GOVERNMENT OF
WESTERN AUSTRALIA

CLEARING PERMIT

Granted under section 51E of the Environmental Protection Act 1986

Purpose Permit number:	CPS 10124/1
Permit Holder:	Rex J Andrews Pty Limited (RJA)
Duration of Permit:	From 19 August 2023 to 19 August 2033

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 transportation of wind turbine blades.

2. Land on which clearing is to be done

Kojonup road reserve (PIN 1253580), Lumeah
Kojonup road reserve (PIN 11708497), Lumeah

3. Clearing authorised

The permit holder must not clear more than 0.05 hectares of *native vegetation* and 2 native trees 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 19 August 2028.

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. Directional clearing

The permit holder must conduct clearing activities in a slow, progressive manner towards adjacent *native vegetation* to allow fauna to move into adjacent *native vegetation* ahead of the clearing activity.

8. Offsets – Infill planting

Within six (6) months of the commencement of clearing, the permit holder must provide to the *CEO* an offset *revegetation management plan* for the *revegetation* of 0.14 hectares of *native vegetation* within the *local area*.

PART III - RECORD KEEPING AND REPORTING

9. Records that must be kept

The permit holder must maintain records relating to the listed relevant matters in accordance with the specifications detailed in Table 1.

Table 1: Records that must be kept

No.	Relevant matter	Specifications
1.	In relation to the authorised clearing activities generally	(a) the species composition, structure, and density of the cleared area; (b) the location where the clearing occurred, recorded using a Global Positioning System (GPS) unit set to Geocentric Datum Australia 2020 (GDA20), 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 5; (f) actions taken to minimise the risk of the introduction and spread of *weeds* and *dieback* in accordance with condition 6;

No.	Relevant matter	Specifications
		(g) actions taken to undertake directional clearing in accordance with condition 7; and (h) actions taken to facilitate an offset *revegetation management plan* in accordance with condition 8.

10. Reporting

The permit holder must provide to the *CEO* the records required under condition 9 of this permit when requested by the *CEO*.

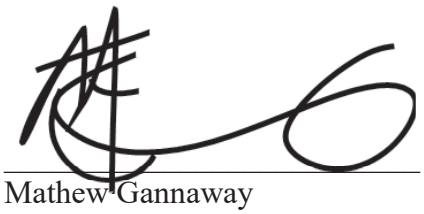
DEFINITIONS

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 *Environmental Protection Act 1986*.
clearing	has the meaning given under section 3(1) of the EP Act.
condition	a condition to which this clearing permit is subject under section 51H of the EP Act.
dieback	means the effect of *Phytophthora* species on native vegetation.
department	means the department established under section 35 of the *Public Sector Management Act 1994* (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)
local area	defined as a 20km radius from the proposed clearing
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.
revegetation	means the re-establishment of a cover of local provenance native vegetation in an area using methods such as natural regeneration, direct seeding and/or planting, so that the species composition, structure and density is similar to preclearing vegetation types in that area.
revegetation management plan	To be prepared in accordance with the Department of Water and Environmental Regulation's 'Guide to preparing revegetation plans for clearing permits (2018)'
weeds	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 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

26 July 2023

Schedule 1

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

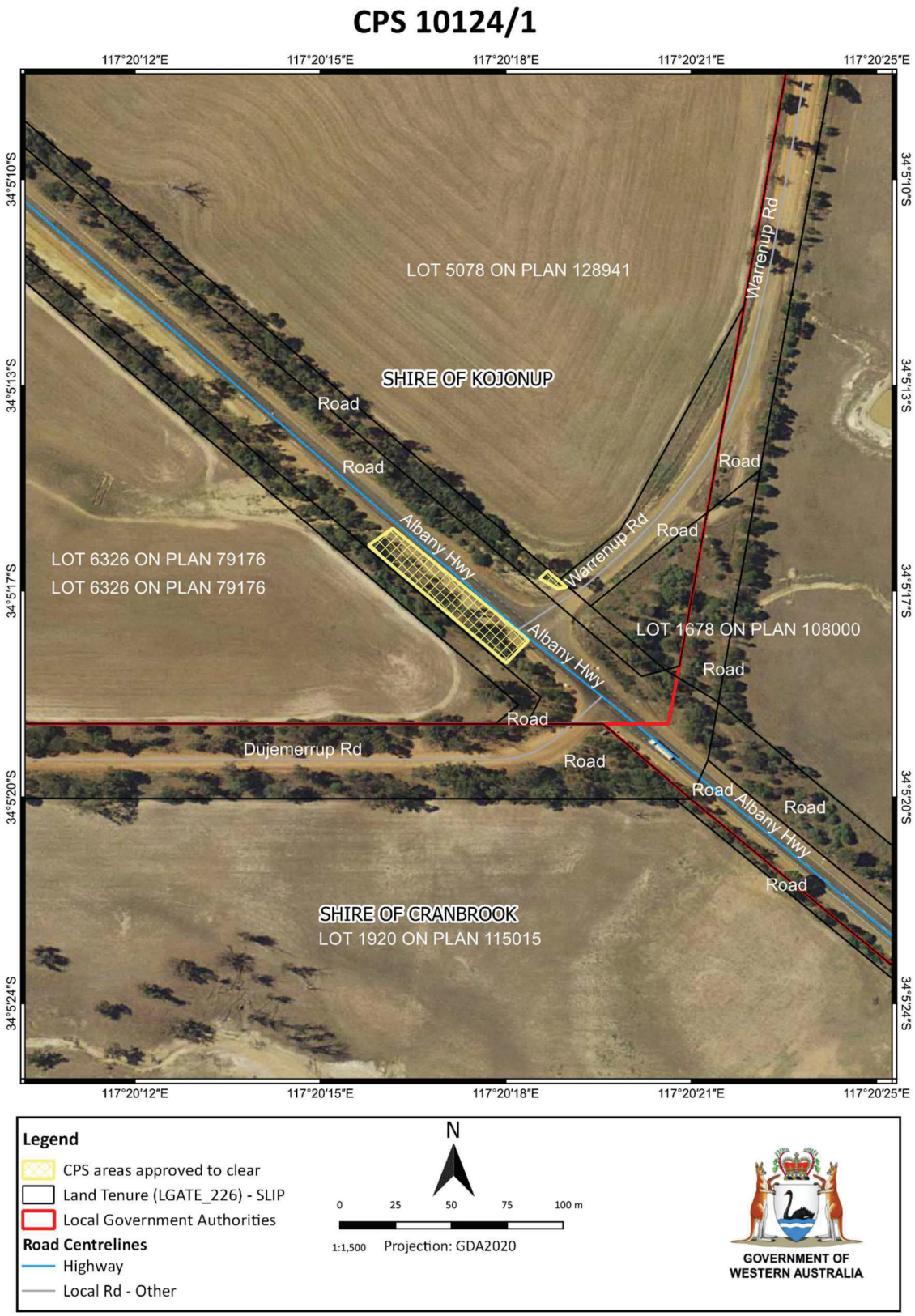


Figure 1: Map of the boundary of the area within which clearing may occur.

Government of Western Australia
Department of Water and Environmental Regulation

Clearing Permit Decision Report

1 Application details and outcome

1.1. Permit application details

Permit number:	CPS 10124/1
Permit type:	Purpose permit
Applicant name:	Rex J Andrews Pty Ltd (RJA)
Application received:	23 March 2023
Application area:	0.05 hectares of native vegetation and 2 native trees
Purpose of clearing:	Transportation of a wind turbine blade
Method of clearing:	Mechanical
Property:	Kojonup road reserve (PINs 1253580 and 11708497)
Location (LGA area/s):	Shire of Kojonup
Localities (suburb/s):	Lumeah

1.2. Description of clearing activities

RJA is proposing to clear 0.05 hectares of native vegetation and two native trees contained within two areas in the intensive land use zone of Western Australia. The application area is within Konjonup road reserve (PIN 1253580 and 11708497), Lumeah (See Figures 1 and 2 in section 1.5). The proposed clearing will assist in the transportation of wind turbine blades for stage 1 of the Flat Rocks Wind Farm project (FRWF).

1.3. Decision on application

Decision:	Granted
Decision date:	26 July 2023
Decision area:	0.05 hectares of native vegetation and 2 native trees, as depicted in Section 1.5, below.

1.4. Reasons for decision

This clearing permit application was submitted, accepted, assessed and determined in accordance with sections 51E and 51O of the *Environmental Protection Act 1986* (EP Act). The Department of Water and Environmental Regulation (DWER) advertised the application for 21 days and no submissions were received.

In making this decision, the Delegated Officer had regard for the site characteristics (see Appendix A), relevant datasets (see Appendix F.1), the findings of a Threatened Ecological Community (TEC) and Black cockatoo reconnaissance survey (Aurora Environmental, 2022), the clearing principles set out in Schedule 5 of the EP Act (see Appendix B), relevant planning instruments and any other matters considered relevant to the assessment (see Section 3). The Delegated Officer also took into consideration the objective of the proposal is to facilitate the transportation of wind turbine blades for stage 1 of the FRWF. The objective of the FRWF proposal is to support an increase in the supply of renewable energy in Western Australia and is aligned with the State's objective to develop a cleaner, more diverse, and affordable electricity network.

