Barn Hill Wind Farm

Native Vegetation Clearance Data Report

Final

September 2026

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Barn Hill Wind Farm

Native Vegetation Clearance Data Report under the *Native Vegetation Regulations 2017*

Final

Prepared by
Umwelt (Australia) Pty Limited

[redacted]

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Document Status

Rev No.	Reviewer Name	Date	Approved for Issue Name	Date
V1	Angela Carpenter	28/09/2026	Dr. T. How	29/09/2026

Abbreviations

Description	
AGL	AGL Energy Limited
AHA Act	*Aboriginal Heritage Act 1988*
BAM	Bushland Assessment Method
BBUS	Bird and Bat Utilisation Survey(s)
BCM	Bushland Condition Monitoring
BDBSA	Biological Database of South Australia
BESS	Battery Energy Storage System
CEMP	Construction Environmental Management Plan
Class B INTG	Condition Class B INTG (Iron-grass Natural Temperate Grassland of high quality with lower native species diversity than Condition Class A). Class B INTG is protected by the EPBC Act
Class C INTG	Condition Class C INTG (Iron-grass Natural Temperate Grassland that is typically significantly degraded, but amenable to rehabilitation). Class C INTG is not protected by the EPBC Act
Construction Corridor	The area to be cleared for construction and operation of the Barn Hill Wind Farm. This area falls within the larger Disturbance Corridor (224.91 ha).
DA	Development Approval
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Commonwealth) now NEPA
Declared weed	A plant that is regulated under the *Landscape South Australia Act 2019* due to its threat to primary industry, the natural environment, and public safety.
DEW	Department for Environment and Water (South Australia)
DEWHA	Department of the Environment, Water, Heritage and the Arts (Commonwealth)
Disturbance Corridor	Proposed maximum clearance area in which micro siting can occur (496.31 ha).
EBS	EBS Ecology (now trading as Umwelt)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
FRWL	Flinders Ranges Worm-lizard
HRE Act	*Hydrogen and Renewable Energy Act 2023* (South Australia)
IBRA	Interim Biogeographical Regionalisation of Australia
INTG	Iron-grass Natural Temperate Grassland of South Australia
KV	Kilovolt
LSA Act	*Landscape South Australia Act 2019* (South Australia)
MNES	Matters of National Environmental Significance, as defined under the EPBC Act
MW	Megawatts
NatureMaps	An online format for accessing information on South Australia's natural resources (maintained by DEW)
NPW Act	*National Parks and Wildlife Act 1972*
NV Act	*Native Vegetation Act 1991*
NVC	Native Vegetation Council
OEMP	Operational Environmental Management Plan
PBTL	Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*)
PDI Act	*Planning, Development and Infrastructure Act 2016*
PMST	Protected Matters Search Tool
Project Boundary Area	The area (or boundary) in which the Project will be located, and where vegetation has been mapped in relation to the Project (4499.52 ha).
Project	The proposed Barn Hill Wind Farm, TL, BESS facility and associated infrastructure.
SA	South Australia(n)
Search Area	A 5 km buffer including the Project Boundary Area used for database searches.
SEB	Significant Environmental Benefit

	Description
sp.	Species (singular)
spp.	Species (plural)
ssp.	Subspecies
STAM	Scattered Tree Assessment Method
TBS	Total Biodiversity Score
TEC	Threatened Ecological Community
TL	Transmission line
UBS	Unit Biodiversity Score
VA(s)	Vegetation Association(s)
var.	Variety (a taxonomic rank below that of species and subspecies, but above that of form)
VCS	Vegetation Condition Score
WF	Wind Farm
WoNS	Weeds of National Significance
WSP	WSP Global Inc.
WTE	Wedge-tailed Eagle
WTG	Wind Turbine Generator(s)

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1.0 Application Information

Details of the native vegetation clearance applicant are summarised in **Table 1.1**, with a summary of the proposed clearance supplied in **Table 1.2**.

Table 1.1 Application Details

Applicant	[redacted]		
Key Contact	[redacted]		
Landowner	[redacted]		
Site Address	Barn Hill, in the Barunga Ranges in the Mid-North region of South Australia (SA)		
Local Government Area	Port Pirie Wakefield	**Hundred**	Barunga Boucaut Koolunga Redhill
Title ID	Title IDs are provided in Attachment 1.	**Parcel ID**	Parcel IDs are provided in Attachment 1.

