FLORA, VEGETATION AND FAUNA ASSESSMENT

OF THE KOJONUP WIND FARM

SURVEY AREA

Prepared for

Kojonup Wind Farm Pty Ltd

Prepared by

Mattiske Consulting Pty Ltd

October 2025

MHE2501/78/25

Mattiske Consulting Pty Ltd

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Report	Version	Prepared By	Reviewed By	Submitted to Client	
				Date	Copies
Internal Review	V1	K. Smith & E. Mattiske	E. Mattiske	-	-
Draft Report released for Client Review	V2	K. Smith & E. Mattiske	E. Mattiske	14/07/2025	Email
Final Report	V3	E. Mattiske	E. Mattiske	15/10/2025	Email

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1. SUMMARY

Mattiske Consulting Pty Ltd was commissioned by the Kojonup Wind Farm Pty Ltd to undertake a review of the flora, vegetation and fauna values on the proposed Kojonup Wind Farm, Figure 1. The proposed development occurs primarily within cleared agricultural areas. The survey effort concentrated on desktop reviews, an assessment of the main remnants, paddock and roadside trees that may need pruning or clearing and roadside vegetation that may be disturbed in localised areas by vehicle movement and the installation of the wind farm facilities.

Survey effort was spread over multiple trips in February, July, November and December 2023 and January, July, September and October 2024 with a total of 23 field days. Most of the remnant vegetation assessments were undertaken by senior and experienced botanists from Mattiske Consulting and Dr Mattiske. The tree assessments were undertaken by Dr Mattiske, Sarah Rankin (Kojonup Wind Farm Pty Ltd) and Jen Willcox (Western Wildlife). The assessments of the trees assisted in the avoidance of most direct and indirect impacts during the design phases of the wind farm layout and associated infrastructure and access routes. Only a few limited areas supported native vegetation, and these were avoided in the proposed development.

A total of 179 vascular plant taxa from 119 plant genera and 45 plant families were recorded within the Kojonup Wind Farm survey area during 2023 and 2024. Most taxa were recorded within the Myrtaceae (21 taxa), Fabaceae (20 taxa), Poaceae (19 taxa), Proteaceae (15 taxa) and Asteraceae (12 taxa) families. Twenty-one introduced (weed) species were recorded in 2023 and 2024. None of the introduced species are declared pests (DPIRD 2025) or Weeds of National Significance (DCCEEW 2025e)

No threatened flora species pursuant to subsection (2) of section 23F of the *Wildlife Conservation Act (1950)* and as listed by the Department of Biodiversity, Conservation and Attractions were recorded within the Kojonup Wind Farm survey area. No plant taxa listed as Threatened pursuant to Schedule 1 of the *Environment Protection and Biodiversity Conservation Act 1999* were recorded during the survey within the proposed Kojonup Wind Farm survey area.

One Priority 4 species (*Xanthorrhoea brevistyla* (P4) was recorded in the woodlands of *Eucalyptus wandoo* with patches of *Allocasuarina huegeliana* over low subshrubs and introduced grasses on sandy soils and near shallow granites on mid and upper slopes. This species was restricted in occurrence near the proposed facilities on the edges of a paddock and at the time of the development it should be feasible to avoid the plants.

Nine vegetation communities were defined and mapped within the Kojonup Wind Farm survey area. The native plant communities were restricted in occurrence due to the degree of land clearing and historical agricultural activities in the area. The design of the project layout avoided the more intact areas of native vegetation. More intact native vegetation is intended to be avoided. The wind turbines are to be established in the cleared paddocks which are mainly degraded or completely degraded.

The threatened ecological community "*Eucalypt Woodlands of the Western Australian Wheatbelt"* as defined by the Department of Climate Change, Energy, the Environment and Water, 2025c and 2025d) under the *Environment Protection and Biodiversity Conservation Act 1999* was not located in the Kojonup Wind Farm survey area. The priority ecological community "Claypans with mid dense shrublands of *Melaleuca lateritia* over herbs" as delineated by the Department of Biodiversity, Conservation and Attractions (2025b) was located outside the Kojonup Wind Farm survey area. The areas of remnant bushland are being avoided in the proposed development on the project area. The few roadside verges that include some crossings of infrastructure support some native trees but all fall below the criteria as they are less than 5m wide, they lack native plant cover and every effort was made to place alignments in the gaps between the trees, or the trees occurred on exposed or shallow granite outcrops and the condition of the vegetation was degraded to completely degraded.

The tree species include mainly *Eucalyptus wandoo, Eucalyptus rudis, Eucalyptus marginata* and *Corymbia calophylla*. Several areas of *Eucalyptus astringens* were recorded, however these stands are outside any direct or indirect impact areas.

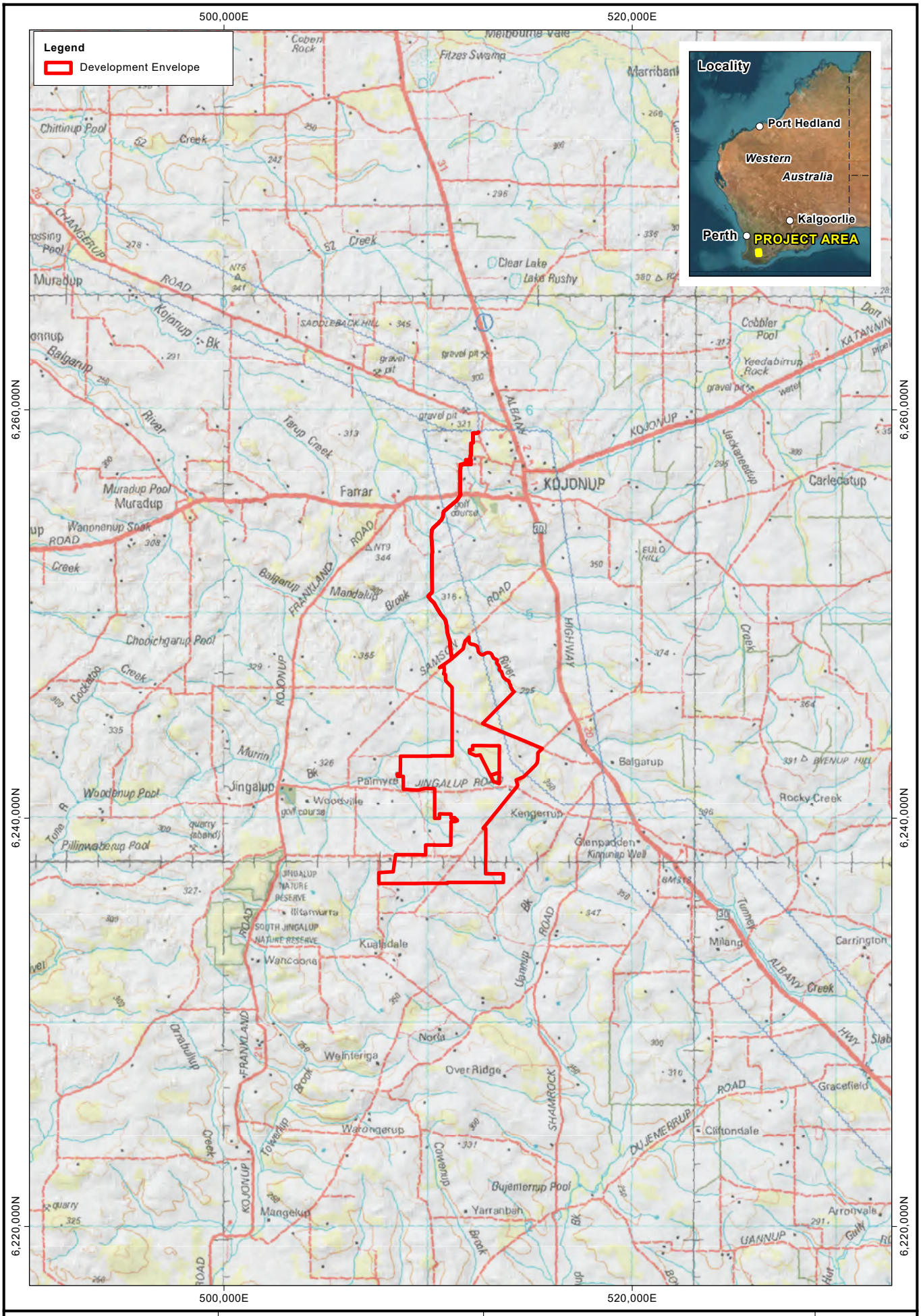
As the proposal has minimal direct or indirect impact on the remnant areas of native vegetation, the impacts are not considered to be significant with the proposed layout of the wind turbines and the associated cables which primarily are within the degraded and completely degraded areas.

Although a range of potential flora and fauna values were sourced from a desktop assessment in the vicinity of the Kojonup Wind Farm survey area; in view of the degree of degradation, and as the area of native vegetation are outside the development footprints, there should not be any significant issues in relation to the native flora and vegetation values.

Should the development of the Kojonup Wind Farm go ahead the following recommendations are made as a means of minimizing the impacts of infrastructure activities on the flora, vegetation and fauna values in the area:

- Limit ground disturbance and clearing of vegetation to designated areas and access routes, avoiding habitat trees (larger trees and trees with hollows) wherever possible;
- Maintain existing drainage systems, ensuring tracks and other infrastructure areas do not disrupt or divert historic water flow patterns;
- Remove and stockpile topsoil, log debris and leaf litter where possible for use in future rehabilitation programs. If possible, stockpiled topsoil should be directly replaced on disturbed areas;
- Minimise soil disturbance during clearing and practice standard vehicle hygiene to ensure introduced (exotic) species do not become established within the Kojonup Wind Farm survey area; and
- Minimize all threatening processes to native vegetation.

In summary, there should be no impediments to the development of the wind farm facilities providing the remnant vegetation areas (including less disturbed road verges) are not disturbed.



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Mattiske Consulting Pty Ltd
28 Central Road, Kalamunda WA 6076 ~ Tel: 9257 1625 ~ Fax: 9257 1640

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Kojonup Wind Farm
Locality

Figure:

1

2. INTRODUCTION

Mattiske Consulting Pty Ltd was commissioned by Kojonup Wind Farm Pty Ltd to undertake a flora and vegetation survey of the proposed Kojonup Wind Farm, Figure 1.

The proposed Kojonup Wind Farm survey area is located slightly west and south- west of the township of Kojonup with a northern connection into the supply substation located north of Kojonup.

2.1 Climate

The Kojonup Wind Farm survey area lies within the Southern Jarrah Forest Subregion on the border of the Avon Wheatbelt subregion. Beard (1990) described the climate of the Southern Jarrah Forest as warm mediterranean with winter precipitation between 600 and 1200mm and 5 - 6 dry months per year. The climate of the Avon Wheatbelt is described as dry, warm mediterranean, with winter precipitation of 300 – 650mm and 7 – 8 dry months per year (Beard 1990). The rainfall in Kojonup in recent years has been declining from 732.74mm in 2021 to 532.2mm in 2022 to 396.8mm in 2023 to 424.4mm in 2024, Figure 2a. This trend has been recorded in a range of sites in the southwest of Western Australia and the Wheatbelt including at Kojonup as illustrated in Figure 2b. Note several years the levels may reflect a slightly lower recording due to missing data for several months. Such fluctuations have been recorded previously at Kojonup.

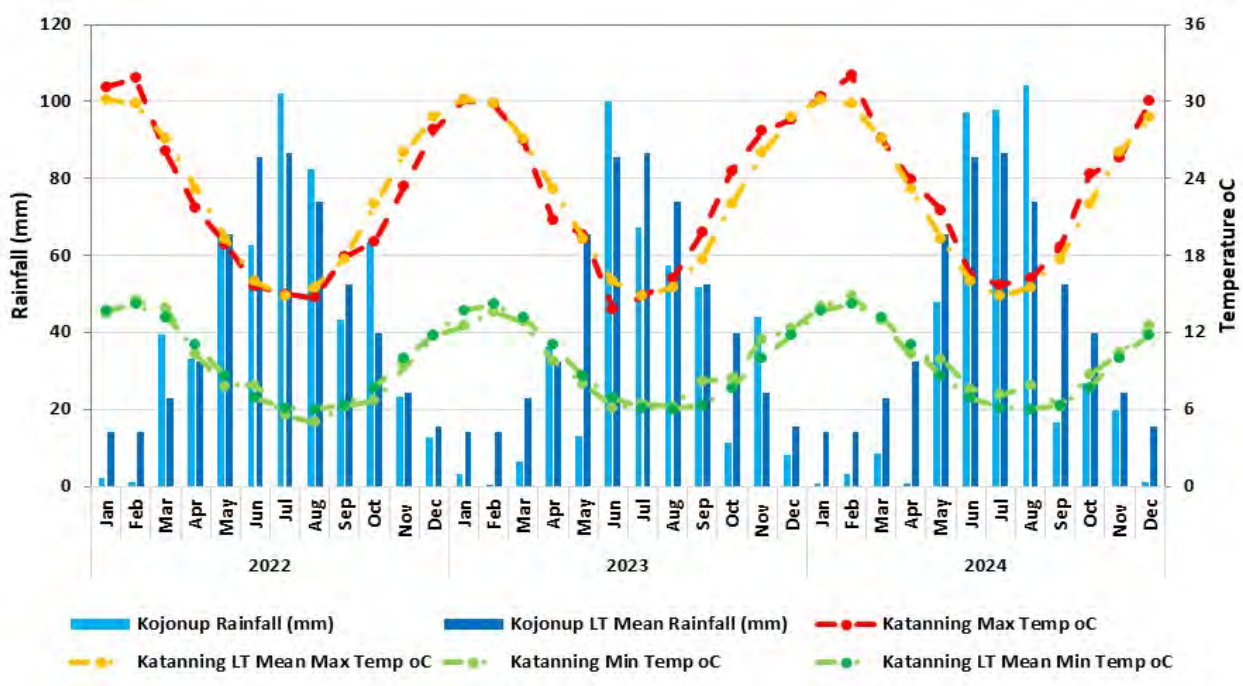


Figure 2a: Rainfall data for Kojonup and temperature data for Katanning (Bureau of Meteorology 2025)
Long term average rainfall and temperature data, together with monthly rainfall and average maximum and minimum temperature data for the period January 2022 to December 2024 are shown.

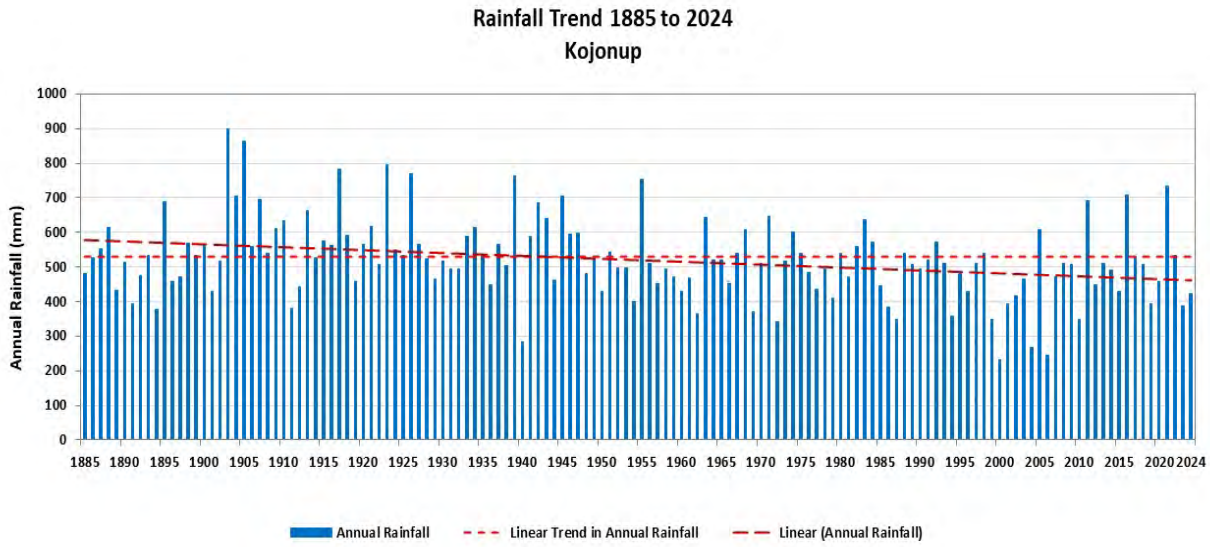


Figure 2b: Rainfall trend data for Kojonup since 1885 (Bureau of Meteorology 2025)

2.2 Regional Vegetation

The Kojonup Wind Farm survey area is located within the Southern Jarrah Forest subregion near the western border of the Avon Wheatbelt region. The Southern Jarrah Forest subregion is characterised by jarrah forest on duricrusted plateaus and loam soils of valleys, with marri-wandoo woodlands on laterite-free soils (Beard 1990). Typical vegetation of the Avon Wheatbelt region includes scrub-heath on sandplains, *Acacia-Casuarina* thickets on ironstone gravels, woodlands of *Eucalyptus loxophleba*, *Eucalyptus salmonophloia* and *Eucalyptus wandoo* on varying soil types (Beard 1990). The proximity of Kojonup Wind Farm to the western border of the Avon Wheatbelt region indicates that characteristics of both regions are likely to be present in the survey area.