The assessment identified that the proposed clearing will result in:

- The loss of 0.05 hectares of native vegetation that provides limited foraging habitat for black-cockatoos,

- The loss of 0.05 hectares of native vegetation that is significant as a remnant of native vegetation in an area that has been extensively cleared.
- 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, including local priority ecological communities.

After consideration of the available information, as well as the applicant's minimisation and mitigation measures (see Section 3.1), the Delegated Officer determined that some of the impacts of the proposed clearing, including the potential to facilitate the introduction of weeds and dieback, can be minimised and managed to unlikely lead to an unacceptable risk to environmental values through permit conditioning. However, impacts to foraging habitat for black cockatoos and significant remnant vegetation remained significant even after the application of minimisation and mitigation measures and constituted a significant residual impact.

The Delegated Officer determined that the revegetation of at least 0.14 hectares of native vegetation that is significant as a remnant of native vegetation in an area that has been extensively cleared and provides foraging habitat for black cockatoos within the local area of the clearing occurring was sufficient to counterbalance the significant residual impacts of the proposed clearing (see Section 4). RJA will be required to provide an offset revegetation management plan for the revegetation, including the location of where it is to occur, within six months of the commencement of clearing.

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

- avoid, minimise, and reduce the impacts and extent of clearing,
- take hygiene steps to minimise the risk of the introduction and spread of weeds and dieback,
- undertake slow, progressive one directional clearing to allow terrestrial fauna to move into adjacent habitat ahead of the clearing activity, and
- within 6 months of the commencement of clearing, provide to the CEO an offset revegetation management plan for the revegetation of 0.14 hectares of native vegetation within the local area that provides black cockatoo foraging habitat. Local area is defined as 20km radius from the proposed clearing.

1.5. Site maps

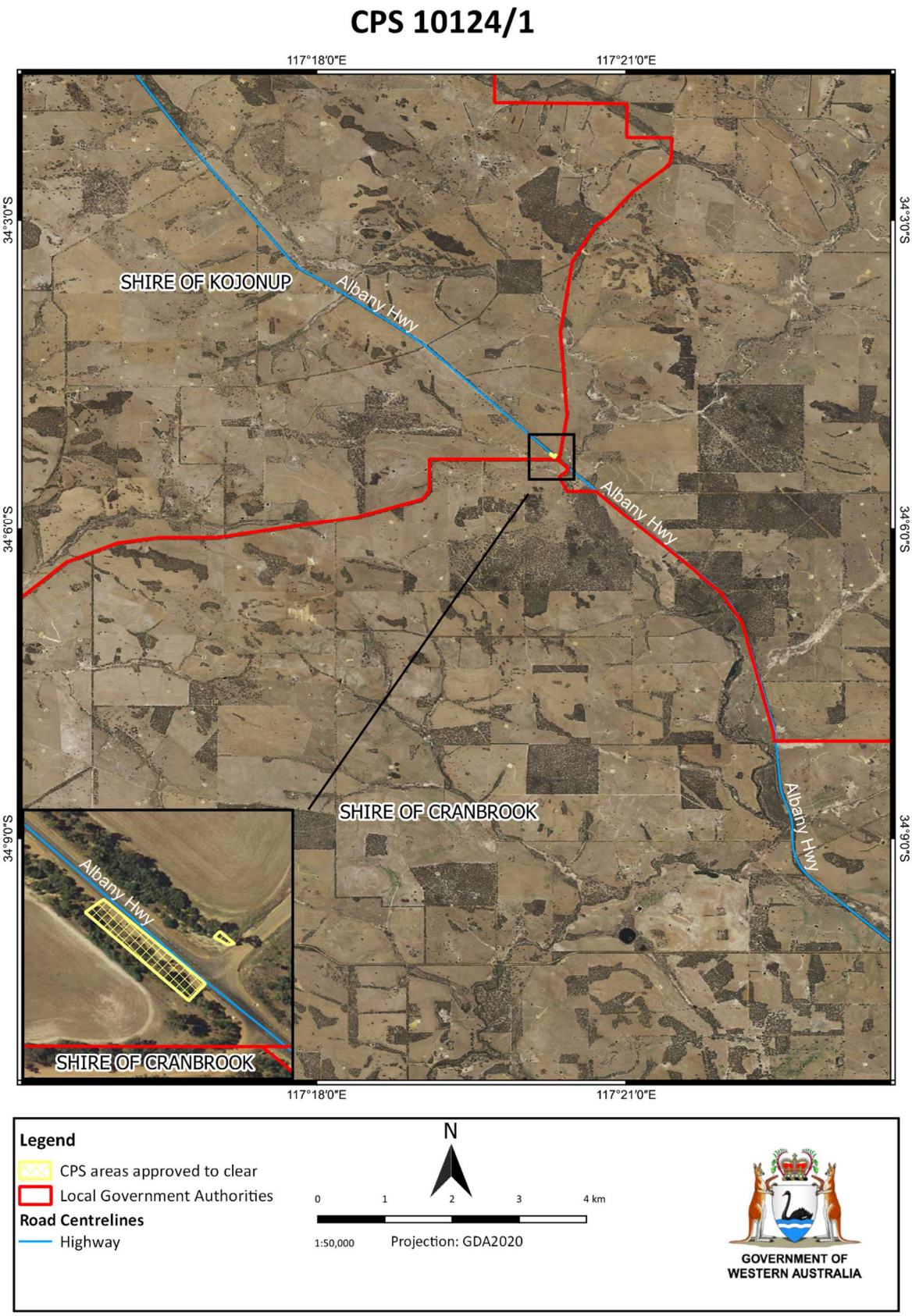


Figure 1: Context map of the application area CPS 10124/1. The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

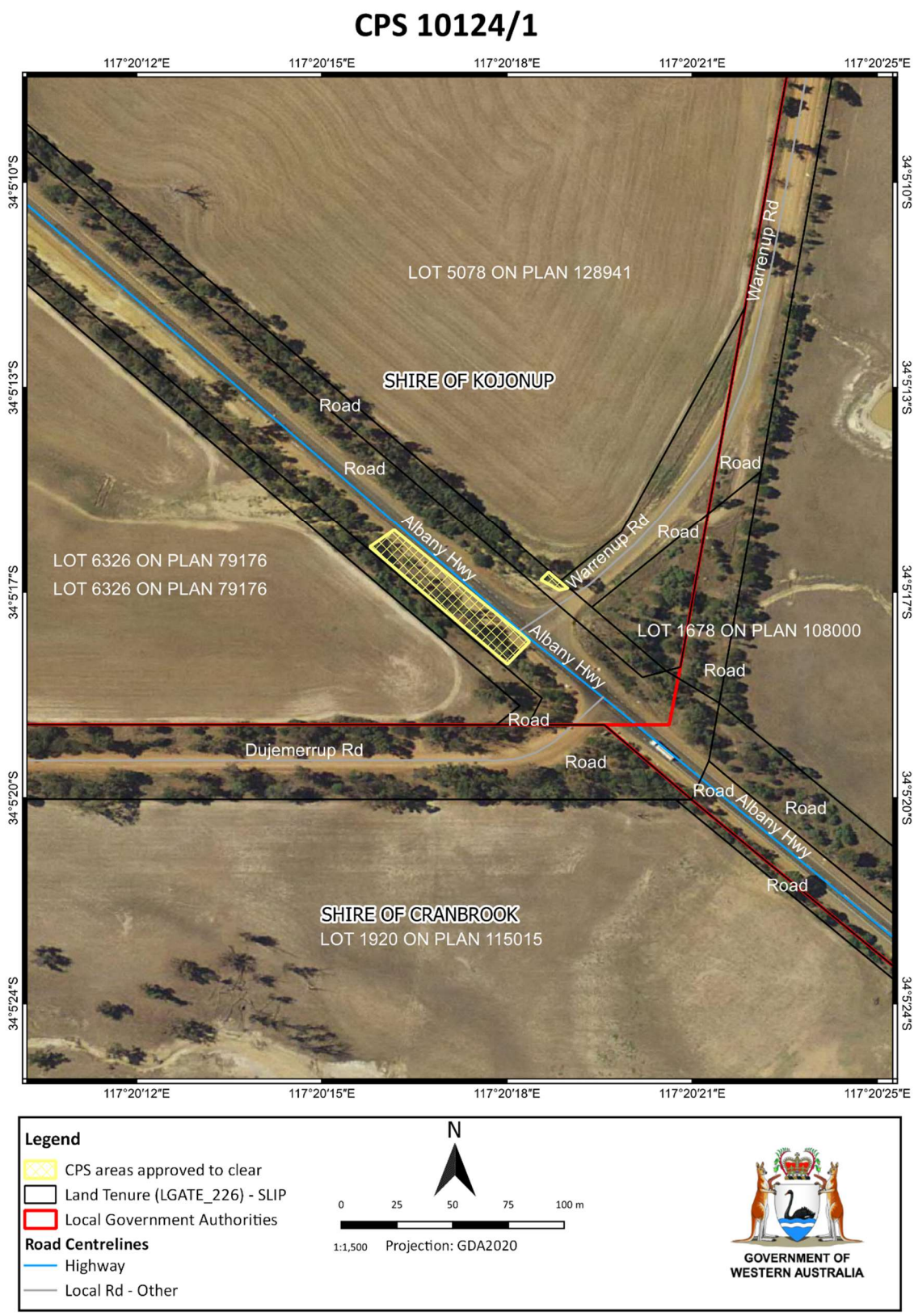


Figure 2: Map of the application area CPS 10124/1. The areas crosshatched yellow indicate the areas authorised to be cleared under the granted clearing permit.

