> . Of the conservation significant flora species recorded in the local area, the application area is likely to provide suitable and potentially significant habitat for eight species (See section 3.2.2).
	Priority species recorded within the local area with the potential of occurring within the application area are further considered in Appendix A.3.
Ecological communities	No conservation significant ecological communities or buffers are mapped over the application area. The closest nearby system (approximately 12 kilometres south of the application area) is the Parker Range system (P3) which extends north towards the remnant native vegetation of the Road Reserve.
Fauna	The desktop assessment identified 3 conservation significant fauna species within the local area. The closest records (just over four kilometres) are the Chuditch and Western Brush Wallaby (GIS Database). No evidence of the above fauna species was found within the application area.

A.2. Vegetation extent										
	Pre-European extent (ha)	Current extent (ha)	Extent remaining (%)	Current extent in all DBCA managed land (ha)	Current proportion (%) of pre- European extent in all DBCA managed land					
IBRA bioregion*										
Coolgardie	12,912,204.35	12,648,491.39	97.96	2,114,349.37	16.37					
Vegetation complex										
Beard vegetation association 1068	268,900.45	142,088.42	52.84	-	-					
Local area										
20km radius	138,311.71	64,472.84	46.61	-	-					

*Government of Western Australia (2019)

A.3. Flora analysis table

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]
Eucalyptus polita subsp. polita	Priority 3	N	Y	Y	<10	1	Y
Eutaxia actinophylla	Priority 3	Y	Υ	Y	<2	1	Υ
Goodenia heatheriana	Priority 1	Y	Υ	Y	<2	2	Y
Hemigenia sp. Newdegate (E. Bishop 75)	Priority 1	N	Y	Y	<2	4	Y
Hydrocotyle corynophora	Priority 1	N	Y	Y	1	8	Y
Millotia newbeyi	Priority 1	Y	Y	Y	<4	1	Υ
Notisia intonsa	Priority 3	N	Y	Y	1	1	Υ
Phlegmatospermum eremaeum	Priority 3	N	Y	N	<1	1	Y
Stenanthemum bremerense	Priority 4	N	Y	Y	<1	1	Y
Teucrium diabolicum	Priority 3	Ν	Υ	Y	<1	1	Y
Verticordia stenopetala	Priority 3	N	Y	Y	<9	3	Y
Acacia desertorum var. nudipes	Priority 3	Y	Y	Y	<15	5	Y
Acacia filifolia	Priority 3	Y	Y	Y	<19	1	Y
Balaustion grandibracteatum subsp. grandibracteatum	Priority 3	Y	Y	Y	<15	1	Y
Daviesia microcarpa	Critically Endangered	Y	Y	Y	<14	8	Y
Eucalyptus calycogona subsp. miraculum	Priority 1	Y	Y	Ν	<13	1	Y

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

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]
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A.4. Fauna analysis table

Species name	Conservati on status	Suitable habitat features? [Y/N]	Suitable vegetation type? [Y/N]	Distance of closest record to application area (km)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
<i>Dasyurus geoffroii</i> (Chuditch, Western Quoll)	VU	Y	Y	<5	3	N/A
Leipoa ocellata (Malleefowl)	VU	Ν	Ν	<8	1	Y
<i>Notamacropus irma</i> (Western Brush Wallaby)	P4	Y	Y	<5	1	N/A
Tringa nebularia (Common Greenshank)	MI	Ν	N	<15	1	Y

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

A.5. Land degradation risk table

Risk categories	261Gt_1Qc	
Wind erosion	10% of the map unit has a high to extreme hazard	
Water erosion	0% of the map unit has a very high to extreme hazard	
Salinity	5% of the map unit has a moderate or high hazard or is presently	
Calling	saline	
Subsurface Acidification	20% of the map unit has a high susceptibility	
Flood risk	0% of the map unit has a moderate to high hazard	
Water logging	70% of the map unit has a moderate to very high to risk	
Phosphorus export risk	0% of the map unit has a high to extreme hazard	

Risk categories	261Gt_1Qa
Wind erosion	10% of the map unit has a high to extreme hazard
Water erosion	0% of the map unit has a very high to extreme hazard
Salinity	15% of the map unit has a moderate or high hazard or is presently saline
Subsurface Acidification	20% of the map unit has a high susceptibility
Flood risk	0% of the map unit has a moderate to high hazard
Water logging	80% of the map unit has a moderate to very high to risk
Phosphorus export risk	0% of the map unit has a high to extreme hazard

Risk categories	261Gr_3
Wind erosion	5% of the map unit has a high to extreme hazard
Water erosion	4% of the map unit has a very high to extreme hazard
Salinity	20% of the map unit has a moderate or high hazard or is presently saline
Subsurface Acidification	10% of the map unit has a high susceptibility
Flood risk	0% of the map unit has a moderate to high hazard