2.3 Western Australia's Flora – A Legislative Perspective

Western Australia has a unique and diverse flora and is recognised as one of the world's 25 biodiversity hotspots (Myers *et al*. 2000). In this context, Western Australia possesses a high degree of species richness and endemism. This is particularly pronounced in the south-west region of the state. There are currently over 12,000 plant species known to occur within Western Australia (WA Herbarium 1998-), and scientific knowledge of many of these species is limited.

This report addresses the environmental factors related to the flora and vegetation as summarized in the Statement of environmental principles, factors, objectives and aims of EIA, EPA (2023).

The legislative protection of flora within Western Australia is principally governed by three Acts. These are:
The *Biodiversity Conservation Act 2016*;
The *Environmental Protection Act 1986*; and
Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*.

The unique flora of Western Australia is potentially under threat due to historical clearing practices associated with agricultural, mining and human habitation activities. Because of the historical clearing practices, some flora species have become threatened or have the potential to become threatened as

their habitat is impacted by human activity. In addition, some areas of the State have been affected by past clearing practices such that entire ecological communities are under threat. The following sections describe these threatened and priority flora and ecological communities, and outline the legislative protection afforded to them.

At the State level, the *Biodiversity Conservation Act 2016* provides for taxa of native flora (and fauna) to be specially protected because they are subject to identifiable threats. Protection of these taxa has been identified as being warranted because they may become extinct, are threatened, or are otherwise in need of special protection. Ecological communities that are deemed to be threatened are afforded protection under the *Environmental Protection Act 1986*. Listings of threatened species and communities are reviewed annually by the Western Australian Threatened Species Scientific Committee (TSSC), which is a body appointed by the Minister for Environment, Climate Action and supported by the Department of Biodiversity, Conservation and Attractions. The TSSC reviews threatened and specially protected flora (and fauna) listings on an annual basis. Under Schedule of the *Biodiversity Conservation Act 2016*, the Minister for Environment, Climate Action may declare a class or description of flora to be threatened flora throughout the State, by notice published in the *Government Gazette* (Department of Biodiversity, Conservation and Attractions 2025a).

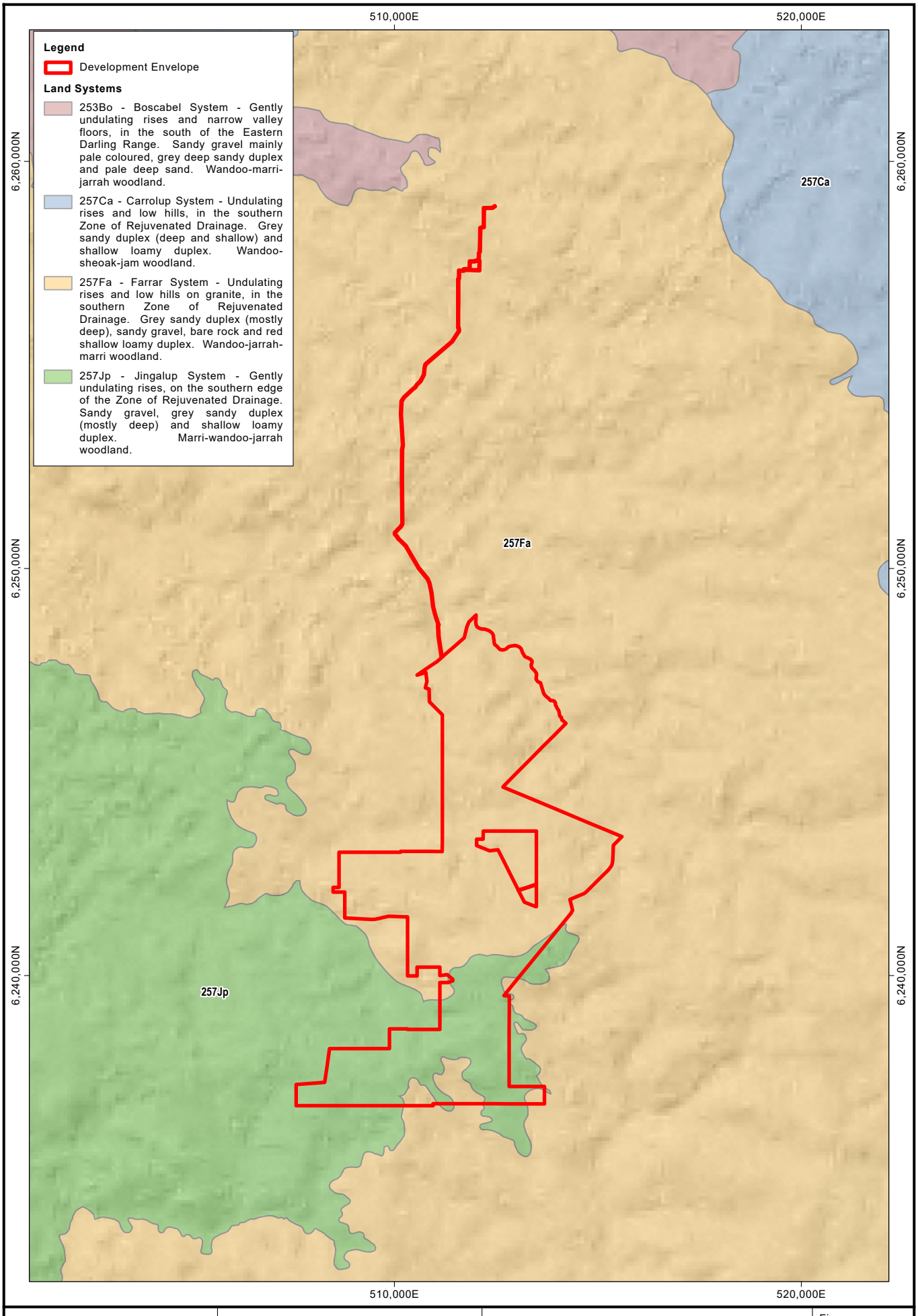
At the Commonwealth level, under the *Environment Protection and Biodiversity Conservation Act 1999*, a nomination process exists, to list a threatened species or ecological community. Additions or deletions to the lists of Threatened species and communities are made by the Minister for the Climate Change, Energy, the Environment and Water, on advice from the Federal Threatened Species Scientific Committee. *Environment Protection and Biodiversity Conservation Act 1999* lists of Threatened flora and ecological communities are published on the Department of Climate Change, Energy, the Environment and Water (2025a, 2025b).

2.4 Land Systems

The survey area lies within two main land systems from the Department of Primary Industries and Regional Development (2025b) (Western Australia), (see Figure 3 and Table 1). The overlap of the development envelope and the land systems remain below 2.2% of these regional land systems (Table 1). These figures do not account for degree or clearing of native vegetation in the agricultural areas.

Table 1: Summary of Land Systems as defined by Department of Primary Industries and Regional Development 2025b (Western Australia)

Land	**Land System**	**Description**	**Area within Survey Area (ha)**	**Total Mapped (ha)**	**% Re-presentation in Survey Area**
257Fa	Farrar System	Undulating rises and low hills on granite, in the southern Zone of Rejuvenated Drainage. Grey sandy duplex (mostly deep), sandy gravel, bare rock and red shallow loamy duplex. Wandoo-jarrah-marri woodland.	2821.119	174523.813	1.62%
257JpDt	Jingalup System	Gently undulating rises, on the southern edge of the Zone of Rejuvenated Drainage. Sandy gravel, grey sandy duplex (mostly deep) and shallow loamy duplex. Marri-wandoo-jarrah woodland.	996.712	45865.419	2.17%



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Scale: 1:125,000
GDA 1994 MGA Zone 50

Mattiske Consulting Pty Ltd
28 Central Road, Kalamunda WA 6076 ~ Tel: 9257 1625 ~ Fax: 9257 1640

Kojonup Wind Farm
Land Systems

Figure: **3**

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Imagery:

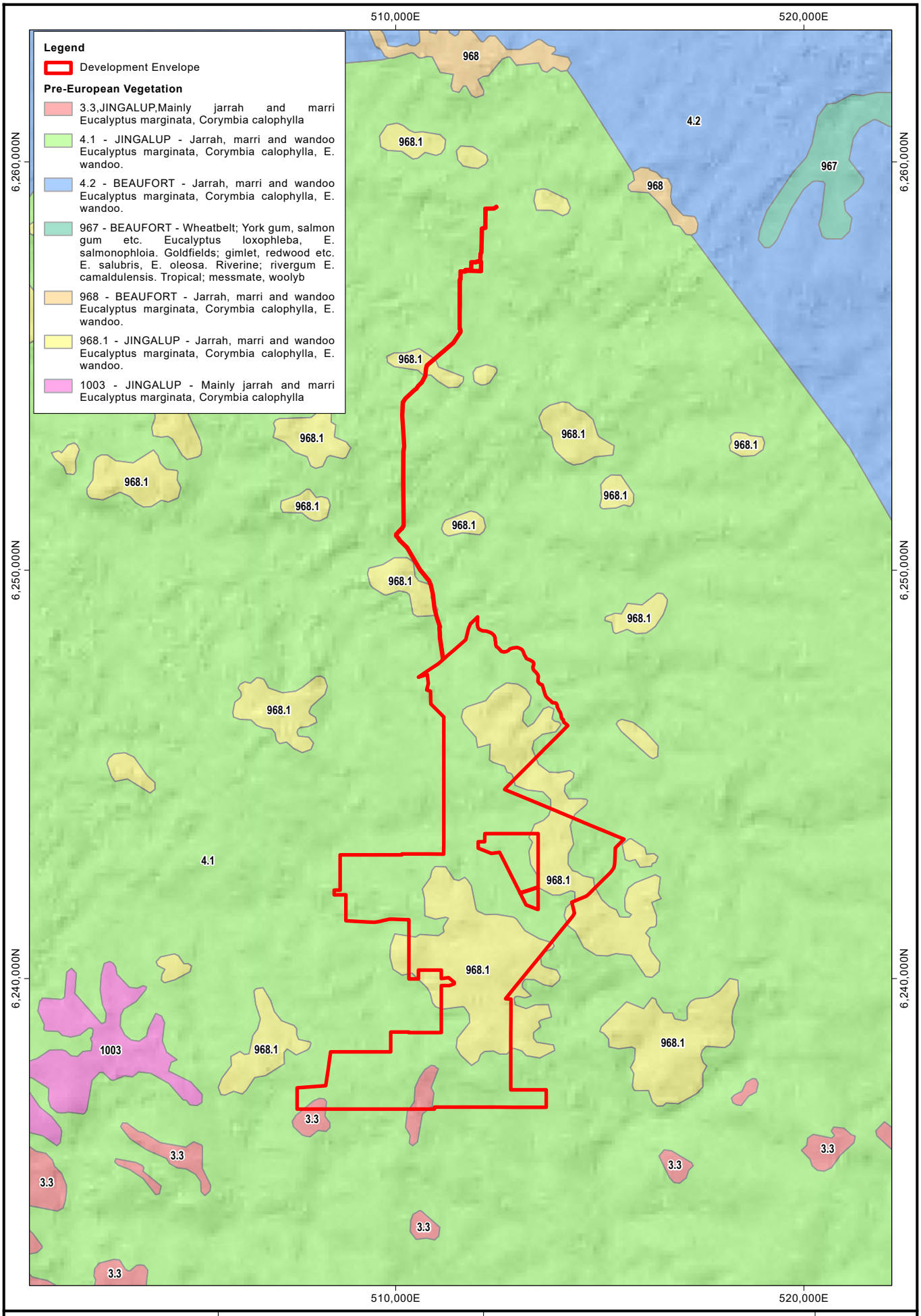
2.5 Regional Vegetation

The survey area lies within the Avon Botanical District in the South-West Province. Typical vegetation of the Avon Botanical District includes *Eucalyptus* woodlands comprising *E. loxophleba, E. salmonophloia* and *E. wandoo* on loams, scrub-health on sandplains, *Acacia-Casuarina* thickets on ironstone and halophytes on saline soils (Beard 1990). Beecham (2001) describes the Avon Wheatbelt 2 (AW2 – Re-juvenated Drainage) subregion vegetation as woodlands of Wandoo (*Eucalyptus wandoo*), York gum (*E. loxophleba*) and Salmon gum (*E. salmonophloia*) with Jam (*Acacia acuminata*) and Casuarina (*Allocasuarina* spp.).

In recent Pre-European vegetation mapping undertaken by Beard *et al.* (2013) the regional mapping indicated that the survey area falls within the Jingalup system (Codes 3.3, 4.1 and 968.1) Figure 4 and Table 2.

Table 2: Summary of Pre-European Systems as defined by Beard *et al*. (2013) through the Department of Primary Industries and Regional Development 2025b (Western Australia)

Vegetation System Code	Pre-European System	Description	Area within Survey Area (ha)	Total Mapped (ha)	% Re-presentation in Survey Area
3.3	Jingalup	Open forest of mainly jarrah and marri (*Eucalyptus marginata, Corymbia calophylla)*	53.224	50085.071	0.106%
4.1	Jingalup	Woodland of jarrah, marri and wandoo (*Eucalyptus marginata, Corymbia calophylla, Eucalyptus wandoo*)	2490.673	166953.492	1.492%
968.1	Jingalup	Woodland of jarrah, marri and wandoo (*Eucalyptus marginata, Corymbia calophylla, Eucalyptus wandoo*)	1272.935	7729.553	16.468%



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Scale: 1:125,000
GDA 1994 MGA Zone 50

Mattiske Consulting Pty Ltd
28 Central Road, Kalamunda WA 6076 ~ Tel: 9257 1625 ~ Fax: 9257 1640

Kojonup Wind Farm
Pre-European Vegetation

Figure: **4**

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Imagery:

2.6 Threatened and Priority Flora

Flora within Western Australia that is under threat may be classed as either threatened flora or priority flora. Where flora has been gazetted as threatened flora under *Biodiversity Conservation Act 2016*, it is an offence "to take" such flora without the written consent of the Minister. The *Biodiversity Conservation Act 2016* states that "to take" flora includes to gather, pluck, cut, pull up, destroy, dig up, remove or injure the flora or to cause or permit the same to be done by any means.

Priority flora constitute species which are under threat, but for which there is insufficient information available concerning their distribution and/or populations to make a proper evaluation of their conservation status. Such species are considered to potentially be under threat, but do not have legislative protection afforded under the *Biodiversity Conservation Act 2016*. The Department of Biodiversity Conservation and Attractions categorises priority flora according to their conservation priority, using five categories, P1 to P5, to denote the conservation priority status of such species, with P1 listed species being the most threatened, and P5 the least. Priority flora species are regularly reviewed and may have their priority status changed when more information on the species becomes available. Appendix A1 sets out definitions of both threatened and priority flora.

At the Commonwealth level, under the *Environment Protection and Biodiversity Conservation Act 1999*, threatened species can be listed as extinct, extinct in the wild, critically endangered, endangered, vulnerable, or conservation dependent, by the commonwealth minister for Climate Change, Energy, the Environment and Water. Refer to Appendix A2 for a description of each of these categories of threatened species. Under the *Environment Protection and Biodiversity Conservation Act 1999*, a person must not take an action that has or will have a significant impact on a listed threatened species without approval from the commonwealth minister for Climate Change, Energy, the Environment and Water, unless those actions are not prohibited under the Act.

2.7 Threatened and Priority Ecological Communities

An ecological community is defined as a naturally occurring biological assemblage that occurs in a particular type of habitat composed of specific abiotic and biotic factors. At the State level, ecological communities may be considered as threatened once they have been identified as such by the Western Australian Threatened Ecological Communities Scientific Advisory Committee. A threatened ecological community is defined, under the *Environmental Protection Act 1986*, as an ecological community listed, designated or declared under a written law or a law of the Commonwealth as threatened, endangered or vulnerable. There are four State categories of threatened ecological communities, or TECs: presumed destroyed (PD); critically endangered (CR); endangered (EN); and vulnerable (VU) (Department of Biodiversity, Conservation and Attractions 2025c). A description of each of these categories of TECs is presented in Appendix A3.

At the Commonwealth level, some Western Australian TECs are listed as threatened, under the *Environment Protection and Biodiversity Conservation Act 1999*. Under the *Environment Protection and Biodiversity Conservation Act 1999*, a person must not take an action that has or will have a significant impact on a listed threatened ecological community without approval from the commonwealth minister for Climate Change, Energy, the Environment and Water, unless those actions are not prohibited under the Act. A description of each of these categories of TECs is presented in Appendix A4.

Ecological communities identified as threatened, but not listed as threatened ecological communities, can be classified as priority ecological communities (PECs). These communities are under threat, but there is insufficient information available concerning their distribution to make a proper evaluation of their conservation status. The Department of Biodiversity, Conservation and Attractions categorises priority ecological communities according to their conservation priority, using five categories, P1 to P5, to

denote the conservation priority status of such ecological communities, with P1 communities being the most threatened and P5 the least. Appendix A5 sets out definitions of priority ecological communities.