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 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)
- *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)
- *Planning and Development Act 2005* (WA) (P&D Act)

Relevant policies considered during the assessment include:

- *Environmental Offsets Policy* (2011)

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)
- *Environmental Offsets Guidelines* (August 2014)
- 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

Project background

The FRWF project relates to a large-scale wind farm development in the Shire of Kojonup and Broomehill-Tambellup, intending to support the supply of renewable energy in Western Australia and align with the State's objective to develop a cleaner, more diverse, and affordable electric network (FRWF, 2022). The FRWF project will be developed in two stages. Stage 1 of the project will involve the establishment of 18 wind turbines as well as supporting infrastructure such as access roads, electrical cables, laydown yards, and construction facilities (FRWF, 2022). Rex J Andrews's clearing permit, CPS 10123/1, relates to the logistical transportation of the wind turbine blades from the Port of Bunbury to FRWF (Aurora Environmental, 2022).

Avoidance and minimisation

Rex J Andrews has advised that the location of Kojonup Road reserve was determined to be the optimum location for clearing in the transportation of wind turbine blades as other locations assessed within the Stantec's Traffic management plan (TMP) would require more clearing (Stantec, 2022).

- Warrenup Road is classified as a Restricted Access Vehicle track with a suitable road width to accommodate for oversized components. Other roads assessed in the TMP would require both road widening and clearing of associated vegetation;
- The turning angle of Albany Highway onto Warrenup Road is approximately 90° compared to the other acute potential roads assessed in the TMP, resulting in less clearing for the sweep path when turning;
- Where possible, pruning of vegetation will be implemented to 2.2 metres in height to accommodate for the swing of the wind turbine blade;
- Where possible, trees will be coppiced to 2.2 metres in height to accommodate for potential regrowth of the trees;
- Rex J Andrews attempted to use a blade lifter for the wind turbine blades to avoid the clearing altogether. However, the size of the blade was unfeasible for the blade lifter to handle. Consequently, extendable trailers are to be used in transportation.

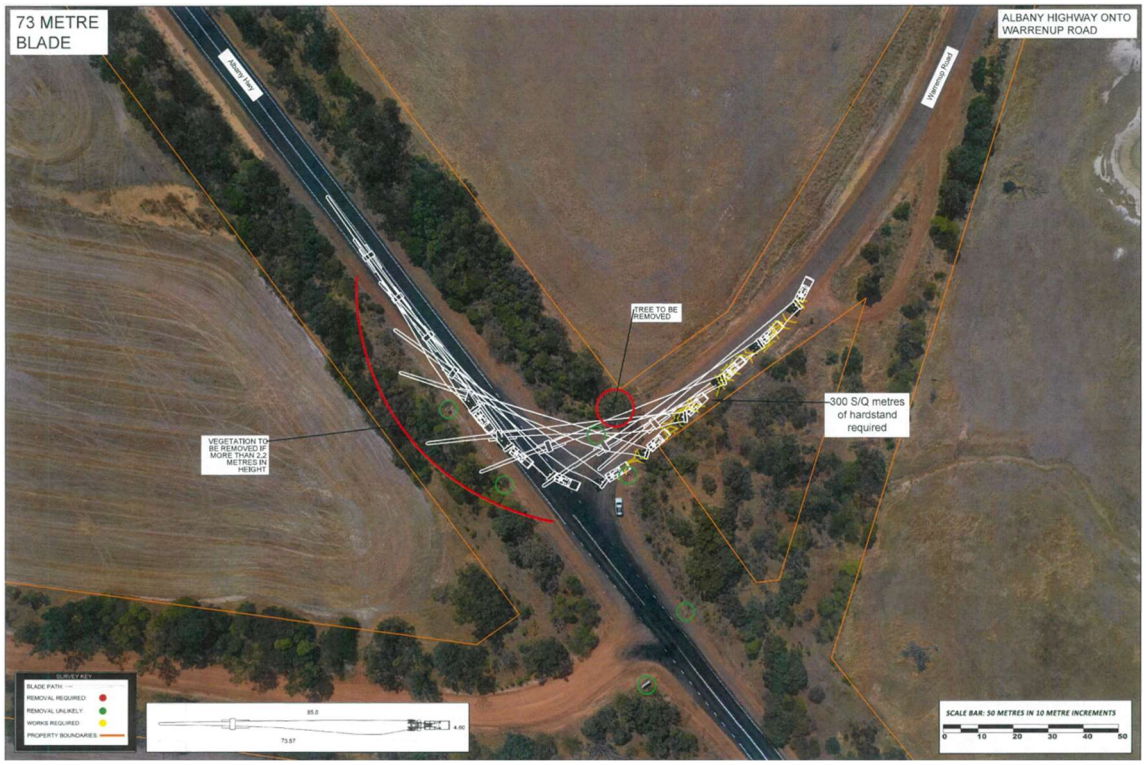


Figure 3: Warrenup Road trailer sweep path analysis. Existing trees marked area where clearing will need to be taken (red).

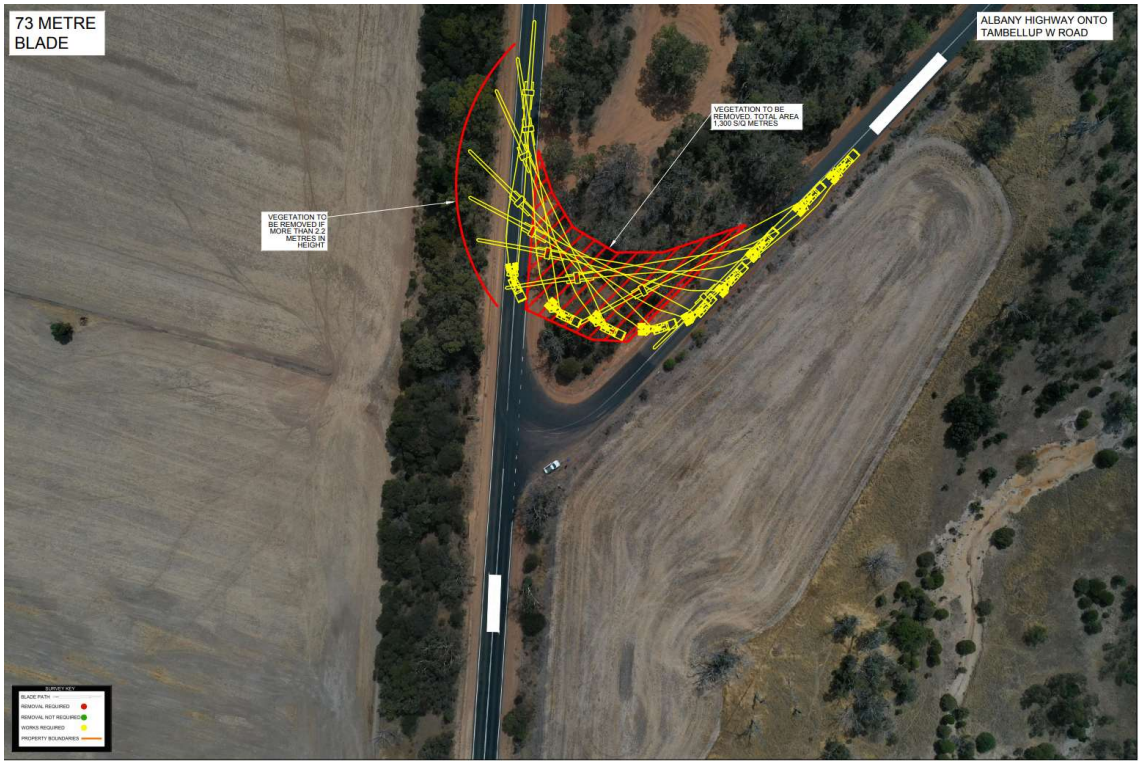


Figure 4: Tambellup Road trailer Sweep path analysis. Existing trees marked area where clearing will need to be taken (red).