Table 1.2 Summary of Proposed Clearance

Purpose of Clearance	Earlier layouts of the Barn Hill Wind Farm were originally granted Provisional Development Plan Consent under the former *Development Act 1993* (SA) by the Port Pirie and Wakefield Regional Councils and determined not to be a controlled action requiring approval from the Commonwealth Minister for the Environment under the EPBC Act. These earlier iterations of the Barn Hill Wind Farm reflected the wind turbine technology available at the time, resulting in a project with a maximum capacity of 250 Megawatts (MW), consisting of 62 wind turbine generators (WTGs), each with a maximum tip height of 180 metres (m). Continued advancements in wind turbine technology now enable a much greater generation capacity to be achieved with a smaller number of larger turbines, increasing the renewable energy efficiency of the Project. AGL has revised the layout of the Project to reflect the improvements in wind energy technology and has now sought sponsorship from the Department for Energy and Mining (DEM) for the revised Project to be assessed under the South Australian Crown development and essential infrastructure process under section 131 of the Planning, *Development and Infrastructure Act 2016* (PDI Act). Crown sponsorship was received 5 March 2024. The revised Project comprises an up to 360 MW wind farm of up to 50 WTGs, a 270 MW grid-scale Battery Energy Storage System (BESS), and a 275 Kilovolt (kV) transmission line (TL) to connect the Project to the grid. The Project also includes associated infrastructure including underground and overhead electrical cables, a high voltage substation with associated infrastructure, operations and maintenance facilities, site access and egress improvements, local road treatments and internal tracks, drainage and stormwater management infrastructure, internal transmission line (TL), security fencing, lighting and CCTV, as well as related construction works and temporary construction compounds and facilities to support the delivery of the Project. The proposed BESS would be located next to the proposed new switchyard, which would be approximately 7 km east of the wind farm site in the vicinity of River and Perrins Roads. The proposed TL would extend from the wind farm site to the new switchyard to enable the Project to connect into the grid. The Project received development approval (DA) from the South Australian

	Department for Housing and Urban Development under the PDI Act on 31 January 2025 (DA number 24018859). A separate native vegetation clearance application for three temporary and three permanent meteorological masts was lodged with the NVC on 28 September 2026 (NVCCA04370). The met mast application was submitted separately as it was not part of the Project approved in the state Development Consent; therefore, it will be assessed under the HRE Act.
Native Vegetation Regulation	Regulation 12, Schedule 1, Clause 34 - Infrastructure.
Description of the Vegetation under Application	

VA #	Vegetation Association	Disturbance Corridor (ha)
A1	*Themeda triandra* +/- *Lomandra spp.* grassland	5.00
A2	*Bursaria spinosa shrubland* +/- emergent *Allocasuarina verticillata* over *Themeda* and *Lomandra* spp.	6.01
A3	*Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs	0.07
A4	*Austrostipa spp.* grassland	68.83
A5	*Lomandra spp.* grassland	11.03
A9	*Pimelea stricta* shrubland	0.69
A12	Mixed tall shrubland over native grasses and forbs	0.41
B9	Chenopod shrubland +/- *Acacia victoriae*	7.59
B10	*Salsola australis* shrubland	3.74
C1	*E. camaldulensis* Riparian Woodland over *Acacia salicina* and *A. victoriae*	0.04

In addition to the impacted vegetation associations three scattered trees will be impacted:

- 1 *Casuarina pauper* (Black Oak)
- 1 *Eucalyptus porosa* (Mallee Box)
- 1 *Allocasuarina verticillata* (Drooping Sheoak)