Water logging	20% of the map unit has a moderate to very high to risk
Phosphorus export risk	15% of the map unit has a high to extreme hazard

Risk categories	261GrPE
Wind erosion	19% of the map unit has a high to extreme hazard
Water erosion	0% of the map unit has a very high to extreme hazard
Salinity	8% of the map unit has a moderate or high hazard or is presently saline
Subsurface Acidification	33% of the map unit has a high susceptibility
Flood risk	0% of the map unit has a moderate to high hazard
Water logging	20% of the map unit has a moderate to very high to risk
Phosphorus export risk	0% 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		
Principle (a): "Native vegetation should not be cleared if it comprises a high level of biodiversity."	Not likely to be at	Yes Refer to Section
<u>Assessment:</u> The area proposed to be cleared does not contain any conservation significant flora. Although seven vegetation types were described within the application area, a high degree of similarity exists between the vegetation types (varying combinations of eucalypt species occurring in each vegetation type). The area proposed to be cleared is not more biodiverse than any of the surrounding area and does not contain any key habitat for significant fauna. In addition, the application area presents consistency throughout its length regarding soil substrates, topography and vegetation.	variance	3.2.2, above.
<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."	Not likely to be at variance	Yes Refer to Section 3.2.1., above.
<u>Assessment:</u> Potential fauna habitat for conservation significant species was recorded in the application area but was not found to be critical habitat to any of the conservation significant species occurring in the local area The proposed clearing is not likely to significantly impact any conservation significant fauna that might occur in the broader local area.		
<u>Principle (c):</u> "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
<u>Assessment:</u> The area proposed to be cleared potentially contains habitat for flora species listed under the BC Act. The flora and vegetation survey did not record any Threatened flora species that are likely to occur in the habitat present in the application area.	variance	3.2.1., above.
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 at variance	Yes Refer to Section 3.2.2, above.
<u>Assessment:</u> The area proposed to be cleared does not contain species that can indicate a threatened ecological community. The vegetation present within the application area is not representative of any nearby TEC and the proposed clearing is therefore not likely to impact any ecological communities in the local area.		

Assessment against the clearing principles	Variance level	Is further consideration required?
Environmental value: significant remnant vegetation and conservation ar	eas	
<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."	Not at variance	No
<u>Assessment:</u> The extent of the mapped vegetation type in the local area is consistent with the national objectives and targets for biodiversity conservation in Australia (Commonwealth of Australia, 2001). The vegetation proposed to be cleared 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 at variance	No
<u>Assessment:</u> Given the distance to the nearest conservation area (15.87 kilometres), the proposed clearing is not likely to have an impact on the environmental values of nearby conservation areas.		
Environmental value: land and water resources		
<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."	Not at variance	No
<u>Assessment:</u> Given no watercourses or wetlands are recorded within or nearby the application area, the proposed clearing is unlikely to impact on- or off-site hydrology and water quality.		
<u>Principle (g):</u> "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
<u>Assessment:</u> The mapped soils are not susceptible to land degradation risks, except for two soil types that have a moderate to very high risk of water logging. Considering the nature of the clearing (whereby it is possible to retain root structures of low ground vegetation), the further extent of native vegetation cover within the application area, and the temporary nature of the disturbance (vegetation is allowed to re-establish), the proposed clearing is not likely to have an appreciable impact on land degradation.	variance	
<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 no water courses or wetlands are recorded within or nearby the application area, the proposed clearing is unlikely to impact 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
<u>Assessment:</u> 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. Given no water courses or wetlands are recorded within the application area, the proposed clearing is unlikely to contribute to waterlogging.		

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. Biological survey information excerpts





	Vegeta	ation Type	Description	Photograph
	Es	Eucalyptus salmonophloia Low Woodland over Eremophila scoparia/E. oppositifolia Low Shrubland	A short section of this vegetation type occurs at the northern end of the site. <i>Eucalyptus salmonophloia</i> (Salmon Gums) are sparse and up to 15m high over an open, low understory with common species being <i>Eremophila scoparia, Eremophila</i> <i>oppositifolia, Atriplex vesicaria</i> and <i>Acacia merrallii.</i> The soils are orange sandy loam. Quadrat SC1 is representative of this vegetation type.	
-	EIEs	<i>Eucalyptus loxophleba/E. salmonophloia</i> Woodland	This is the dominant vegetation type on the site, occurring in the western area through the reserve. <i>Eucalyptus loxophleba</i> is usually more dominant than <i>E. salmonophloia</i> with both species ranging from 15-25m high. The understorey is low and open with common species <i>Eremophila scoparia, Olearia</i> <i>muelleri, Acacia merrallii</i> and occasionally <i>Melaleuca</i> <i>lanceolata.</i> The soils are orange-brown sandy loam. Quadrats SC5, SC6, SC8 and SC9 are representative of this vegetation type.	