Conclusion
After consideration of the avoidance and mitigation measures, it was determined that an offset to counterbalance the significant residual impacts to significant remnant vegetation within an extensively cleared landscape was necessary. In accordance with the Government of Western Australia's Environmental Offset Policy and Environmental Offset Guidelines, the significant residual impacts have been addressed through the conditioning of environmental offset requirements on the permit. The nature and suitability of the offset is summarised in Section 4.

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 (biodiversity and fauna), significant remnant vegetation and land and water resources (land degradation). The consideration of these impacts, and the extent to which they can be managed through conditions applied in line with sections 51H and 51I of the EP Act, is set out below.

3.2.1. Biological values (fauna and TEC/PEC) - Clearing Principles (a), (b) and (d)

Assessment
Noting the findings of the Threatened Ecological Community (TEC) and Black cockatoo reconnaissance for the application area (Aurora Environmental, 2022), the site characteristics (see Appendix A), and the habitat preferences of the conservation significant fauna species recorded within the local area, the application area was considered to contain suitable habitat for the following fauna species:

- *Calyptorhynchus banksii naso* (Forest Red-tailed Black-cockatoo) (listed as Vulnerable under the BC Act and EPBC Act),
- *Isoodon fusciventer (*Quenda) (listed as a Priority 4 species by the DBCA).
- *Macrotis lagotis* (Greater bilby) (listed as Vulnerable under the EPBC Act and BC Act),
- *Myrmecobius fasciatus (*Numbat*) (*listed as Endangered under the EPBC Act and BC Act),
- *Notamacropus irma* (Western brush wallaby) (listed as a Priority 4 species by the DBCA),
- *Zanda latirostris* (Carnaby's cockatoo) (listed as Endangered under the EPBC Act and BC Act).

Black cockatoo Species

When considering the habitat of Black Cockatoos, it can be categorized into three distinct groups: foraging, breeding, and roosting. Black Cockatoos typically forage within a 12-kilometre radius of their active breeding site (Commonwealth of Australia, 2022). Following breeding, they will flock in search of food sources within six kilometres of their night roost (Commonwealth of Australia, 2022). However, they may travel up to 20 kilometres or more (Commonwealth of Australia, 2022). To maintain their populations, it is crucial to have an abundance of food resources within the range of their breeding and roosting sites. Consequently, foraging resources are evaluated based on known breeding and night roosting sites, primarily within 12 kilometres of a breeding or roosting site (Commonwealth of Australia, 2022).

The application area is located within the modelled breeding range of Carnaby's Cockatoo and within the northern core of the Forest Red-tailed Black-cockatoo distribution zone. The range of the species has contracted west and south from its historical range.

Breeding habitat

Black cockatoo species, are known to nest in hollows of live and dead trees, including *Corymbia calophylla* (marri), *Eucalyptus marginata* (jarrah), *Eucalyptus diversicolor* (karri), *Eucalyptus wandoo* (wandoo), *Eucalyptus gomphocephala* (tuart), *Eucalyptus rudis* (flooded gum), and other *Eucalyptus* spp. (Commonwealth of Australia, 2022). 'Breeding habitat' for black cockatoos includes trees of these species that either have a suitable nest hollow or are of a suitable diameter at breast height (DBH) to develop a nest hollow, where suitable DBH for nest hollows is ≥ 50 centimetres for most tree species (Commonwealth of Australia, 2022). Black cockatoos generally breed and forage within a 6-to-12-kilometre radius of their nesting site (Commonwealth of Australia, 2022). According to spatial data, there are 25 records of White-tailed black cockatoo breeding hollows within 12 kilometres of the application area, with the closest record being approximately 2.49 kilometres south of the application area.

A habitat assessment was conducted for black cockatoos within the application area. The tree species found were *Eucalyptus occidentalis* (yates) and *Casuarina obesa* (Swamp sheoak). None of the trees met the criteria of potential habitat for black cockatoos due to their inadequate DBH of less than 50 centimetres. Although one yate tree had a DBH greater than 50 centimetres, no evidence of hollows suitable for black cockatoo breeding was found upon inspection. Therefore, the proposed clearing is not considered likely to significantly impact black cockatoo breeding habitat.

Foraging habitat

Carnaby's cockatoos forage on a variety of seeds, nuts, and flowers, and plants, including Proteaceous species (*Banksia* spp., *Hakea* spp., and *Grevillea* spp.), as well as *Allocasuarina* and *Eucalyptus* species, marri, and a range of introduced species (Valentine and Stock, 2008). FRBC feed predominantly on the seeds of marri and jarrah, which comprise approximately 90 per cent of their diet (DEC, 2008).

Although the application area occurs within the predicted occurrence range of the Carnaby's and FRBC, the tree species found within the application area, *Eucalyptus occidentalis* (yates) and *Casuarina obesa* (Swamp sheoak), are known as low priority species when it comes to the diet of the black cockatoo species (Commonwealth of Australia, 2022). As such, the clearing is unlikely to affect significant foraging habitat for black cockatoo species.

Roosts

Black cockatoo species will utilise a wide range of native and non-native trees situated within a variety of land-use types. Black cockatoos will usually roost in tall (average of >25 metres) trees species that have a relatively thick trunk (DBH of 1 metre) and medium foliage density (average of 50%) (Le Roux, 2017).

According to available databases, there are no known roost sites within the local area (12-kilometre radius). The closest known roost site for black cockatoo species being approximately 34.50 kilometres northwest of the application area. No evidence of roosting by black cockatoo species was observed during the black cockatoo habitat assessment (Aurora Environmental, 2022). Roosting typically occurs within suitable trees that are in close proximity to an important water source and within an area of quality foraging habitat (Commonwealth of Australia, 2022). Since the proposed application area does not intersect any perennial watercourses and the surrounding area contains sparsely distributed foraging habitat due to the historical clearing for paddocks, it is unlikely that the proposed clearing will result in the loss of significant roosting habitat for any black cockatoo species.

Based on the above assessment, the loss of 0.05 of low-quality foraging habitat is not considered to significantly impact black cockatoos.

Greater bilby

The Greater Bilby once ranged across the Australian mainland. The species range has decreased due to predation from introduced species, habitat loss and habitat degradation (DCCEEW, 2023). In Western Australia, the Greater Bilby are predominantly found within the Pilbara and Kimberly region as well as small, isolated patches within the Wheatbelt (DCCEEW, 2023). The bilby is known to inhabit semi-arid shrublands, woodlands, hummock and tussock grasslands, and many other environments (DCCEEW, 2023). The Greater Bilby is a crepuscular species avoiding the heat of the day in burrows and emerging at night to forage. They are omnivorous, favouring termites, seeds, fungi and fruit (DCCEEW, 2023). Due to the extensively cleared landscape surrounding the application area, and the high risk of predation that this brings (DCCEEW, 2023), it is unlikely that the Greater Bilby would be found within the application area.

Quenda

In their natural habitat, quenda live in dense understories in swampland areas, Banksia and Jarrah woodlands. However, quendas have adapted to urban and suburban habitats in recent years (DEC, 2012a). According to available databases, the closest quenda record is 0.64 kilometres from the application area. As the application area is predominantly a mixed heath with scattered tall shrubs Acacia spp., Proteaceae and Myrtaceae, quenda may occasionally traverse the application area as they move through the landscape. Given the extent of the clearing proposed, the application area is not considered significant habitat for quenda.

Numbat

This species is primarily found in Jarrah forests and woodlands, as well as in the Wheatbelt region. The Numbat spends most of its day searching for termites and will dig up underground galleries or scratch bark and decayed wood rather than directly digging termite mounds (DBCA, 2021). When the Numbat feeds, it seeks cover in shrubs,

hollows, and burrows to avoid predators (DBCA, 2021). Within a 10-kilometre buffer of the application site, there have been sightings of the Numbat in similar environments. Spatial data indicated that the closest recording of a Numbat is 0.64 kilometres from the application area. The surrounding area contains decaying wood and dense shrubs (see Appendix E), ideal habitats for the Numbat. However, due to the extensively cleared surrounding landscape, it is unlikely that the Numbat will utilise the application area more than transitorily when searching for a denser environment.

Western brush wallaby

The western bush wallaby's optimum habitat is open forests/woodlands, particularly favouring seasonally wet flats with low grasses and open scrubby thickets. It is also found in some areas of mallee and heathland and is uncommon in karri forests (DEC, 2012b). The three most common dietary flora are *Carpobrotus edulis*, *Cynodon dactylon*, and *Nuytsia floribunda*. The closest individual of western bush wallaby was recorded approximately 0.64 kilometres from the application area. The application area is not within a seasonally wet flat. Noting the sparseness of the surrounding vegetation, the lack of preferred food within the application area, the abundant weed species and surrounding cleared environments, it is unlikely that the western brush wallaby utilises the application area.