Total Proposed Clearance – Area (ha)	103.41 ha of native vegetation and three scattered trees are proposed to be cleared
Level of Clearance	Level 4
Overlay (Planning and Design Code)	Native Vegetation Overlay
Map of Proposed Clearance Area	A detailed map series of the proposed clearance area is provided in **Appendix B.**
Mitigation Hierarchy	**Avoidance** All stages of the Project design have been undertaken considering vegetation mapping, threatened ecological community mapping and other ecological constraints such as active Wedge-tailed Eagle nests. Whilst every effort has been made to avoid sensitive areas where possible, such as locating turbines outside of *Lomandra* spp. grasslands, engineering and landscape constraints mean that clearing of native vegetation cannot be completely avoided. **Minimization** As far as is practicable, the development has been placed in areas with no native vegetation or avoided native vegetation in better condition or of higher conservation value. The majority of the clearance (392.90 ha of the 496.31 or 79% of impact) is located in cropland, exotic vegetation or is part of existing infrastructure and roads. Within the native vegetation which will be impacted, efforts have been made to avoid more diverse vegetation types. The area under application provides flexibility to refine the final design and construction approach, allowing scattered trees and sensitive vegetation to be avoided wherever practicable. Of the 103.41 ha under application, 53.13 ha (51%) is expected to be required for the Construction Corridor. **Rehabilitation or Restoration** The Disturbance Corridor includes areas of both temporary and permanent vegetation clearance. Temporary clearance areas including laydown areas and temporary construction compounds will be rehabilitated according to the strategies discussed in a CEMP.
SEB Offset Proposal	Payment of $4,246,434.08 (incl. GST and admin fee) to the Native Vegetation Fund.

2.0 Purpose of Clearance

2.1 Description

Umwelt have been engaged by Barn Hill Wind Farm Pty Ltd to prepare a Native Vegetation Clearance Data Report for the Barn Hill Wind Farm, Transmission Line (TL) and Battery Energy Storage System (BESS) in the Mid-North region of South Australia (SA) (the Project). The Project is located in the Barunga Ranges, situated between Redhill and Mundoora, approximately 45 km south of Port Pirie.

2.2 Background

The Project Boundary Area is located at Barn Hill, west of the Princes Highway between the existing Clements Gap and Snowtown Wind Farms.

2.2.1 Administrative Boundaries

The Project Boundary Area occurs within the Port Pirie and Wakefield Local Government Area, within the Hundreds of Redhill, Koolunga, Barunga and Boucaut, and as part of the Northern and Yorke Landscape Management Region.

2.2.2 Bioregions

The Interim Biogeographical Regionalisation of Australia (IBRA) identifies geographically distinct bioregions based on common climate, geology, landform, native vegetation, and species information. The bioregions are further refined into subregions and environmental associations. The Project Boundary Area is located within the Eyre Yorke Block IBRA bioregion and the St Vincent IBRA subregion. The Project Boundary Area spans two IBRA associations: Crystal Brook and Barung.

Approximately 8 % (87,402 ha) of the St Vincent IBRA Subregion is mapped as remnant vegetation. Approximately 2 % (2,224 ha) and 4 % (3,196 ha) of the Crystal Brook and Barung IBRA Environmental Association are mapped as remnant vegetation, respectively. Of this, 1 % (22 ha), and less than 1 % (1 ha) is formally conserved and protected, respectively.

2.2.3 Topography

The topography of the wind farm (WF) land is typically steep hills and gullies with a rocky surface layer. The hills are steep sided, with levelled tops where there was evidence of historical mechanical removal of the rocky surface layer to ‘improve’ the land for cropping or grazing purposes. The TL corridor occurs predominantly on flat terrain, traversing the plains east of the ranges towards the Broughton River. Native vegetation was patchy and degraded, occurring predominantly in the road reserve, surrounded by cleared agricultural farmland and cropping land. The BESS and switchyard are located in cropping land adjacent to the Broughton River and unnamed tributaries, which contain remnant riparian vegetation in poor to good condition, with derived riparian vegetation patchily distributed in the surrounding floodplain areas.

2.2.4 Current and Surrounding Land Use

Land use within the area is predominantly cropping and grazing of sheep. Native vegetation in the area has been extensively cleared, with most of the Disturbance Corridor containing grasslands and cropping land with large outcrops of rocks and boulders on some of the hills. Woodland vegetation is generally restricted within small patches and within creek lines.

2.2.5 Previous Surveys Conducted

Studies relevant to the Project have been undertaken by EBS Ecology (EBS, now trading as Umwelt) since 2011, as indicated in **Table 2.1**.