2.8 Clearing of Native Vegetation

Under the *Environmental Protection Act 1986*, the clearing of native vegetation requires a permit to do so, from the Department of Environment Regulation or the Department of Mines and Petroleum, unless that clearing is exempted under specific provisions listed in Schedule 6 of the Act, or are prescribed in the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*. Under the *Environmental Protection Act 1986*, "native vegetation" means indigenous aquatic or terrestrial vegetation and includes dead vegetation unless that dead vegetation is of a class declared by regulation to be excluded from this definition but does not include vegetation in a plantation. Under the *Environmental Protection Act 1986*, Section 51A, "clearing" means the killing or destruction of, the removal of, the severing or ringbarking of trunks or stems of, or the doing of any other substantial damage to, some or all of the native vegetation in an area, and includes the draining or flooding of land, the burning of vegetation, the grazing of stock, or any other act or activity, that causes any of the aforementioned consequences or results.

Under the *Environmental Protection Act 1986*, ten principles for clearing native vegetation are set out in Schedule 5, under which native vegetation should not be cleared. These principles state that native vegetation should not be cleared, if:

- it comprises a high level of biological diversity;
- it comprises the whole or a part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to Western Australia;
- it includes, or is necessary for the continued existence of, threatened flora;
- it comprises the whole or a part of, or is necessary for the maintenance of, a threatened ecological community;
- it is significant as a remnant of native vegetation in an area that has been extensively cleared;
- it is growing in, or in association with, an environment associated with a watercourse or wetland;
- the clearing of the vegetation is likely to cause appreciable land degradation;
- the clearing of the vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area;
- the clearing of the vegetation is likely to cause deterioration in the quality of surface or underground water; or
- the clearing of the vegetation is likely to cause, or exacerbate, the incidence or intensity of flooding.

The *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*, under Regulation 5, sets out prescribed clearing actions that do not require a clearing permit, as defined in Section 51C of the *Environmental Protection Act 1986*. However, exemptions under these Regulations do not apply in Environmentally Sensitive Areas (ESA's).

Under the *Environmental Protection (Clearing of Native Vegetation) Regulations 2004*, under Regulation 6 –"environmentally sensitive areas" include "the area covered by vegetation within 50 m of threatened flora, to the extent to which the vegetation is continuous with the vegetation in which the threatened flora is located". Similarly, "the area covered by a threatened ecological community" is listed as an environmentally sensitive area under Regulation 6.

2.9 Declared (Plant) Pest Organisms

The *Biosecurity and Agriculture Management Act 2007* (BAM Act), Section 22, makes provision for a plant taxon to be listed as a declared pest organism in respect to parts of, or the entire State. According to the BAM Act, a declared pest is defined as a prohibited organism (Section 12), or an organism for which a declaration under section 22 (2) of the Act is in force.

Under section 26 (1) of the *Biosecurity and Agriculture Management Act 2007*, a person who finds a declared plant pest must report, in accordance with subsection (2), the presence or suspected presence of the declared pest to the Director General or an inspector of the Department of Primary Industry and Regional Development.

Under the *Biosecurity and Agriculture Management Regulations 2013*, declared plant pests are placed in one of three control categories, C1 (exclusion), C2 (eradication) or C3 (management), which determines the measures of control which apply to the declared pest (Appendix A6). According to section 30 (3) of the BAM Act, the owner or occupier of land, or a person who is conducting an activity on the land, must take the prescribed control measures to control the declared pest if it is present on the land.

The current listing of declared pest organisms and their control category is available on the Western Australian Organism List (WAOL), at the Biosecurity and Agriculture Management website of the Department of Department of Primary Industry and Regional Development (DPIRD 2025a).

2.10 Local and Regional Significance

Flora or vegetation may be locally or regionally significant in addition to statutory listings by the State or Federal Government.

Flora species, subspecies, varieties, hybrids and ecotypes may be significant other than as threatened flora or priority flora, for a variety of reasons, including:

- a keystone role in a particular habitat for threatened species, or supporting large populations representing a significant proportion of the local regional population of a species;
- relic status
- anomalous features that indicate a potential new discovery;
- being representative of the range of a species (particularly, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range);
- the presence of restricted subspecies, varieties, or naturally occurring hybrids;
- local endemism/a restricted distribution; and
- being poorly reserved (Environmental Protection Authority 2004).

Vegetation may be significant because the extent is below a threshold level and a range of other reasons, including:

- scarcity;
- unusual species;
- novel combinations of species;
- a role as a refuge;
- a role as a key habitat for threatened species or large populations representing a significant proportion of the local to regional total population of a species;
- being representative of the range of a unit (particularly, a good local and/or regional example of a unit in “prime” habitat, at the extremes of range, recently discovered range extensions, or isolated outliers of the main range);
- a restricted distribution (Environmental Protection Authority 2004).

Vegetation communities are locally significant if they contain threatened or priority flora or contain a range extension of a particular taxon outside of the normal distribution. They may also be locally significant if they are very restricted to one or two locations or occur as small, isolated communities. In addition, vegetation communities that exhibit unusually high structural and species diversity are also locally significant.

Vegetation communities are regionally significant where they are limited to specific landform types, are uncommon or restricted plant community types within the regional context, or support populations of threatened Flora.

Determining the significance of flora and vegetation may be applied at various scales, for example, a vegetation community may be nationally significant and governed by statutory protection as well as being locally and regionally significant.

3. OBJECTIVES

The general aim of this report was to map and undertake a flora, fauna and vegetation assessment of the Kojonup Wind Farm. Specifically, the objectives include:

- Search the literature and databases to assess the potential flora and fauna values that may occur within the survey area;
- Search the remnant vegetation and streamzone areas within the Kojonup Wind Farm survey area for threatened and priority flora and record any opportunistic fauna sightings during the field study;
- Collect and identify the vascular plant species present in the Kojonup Wind Farm Wind Farm survey area;
- Review the conservation status of the vascular plant species and vegetation by reference to current literature and current listings by the Department of Biodiversity, Conservation and Attractions (2025a, 2025b, 2025c, 2025d, 2025e), plant collections held at the Western Australian State Herbarium (WA Herbarium 1998-), and listed by the Department of Climate Change, Energy, the Environment and Water (2025a, 2025b, 2025c, 2025d, 2025e) under the *Environment Protection and Biodiversity Conservation Act 1999*;
- Define and map the native vegetation communities and their condition;
- Define any management issues related to flora and vegetation values;
- Provide recommendations on the local and regional significance of the flora and vegetation values; and
- Prepare a report summarising the findings.

4. METHODS

4.1 Desktop Assessment

A desktop assessment and review were conducted to establish the presence of any threatened or priority flora and community that may potentially occur within the survey area, using NatureMap, Herbarium records and the Dandjoo biodiversity data (Department of Biodiversity, Conservation and Attractions 2025a, 22025c, 2025d) and the *EPBC Act Protected Matters Search Tool* (Department of Climate Change, Energy, the Environment and Water 2025c) and the Western Australian Herbarium (WA Herbarium 1998-).

In addition to the literature review, searches of the following databases were undertaken to aid in the compilation of a list of significant flora within the survey area:

- DBCA Threatened/ Priority Flora spatial data (DBCA, 2025a);
- DBCA Threatened/ Priority Ecological Communities spatial data (DBCA, 2025b);
- DBCA NatureMap and Dandjoo datasets (DBCA 2025d): and
- EPBC Protected Matters search tool (DCCEEW, 2025c).

4.2 Field Survey

Survey effort was spread over multiple trips in February, July, November and December 2023 and January, July, September and October 2024 with a total of 23 field days. The detailed field studies on the native remnants were undertaken in January 2023 and Early December 2024. Most of the remnant vegetation assessments were undertaken by senior and experienced botanists from Mattiske Consulting. Dr Mattiske with Sarah Rankin and Jen Willcox (Western Wildlife) completed the assessments of trees that assisted in avoidance of many direct and indirect impacts during the design phases of the wind farm layout and associated infrastructure and access routes.

All botanists held valid collection licences to collect flora for scientific purposes, issued under the *Biodiversity Conservation Act 2016*. Aerial photographs of the survey area were supplied by Dr Sarah Rankin from Kojonup Wind Farm Pty Ltd. The field survey was conducted according to standards set out in Guidance Statements (Environmental Protection Authority 2004 and 2023).

The flora and vegetation were described and sampled systematically at each survey site, and additional opportunistic collecting was undertaken wherever previously unrecorded plants were observed. At each site the following floristic and environmental parameters were noted: GPS location, topography, percentage litter cover, soil type and colour, percentage of bare ground, outcropping rocks and their type, gravel type and size, time since fire and the percentage cover and average height of each vegetation stratum. For each vascular plant species, the average height and percent cover (both live and dead material) were recorded.

All plant specimens collected during the field surveys were dried and fumigated in accordance with the requirements of the Western Australian Herbarium. The plant species were identified through comparisons with pressed specimens housed at the Western Australian Herbarium. Where appropriate, plant taxonomists with specialist skills were consulted. Nomenclature of the species recorded is in accordance with the State Herbarium, Western Australia (WAH 1998-).

4.3 Assessment of Potential TECs and PECs

The survey methodology consisted of assessing the presence and extent of the Eucalypt Woodlands TEC. Key TEC Factors were checked initially, and if a site failed to meet these criteria, no further checks were done, and the site was ranked as “Not Likely a TEC”. However, if the site did meet these criteria, then the Contra-indicators and Condition Thresholds were checked Department of Climate Change, Energy, the Environment and Water (2025d).

Key TEC Factors:

Crown cover of the tree canopy (>10 %, <10 %)
Key species of the tree canopy are listed Key Eucalypt Species
Cover of introduced and native understorey species
Growth forms of native understorey species

Contra-indicators:

Dominant mallee growth form of Eucalyptus species in tree canopy
Dominant presence of non-Eucalyptus species in the tree canopy
Presence of shrublands or herblands where the tree canopy is very sparse
Dominance of Eucalyptus species that are restricted to granite outcrops

Condition Thresholds:

Keighery (1994) Condition
Introduced species understorey cover (<10 %, 10-30 %, 31-50 %, 51-70 %, >70 %)
Mature tree (DBH >30 cm) presence
Mature tree density (<5 trees per 0.5 ha, 5+ trees per 0.5 ha)
Roadside patch width (native understorey) (<5 m, 5+ m)

5. DESKTOP RESULTS

5.1 Potential Threatened and Priority Flora

A total of 14 threatened flora has been listed as occurring, or potentially occurring, in the vicinity of the Kojonup Wind Farm survey area (DBCA 2025a, 2025b, DCCEEW 2025a, 2025c). Of the 14 potential threatened species, only two may be possible, *Eleocharis keigheryi* which occurs in freshwater creeks and claypans and *Gastrolobium lehmannii* which occurs on red clays and laterite on low hilltops of breakaways. If one considers their preferred habitats their potential decreases.

A total of 8 priority flora has been listed as occurring, or potentially occurring, in the vicinity of the Kojonup Wind Farm survey area (DBCA 2025a, 2025b). Six of these may occur, however in view of the restricted extent of native remnant vegetation and the avoidance of the native vegetation these potentials can again be reduced.

A summary of these species listings at state and federal levels can be found in Appendix B.

5.2 Potential Threatened and Priority Ecological Communities

Three listed Threatened Ecological Communities were delineated through the PMST (DCCEEW 2025cx) as potentially occurring in the area.

- Clay Pans of the Swan Coastal Plain (Critically Endangered) – potential in Buffer only
- Eucalypt Woodlands of the Western Australian Wheatbelt – potential within survey area
- Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province of Western Australia – potential in Buffer only

The Clay Pans occur well to the west of the survey area on completely different landforms and soils and not in the survey area.

The Proteaceae Dominated Kwongkan Shrublands of the Southeast Coastal Floristic Province are associated with different landforms and soils that are not in the survey area.

The Eucalypt Woodlands of the Western Australian Wheatbelt are in the vicinity of the survey area.

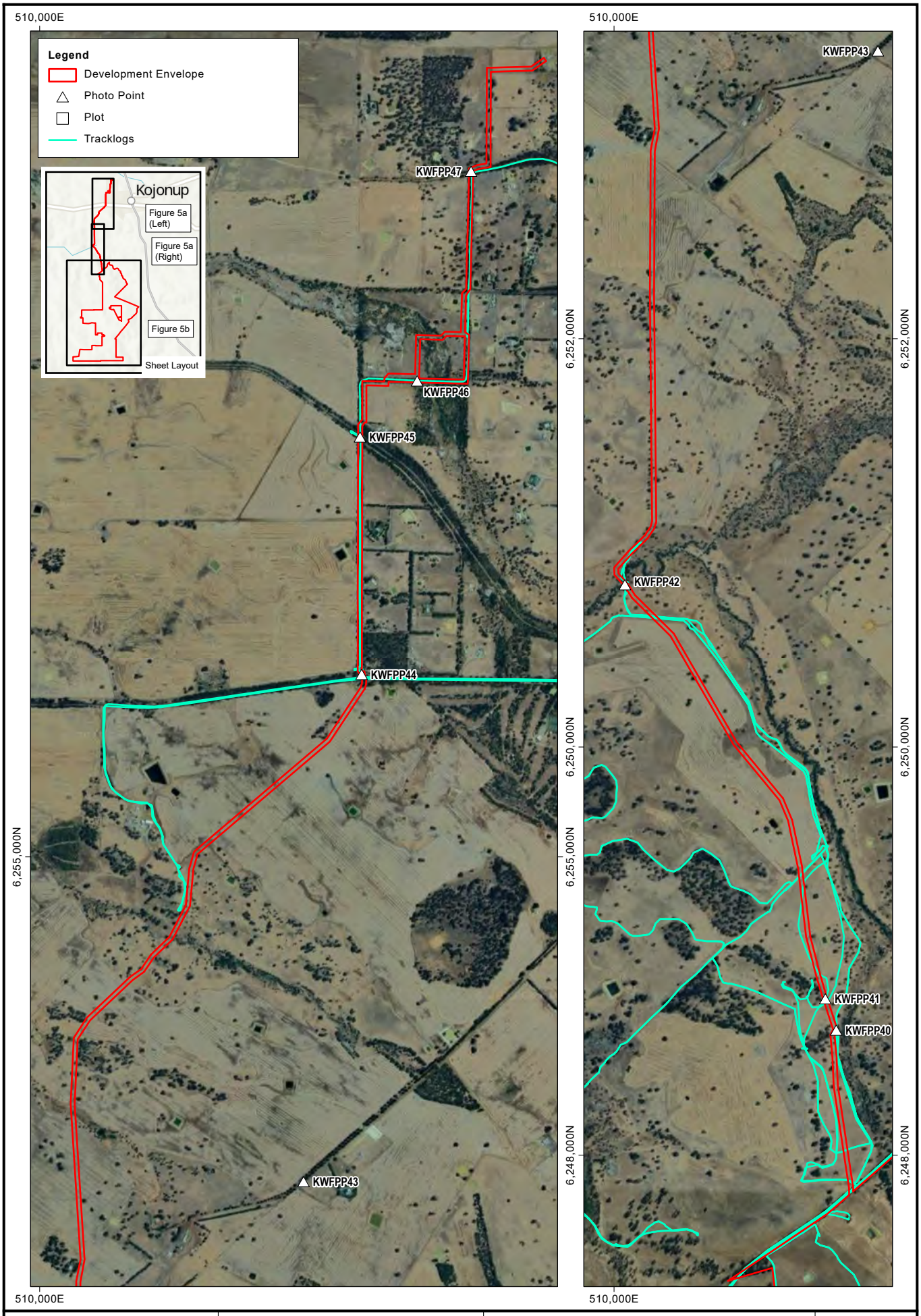
A review of Priority Ecological Communities as defined by DBCA (2025b) highlighted the possibility of the following community, namely:

- Claypans with mid dense shrublands of *Melaleuca lateritia* over herbs – potential within survey area

The Claypans with mid dense shrublands of *Melaleuca lateritia* over herbs are in the vicinity of the survey area.

5.3 Field Survey

A total of detailed survey sites in the few remaining remnant areas along with assessments of releves in the disturbed areas were used to assess the flora and vegetation of the Kojonup Wind Farm survey area. The survey efforts in 2023 and 2024 are summarized on Figures 3a and 3b.