Threatened and Priority Ecological Community

According to Aurora Environmental (2022), the area proposed to be cleared contains species that indicate the presence of the Eucalypt woodlands of the Western Australian Wheatbelt TEC. This TEC is synonymous with the Priority 3 Priority Ecological Community (PEC) as listed by the Department of Biodiversity, Conservation and Attractions. The amount of vegetation that represents the TEC/PEC within the application area is approximately 0.005 hectares (Figure 6). Due to the small amount of clearing of the TEC/PEC, it is unlikely that the clearing will significantly impact the survival or maintenance of the surrounding community. Weed and dieback management measures will mitigate against any impacts to the adjacent TEC/PEC.

Conclusion

Based of the above assessment, the proposed clearing is unlikely to significantly impact any conservation significant fauna, outside of the displacement of individuals that may be present at the time of clearing. The amount vegetation proposed to be cleared that is classified as a TEC/PEC is not considered significant to impact the survival or maintenance of the surrounding community.

Conditions

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

- Directional clearing, which requires slow, progressive, one directional clearing to allow terrestrial fauna to disperse ahead of the clearing activity should they occur on site at the time of clearing.
- Dieback and weed control, which ensures protocols are put in place to limit the introduction and transportation of dieback- and weed-affected materials

3.2.2. Significant remnant vegetation and conservation areas (extensively cleared) - Clearing Principle (e)

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 application area is located within the Avon Wheatbelt IBRA Bioregion which retains approximately 18.51 per cent of its pre-European vegetation extent (Government of Western Australia, 2019). The application area is mapped within Beard vegetation association 967, which retains approximately 15.23 per cent of pre-European vegetation extent. Within a 10-kilometre radius of the application area, there is approximately 17.36 per cent of pre-European vegetation extent remaining. Given the above, the application area is considered to be a remnant of vegetation within an extensively cleared landscape. Noting the application area contains the presence of a TEC/PEC, the vegetation proposed to be cleared is considered a significant remnant within an extensively cleared landscape.

Conclusion

Based on the above assessment, the proposed clearing will result in the loss of 0.05 hectares of native vegetation that is significant as a remnant of native vegetation in an area that has been extensively cleared.

For the reasons set out above, it is considered that the impacts of the proposed clearing to significant remnant vegetation constitutes a significant residual impact. In accordance with the Government of Western Australia's

Environmental Offsets Policy (2011) and Environmental Offsets Guidelines (2014), this significant residual impact has been addressed through the conditioning of environmental offset requirements, as outlined under Section 4.

Conditions

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

- Offset - Within 6 months of the commencement of clearing, provide to the CEO an offset revegetation management plan for the revegetation of 0.14 hectares of native vegetation within the local area. Local area defined as 20km radius from the proposed clearing.

3.3. Relevant planning instruments and other matters

On 10 August 2022, DWER received a clearing permit application (CPS 9845/1) from Flat Rocks One Wind Farm Pty Ltd as the trustee for FRWF for the proposed clearing of 1.77 hectares, later revised during assessment to 1.06 hectares of native vegetation, to facilitate the construction of the FRWF Stage 1 project and associated supporting infrastructure, including wind turbine footprints and blade clearance areas, permanent access tracks, and cable alignments within various properties as Borderdale, Broomehill West, and Lumeah.

It is understood that the clearing of 0.05 hectares of native vegetation in CPS 10124/1 will help facilitate the FRWF project. The clearing requiring wind turbine clearance during transportation is the responsibility of Rex J Andres Pty Limited. It is understood that CPS 10124/1 and CPS 9845/1 are intrinsically interlinked, with CPS 10124/1 being integral to the overarching facilitation of the FRWF project.

It should be noted that FRWF eliminated from their clearing permit the requirements for the transportation of wind turbine blades from their application. This consideration was acknowledged when considering the cumulative impacts of the proposed clearing for the FRWF project.

It has come to DWERs attention that Rex J Andrews has started the transportation of wind turbines on an alternate route not requiring clearing. However, this route has become a danger on the motorway and changed the flow of the road network. As such, DWER has granted this clearing permit ahead of the finalisation of the rehabilitation offset to ensure the safety of the road user on the State's road network. The offset will be required to be submitted to the CEO within six months of undertaking the clearing.

The Aboriginal heritage site (Tunney fish traps ID 962) has been mapped within the application area. It is the permit holder's responsibility to comply with the *Aboriginal Heritage Act 1972* (WA) and ensure that no Aboriginal Sites of Significance are damaged through the clearing process.

4 Suitability of offsets

Through the detailed assessment outlined in Section 3.2 above, the Delegated Officer has determined that the following significant residual impacts remain after the application of the avoidance and mitigation measures summarised in Section 3.1:

- The loss of 0.05 hectares of native vegetation that is significant as a remnant of native vegetation in an area that have been extensively cleared.

Due to the extenuating circumstances of the urgent need to ameliorate the impacts to the road network (traffic build-up), the applicant will have a post-approval offset. As such within 6 months of the commencement of clearing, the applicant will need to provide to the CEO an offset revegetation management plan for the revegetation of 0.14 hectares of native vegetation within the "local area". The local area defined as 20km radius from the proposed clearing.

In assessing whether the proposed offset is adequately proportionate to the significance of the habitat values being impacted, DWER undertook a calculation using the WA Environmental Offsets Metric. DWER assumed a number of the variables input into the calculator as an offset plan had not been provided. The calculation determined that the revegetation of at least 0.14 hectares of native vegetation in a Degraded (Keighery, 1994) condition that is significant as a remnant within an area that has been extensively cleared is adequate to counterbalance the significant residual impacts.

The Delegated Officer considers that the proposed offset is consistent with the Environmental Offsets Policy (2011) and the Environmental Offsets Guidelines (2014), and adequately counterbalances the significant residual impacts to significant remnant vegetation. The justification for the values used in the offset calculation is provided in Appendix D.

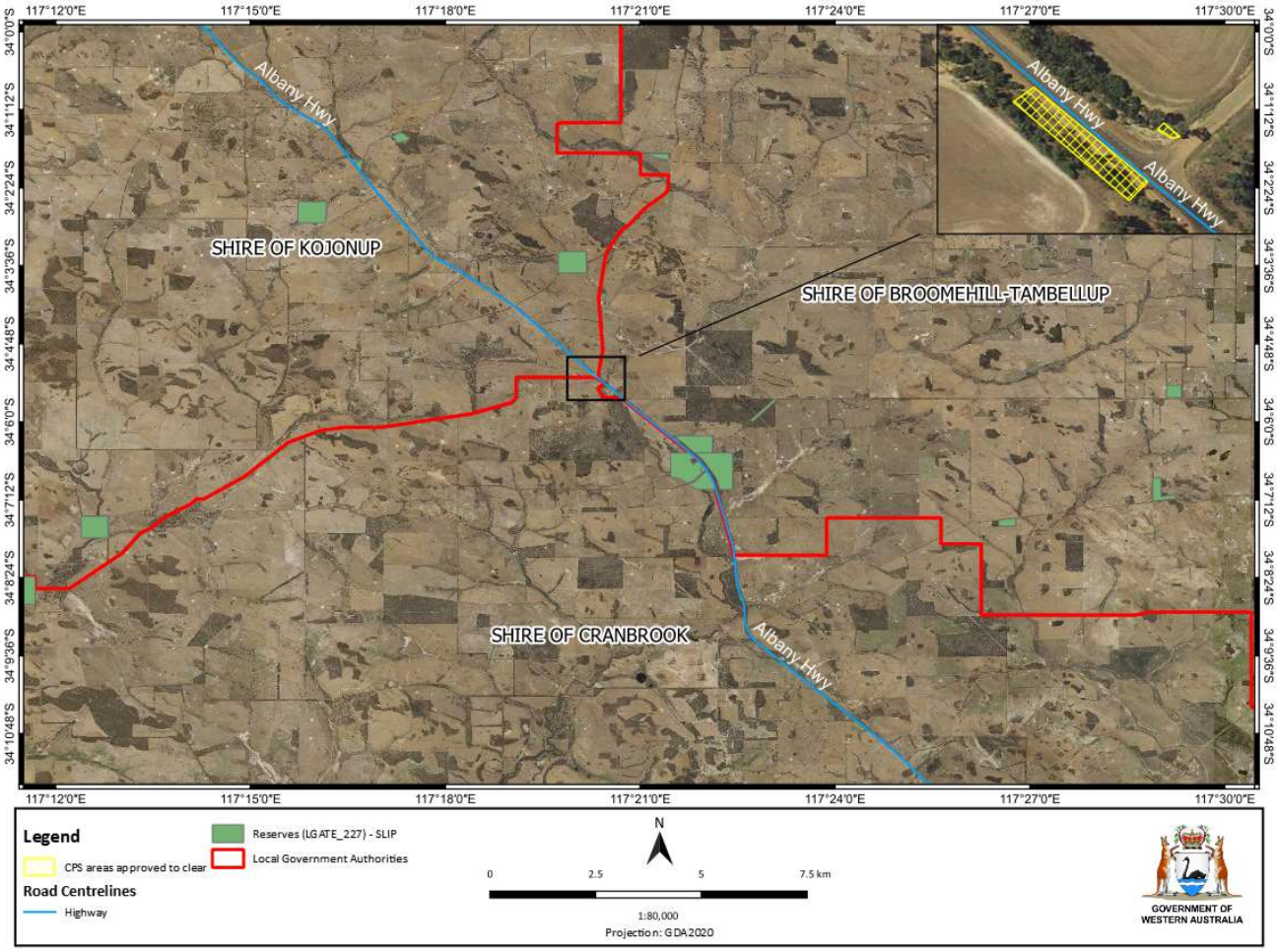


Figure 5: Location of surrounding reserves (green) and native vegetation with the potential for revegetation offset, in relation to the application area for CPS 10124/1 (cross-hatched yellow).