Vegetation Type	Description	Photograph
EsEIEy Eucalyptus salmon /E. loxophleba/E. yilgarnensis Woodl	A short section of this vegetation type occurs at the end of the route through the farmland area. Similar ElEs vegetation type but with the mallee species <i>Euc</i> <i>yilgarnensis</i> also common to 5m high. Species in the open understorey include <i>Phebalium sp, Austrostipo</i> <i>elegantissima, Exocarpos aphyllus, Eremophila scope</i> <i>Acacia merrallii</i> . The soils are orange-brown sandy loam. Quadrat SC10 is representative of this vegetation type	southern to the calyptus e low, a aria and pe.
ElEsp Eucalyptus loxophic Eucalyptus spathul Woodland	This vegetation type occurred in the middle section the reserve. <i>Eucalyptus spathulata</i> was more comm <i>E. loxophleba</i> but smaller at 12m high. Mid-storey s included <i>Melaleuca lanceolata</i> and <i>Santalum acumi</i> . The lower shrubs and ground cover were very spars. The soils are orange-brown sandy loam. Quadrat SC7 is representative of this vegetation type	through non than shrubs natum. e. e. e.

Vegeta	ation Type	Description	Photograph
Ey	<i>Eucalyptus yilgarnensis</i> Low Woodland over <i>Melaleuca</i> <i>hamata</i> Tall Open Shrubland	Similar to the EsElEy vegetation type but with only <i>Eucalyptus</i> <i>yilgarnensis</i> mallees present. Occurs in the southern half of the section of the route through the agricultural land. Shrubs are almost absent, with the native grass <i>Bromus arenarius</i> the most common species. The soils are orange sandy loam. Quadrat SC4 is representative of this vegetation type.	
EspAa	<i>Eucalyptus spathulata</i> Low Woodland over <i>Acacia</i> <i>acuminata</i> Tall Shrubland	This vegetation type occurs in the northern part of the site on shallow loam over granite soils. <i>Eucalyptus spathulata</i> trees are up to 10m high and around 20% canopy cover over a Prominent tall shrub cover of <i>Acacia acuminata</i> (Jam) 4-5m high. The lower shrub and groundcover is almost absent with <i>Austrostipa elegantissima</i> fairly common. The soils are orange-brown sandy loam over granite. Quadrat SC3 is representative of this vegetation type.	

Vegetation Type	Description	Photograph
Aa Acacia acuminata Tall Shrubland	Recorded near the northern part of the site on soils with some fine granite at the surface. Acacia acuminata shrubs are 3-4m high and moderately dense at around 30%. Ephemeral species recorded on this soil type but nowhere else on the site included Siemssenia capillaris, Brachycome ciliaris, Waitzia acuminata subsp. acuminata and Borya sphaerocephala. The soils are orange sandy loam with granite at the surface. Quadrat SC2 is representative of this vegetation type.	

Figure 2. Vegetation Types (PGV Environmental, 2024)



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Figure 3. Vegetation Type locations (PGV Environmental, 2024)

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Figure 4. Vegetation Condition (PGV Environmental, 2024)

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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)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography Inland Waters Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- 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
- Soil Landscape Mapping Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

E.2. References

- Keighery, B.J. (1994) Bushland Plant Survey: A Guide to Plant Community Survey for the Community. Wildflower Society of WA (Inc). Nedlands, Western Australia.
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- PGV Environmental (2024) Supporting information for clearing permit application CPS 10612/1, Flora and Vegetation survey, received 18 June 2024 (DWER Ref: DWERDT969978).
- Shire of Yilgarn (2024) Confirmation of clearing permit applications CPS 16012/1, received 10 July 2024 (DWER Ref: DWERDT974680).
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- Threatened Species Scientific Committee (TSSC) (2015). Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) Approved Conservation Advice (including listing advice) for the Eucalypt Woodlands of the Western Australian Wheatbelt Commonwealth of Australia.
- Van Dyck, Steve & Strahan, Ronald (1922)- & Queensland Museum (2008). The mammals of Australia / edited by Steve van Dyck and Ronald Strahan. Sydney : New Holland Publishers.
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- Woinarski, J.C.Z. (1989). The vertebrate fauna of broombush Melaleuca-uncinata vegetation in northwestern Victoria, with reference to effects of broombush harvesting. Wildlife Research, 16(2), pp.217-238.