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Scale: 1:25,000
GDA 1994 MGA Zone 50

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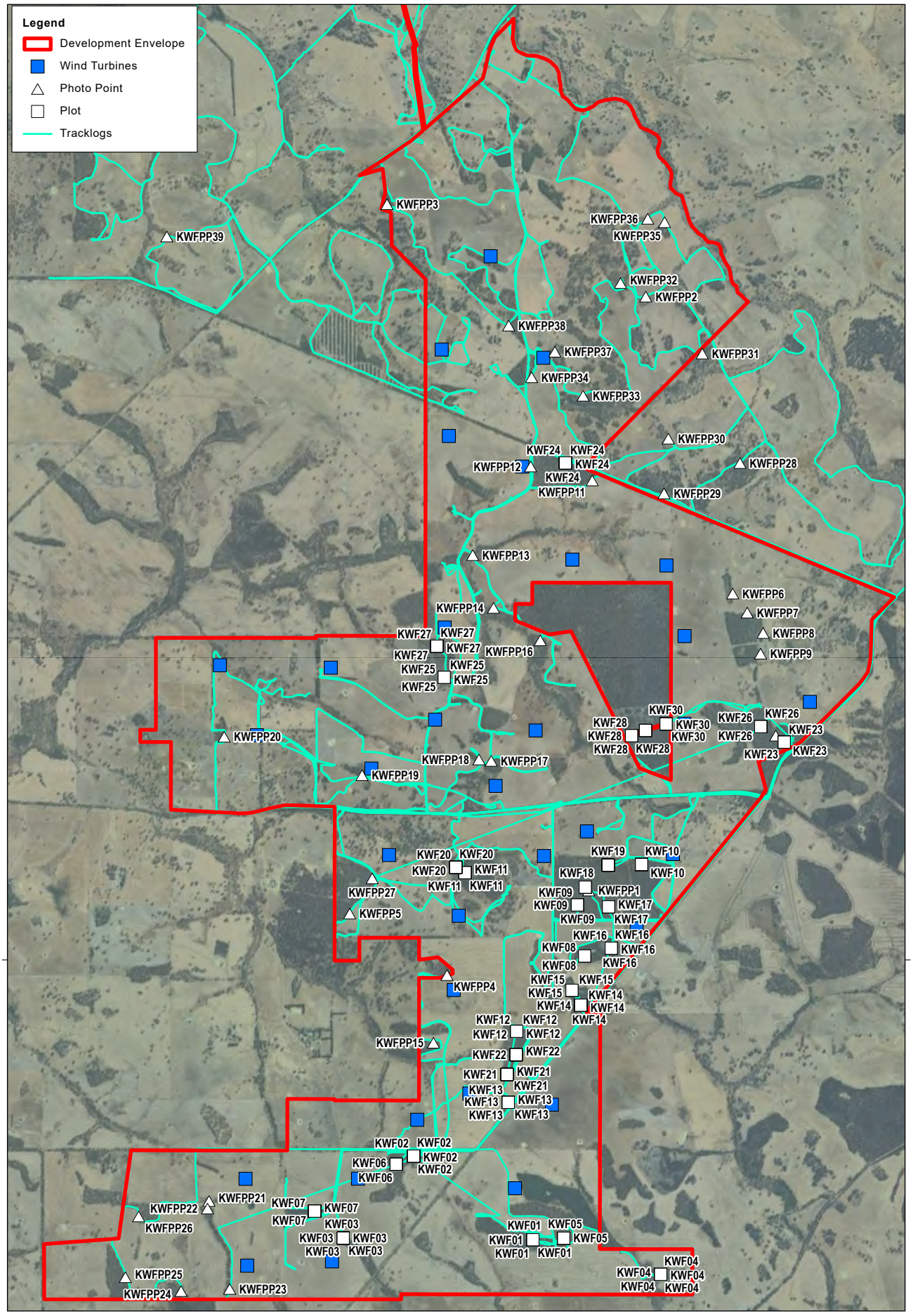
Kojonup Wind Farm
Survey Effort
Transmission Corridor

Figure:
5a

CAD Ref: a1868_F059_07		Author: L. Mattiske	Ref:
Date: October 2025	Rev: A	A4	Drawn: CAD Resources ~ www.cadresources.com.au



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Scale: 1:50,000
GDA 1994 MGA Zone 50

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Kojonup Wind Farm
Survey Effort

Figure: **5b**

CAD Ref: a1868_F059_06		Author: L. Mattiske	Ref:
Date: October 2025	Rev: A	A4	Drawn: CAD Resources ~ www.cadresources.com.au

5.4 Survey Limitations and Constraints

An assessment of the survey against a range of factors which may have had an impact on the outcomes of the present survey was made (Table 3). Based on this assessment, the present survey has not been subject to constraints which would affect the thoroughness of the survey, and the conclusions which have been formed.

Table 3: Potential Survey Limitations for Survey Area

Potential Survey Limitation	Impact on Survey
Sources of information and availability of contextual information (i.e. pre-existing background versus new material).	Not a constraint: The study was undertaken in the Southwest Forest Region and west of the Avon Wheatbelt Region (Beard 1990). In addition, the databases held at the State and National level were used to assess the potential flora and fauna values.
Scope (i.e. what life forms, etc., were sampled).	**Not a constraint:** Rainfall in 2023 and 2024 were lower than the longer-term average (Bureau of Meteorology 202'5). In view of the lack of proposed disturbance on the native vegetation areas, this was not seen as a constraint on the assessment of the flora and vegetation values on the Kojonup Wind Farm survey area.
Proportion of flora collected and identified (based on sampling, timing and intensity).	**Not a constraint:** Proportion of flora covered is lower than in many projects as the areas of native remnant vegetation are being avoided. 17.3% of the recorded species were annuals. The turbines and associated access and infrastructure facilities have been located in the more disturbed areas, and the efforts have been undertaken to avoid as many trees as possible and also the remnants of native vegetation.
Completeness and further work which might be needed (i.e. was the relevant survey area fully surveyed).	**Not a constraint:** The information collected during the survey was sufficient to assess the vegetation and potential fauna and flora issues that may be present during the time of the survey.
Mapping reliability.	**Not a constraint:** Aerial photography of a suitable scale was used to map the project area. Sites were chosen in areas of remnant vegetation and where the options for access routes and infrastructure facilities and the turbines were going to be located. As the latter were largely in cleared and highly modified agricultural areas, the mapping was restricted by the lack of native species. The majority of the disturbance occurs on current access tracks within the properties and also in paddocks with a few remnant trees over introduced grasses and crop species.
Timing, weather, season, cycle.	**Not a constraint:** It is generally accepted that flora and vegetation surveys are conducted in spring following autumn rains in the Avon Wheatbelt (Environmental Protection Authority 2004). Surveys were undertaken over multiple years and in different seasons and in view of the lack of proposed disturbance to the remnant areas of native vegetation and the dominance of cleared or cropped areas this was not considered a constraint.
Disturbances (fire flood, accidental human intervention, etc.).	**Not a constraint:** Human-induced disturbances associated with mainly historical agricultural activities dominate the project areas.
Intensity (in retrospect, was the intensity adequate).	**Not a constraint:** The survey intensity was considered to have been thorough throughout the survey area. Sites were chosen in remnant vegetation and in areas that should be either avoided or potentially utilised for the project facilities.
Resources (i.e. were their adequate resources to complete the survey to the required standard).	**Not a constraint:** The available resources were adequate to complete the survey.
Access problems (i.e. ability to access survey area).	**Not a constraint:** Existing roads and tracks enabled adequate access to survey representative vegetation and remnant areas within the survey area. Where access was not available by car, it was easily traversed by foot.
Experience levels.	**Not a constraint:** All survey personnel had the appropriate training in sampling and identifying the flora of the region. Experienced botanists were consulted where plants could not be identified in the field and discussions were held with experienced zoologists.

6. FIELD RESULTS

6.1 Flora

A total of 179 vascular plant taxa from 119 plant genera and 45 plant families were recorded within the Kojonup Wind Farm survey area during 2023 and 2024. The main taxa were recorded within the Myrtaceae (21 taxa), Fabaceae (20 taxa), Poaceae (19 taxa), Proteaceae (15 taxa) and Asteraceae (12 taxa) families. The species recorded in Kojonup Wind Farm are summarized in Appendix C. 17.3% of the taxa recorded were annual species.

6.2 Threatened and Priority Flora

No threatened flora species pursuant to subsection (2) of section 23F of the *Wildlife Conservation Act (1950)* and as listed by the Department of Biodiversity, Conservation and Attractions were recorded within the Kojonup Wind Farm survey area. No plant taxa listed as Threatened pursuant to Schedule 1 of the *Environment Protection and Biodiversity Conservation Act 1999* were recorded during the survey within the proposed Kojonup Wind Farm survey area.

One Priority 4 species (*Xanthorrhoea brevistyla* P4) was recorded in the woodlands of *Eucalyptus wandoo* with patches of *Allocasuarina huegeliana* over low subshrubs and introduced grasses on sandy soils and near shallow granites on mid and upper slopes, see Figures 6a and 6b. This species was restricted in occurrence near the proposed facilities on the edges of a paddock and at the time of the development it should be feasible to avoid the plants.

6.3 Introduced (Exotic) Plant Species

A total of 21 introduced (exotic) taxa were recorded within the Kojonup Wind Farm survey area (Appendix C). All others are listed as Permitted - s11 for the whole of state (Western Australian Department of Primary Industries and Regional Development 2025a) and none of the species are Weeds of National Significance (WONS), DCCEEW (2025e).

6.4 Vegetation

Nine vegetation communities were defined and mapped within the Kojonup Wind Farm survey area, Figure 4. The native plant communities were restricted in occurrence due to the degree of land clearing and historical agricultural activities in the area. The design of the project layout avoided the more intact areas of native vegetation. The areas of intact and less disturbed native vegetation are intended to be avoided. The wind turbines are to be established in the cleared paddocks which are mainly degraded or completely degraded.

Nine vegetation communities are summarized below (Figures 6a and 6b):

Ah1: Open woodland of *Allocasuarina huegeliana* with *Corymbia calophylla, Eucalyptus marginata* and *Eucalyptus wandoo* over low undergrowth of grasses and herbs on sandy-loams to clay loams on slopes and ridges.

Ah2: Open woodland of *Allocasuarina huegeliana* with *Corymbia calophylla* and *Eucalyptus wandoo* over low undergrowth of grasses and herbs on sandy-loams on slopes and ridges.

Ah3: Open woodland of *Allocasuarina huegeliana* with *Eucalyptus rudis* over low undergrowth of grasses and herbs on fringes of creeklines on lower slopes with patches of granite near or on surface.

E1: Open woodland of *Corymbia calophylla* with some patches o*f Eucalyptus marginata* and *Eucalyptus wandoo* over low undergrowth of grasses and herbs sandy-loams on slopes and ridges

E2: Open woodland of *Eucalyptus marginata* and *Corymbia calophylla o*ver low undergrowth of grasses and herbs on sandy loam soils on slopes and ridges

E3: Open woodland of *Eucalyptus marginata* and *Corymbia calophylla with some Eucalyptus wandoo patches* over low undergrowth of grasses and herbs on sandy loam soils on slopes and ridges

E4: Open woodland of *Eucalyptus wandoo* over low undergrowth of grasses and herbs on sandy loam soils on slopes and ridges

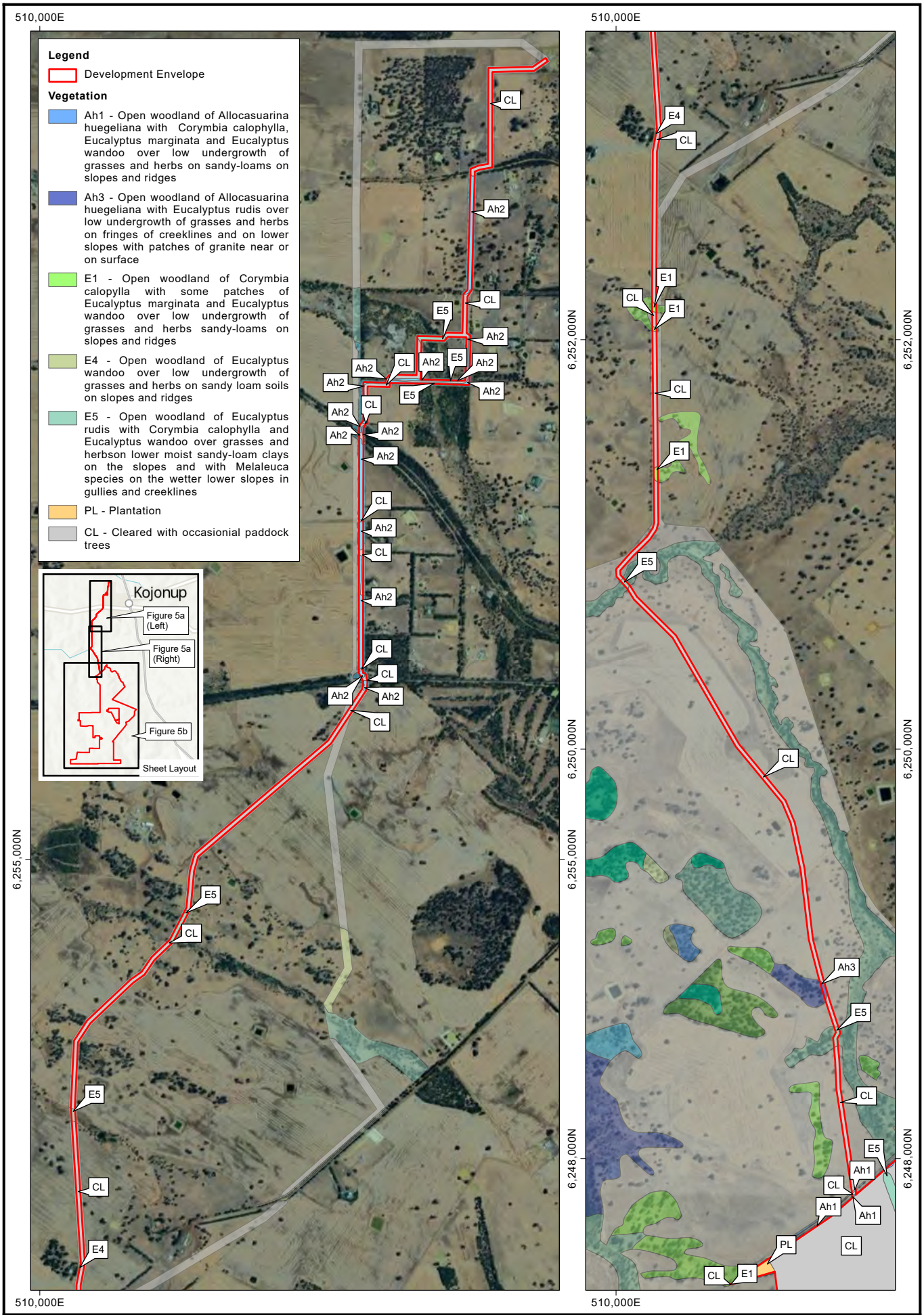
E5: Open woodland of *Eucalyptus rudis* with patches of *Corymbia calophylla* and *Eucalyptus wandoo* over grasses and herbs on lower moist sandy-loam clays on the slopes and with Paperbarks (*Melaleuca rhaphiophylla* and *Melaleuca cuticularis*) on the wetter lower slopes in gullies and creeklines

E6: Open woodland of *Eucalyptus astringens* with patches of *Eucalyptus wandoo* over low undergrowth of grasses and herbs on slopes and ridges.

Cl: Cleared

PL: Plantation

The spatial extent of each mapping unit is summarized n Table 4. As such this is an over-estimate of the values as only several areas remain relatively undisturbed by agricultural activities. The latter is evident from the degree of clearing as reflected in the Cleared and Plantation categories in Table 4 and from the aerial images on Figures 6a and 6b.



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Scale: 1:25,000
GDA 1994 MGA Zone 50

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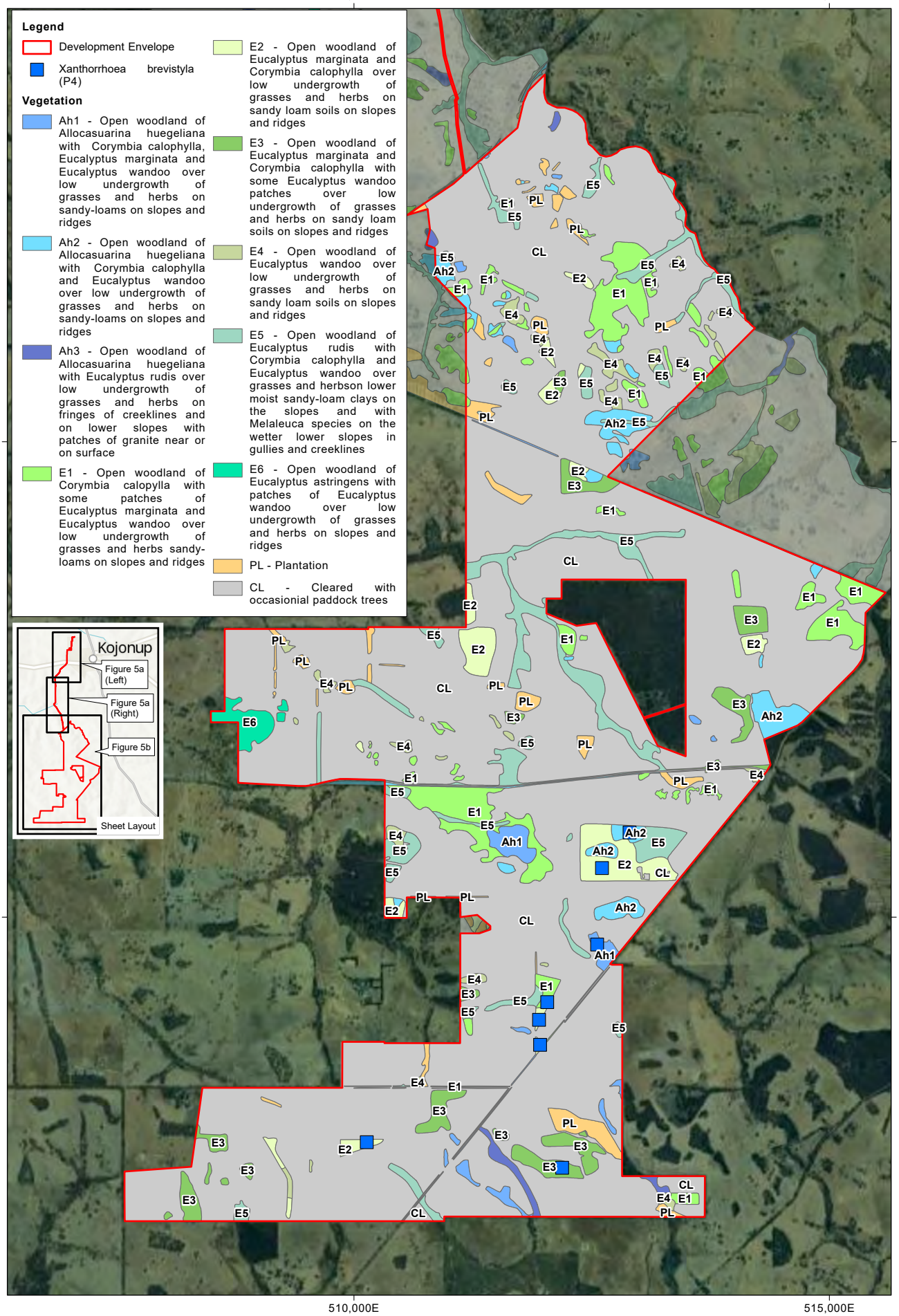
CAD Ref: a1868_F059_09 | Author: L. Mattiske | Ref:

Date: October 2025 | Rev: A | A4 | Drawn: CAD Resources ~ www.cadresources.com.au

Kojonup Wind Farm Vegetation Mapping Transmission Corridor

Figure:

6a



Imagery: © OpenStreetMap (and) contributors, CC-BY-SA, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community, Esri, CGIAR

0 0.5 1km

Scale: 1:55,000
GDA 1994 MGA Zone 50

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CAD Ref: a1868_F059_08 | Author: L. Mattiske | Ref:

Date: October 2025 | Rev: A | A4 | Drawn: CAD Resources ~ www.cadresources.com.au

Kojonup Wind Farm
Vegetation Mapping
Wind Farm

Figure:

6b

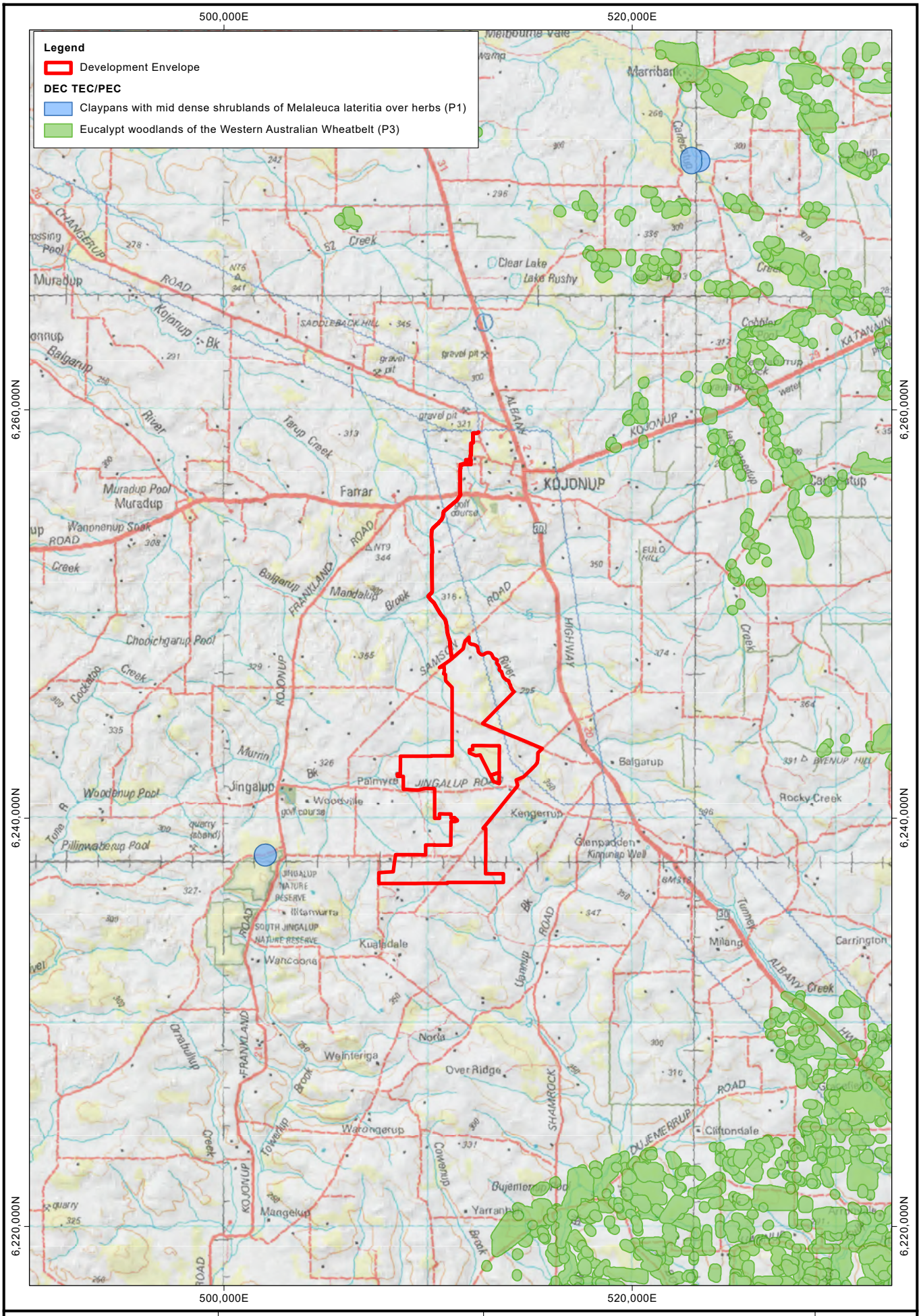
Table 4 : Summary of Representation of Vegetation on Kojonup Wind Farm

Vegetation Mapping Unit	Total Surveyed (ha)	Area (ha)	% of Survey Area
Ah1	48.05	41.45	1.09
Ah2	97.50	78.05	2.05
Ah3	87.99	13.00	0.34
E1	238.06	175.65	4.61
E2	95.64	83.73	2.20
E3	109.46	89.67	2.35
E4	81.99	45.17	1.18
E5	356.25	177.62	4.66
E6	39.65	19.67	4.61
PL	105.98	68.95	1.81
CL	4643.26	3021.05	79.21
Total	**5903.83**	**3814.02**	

6.5 Threatened and Priority Ecological Communities

The threatened ecological community "*Eucalypt Woodlands of the Western Australian Wheatbelt"* as defined by the Department of Climate Change, Energy, the Environment and Water 2025d) under the *Environment Protection and Biodiversity Conservation Act 1999* was not located in the Kojonup Wind Farm survey area, Figure 7. The priority ecological community "Claypans with mid dense shrublands of *Melaleuca lateritia* over herbs" as delineated by the Department of Biodiversity, Conservation and Attractions (2025b) was located outside the Kojonup Wind Farm survey area, Figure 7.

The survey area occurs within the Jarrah Forest IBRA Region and the Avon Wheatbelt region occurs to the east of the survey area. Whilst some values of Eucalypt woodlands may extend westwards into the Jarrah Forest IBRA region it should be recognized that the areas of remnant bushland are being avoided in the proposed development on the project area. The few roadside verges that include some crossings of infrastructure support some native trees but all fall below the TEC criteria as they are less than 5m wide, they lack native plant cover and every effort was made to place alignments in the gaps between the trees, or the trees occurred on exposed or shallow granite outcrops and the condition of the vegetation was degraded to completely degraded.



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Scale: 1:250,000
GDA 1994 MGA Zone 50

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Kojonup Wind Farm Threatened Ecological Communities

Figure: **7**

CAD Ref: a1868_F059_04		Author: L. Mattiske	Ref:
Date: October 2025	Rev: A	A4	Drawn: CAD Resources ~ www.cadresources.com.au

Imagery:

6.6 Vegetation Condition

The plant communities were very disturbed and had been largely grazed or cleared (Figure 8a and 8b and Table 5). Consequently, the majority (92.26%) of the survey area are completely degraded or degraded except for a few ridges in the eastern section of Kojonup Wind Farm survey area.

The survey effort was undertaken on the few remnant areas and during the field studies every effort was made to assist in the avoidance of these areas. The latter is particularly evident in the results illustrated in Figures 8a and 8b where the facilities have been designed to avoid most areas of remnant vegetation and paddock trees.

Table 5: Summary of Representation of Vegetation Condition on Kojonup Wind Farm

Vegetation Mapping Unit	Total Surveyed Area (ha)	Area (ha)	% of Survey Area
Excellent	65.85	65.85	1.73
Very Good	58.19	58.19	1.52
Good	229.43	171.55	4.49
Degraded	620.96	308.00	8.07
Completely Degraded	4929.37	3213.23	84.19
Total	**5903.79**	**3816.82**	

6.7 Tree Assessments

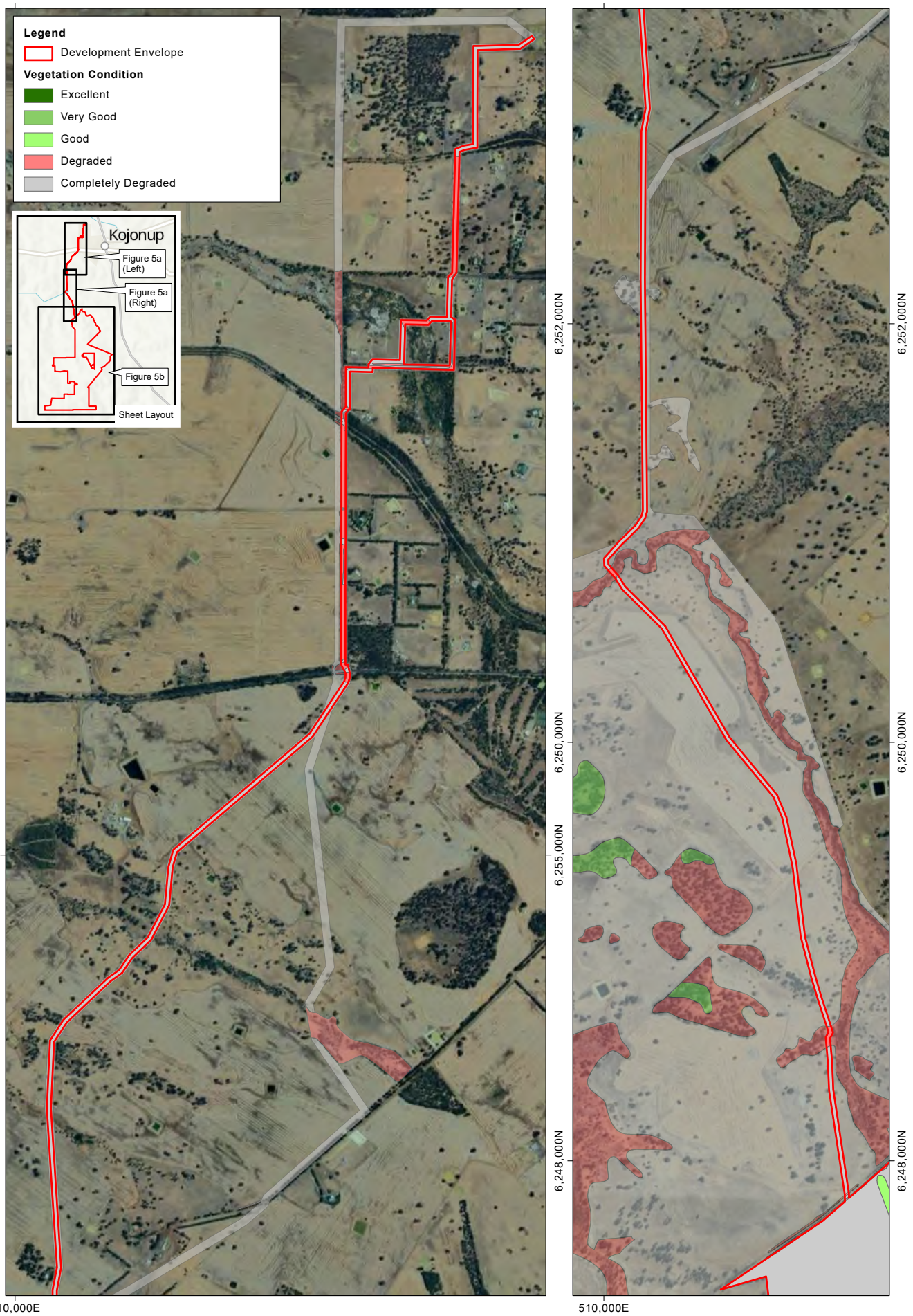
During the initial field work associated with planning the alignments and turbines, more than 151 trees with diameters at breast height greater than 30cm for *Eucalyptus wandoo* and diameters at breast height of greater than 50cm for *Corymbia calophylla, Eucalyptus marginata* and *Eucalyptus rudis*, Appendix D. The key tree locations recorded by botanical assessments are summarized in Appendix D and further highlighted in Figure 9.

As indicated in results in Appendix D, 49 trees have the potential to be directly or indirectly impacted within the maximum boundary. It is expected that this total will be reduced markedly during the finalization of the operations facilities and also as the cable installations will be much narrower than the boundary as updated. Many of the trees may only need a pruning rather than removal.

At the time of the assessment of the trees, an assessment was made of the potential fauna utilisation of the trees. The latter is discussed more fully by Jen Willcox in the Western Wildlife report (2025) for this project. The potential for fauna usage is expanded in the Western Wildlife report (2025).

A few additional trees have been recorded by Jen Willcox during additional fauna trips (see Western Wildlife report 2025).

Selected photographs are included in Appendix E to illustrate the degree of clearing and the few intact areas of native vegetation.



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Scale: 1:25,000
GDA 1994 MGA Zone 50

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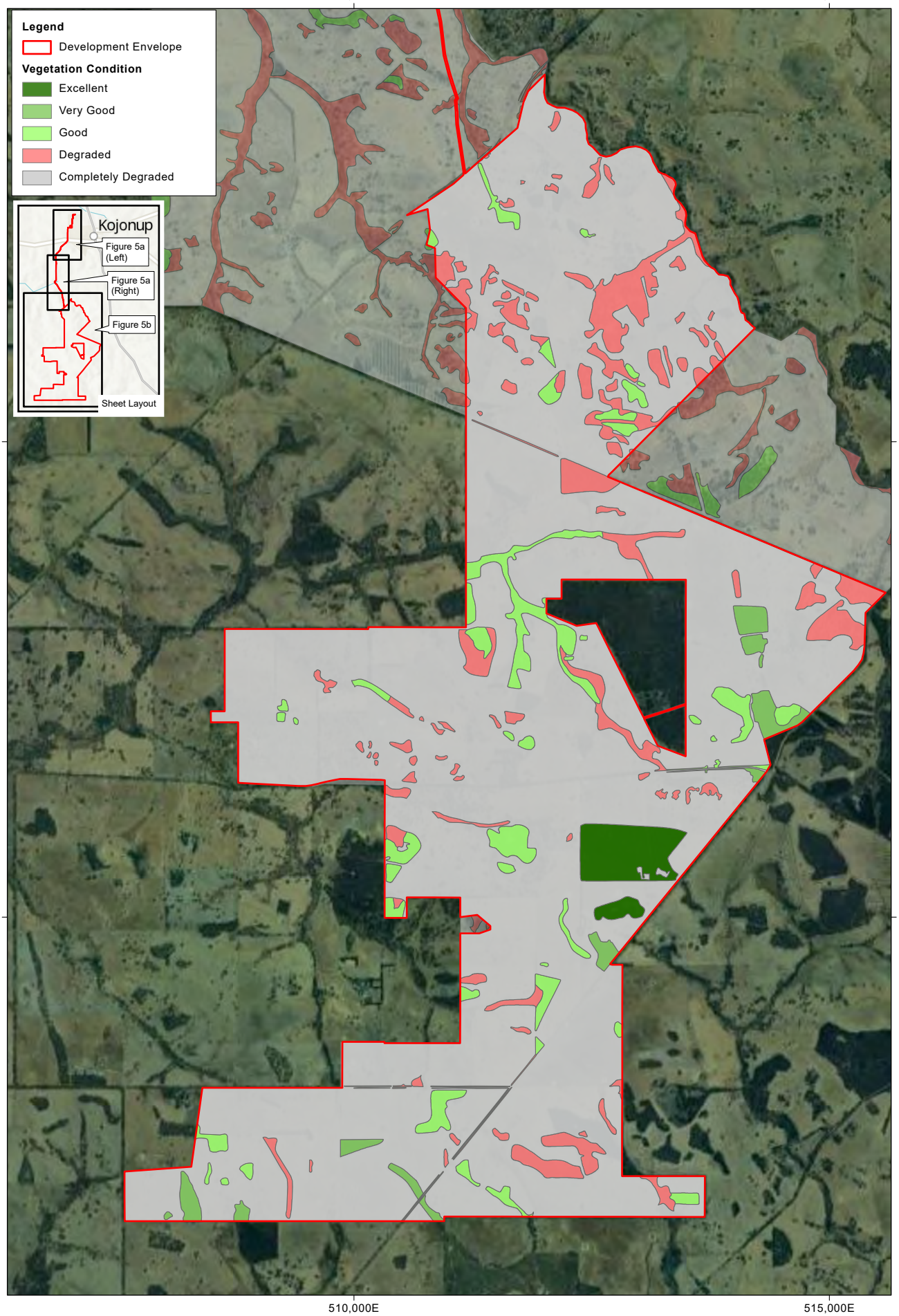
Kojonup Wind Farm
Vegetation Condition
Transmission Corridor