End

Appendix A. Site characteristics

A.1. 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 the department 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.

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td>Local context</td><td>The area proposed to be cleared is a 0.05-hectare isolated patch of native vegetation and two native trees in the intensive land use zone of Western Australia.

Spatial data indicates the local area (10-kilometre radius from the centre of the area proposed to be cleared) retains approximately 17.35 per cent of the original native vegetation cover.</td></tr>
<tr><td>Ecological linkage</td><td>The application area is part of two joining DBCA roadside ecological linkages, 7136, managed by the Shire of Kojonup, and 8746, managed by the Shire of Tambellup. Noting the small size of the clearing, the ecological linkages are not likely to be severed.</td></tr>
<tr><td>Conservation areas</td><td>There are seven conservation areas within a 10-kilometre radius of the application area. These include:

<table>
<tr><th>Conservation area name</th><th>Conservation object ID</th><th>Distance from application (km)</th><th>Direction from application area</th></tr>
<tr><td>Conservation covenant</td><td>2545</td><td>2.03</td><td>South</td></tr>
<tr><td>DBCA nature reserve</td><td>187</td><td>3.28</td><td>Southeast</td></tr>
<tr><td>Conservation covenant</td><td>3546</td><td>3.74</td><td>South</td></tr>
<tr><td>Conservation covenant</td><td>3545</td><td>4.51</td><td>Southeast</td></tr>
<tr><td>Conservation covenant</td><td>304</td><td>5.92</td><td>North</td></tr>
<tr><td>Conservation covenant</td><td>2776</td><td>6.25</td><td>North</td></tr>
<tr><td>Conservation covenant</td><td>2377</td><td>9.51</td><td>Southeast</td></tr>
</table>

The proposed clearing is unlikely to have any adverse effects on any conservation areas within the radius of the application area.</td></tr>
<tr><td>Vegetation description</td><td>Photographs and a desktop assessment (Aurora environmental, 2022) indicate that the vegetation within the proposed clearing area consists of several weed species and native species. The native species include Eucalyptus occidentalis, Eucalyptus Wandoo, Melaleuca sp., Acacia saligna, Acacia rostellifera, Acacia microbotrya, Jacksonia sternbergiana, Callistemon phoeniceus and Casuarina obesa. Representative photos are available in Appendix E.

This is mostly consistent with the mapped vegetation type across the application are:

- Tambellup (967) which is described as a mixed heath with scattered tall shrubs Acacia spp., Proteaceae and Myrtaceae.

The mapped vegetation type retains approximately 17.36 per cent of the original extent (Government of Western Australia, 2019).</td></tr>
<tr><td>Vegetation condition</td><td>Aurora Environmental (2022) identified the native vegetation within the application area to predominately range from Good to degraded condition with some parts of the application area in Very good (Keighery, 1994).

The full Keighery (1994) condition rating scale is provided in Appendix C. Representative photos are available in Appendix E.</td></tr>
<tr><td>Climate and landform</td><td>The climate experienced in the application area is Mediterranean, characterized by hot and dry summers and cool and wet winters. According to the Bureau of Meteorology (2022), the average annual rainfall in the application area is 532 millimetres, mostly falling between May and August (Bureau of Meteorology, 2022).

The elevation of the application area is 250 meters Isohyet. The surrounding elevation is 290- 300 meters Isohyet with the application area being the lowest topography.</td></tr>
</table>

<table>
<tr><th>Characteristic</th><th>Details</th></tr>
<tr><td>Soil description</td><td>The soil across the application area is mapped as:

<table>
<tr><td>Name</td><td>Carrolup 6 Subsystem</td></tr>
<tr><td>Soils</td><td>257Ca_6</td></tr>
<tr><td>Description</td><td>Broad valley flats and narrow alluvial plains. Soils are mainly grey deep and shallow sandy duplex soils. Brown deep sands occur in small dunes along the river.</td></tr>
</table></td></tr>
<tr><td>Land degradation risk</td><td>The degradation risk factors mapped over the application area are detailed below:

<table>
<tr><th></th><th>Carrolup 6 Subsystem 257Ca_6</th></tr>
<tr><td>Wind erosion</td><td>M2 30-50 per cent of the map has a high to extreme risk</td></tr>
<tr><td>Water erosion</td><td>L1 <3 per cent of the map has a high to extreme risk</td></tr>
<tr><td>Salinity risk</td><td>H1 50-70 per cent of the map has a high to extreme risk</td></tr>
<tr><td>Phosphorous export</td><td>M1 10-30 per cent of the map has a high to extreme risk</td></tr>
<tr><td>Waterlogging</td><td>H1 50-70 per cent of the map has a high to extreme risk</td></tr>
</table>
<table>
<tr><td>Subsurface acidification</td><td>H2 >70 per cent of the map has a high to extreme risk</td></tr>
<tr><td>Acid sulphate soils</td><td>Not mapped</td></tr>
</table>
<table>
<tr><td>Flooding</td><td>M1 10-30 per cent of the map has a high to extreme risk</td></tr>
<tr><td>Floodplains</td><td>No flood plains area.</td></tr>
</table></td></tr>
<tr><td>Waterbodies</td><td>The desktop assessment and aerial imagery indicated that the application area does not intersect or occur within any waterbodies. Natural and artificial perennial waterbodies surround the application area. The closest wetland to the application area is a natural perennial waterbody located approximately 230 metres northeast of the application area, separated by historically cleared agricultural land and road infrastructure.

The application area does not transect any water resources proclaimed under either the Rights in Water and Irrigation Act 1914 (RIWI Act), Metropolitan Water Supply Sewerage and Drainage Act 1909, or Country Areas Water Supply Act 1947 (CAWS Act).</td></tr>
<tr><td>Hydrogeography</td><td>
<table>
<tr><td>Hydrological Zone</td><td>Southern Zone of Rejuvenated Drainage</td></tr>
<tr><td>Basin</td><td>Frankland River 605</td></tr>
<tr><td>Hydrographic Catchment</td><td>Nornalup Inlet Frankland River</td></tr>
</table>
<table>
<tr><td>RIWI Act Surface Water and Irrigation District</td><td>No</td><td></td></tr>
<tr><td>RIWI Act Rivers</td><td>No</td><td></td></tr>
<tr><td>RIWI Act Groundwater Areas</td><td>No</td><td></td></tr>
<tr><td>CAWS Act Clearing Control Catchment</td><td>No</td><td></td></tr>
<tr><td>Public Drinking Water Source Areas</td><td>No</td><td></td></tr>
<tr><td>Wellhead Protection Zone</td><td>No</td><td></td></tr>
<tr><td>Reservoir Protection Zone</td><td>No</td><td></td></tr>
</table>
The salinity of the application area is mapped at 7000 - 14000 total dissolved solids milligrams per litre.</td></tr>
<tr><td>Flora</td><td>According to the available database, six conservation-significant flora species have been recorded within the local area (10-kilometre buffer). Comprising two Priority 3, three Priority 4 and one threatened flora taxa.
Based on the soil characteristics, vegetation type, habitat features and distance from the application area, it is unlikely any significant conservation flora are to be found within the application area. No conservation signficant flora were found within the application area (Aurora Environmental, 2022).</td></tr>
</table>

Characteristic	Details
Ecological communities	Aurora Environmental (2022) identified that the patch of native vegetation on the eastern side of Albany Highway does meet the criteria to be identified as Eucalypt woodlands of the Western Australia Wheatbelt TEC/PEC and is in Very good Keighery condition.
Fauna	According to the available database, 12 conservation significant fauna species have been recorded within the local area comprising three Priority 4, three Endangered, four Vulnerable, and two critically endangered fauna taxa. The application area is within the distribution of the Carnaby's Cockatoo (*Zanda latirostris*) and the Forest Red-tailed Black-cockatoo (*Calyptorhynchus banksii naso*). There are 25 records of White-tailed black cockatoo breeding hollows within 12 kilometres of the application area, with the closest record being approximately 2.49 kilometres south of the application area. No black cockatoo roosts are recorded within 12- kilometres of 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*					
Avon Wheatbelt	9,517,109.95	1,761,187.42	18.51	174,980.68	1.84
Vegetation complex					
Beard vegetation association 967	174,907.84	26,637.79	15.23	381.03	0.22
Local area					
10-kilometre radius	31,676.66	5,498.13	17.36	-	-