Table 2.1 Previous Studies Relevant to the Project

Date	Details of Works Undertaken	Report Reference
Spring 2024 to winter 2025	• Bird and Bat Utilisation Surveys (BBUS)	Umwelt (2026). *Barn Hill Wind Farm BBUS Summary Report.*
June 2024	• Targeted surveys for the Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*) and Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*)	EBS (2024). Barn Hill Wind Farm and Battery Project Ecological Assessment, Addendum - targeted threatened reptile survey. Report to WSP.
March 2017	• Vegetation survey • Fauna survey, including: ○ Pygmy Blue-tongue Lizard (PBTL) habitat mapping; ○ Limited Flinders Ranges Worm-lizard FRWL survey; and ○ Bird and Bat Utilisation Surveys BBUS	EBS (2017b). *Barn Hill Wind Farm Ecological Assessment*, March 2017. Report to WSP.
November 2011 & February 2012	• Vegetation survey • Fauna survey, including: ○ Targeted PBTL survey; and ○ Targeted FRWL survey	EBS (2012). *Barn Hill Wind Farm Pre-construction Flora and Fauna Survey.* Report to Barn Hill Wind Farm Pty Ltd.
November 2011	• Vegetation survey • Fauna survey (opportunistic)	EBS (2011c). *Barn Hill Transmission Line Flora and Fauna Assessment.* Report to ElectraNet.
June 2011	• Desktop assessment on bat utilisation	EBS (2011a). *Barn Hill Wind Farm – Bat Assessment.* Report to Wind Prospect Pty Ltd.
March 2011	• Vegetation survey, including: ○ INTG TEC mapping	EBS (2011b). *Barn Hill Wind Farm Vegetation Assessment.* Report to Wind Prospect Pty Ltd.

2.3 General Location Map

The location of the Project Boundary Area and Disturbance Corridor is provided in **Figure 2.1**. A more detailed map series showing the layout of the Construction Corridor within the Disturbance Corridor is presented in **Appendix B**.