Figure: **8a**

CAD Ref: a1868_F059_11		Author: L. Mattiske	Ref:
Date: October 2025	Rev: A	A4	Drawn: CAD Resources ~ www.cadresources.com.au



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Scale: 1:55,000
GDA 1994 MGA Zone 50

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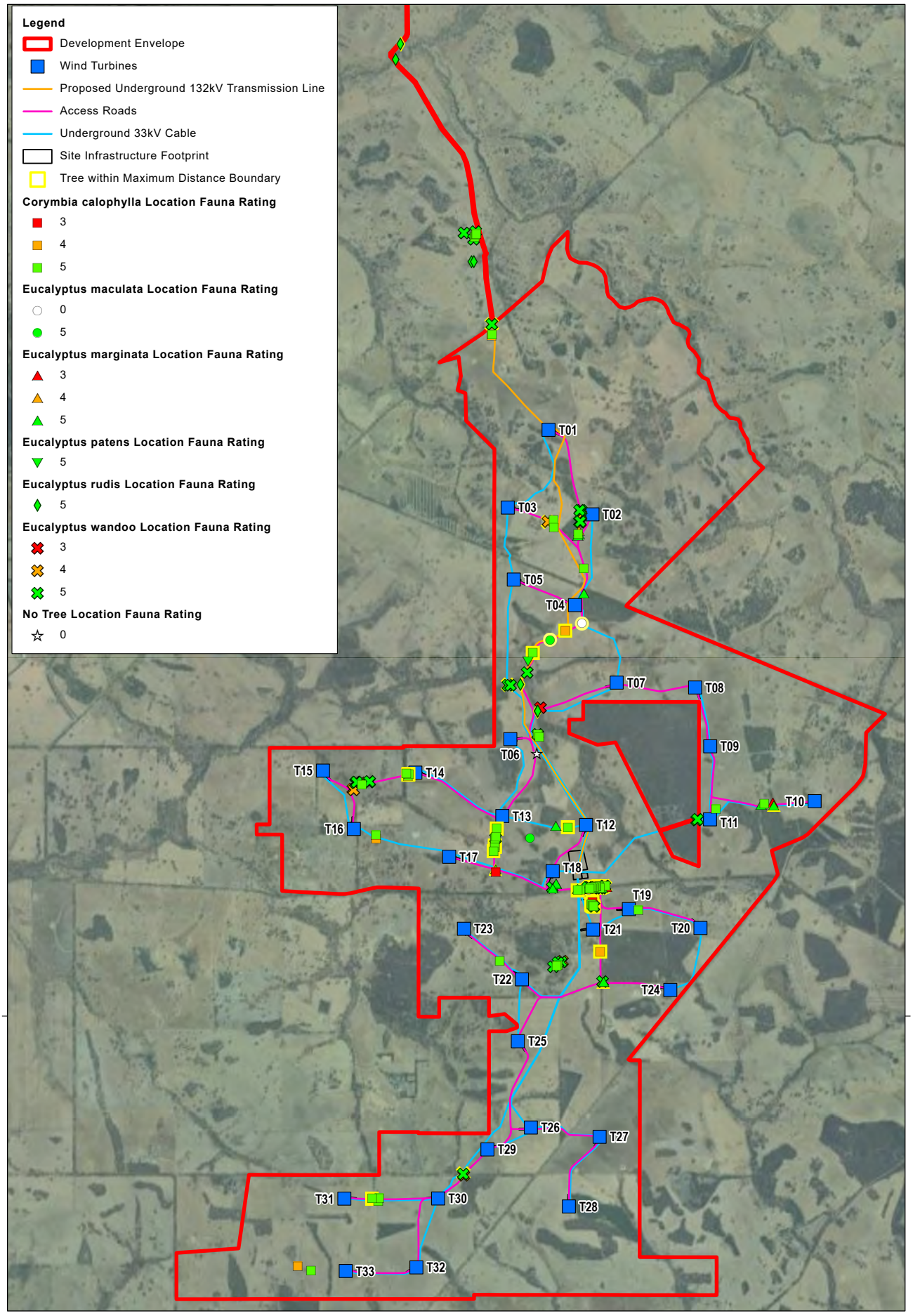
Kojonup Wind Farm
Vegetation Condition
Wind Farm

Figure:
8b

CAD Ref: a1868_F059_10		Author: L. Mattiske	Ref:
Date: October 2025	Rev: A	A4	Drawn: CAD Resources ~ www.cadresources.com.au



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Scale: 1:60,000
GDA 1994 MGA Zone 50

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Kojonup Wind Farm
Tree Locations

Figure: **9**

CAD Ref: a1868_F059_05		Author: L. Mattiske	Ref:
Date: October 2025	Rev: A	A4	Drawn: CAD Resources ~ www.cadresources.com.au

7. DISCUSSION

Mattiske Consulting Pty Ltd was commissioned by the Kojonup Wind Farm Pty Ltd to undertake a review of the flora, vegetation and fauna values on the proposed Kojonup Wind Farm. The proposed development occurs primarily within cleared agricultural areas. The survey effort concentrated on desktop reviews, an assessment of the main remnants, paddock and roadside trees that may need pruning or clearing and roadside vegetation that may be disturbed in localised areas by vehicle movement and the installation of the wind farm facilities.

Survey effort was spread over multiple trips in February, July, November and December 2023 and January, July, September and October 2024 with a total of 23 field days. As the survey effort mainly included remnant trees in sheep paddocks and crop paddocks the seasonal conditions were less relevant. The few areas of remnant native vegetation which were less disturbed and that will not be directly impacted were assessed in detail despite being outside the proposed operational areas. The remnant vegetation assessments were undertaken by senior and experienced botanists from Mattiske Consulting. Dr Mattiske with Sarah Rankin (Kojonup Wind Farm Pty Ltd) and Jen Willcox (Western Wildlife) completed the assessments of trees that assisted in avoidance of many direct and indirect impacts during the design phases of the wind farm layout and associated infrastructure and access routes. As with many wind farm developments in agricultural areas it was feasible through early assessments to minimize the disturbances of the installation operations to degraded or completely degraded communities.

A total of 179 vascular plant taxa from 119 plant genera and 45 plant families were recorded within the Kojonup Wind Farm survey area during 2023 and 2024. The main taxa recorded were within the Myrtaceae (21 taxa), Fabaceae (20 taxa), Poaceae (19 taxa), Proteaceae (15 taxa) and Asteraceae (12 taxa) families. Of the 179 taxa, 17.3% were annual species and as such reflects the coverage of the flora.

Twenty-one introduced (weed) species were recorded in 2023 and 2024. None of the introduced species are declared pests (DPIRD 2025a) or Weeds of National Significance (DCCEEW 2025e).

No threatened flora species pursuant to subsection (2) of section 23F of the *Wildlife Conservation Act (1950)* and as listed by the Department of Biodiversity, Conservation and Attractions were recorded within the Kojonup Wind Farm survey area. No plant taxa listed as Threatened pursuant to Schedule 1 of the *Environment Protection and Biodiversity Conservation Act 1999* were recorded during the survey within the proposed Kojonup Wind Farm survey area.

One Priority 4 species (*Xanthorrhoea brevistyla* (P4) was recorded in the woodlands of *Eucalyptus wandoo* with patches of *Allocasuarina huegeliana* over low subshrubs and introduced grasses on sandy soils and near shallow granites on mid and upper slopes. This species was restricted in occurrence near the proposed facilities on the edges of a paddock and at the time of the development it should be feasible to avoid the plants.

Nine vegetation communities were defined and mapped within the Kojonup Wind Farm survey area. The native plant communities were restricted in occurrence due to the degree of land clearing and historical agricultural activities in the area. The detailed analysis of the communities was restricted by the lack of understorey native species in most areas. The latter absence of many native understorey species reflected the historical agricultural activities in the area. The design of the project layout avoided the more intact areas of native vegetation. Every effort was made to avoid the areas of intact native vegetation. The wind turbines are to be established in the cleared paddocks which are mainly degraded or completely degraded.

The threatened ecological community "*Eucalypt Woodlands of the Western Australian Wheatbelt"* as defined by the Department of Climate Change, Energy, the Environment and Water 2004b) under the *Environment Protection and Biodiversity Conservation Act 1999* was not located in the Kojonup Wind Farm survey area.

The priority ecological community "Claypans with mid dense shrublands of *Melaleuca lateritia* over herbs" as delineated by the Department of Biodiversity, Conservation and Attractions (2025b) was located outside the Kojonup Wind Farm survey area.

The tree species include mainly *Eucalyptus wandoo, Eucalyptus rudis, Eucalyptus marginata* and *Corymbia calophylla*. Several areas of *Eucalyptus astringens* were recorded, however these stands are outside any direct or indirect impact areas. Although more than 151 tree species were assessed through diameter at breast height measurements and potential fauna activity only a few are located near access routes, turbines and cable alignments. This planning has enabled a marked reduction in the potential trees that will need either pruning or removal.

As the proposal has minimal direct or indirect impact on the remnant areas of native vegetation, the impacts are not considered to be significant with the proposed layout of the wind turbines and the associated cables which primarily are within the degraded and completely degraded areas.

Should the development of the Kojonup Wind Farm go ahead the following recommendations are made as a means of minimizing the impacts of infrastructure activities on the flora, vegetation and fauna values in the area:

- Limit ground disturbance and clearing to designated areas and access routes, avoiding habitat trees (larger trees and trees with hollows) wherever possible;
- Maintain existing drainage systems, ensuring tracks and other infrastructure areas do not disrupt or divert historic water flow patterns;
- Remove and stockpile topsoil, log debris and leaf litter where possible for use in future rehabilitation programs. If possible, stockpiled topsoil should be directly replaced on disturbed areas;
- Minimise soil disturbance during clearing and practice standard vehicle hygiene to ensure introduced (exotic) species do not become established within the Kojonup Wind Farm survey area; and
- Minimize all threatening processes to native vegetation.

In summary, every effort was made to avoid any flora and vegetation values that may restrict the development. The main flora and vegetation values near the proposed operational areas may be minimized further during the final design and development stages. The key issues remain the isolated paddock and roadside trees that may need removal or minor pruning and the avoidance of the Priority 4 species in the southern areas on cable and track alignments.

8. ACKNOWLEDGEMENTS

The authors would like to thank Dr Sarah Rankin from Kojonup Wind Farm Pty Ltd and for their assistance with this project.

9. LIST OF PERSONNEL

The following Mattiske Consulting Pty Ltd personnel were involved in this project:

Name	Position	Project Involvement
Dr E M Mattiske	Managing Director & Principal Ecologist	Planning, Data Interpretation, Field Studies, Management & Reporting FB62000019-2
Mr Z Sims	Senior Botanist	Field work, Plant Identifications Flora Permit FB62000025-5
Ms L Cockram	Senior Botanist	Field work, Plant Identifications Flora Permit FB62000266-4
Ms L Ducki	Experienced Botanist	Fieldwork FB62000394-2
Ms M Pollock	Botanist	Fieldwork FB62000524

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APPENDIX A5: DEFINITION OF PRIORITY ECOLOGICAL COMMUNITIES (Department of Biodiversity, Conservation and Attractions 2025b)

Category Code	Category
P1	**Poorly-known ecological communities** Ecological communities with apparently few, small occurrences, all or most not actively managed for conservation (e.g. within agricultural or pastoral lands, urban areas, active mineral leases) and for which current threats exist.
P2	**Poorly-known ecological communities** Communities that are known from few small occurrences, all or most of which are actively managed for conservation (e.g. within national parks, conservation parks, nature reserves, State forest, un-allocated Crown land, water reserves, etc.) and not under imminent threat of destruction or degradation.
P3	**Poorly known ecological communities** (i) Communities that are known from several to many occurrences, a significant number or area of which are not under threat of habitat destruction or degradation or: (ii) Communities known from a few widespread occurrences, which are either large or within significant remaining areas of habitat in which other occurrences may occur, much of it not under imminent threat, or; (iii) Communities made up of large, and/or widespread occurrences, that may or not be represented in the reserve system, but are under threat of modification across much of their range from processes such as grazing and inappropriate fire regimes.
P4	Ecological communities that are adequately known, rare but not threatened or meet criteria for Near Threatened, or that have been recently removed from the threatened list. These communities require regular monitoring.
P5	**Conservation Dependent ecological communities** Ecological communities that are not threatened but are subject to a specific conservation program, the cessation of which would result in the community becoming threatened within five years.

APPENDIX A6: CATEGORIES AND CONTROL OF DECLARED (PLANT) PESTS IN WESTERN AUSTRALIA (Department of Primary Industries and Regional Development 2025) (*Biosecurity and Agriculture Management Regulations 2013*)

Control Category	Control Measures
C1 (Exclusion) '(a) Category 1 (C1) — Exclusion: if in the opinion of the Minister introduction of the declared pest into an area or part of an area for which it is declared should be prevented' Pests will be assigned to this category if they are not established in Western Australia and control measures are to be taken, including border checks, in order to prevent them entering and establishing in the State.	In relation to a category 1 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to destroy, prevent or eradicate the declared pest.
C2 (Eradication) '(b) Category 2 (C2) — Eradication: if in the opinion of the Minister eradication of the declared pest from an area or part of an area for which it is declared is feasible' Pests will be assigned to this category if they are present in Western Australia in low enough numbers or in sufficiently limited areas that their eradication is still a possibility.	In relation to a category 2 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to destroy, prevent or eradicate the declared pest.
C3 (Management) '(c) Category 3 (C3) — Management: if in the opinion of the Minister eradication of the declared pest from an area or part of an area for which it is declared is not feasible but that it is necessary to — (i) alleviate the harmful impact of the declared pest in the area; or (ii) reduce the number or distribution of the declared pest in the area; or (iii) prevent or contain the spread of the declared pest in the area.' Pests will be assigned to this category if they are established in Western Australia but it is feasible, or desirable, to manage them in order to limit their damage. Control measures can prevent a C3 pest from increasing in population size or density or moving from an area in which it is established into an area which currently is free of that pest.	In relation to a category 3 declared pest, the owner or occupier of land in an area for which an organism is a declared pest or a person who is conducting an activity on the land must take such of the control measures specified in subregulation (1) as are reasonable and necessary to — (a) alleviate the harmful impact of the declared pest in the area for which it is declared; or (b) reduce the number or distribution of the declared pest in the area for which it is declared; or (c) prevent or contain the spread of the declared pest in the area for which it is declared.

APPENDIX A7: DEFINITION OF STRUCTURAL FORMS OF AUSTRALIAN VEGETATION (Beard 1990)

Structural Forms of Australian Vegetation			
Growth Form of Tallest Stratum	**Foliage Cover of Tallest Stratum**		
	30 – 70 %	**10 – 30 %**	**less than 10 %**
Tall Trees [greater than 30 m]	Tall Forest	Tall Woodland	Open Tall Forest
Medium Trees [10 – 30 m]	Forest	Woodland	Open Woodland
Low Trees [less than 10 m]	Low Forest	Low Woodland	Open Low Woodland
Tall Shrubs [greater than 2 m]	Thicket	Scrub	Open Scrub
Low Shrubs [less than 2 m]	Heath	Low Shrubland	Open Low Shrubland
Grassland [less than 1 m]	Closed Bunch Grassland	Open Bunch Grassland	Hummock Grassland

APPENDIX A8: DEFINITION OF VEGETATION CONDITION SCALE (Trudgen 1988)

Condition Rating	Description
Pristine (1)	Pristine or nearly so, no obvious signs of damage caused by human activities since European settlement.
Excellent (2)	Some relatively slight signs of damage caused by human activities since European settlement. For example, some signs of damage to tree trunks caused by repeated fire, the presence of some relatively non-aggressive weeds, or occasional vehicle tracks.
Very Good (3)	More obvious signs of damage caused by human activity since European settlement, including some obvious impact on the vegetation structure such as that caused by low levels of grazing or slightly aggressive weeds.
Good (4)	Still retains basic vegetation structure or ability to regenerate it after very obvious impacts of human activities since European settlement, such as grazing, partial clearing, frequent fires or aggressive weeds.
Degraded (5)	Severely impacted by grazing, very frequent fires, clearing or a combination of these activities. Scope for some regeneration but not to a state approaching good condition without intensive management. Usually with a number of weed species present including very aggressive species.
Completely Degraded (6)	Areas that are completely or almost completely without native species in the structure of their vegetation; i.e. areas that are cleared or 'parkland cleared' with their flora comprising weed or crop species with isolated native trees or shrubs.