*Government of Western Australia (2019a)

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]
Banksia acuminata	4	N	Y	N	1.94	2	N
Bossiaea spinosa	3	N	Y	Y	3.33	1	N
Caladenia integra	4	Y	Y	N	6.48	1	N
Caladenia x triangularis	4	N	Y	N	3.73	1	N
Gastrolobium lehmannii	T	Y	Y	N	3.16	9	N
Melaleuca micromera	3	Y	Y	N	2.45	2	N

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

A.4. Fauna analysis table

Scientific name	common 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?
Birds							
Zanda latirostris	Carnaby's cockatoo	EN	Y	Y	2.61	22	N
Calyptorhynchus banksii naso	Forest red-tailed black cockatoo	VU	Y	Y	9.45	1	N
Leipoa ocellata	Malleefowl	VU	N	Y	8.54	3	N
Calyptorhynchus sp. 'white-tailed black cockatoo'	White-tailed black cockatoo	EN	Y	Y	8.38	1	N
Mammals							
Bettongia penicillata ogilbyi	Boodie (inland)	CR	N	Y	0.64	4	N
Dasyurus geoffroii	Chuditch	VU	N	Y	0.64	2	N
Isoodon fusciventer	Quenda	P4	Y	Y	0.64	4	N
Macrotis lagotis	Greater bilby	VU	Y	Y	0.64	10	N
Myrmecobius fasciatus	Numbat	EN	Y	Y	0.64	4	N
Notamacropus eugenii derbianus	Tammar wallaby	P4	N	Y	0.64	8	N
Notamacropus irma	Western brush wallaby	P4	Y	Y	0.64	14	N
Pseudocheirus occidentalis	Brush-tailed bettong	CR	N	N	0.64	2	N

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

A.5. Ecological community analysis table

Community 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 (m)	Number of known records (total)	Are surveys adequate to identify? [Y, N, N/A]
Eucalypt woodlands of the Western Australian Wheatbelt	Priority 3	Y	Y	Y	103.86	442	Y

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

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."* Assessment: The area proposed to be cleared consists of a small footprint of roadside remnant native vegetation in a degraded to very good Keighery condition and is not likely to be floristically diverse. Aurora Environmental 2022	May be at variance	Yes *Refer to Section 3.2.1, above.*

Assessment against the clearing principles	Variance level	Is further consideration required?
survey identified that the patch of native vegetation on the eastern side of Albany Highway meets the criteria for a PEC. Furthermore, the application area contains foraging habitat for black cockatoo species.		
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."* Assessment: The area proposed to be cleared contains foraging habitat for Carnaby's cockatoo and Forest red-tailed black cockatoo.	At variance	Yes *Refer to Section 3.2.1 above.*
Principle (c): *"Native vegetation should not be cleared if it includes, or is necessary for the continued existence of, threatened flora."* Assessment: The area proposed to be cleared is unlikely to contain habitat for Threatened flora species.	Not at variance	No
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."* Assessment: According to spatial data and Aurora Environmental (2022), the area proposed to be cleared contains a small 0.005 hectare area representative of the Eucalyptus Woodlands of the Western Australian Wheatbelt.	May be at variance	Yes *Refer to Section 3.2.1 above.*
Environmental value: significant remnant vegetation and conservation 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."* Assessment: The extent of the mapped vegetation type in the local area is inconsistent with the national objectives and targets for biodiversity conservation in Australia as the surrounding native vegetation has been extensively cleared..	At variance	Yes *Refer to Section 3.2.2, above.*
Principle (h): *"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."* Assessment: Given the distance to the nearest conservation area, the proposed clearing is not likely to have an impact on the environmental values of adjacent or nearby conservation areas.	Not at variance	No
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."* Assessment: Given no water courses or wetlands are recorded within the application area and the small footprint of the application area, the proposed clearing is unlikely to impact an environment associated with a watercourse or wetland.	Not at variance	No
Principle (g): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause appreciable land degradation."* Assessment: The mapped soil across the application area is moderately susceptible to wind erosion and subsurface acidification. Furthermore, the mapped soil is highly susceptible to salinity risk and phosphorous export. However, noting the Good to the Degraded (Keighery, 1994) condition of the majority of vegetation across the application area, the small 0.05 hectares of vegetation within a linear footprint, and the proximity of the application area to a road, the proposed clearing is not likely to have an appreciable impact on land degradation.	Not likely to be at variance	No

Assessment against the clearing principles	Variance level	Is further consideration required?
Principle (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."* Assessment: Given the extent and the purpose of the clearing, and no watercourses or wetlands are recorded within the application area, the proposed clearing is unlikely to impact the quality of surface or underground water.	Not at variance	No
Principle (j): *"Native vegetation should not be cleared if the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding."* Assessment: The mapped soils and topographic contours in the surrounding area do indicate that the surrounding environment is prone to minimal flooding. However, noting the limited 0.05-hectare extent clearing, the proposed clearing is unlikely to contribute to increased incidence or intensity of flooding or contribute to waterlogging.	Not likely to be at variance	No

Appendix C. Vegetation condition rating scale

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

Considering its location, the scale below was used to measure the condition of the vegetation proposed to be cleared. This scale has been extracted from

Keighery, B.J. (1994) *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. Offset calculator value justification.

D.1. Significant Remnant Vegetation

WA Environmental Offset Calculator
Rational for scores used in the offset calculator.

Calculation	Score (Area)	Rationale
Conservation significance		
Description	Significant remnant vegetation within an area that has been extensively cleared	The proposed clearing will impact 0.05 hectares of native vegetation that is significant as a remnant within an area that has been extensively cleared.
Type of environmental value	Vegetation/habitat	Significant remnant vegetation
Conservation significance of environmental value	Terrestrial native vegetation complex - <30% extent remaining in the bioregion	The vegetation within the application area occurs within a local area (10-kilometre radius) that retains approximately 17.36 per cent of its original vegetation extent. The application area also contains a Beard vegetation association 967 that retains approximately 15.23 per cent of its original vegetation extent. Finally, the application area retains 18.51 per cent of its original vegetation extent in the Avon Wheatbelt.
Landscape level value impacted	Yes/No	The impact is to an area of significant remnant vegetation in hectares.
Significant impact		
Description	Clearing of native vegetation is significant as a remnant within an area that has been extensively cleared	Native vegetation that comprises native vegetation that is significant as a remnant within an area that has been extensively cleared
Significant impact (hectares)	0.05	Given that the local area retains 17.36 per cent of its original vegetation extent, the entire application area is considered to significantly contribute to the ecological function of native vegetation in the local area.
Quality (scale)	4.00	Based on the available information from the black cockatoo and TEC Reconnaissance survey (Aurora Environmental, 2022). the vegetation within the application area is split on either side of Albany Highway. The vegetation on the eastern side of the highway predominantly consists of Two *Eucalyptus occidentalis* with an understory of *Melaleuca sp*. in a very good (Keighery) condition. The vegetation on the western side of the highway predominantly consists of a canopy of Eucalyptus wandoo and Eucalyptus occidentalis with an understory of *Jacksonia sternbergiana*, *Callistemon phoeniceus*, *Casuarina obesa*, and A*cacia* species, not native to the Wheatbelt. The application is mapped as being predominantly in a degraded condition.
Offset		
Description	Revegetation	Rehabilitation of an offset site within the surrounding area of the application site through infill planting to increase the native vegetation extent in an extensively cleared landscape, representative of the region (e.g., wandoo and yate representative of Beard vegetations association 967).
proposed offset (area in hectares)	0.14	Rehabilitation of 0.14 hectares of native vegetation that is significant as a remnant in an area that has been extensively cleared is required to offset the residual impacts of this value.
Current quality of offset site	2.00	It is assumed that the remnant vegetation within the offset site will be in degraded (Keighery,1994) condition. The value may be subject to change depending on the condition/quality of the proposed rehabilitation offset site.
Future quality WITHOUT offset	2.00	It is not expected that the quality of the remnant vegetation within an offset site will significantly change over a two-year period in the absence of the offset.
Future quality WITH offset	5.00	It is assumed that with appropriate rehabilitation measures, the remnant vegetation within the site will improve in condition and quality. This value is subject to change depending on the quality of the rehabilitation plan prepared.