APPENDIX B: DESCRIPTION OF THREATENED AND PRIORITY FLORA SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE KOJONUP WIND FARM SURVEY AREA (^Department of Biodiversity, Conservation and Attractions 2025a, 2025e, #Department of Climate Change, the Environment and Water 2025a)

Species	Common Name	State Conservation Code ^	Federal Conservation Code #	Family	Description	Flowers	Habitat	Known from No. Specimens at State Herbarium	Likelihood of occurrence
Adenanthos pungens subsp. *effusus*	Sprawling Spiky Adenanthos	Threatened	Endangered	Proteaceae	prostrate shrub to 50 cm, forming large mats to 3 m wide	pink, Aug to Nov	white siliceous sand	30	Highly Unlikely, occurs north and southeast of Kojonup, soils not suitable on survey area
Adenanthos pungens subsp. *pungens*	Spiky Adenanthos	Threatened	Vulnerable	Proteaceae	erect shrub to 3 m	pink/red, Aug to Nov	white/grey or pink sand, rocky soils, gypsum on sand dunes, hillsides	32	Highly Unlikely, occurs south and east of Kojonup, soils not suitable on survey area
Banksia oligantha	Wagin Banksia	Threatened	Endangered	Proteaceae	non-lignotuberous shrub to 3 m	red & cream/orange-brown, Oct to Nov	yellow or yellow-brown sand	16	Highly Unlikely, occurs north of Kojonup with outlier in cultivation at Kings Park Perth, soils not suitable on survey area
Caladenia dorrienii	Cossack Spider Orchid	Threatened	Endangered	Orchidaceae	Tuberous, perennial, herb 0.1 to 0.2m high	White-cream-yellow, Sep to Nov	Clayey loam Moist sites adjacent to rivers and seasonal creeks	15	Unlikely, occurs southwest of Kojonup and extends northwards on eastern fringes of southwest forests
Commersonia erythrogyna	Trigwell's Rulingia	Threatened	Endangered	Fabaceae	erect, domed shrub to 1.5m	orange, yellow, red & purple, Sep to Oct	red clay and laterite, on low hilltops and breakaways	5	Highly Unlikely, occurs northwest of Kojonup with outlier in glasshouse at UWA near Perth

APPENDIX B: DESCRIPTION OF THREATENED AND PRIORITY FLORA SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE KOJONUP WIND FARM SURVEY AREA (^Department of Biodiversity, Conservation and Attractions 2025a, 2025e, #Department of Climate Change, the Environment and Water 2025a)

Species	Common Name	State Conservation Code ^	Federal Conservation Code #	Family	Description	Flowers	Habitat	Known from No. Specimens at State Herbarium	Likelihood of occurrence
Conostylis drummondii	Drummond's Conostylis	Threatened	Endangered	Haemodoraceae	Rhizomatous, tufted perennial, grass line or herb, 0.1 to 0.3m high.	Yellow Oct-Nov	White, grey or yellow sand, gravel	20	Highly Unlikely, occurs north of Kojonup
Darwinia oxylepis	Gillam's Bell	Threatened	Endangered	Myrtaceae	upright, dense shrub to 1.5 m	red, Aug to Nov	stony, peaty sand in rocky gullies.	31	Highly Unlikely, recorded north of Perth, but mainly in Stirling Ranges to south of Kojonup
Diuris micrantha	Dwarf Bee-orchid	Threatened	Vulnerable	Orchidaceae	tuberous, perennial, herb to 60 cm	yellow & brown, Sep to Oct	brown loamy clay in winter-wet swamps, in shallow water	10	Highly Unlikely, occurs on Swan Coastal Plain or north of Kojonup
Drakaea micrantha	Dwarf Hammer-orchid	Threatened	Vulnerable	Orchidaceae	Tuberous perennial herb 0.15m to 0.3m	Red and yellow, Sep to Oct	White grey sands	50	Highly Unlikely, occurs on Swan Coastal Plain or well south of Kojonup near Denmark and Albany
Eleocharis keigheryi		Threatened	Vulnerable	Cyperaceae	Rhizomatous, clumped perennial, grass-like or herb (sedge) to 0.4m high	Green, Aug to Nov	Clay, sandy-loam. Emergent in freshwater, creeks and claypans	59	Possible, however reduced likelihood as mainly north and northwest of Kojonup and a specialised emergent in freshwater, creeks and claypans
Gastrolobium lehmannii	Cranbrook Pea	Threatened	Vulnerable	Fabaceae	erect, domed shrub to 1.5 m	orange-yellow-red-purple, Sep to Oct	red clay, laterite on low hilltop of breakaway	20	Possible, recorded near Kojonup and also to south of Kojonup

APPENDIX B: DESCRIPTION OF THREATENED AND PRIORITY FLORA SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE KOJONUP WIND FARM SURVEY AREA (^Department of Biodiversity, Conservation and Attractions 2025a, 2025e, #Department of Climate Change, the Environment and Water 2025a)

Species	Common Name	State Conservation Code ^	Federal Conservation Code #	Family	Description	Flowers	Habitat	Known from No. Specimens at State Herbarium	Likelihood of occurrence
Hemigenia ramosissima	Branched Hemigenia	Threatened	Critically Endangered	Lamiaceae	slender shrub to 50 cm	blue-purple, Nov to Dec or Jan	lateritic soils, clay on granite outcrops	8	Unlikely, occurs north of Kojonup
Roycea pycnophylloides	Saltmat	Threatened	Endangered	Chenopodiaceae	Perennial herb, forms densely branched mats to 1m high	White, Sep	Sandy soils, clays and saline flats	60	Highly Unlikely as occurs on sandy soils, clays and saline flats and occurs north-east and north of Kojonup
Verticordia fimbrilepis subsp. *fimbrilepis*	Shy Featherflower	Threatened	Endangered	Myrtaceae	shrub to 70 cm	pink-white, Oct to Dec or Jan	gravelly sandy or clayey soils on flats, road verges	39	Unlikely, occurs north of Kojonup from Wheatbelt into northern Jarrah forest
Banksia subpinnatifida var. *imberbis*		Priority 2	-	Proteaceae	erect or straggling, non-lignotuberous shrub to 1.5m	yellow, Sep to Oct	lateritic soils	17	Unlikely, mainly to west on eastern fringes of main south-west forests with a few outliers in Wheatbelt
Melaleuca ordinifolia		Priority 2	-	Myrtaceae	compact, spreading shrub to 1.5 m	white-cream, Aug to Oct.	sandy loam or clay	24	Possible, recorded near Kojonup, but mainly occurs south east and south of Kojonup
Acacia ataxiphylla subsp. *ataxiphylla*		Priority 3	-	Fabaceae	prostrate, sprawling shrub to 50 cm	yellow, Nov to Dec or Jan	gravelly clay loam, white/grey sand on flats, roadsides	11	Possible, recorded near survey area with main populations near Albany and north-west of Kojonup

APPENDIX B: DESCRIPTION OF THREATENED AND PRIORITY FLORA SPECIES WITH THE POTENTIAL TO OCCUR WITHIN THE KOJONUP WIND FARM SURVEY AREA (^Department of Biodiversity, Conservation and Attractions 2025a, 2025e, #Department of Climate Change, the Environment and Water 2025a)

Species	Common Name	State Conservation Code ^	Federal Conservation Code #	Family	Description	Flowers	Habitat	Known from No. Specimens at State Herbarium	Likelihood of occurrence
Calectasia obtusa		Priority 3	-	Dasypogonaceae	erect, low herb to 40 cm	blue, Aug to Sep	sand, clay loam, gravel and laterite soils	23	Possible but mainly east of Kojonup and south-east along southern coastal areas
Melaleuca micromera		Priority 3	-	Myrtaceae	shrub to 4 m	yellow, Sep & Oct	gravelly sandy loam or clay	16	Unlikely, mainly south east of survey area with a few outliers
Caladenia integra	Mantis Orchid, Smooth-lipped Spider Orchid	Priority 4	-	Orchidaceae	tuberous, perennial, herb to 50 cm	green, red	clayey loam on granite outcrops, rocky slopes	54	Possible near granite outcrops and on clayey-loams
Caladenia x *triangularis*	Shy Spider Orchid	Priority 4	-	Orchidaceae	tuberous, perennial herb	yellow	loam, low lying areas	8	Possible, mainly south west and south of survey area
Schoenus natans	Floating Bog-rush	Priority 4	-	Cyperaceae	aquatic annual herb (sedge) to 30 cm	brown, Oct	winter-wet depressions often associated with clayey soils	66	Possible, but restricted to winter-wet depressions that reduces likelihood

APPENDIX C: VASCULAR PLANT SPECIES RECORDED ON THE KOJONUP WIND FARM SURVEY AREA

Note: * denotes introduced species;
P1-P4 denote Priority Flora Species (Department of Biodiversity, Conservation and Attractions 2025e)

FAMILY		SPECIES
AMARANTHACEAE		*Ptilotus manglesii*
APIACEAE		*Daucus glochidatus*
		Xanthosia candida
		Xanthosia huegelii
ARALIACEAE		*Trachymene pilosa*
ASPARAGACEAE		*Chamaescilla corymbosa*
		Chamaexeros serra
		Dichopogon capillipes
		Laxmannia squarrosa
		Lomandra hermaphrodita
		Lomandra sericea
		Lomandra sp.
		Sowerbaea laxiflora
		Thysanotus sp.
		Thysanotus sp. (climbing)
ASTERACEAE		*Gnephosis drummondii*
		Helichrysum leucopsideum
	*	*Hypochaeris glabra*
		Lagenophora huegelii
		Podolepis gracilis
		Pterochaeta paniculata
		Siemssenia capillaris
		Siloxerus filifolius
	*	*Sonchus oleraceus*
		Trichocline spathulata
	*	*Ursinia anthemoides*
		Asteraceae sp.
BORYACEAE		*Borya sp.*
CAMPANULACEAE		*Wahlenbergia* sp.
CASUARINACEAE		*Allocasuarina huegeliana*
		Allocasuarina humilis
		Allocasuarina microstachya
		Casuarina obesa
CELASTRACEAE		*Stackhousia pubescens*
CENTROLEPIDACEAE		*Centrolepis aristata*
COLCHICACEAE		*Burchardia monantha*
CYPERACEAE		*Cyathochaeta avenacea*
		Lepidosperma sp.
		Mesomelaena stygia
		Morelotia octandra
		Netrostylis sp. Jarrah Forest (R. Davis 7391)
		Schoenus minulatus
		Schoenus sp.
DILLENIACEAE		*Hibbertia commutata*
		Hibbertia gracilipes

APPENDIX C: VASCULAR PLANT SPECIES RECORDED ON THE KOJONUP WIND FARM SURVEY AREA

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FAMILY		SPECIES
DROSERACEAE		*Drosera* sp. (climbing)
ELAEOCARPACEAE		*Tetratheca virgata*
ERICACEAE		*Andersonia parvifolia*
		Leucopogon capitellatus
		Leucopogon sprengelioides
		Leucopogon tamariscinus
		Styphelia pallida
		Styphelia tenuiflora
		Ericaceae sp.
FABACEAE		*Acacia drummondii*
		Acacia nervosa
		Bossiaea eriocarpa
		Bossiaea ornata
		Daviesia lancifolia
		Daviesia preissii
		Dillwynia laxiflora
		Gastrolobium calycinum
		Gastrolobium dorrienii
		Gastrolobium praemorsum
		Gastrolobium spinosum
		Gompholobium knightianum
		Gompholobium marginatum
		Gompholobium preissii
		Hovea chorizemifoilia
		Jacksonia condensata
		Kennedia prostrata
		Pultenaea ericifolia
		Sphaerolobium sp.
	*	*Trifolium campestre*
GOODENIACEAE		*Dampiera alata*
		Goodenis caerulea
		Lechenaultia biloba
		Lechenaultia sp.
		Scaevola calliptera
HAEMODORACEAE		*Conostylis aculeata*
		Conostylis setigera
		Haemodorum sp.
HEMEROCALLIDACEAE		*Dianella revoluta*
		Stypandra glauca
		Tricoryne humilis
		Tricoryne tenella
		Tricoryne sp.
IRIDACEAE		*Patersonia occidentalis*
	*	*Romulea rosea*
LAMIACEAE		*Hemigenia incana*
LAURACEAE		*Cassytha* sp.
LINACEAE		*Linum marginale*

APPENDIX C: VASCULAR PLANT SPECIES RECORDED ON THE KOJONUP WIND FARM SURVEY AREA

Note: * denotes introduced species;
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FAMILY		SPECIES
LOGANIACEAE		*Logania micrantha*
		Phyllangium sp.
MALVACEAE		*Thomasia foliosa*
MYRTACEAE		*Babingtonia camphorosmae*
		Beaufortia schaueri
		Calothamnus sanguineus
		Corymbia calophylla
		Eucalyptus astringens subsp. *astringens*
	PL	*Eucalyptus maculata*
		Eucalyptus marginata
		Eucalyptus patens
		Eucalyptus rudis
		Eucalyptus wandoo subsp. *wandoo*
		Hypocalymma angustifolium
		Kunzea micrantha
		Kunzea recurva
		Kunzea sp.
		Leptospermopsis erubescens
		Melaleuca cuticularis
		Melaleuca preissiana
		Melaleuca rhaphiophylla
		Melaleuca sp.
		Verticordia habrantha
ORCHIDACEAE		*Caladenia sp.*
	*	*Disa bracteata*
		Pterostylis sp.
		Thelymitra sp.
OXALIDACEAE		*Oxalis exilis*
		Oxalis sp.
PHYLLANTHACEAE		*Lysiandra calycina*
PITTOSPORACEAE		*Billardiera fusiformis*
		Billardiera variifolia
PLANTAGINACEAE	*	*Plantago bellardii*
POACEAE	*	*Aira caryophyllea*
		Amphipogon debilis
		Austrostipa elegantissima
		Austrostipa mollis
		Austrostipa sp.
	*	*Avena* sp.
	*	*Briza maxima*
	*	*Briza minor*
	*	*Bromus diandrus*
	*	*Ehrharta calycina*
	*	*Ehrharta longiflora*
	*	*Hordeum leporinum*
	*	*Lolium rigidum*
		Neurachne alopecuroidea
	*	*Polypogon monspeliensis*
		Rytidosperma acerosum
		Rytidosperma caespitosum

APPENDIX C: VASCULAR PLANT SPECIES RECORDED ON THE KOJONUP WIND FARM SURVEY AREA

Note: * denotes introduced species;
P1-P4 denote Priority Flora Species (Department of Biodiversity, Conservation and Attractions 2025e)

FAMILY		SPECIES
POACEAE		*Rytidosperma* sp.
(continued)	*	*Vulpia myuros* forma *megalura*
POLYGALACEAE		*Comesperma sp.*
POLYGONACEAE	*	*Rumex acetosella*
PRIMULACEAE	*	*Lysimachia arvensis*
PROTEACEAE		*Banksia armata* var. *armata*
		Banksia bipinnatifida
		Banksia dallanneyi subsp. *dallanneyi* var. *dallanneyi*
		Banksia fraseri var. *fraseri*
		Banksia grandis
		Banksia sessilis
		Grevillea pulchella
		Grevillea wilsonii
		Hakea brownii
		Hakea lissocarpha
		Hakea trifurcata
		Hakea undulata
		Persoonia striata
		Petrophila squamata sp. Northern (J. Monks 40)
		Petrophile divaricata
PTERIDACEAE		*Cheilanthes sieberi* subsp. *sieberi*
RESTIONACEAE		*Desmocladus asper*
		Desmocladus fasciculatus
RHAMNACEAE		*Cryptandra myriantha*
		Stenanthemum emarginatum
		Trymalium ledifolium
RUBIACEAE		*Opercularia vaginata*
RUTACEAE		*Boronia fastigiata*
STYLIDIACEAE		*Stylidium affine*
		Stylidium amoenum
		Stylidium dichotomum
		Stylidium piliferum
		Stylidium repens
		Stylidium sp.
THYMELAEACEAE		*Pimelea brevifolia* subsp. *brevifolia*
		Pimelea sp.
XANTHORRHOEACEAE	P4	*Xanthorrhoea brevistyla*

APPENDIX D: SUMMARY OF TREE ASSESSMENTS ON THE KOJONUP WIND FARM

DBH - Diameter at Breast Height (cm)
COND - Condition; H - Healthy, SS - Slightly Stressed, S - Stressed, VS - Very Stressed, VVS Very Very Stressed, D - Dead, DO - Old Death only main stems persisting.
Fauna - Ranking based on Usage by Fauna species