Time until ecological benefit (years)	10.00	It is assumed that the benefits of rehabilitation to increase native vegetation extent in an extensively cleared landscape will be available after ten (10) years.
Confidence in offset result (%)	0.80	There is a moderate level of confidence that the offset will achieve the predicted result, given that rehabilitation will be undertaken in accordance with a rehabilitation plan following the department's Guide to preparing revegetation plans for clearing permits (2018).
Duration of offset implementation (maximum 20 years)	20.00	It is assumed the offset site will be conserved in perpetuity. Therefore, the maximum of 20 years for this field is applied.
Time until offset site secured (years)	4.00	Suitable land has not been identified at the time of assessment. Accordingly, value has been set following Table 6 of Draft procedure for environmental offset metric inputs.
Risk of future loss WITHOUT offset (%)	40.0%	Given offset site has not been identified at the time of assessment, the value has been set based on the worst-case scenario, that the rehabilitation offset site will be within a road reserve and subject to the edge effects (this value may change depending on the current tenure and land use of the area applied to be offset).
Risk of future loss WITH offset (%)	40.0%	No change in risk-of-loss has been applied given offset site has not been identified at the time of assessment and a worst-case scenario has been applied (these values may change depending on the current tenure and land use of the area applied to be cleared).
Offset ratio (Conservation area only)	NA	-

Appendix E. Photographs of the vegetation

PATCH 1 (EASTERN SIDE OF ALBANY HIGHWAY, NORTH OF WARRENUP ROAD)			
Tree Canopy Species	*Eucalyptus occidentalis*		
Dominant Understorey Species	*Melaleuca* sp. Scattered *Acacia saligna* along roadside only (not native to Wheatbelt TEC)		
% Exotic Species for Wheatbelt TEC	<30 %	Vegetation Condition	Very Good
Wheatbelt TEC (Y/N)	Y	Wheatbelt TEC Category	A

Figure 6: Application area site photos (Aurora Environmental, 2022)

PATCH 2 (EASTERN SIDE OF ALBANY HIGHWAY, SOUTH OF WARRENUP ROAD)			
Tree canopy species	none		
Dominant Understorey Species	*Acacia saligna* (not native to Wheatbelt TEC)		
% Exotic Species for Wheatbelt TEC	100 %	Vegetation Condition	Good
Wheatbelt TEC (Y/N)	N	Wheatbelt TEC Category	-

Figure 7: Application area site photos (Aurora Environmental, 2022)

PATCH 3 (WESTERN SIDE OF ALBANY HIGHWAY)			
Tree canopy species	*Eucalyptus wandoo* *Eucalyptus occidentalis*		
Dominant Understorey Species	*Acacia rostellifera* (not native to Wheatbelt TEC) *Acacia ?microbotrya* (possible ID based on seed pods alone) *Jacksonia sternbergiana* *Callistemon phoeniceus* *Casuarina obesa*		
% Exotic Species for Wheatbelt TEC	>70 %	Vegetation Condition	Degraded
Wheatbelt TEC (Y/N)	N	Wheatbelt TEC Category	-

Figure 8: Application area site photos (Aurora Environmental, 2022)

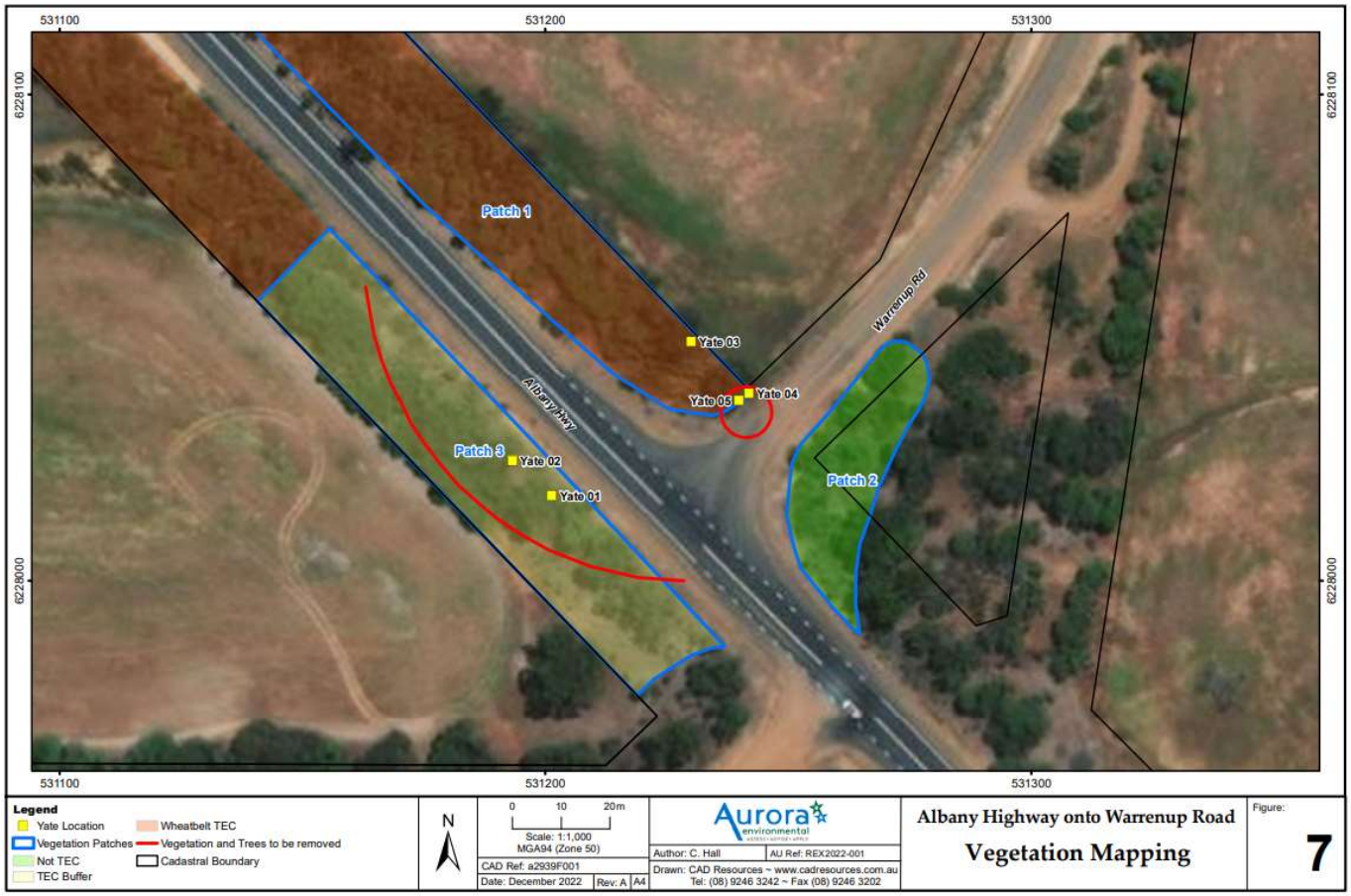


Figure 9: Albany Highway onto Warrenup Road vegetation mapping (Aurora Environmental, 2022).

Appendix F. Sources of information

F.1. GIS databases

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

- 10 Metre Contours (DPIRD-073)
- Aboriginal Heritage Places (DPLH-001)
- Aboriginal Heritage Places (DPLH-001)
- Cadastre (LGATE-218)
- Cadastre Address (LGATE-002)
- Contours (DPIRD-073)
- DBCA – Lands of Interest (DBCA-012)
- DBCA Legislated Lands and Waters (DBCA-011)
- Directory of Important Wetlands in Australia – Western Australia (DBCA-045)
- Environmentally Sensitive Areas (DWER-046)
- Flood Risk (DPIRD-007)
- Groundwater Salinity Statewide (DWER-026)
- Hydrography – Inland Waters – Waterlines
- Hydrological Zones of Western Australia (DPIRD-069)
- IBRA Vegetation Statistics
- Imagery
- Local Planning Scheme – Zones and Reserves (DPLH-071)
- Native Title (ILUA) (LGATE-067)
- Offsets Register – Offsets (DWER-078)
- Pre-European Vegetation Statistics
- Public Drinking Water Source Areas (DWER-033)
- Ramsar Sites (DBCA-010)

- Regional Parks (DBCA-026)
- Remnant Vegetation, All Areas
- RIWI Act, Groundwater Areas (DWER-034)
- RIWI Act, Surface Water Areas and Irrigation Districts (DWER-037)
- Soil Landscape Land Quality – Flood Risk (DPIRD-007)
- Soil Landscape Land Quality – Phosphorus Export Risk (DPIRD-010)
- Soil Landscape Land Quality – Subsurface Acidification Risk (DPIRD-011)
- Soil Landscape Land Quality – Water Erosion Risk (DPIRD-013)
- Soil Landscape Land Quality – Water Repellence Risk (DPIRD-014)
- Soil Landscape Land Quality – Waterlogging Risk (DPIRD-015)
- Soil Landscape Land Quality – Wind Erosion Risk (DPIRD-016)
- Soil Landscape Mapping – Best Available
- Soil Landscape Mapping – Systems
- Wheatbelt Wetlands Stage 1 (DBCA-021)

Restricted GIS Databases used:

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

F.2. References

Aurora Environmental (2022) *Flat Rock Wind Farm Turbine Transport Tec and Black Cockatoo Reconnaissance, Lumeah*. *Supporting information for clearing permit application CPS* 10124/1, Received 23 March 2023 (DWER Ref: DWERDT760987).

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