Datum	Easting	Northing	Tree_No	Species	DBH	COND	No. Stems	Fauna	Comments	Proximity
GDA94	510829	6238220	1	Eucalyptus wandoo	60	H	3	5	No Hollows	Within Max Disturbance Boundary
GDA94	510836	6238200	2	Eucalyptus wandoo	113	VS	1	4	Hollows Regent Parrot Nesting, 1J and 1M to east too small and stump	
GDA94	509869	6237906	3	Corymbia calophylla	160	H	1	5	No Hollows	
GDA94	509878	6237944	4	Corymbia calophylla	94	H	1	5	No Hollows, in paddock	
GDA94	509800	6237940	5	Corymbia calophylla	60	H	1	5	No Hollows	Within Max Disturbance Boundary
GDA94	508960	6237174	6	Corymbia calophylla	100	H	1	4	Hollows	
GDA94	509110	6237124	7	Corymbia calophylla	81	H	1	5	No Hollows	
GDA94	512408	6240383	18	Eucalyptus marginata	72	H	1	4	Hollows	Within Max Disturbance Boundary
GDA94	512415	6240385	19	Eucalyptus marginata	52	H	1	5	No Hollows	
GDA94	512403	6240391	20	Eucalyptus wandoo	35	H	1	5	No Hollows	
GDA94	512376	6240728	21	Corymbia calophylla	139	H	1	4	No Hollows west side	Within Max Disturbance Boundary
GDA94	512278	6241255	22	Corymbia calophylla	71	H	1	5	No Hollows, in paddock	Within Max Disturbance Boundary
GDA94	512281	6241258	23	Corymbia calophylla	76	H	1	4	Hollows, in paddock	Within Max Disturbance Boundary
GDA94	512277	6241267	24	Corymbia calophylla	59	H	1	5	No Hollows	Within Max Disturbance Boundary
GDA94	512290	6241248	25	Corymbia calophylla	79	H	1	5	No Hollows, looking east	Within Max Disturbance Boundary
GDA94	512301	6241241	26	Corymbia calophylla	75	H	1	5	No Hollows, looking east	Within Max Disturbance Boundary
GDA94	512305	6241242	27	Eucalyptus wandoo	74	H	1	5	No Hollows, looking east	Within Max Disturbance Boundary
GDA94	512806	6241197	28	Corymbia calophylla	140	H	1	5	No Hollows	
GDA94	512392	6241448	29	Eucalyptus wandoo	78	H	1	5	No Hollows, SE of Road, Paddock, in ro	Within Max Disturbance Boundary
GDA94	512395	6241448	30	Eucalyptus marginata	76	H	1	3	Hollows, in row, SE side	Within Max Disturbance Boundary
GDA94	512398	6241448	31	Eucalyptus marginata	112	H	1	5	No Hollows, in row, SE side	
GDA94	512397	6241466	32	Corymbia calophylla	50	H	1	5	No Hollows, in row, SE side	Within Max Disturbance Boundary

APPENDIX D: SUMMARY OF TREE ASSESSMENTS ON THE KOJONUP WIND FARM

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Fauna - Ranking based on Usage by Fauna species

Datum	Easting	Northing	Tree_No	Species	DBH	COND	No. Stems	Fauna	Comments	Proximity
GDA94	512429	6241470	33	Eucalyptus wandoo	62	H	1	5	No Hollows, next row, north side	Within Max Disturbance Boundary
GDA94	512426	6241469	34	Eucalyptus wandoo	48	H	1	5	No Hollows, next row, north side	Within Max Disturbance Boundary
GDA94	512436	6241472	35	Corymbia calophylla	67	H	1	5	No Hollows, next row, north side	
GDA94	512448	6241458	36	Eucalyptus marginata	181	H	1	3	Hollows on south side	
GDA94	512366	6241467	37	Corymbia calophylla	61	H	1	5	No Hollows, on north side	Within Max Disturbance Boundary
GDA94	512357	6241466	38	Corymbia calophylla	115	H	1	5	No Hollows, on north side	Within Max Disturbance Boundary
GDA94	512367	6241449	39	Eucalyptus wandoo	79	SS	1	5	No Hollows on South Side	
GDA94	512373	6241450	40	Corymbia calophylla	73	SS	1	5	Near access track to farm	Within Max Disturbance Boundary
GDA94	512334	6241462	41	Corymbia calophylla	81	SS	1	5	Cable crossing north side	Within Max Disturbance Boundary
GDA94	512324	6241460	42	Corymbia calophylla	60	SS	1	5	Cable crossing north side	Within Max Disturbance Boundary
GDA94	512308	6241445	43	Corymbia calophylla	80	H	1	5	South side	
GDA94	512300	6241458	44	Corymbia calophylla	100	H	1	5	Road Crossing	Within Max Disturbance Boundary
GDA94	512289	6241289	45	Corymbia calophylla	148	VS	1	3	North	Within Max Disturbance Boundary
GDA94	512282	6241443	46	Corymbia calophylla	91	H	1	5	South side	
GDA94	512276	6241456	47	Corymbia calophylla	81	SS	1	5	North	Within Max Disturbance Boundary
GDA94	512279	6241458	48	Corymbia calophylla	70	SS	1	5	North	Within Max Disturbance Boundary
GDA94	512266	6241439	49	Eucalyptus marginata	105	DO	1	5	South side	
GDA94	512256	6241438	50	Corymbia calophylla	56	S	1	5	South side	
GDA94	512257	6241451	51	Eucalyptus wandoo	45	H	1	5	Photo East and then west	Within Max Disturbance Boundary
GDA94	512242	6241451	52	Eucalyptus wandoo	40	SS	1	5	Photo East	Within Max Disturbance Boundary
GDA94	512236	6241450	53	Eucalyptus wandoo	34	SS	1	5	Photo west	Within Max Disturbance Boundary
GDA94	512151	6241428	54	Corymbia calophylla	71	SS	1	5	South side	
GDA94	512122	6241423	55	Corymbia calophylla	51	VS	1	5	South	Within Max Disturbance Boundary

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Fauna - Ranking based on Usage by Fauna species

Datum	Easting	Northing	Tree_No	Species	DBH	COND	No. Stems	Fauna	Comments	Proximity
GDA94	512121	6241438	56	Eucalyptus marginata	64	VS	1	5	North	Within Max Disturbance Boundary
GDA94	511241	6240622	57	Corymbia calophylla	132	SS	1	5		
GDA94	511939	6240616	58	Eucalyptus wandoo	49	S	1	5		
GDA94	511952	6240622	59	Eucalyptus wandoo	69	SS	1	4		
GDA94	511901	6240605	60	Eucalyptus wandoo	50	S	1	5		
GDA94	511898	6240573	61	Corymbia calophylla	110	SS	1	5		
GDA94	511884	6240568	62	Corymbia calophylla	54	S	1	5		
GDA94	511847	6240553	63	Eucalyptus wandoo	39	H	1	5		
GDA94	509845	6242004	64	Corymbia calophylla	103	SS	1	4		
GDA94	509841	6242046	65	Corymbia calophylla	98	VVS	1	5		
GDA94	509580	6242566	66	Eucalyptus wandoo	81	SS	1	4	Near planted trees and fence juncture	
GDA94	509593	6242554	67	Eucalyptus wandoo	56	S	1	4		
GDA94	509670	6242638	68	Eucalyptus wandoo	60	VS	1	4		
GDA94	509612	6242639	69	Eucalyptus wandoo	40	SS	1	5		
GDA94	509619	6242644	70	Eucalyptus wandoo	53	SS	1	5		
GDA94	509623	6242643	71	Eucalyptus wandoo	37	S	1	5		
GDA94	509627	6242641	72	Eucalyptus wandoo	39	SS	1	5		
GDA94	509683	6242612	73	Corymbia calophylla	92	SS	1	5		
GDA94	509767	6242646	74	Eucalyptus wandoo	87	SS	1	5		
GDA94	509771	6242649	75	Eucalyptus wandoo	66	S	1	5		
GDA94	511196	6241655	76	Eucalyptus marginata	83	SS	1	5		Within Max Disturbance Boundary
GDA94	511195	6241626	77	Corymbia calophylla	102	SS	1	3		
GDA94	512162	6245713	79	Eucalyptus wandoo	79	S	1	5		

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Fauna - Ranking based on Usage by Fauna species

Datum	Easting	Northing	Tree_No	Species	DBH	COND	No. Stems	Fauna	Comments	Proximity
GDA94	512144	6245712	80	Eucalyptus wandoo	67	SS	1	5	west side	
GDA94	512158	6245667	81	Eucalyptus wandoo	93	SS	1	4	east of road through bush	
GDA94	512160	6245647	82	Eucalyptus wandoo	56	SS	1	4	east of road through bush	
GDA94	512142	6245588	83	Eucalyptus wandoo	57	SS	1	5	west side	
GDA94	512151	6245587	84	Eucalyptus wandoo	31	SS	1	5	east side	
GDA94	512153	6245578	85	Eucalyptus wandoo	57	DO	1	4	east side	
GDA94	512137	6245485	87	Eucalyptus marginata	89	VS	1	4		
GDA94	512128	6245444	88	Corymbia calophylla	107	H	1	5		
GDA94	512140	6245441	89	Eucalyptus marginata	66	SS	1	5		
GDA94	512123	6245429	90	Eucalyptus marginata	48	SS	1	5		
GDA94	511850	6245604	91	Corymbia calophylla	138	SS	1	5		
GDA94	511788	6245584	92	Eucalyptus wandoo	68	SS	1	4		Within Max Disturbance Boundary
GDA94	511852	6245521	93	Corymbia calophylla	178	H	1	5		
GDA94	512190	6245060	94	Corymbia calophylla	108	H	1	5		
GDA94	512191	6244775	95	Eucalyptus marginata	69	H	1	5		
GDA94	512170	6244438	96	Eucalyptus maculata	0	H	1	0	planted and clearing	Within Max Disturbance Boundary
GDA94	511981	6244355	97	Corymbia calophylla	145	H	1	4		Within Max Disturbance Boundary
GDA94	511810	6244249	98	Eucalyptus maculata	90	H	1	5	pruning needed	Within Max Disturbance Boundary
GDA94	511615	6244105	99	Corymbia calophylla	116	SS	1	5		Within Max Disturbance Boundary
GDA94	511583	6242009	100	Eucalyptus maculata	90	S	1	5	planted	
GDA94	511563	6244006	101	Eucalyptus patens	80	SS	1	5		
GDA94	511552	6243882	102	Eucalyptus wandoo	80	SS	1	5		
GDA94	511476	6243746	103	Eucalyptus rudis	107	H	1	5	Near Melaleuca cuticularis	Within Max Disturbance Boundary

APPENDIX D: SUMMARY OF TREE ASSESSMENTS ON THE KOJONUP WIND FARM

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Fauna - Ranking based on Usage by Fauna species

Datum	Easting	Northing	Tree_No	Species	DBH	COND	No. Stems	Fauna	Comments	Proximity
GDA94	511336	6243742	104	Eucalyptus wandoo	80	H	1	5	Gap across creek	Within Max Disturbance Boundary
GDA94	511364	6243737	105	Eucalyptus wandoo	38	SS	1	5	South Creek	
GDA94	511669	6243449	106	Eucalyptus rudis	81	S	1	5	Western	Within Max Disturbance Boundary
GDA94	511671	6243447	107	Eucalyptus rudis	88	S	1	5	Eastern	Within Max Disturbance Boundary
GDA94	511702	6243483	108	Eucalyptus wandoo	88	S	1	3	East of creek	
GDA94	511674	6243176	109	Corymbia calophylla	82	SS	1	5		
GDA94	511672	6243184	110	Corymbia calophylla	58	SS	1	5		
GDA94	511670	6243184	111	Corymbia calophylla	58	SS	1	5		
GDA94	511671	6243186	112	Eucalyptus wandoo	78	S	1	5		
GDA94	511689	6243151	113	Corymbia calophylla	137	SS	1	5		
GDA94	511661	6242968	0	No Trees	0		0	0	Creek crossing no trees	
GDA94	511874	6242147	114	Eucalyptus marginata	121	SS	1	5		
GDA94	512012	6242132	115	Corymbia calophylla	88	SS	1	5		Within Max Disturbance Boundary
GDA94	511185	6241926	116	Corymbia calophylla	86	S	1	5	East	Within Max Disturbance Boundary
GDA94	511185	6241910	117	Corymbia calophylla	75	SS	1	5	East	Within Max Disturbance Boundary
GDA94	511172	6241862	118	Corymbia calophylla	105	SS	1	5	West	Within Max Disturbance Boundary
GDA94	511194	6242012	119	Eucalyptus wandoo	54	S	1	5		
GDA94	511188	6242010	120	Corymbia calophylla	62	S	1	5		
GDA94	511189	6242006	121	Corymbia calophylla	65	VS	1	5		
GDA94	511200	6242026	122	Corymbia calophylla	64	SS	1	5		
GDA94	511207	6242121	123	Corymbia calophylla	97	VVS	1	5		Within Max Disturbance Boundary
GDA94	510205	6242712	124	Corymbia calophylla	112	SS	1	5		
GDA94	510208	6242732	125	Corymbia calophylla	74	SS	1	5		Within Max Disturbance Boundary

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Fauna - Ranking based on Usage by Fauna species

Datum	Easting	Northing	Tree_No	Species	DBH	COND	No. Stems	Fauna	Comments	Proximity
GDA94	510214	6242733	126	Corymbia calophylla	84	DO	1	5		Within Max Disturbance Boundary
GDA94	510185	6242740	127	Corymbia calophylla	61	SS	1	5		
GDA94	513466	6242218	128	Eucalyptus wandoo	42	S	1	5		
GDA94	513477	6242224	129	Eucalyptus wandoo	40	SS	1	5		
GDA94	513683	6242340	130	Corymbia calophylla	118	SS	1	5		
GDA94	514194	6242385	131	Eucalyptus marginata	114	SS	1	5		
GDA94	514231	6242398	132	Corymbia calophylla	124	SS	1	5		
GDA94	514326	6242414	133	Eucalyptus marginata	140	SS	1	3		
GDA94	514336	6242377	134	Eucalyptus marginata	110	D	1	5		Within Max Disturbance Boundary
GDA94	511881	6241490	135	Eucalyptus marginata	104	SS	1	5		
GDA94	511877	6241497	136	Eucalyptus marginata	66	SS	1	5		
GDA94	511841	6241441	137	Eucalyptus marginata	148	SS	1	5		
GDA94	511834	6241454	138	Eucalyptus wandoo	60	SS	1	5		
GDA94	511148	6247687	139	Corymbia calophylla	109	SS	1	4		
GDA94	511154	6247699	140	Corymbia calophylla	125	SS	1	5		
GDA94	511153	6247815	141	Eucalyptus wandoo	51	SS	1	5	2 stems	Within Max Disturbance Boundary
GDA94	510922	6248526	142	Eucalyptus rudis	79	S	1	5	2 stems	
GDA94	510948	6248524	143	Eucalyptus rudis	79	VS	1	5		
GDA94	510838	6248850	144	Eucalyptus wandoo	0	D	1	5		
GDA94	510947	6248776	145	Eucalyptus wandoo	0	SS	1	5		
GDA94	510958	6248799	146	Corymbia calophylla	109	SS	1	5		
GDA94	510971	6248826	147	Corymbia calophylla	91	SS	1	5	Wandoo on edge of photo	
GDA94	510976	6248838	148	Corymbia calophylla	73	SS	1	5		

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Fauna - Ranking based on Usage by Fauna species

Datum	Easting	Northing	Tree_No	Species	DBH	COND	No. Stems	Fauna	Comments	Proximity
GDA94	510970	6248865	149	Eucalyptus wandoo	47	SS	1	5	2 stems	
GDA94	510064	6250805	150	Eucalyptus rudis	62	VS	1	5		
GDA94	510119	6250985	151	Eucalyptus rudis	70	SS	1	5		Within Max Disturbance Boundary

APPENDIX E: PHOTOGRAPHIC RECORD OF KOJONUP WIND FARM SURVEY AREA

Photograph 1 : KWF04 in southern section; E1 - Open woodland of *Corymbia calophylla* with some patches of *Eucalyptus marginata* and *Eucalyptus wandoo* over low undergrowth of grasses and herbs sandy-loams on slopes and ridges

Photograph 2 : KWF17 in southern section; E2 - Open woodland of *Eucalyptus marginata* and *Corymbia calophylla* over low undergrowth of grasses and herbs on sandy loam soils on slopes and ridges

Photograph 3 : KWF05 in southern section; E3 - Open woodland of *Eucalyptus marginata* and *Corymbia calophylla with some Eucalyptus wandoo patches* over low undergrowth of grasses and herbs on sandy loam soils on slopes and ridges

APPENDIX E: PHOTOGRAPHIC RECORD OF KOJONUP WIND FARM SURVEY AREA

Photograph 4 : E5 – Creek Crossing with Open woodland of *Eucalyptus rudis* with patches of *Corymbia calophylla* and *Eucalyptus wandoo* over grasses and herbs on lower moist sandy-loam clays on the slopes and with Paperbarks (*Melaleuca rhaphiophylla* and *Melaleuca cuticularis*) on the wetter lower slopes in gullies and creeklines

Photograph 5 : KWF11 : Ah1 - Open woodland of *Allocasuarina huegeliana* with *Corymbia calophylla, Eucalyptus marginata* and *Eucalyptus wandoo* over low undergrowth of grasses and herbs on sandy-loams to clay loams on slopes and ridges.

APPENDIX E: PHOTOGRAPHIC RECORD OF KOJONUP WIND FARM SURVEY AREA

Photograph 6 : KWF16 in southern section; Ah2 - Open woodland of *Allocasuarina huegeliana* with *Corymbia calophylla* and *Eucalyptus wandoo* over low undergrowth of grasses and herbs on sandy-loams on slopes and ridges.

Photograph 7 : Example of checking road crossings in areas supporting less trees.

APPENDIX E: PHOTOGRAPHIC RECORD OF KOJONUP WIND FARM SURVEY AREA

Photograph 8 : Example of checking species, tree condition and diameter at breast height in paddocks on potential project areas.

Photograph 9 : Example of checking tree species near current access tracks with view to checking if sufficient room and also whether alternative route needed.