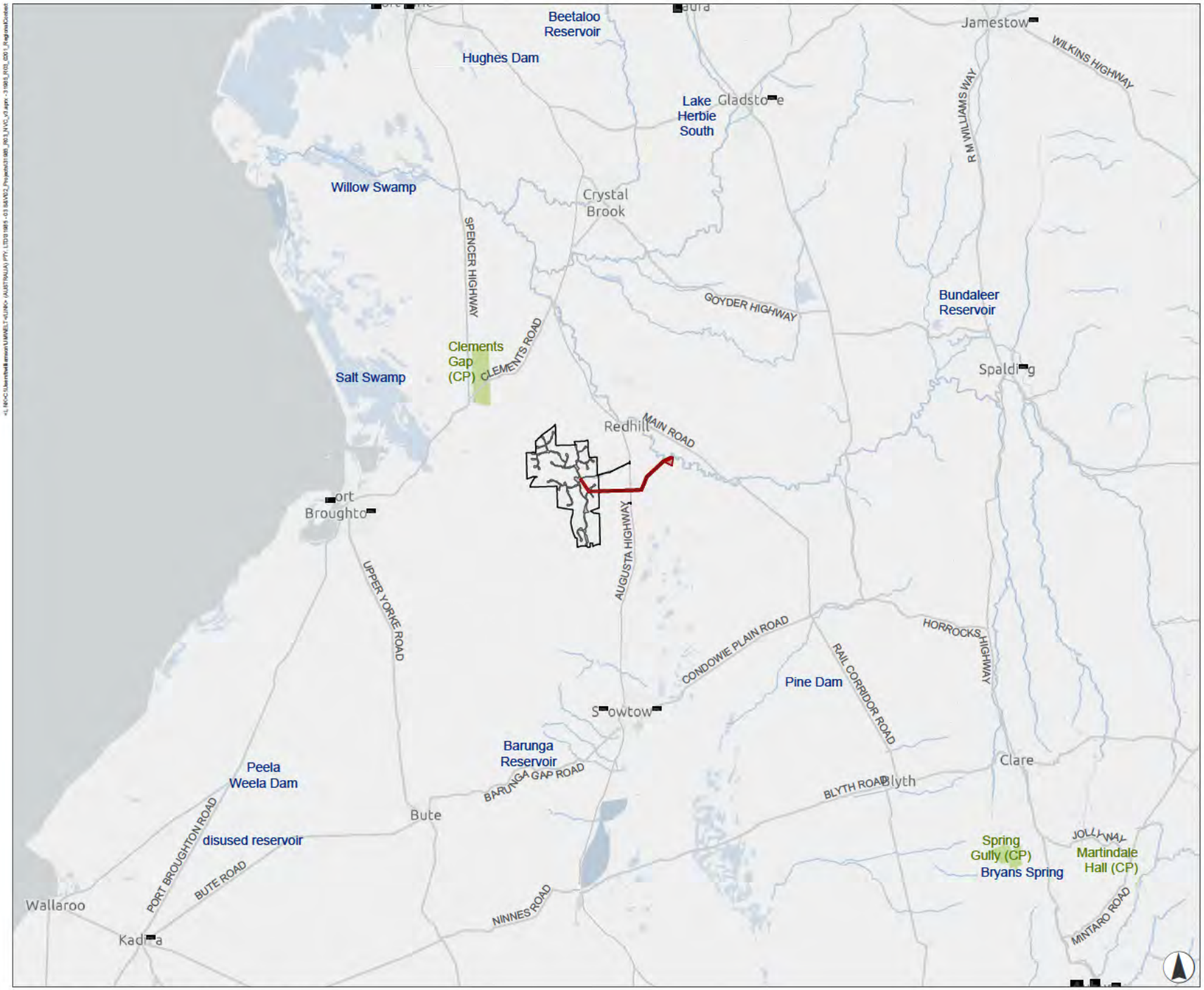


Image Source: ESRI Basemap (2025) | **Data Source:** SA DIT, SA DEW (2024)

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FIGURE 2.1

The Regional Context of the Project Area

Legend

- Battery and Switchyard
- Transmission Line Corridor
- Project Boundary Area
- NPWSA reserve
- Water body
- Water course
- Main road



0 10 20

Kilometres

Scale 1:500,000 at A4
GDA2020 MGA Zone 54

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2.4 Details of the Proposal

Earlier layouts of the Project were originally granted Provisional Development Plan Consent under the former *Development Act 1993* (SA) by the Port Pirie and Wakefield Regional Councils and determined not to be a controlled action requiring approval from the commonwealth minister for Environment under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). These earlier iterations of the Barn Hill Wind Farm reflected the wind turbine technology available at the time, resulting in a project with a maximum capacity of 250 Megawatts (MW), consisting of 62 wind turbine generators (WTGs), each with a maximum tip height of 180 metres (m).

Continued advancements in wind turbine technology now enable a much greater generation capacity to be achieved with a smaller number of larger turbines, increasing the renewable energy efficiency of the Project. AGL has revised the layout of the Project to reflect the improvements in wind energy technology and has now sought sponsorship from the Department for Energy and Mining for the revised Project to be assessed under the South Australian Crown development and essential infrastructure process under section 131 of the *Planning, Development and Infrastructure Act 2016* (PDI Act).

The revised Project comprises a wind farm of up to 360 MW wind farm comprising of up to 50 WTGs, a 270 MW grid-scale BESS, and a 275 kilovolt (kV) TL to connect the Project to the grid. The Project also includes associated infrastructure, including underground and overhead electrical cables, a high voltage substation with associated infrastructure, operations and maintenance facilities, up to four meteorological monitoring masts, site access and egress improvements, local road treatments and internal tracks, drainage and stormwater management infrastructure, internal transmission line, security fencing, lighting and CCTV, as well as related construction works and temporary construction compounds and facilities to support the delivery of the Project.

The proposed BESS would be located next to the proposed new switchyard, which would be located approximately 7 km east of the wind farm site in the vicinity of River and Perrins Roads. The proposed TL would extend from the wind farm site to the new switchyard to enable the Project to connect into the grid.

The Project received development approval from the South Australian Department for Housing and Urban Development under the PDI Act on 31 January 2025 (Development application number 24018859). Certain conditions were applied to approval, including an approved CEMP. A draft NVC data report was submitted in 2024 and was available for public consultation.

A separate native vegetation clearance application for three temporary and three permanent meteorological masts was lodged with the NVC on 28 September 2026 (NVCCA04370). The met mast application was submitted separately as it was not part of the Development Consent and will therefore require assessment under the HRE Act.

2.4.1 Wind Turbine Generators

Forty-nine turbines, at 6.2 MW with a tip height of 200 m; hub height of 119 m.

- Hardstands and foundations:
    - Concrete foundations at the base (approximately 30 m x 30 m), and
    - Hard stand area (approximately 100 m x 60 m).

2.4.2 Access Tracks

Site access and egress via Ingram Road and Adey Road, internal roads (approximately 5.5 – 6 m wide).

2.4.3 Transmission Line (TL)

Installation, commissioning, and operation of a 275 kV electricity transmission line from the wind farm substation to the switchyard to be constructed adjacent to the Para to Bungama 275 kV line.

2.4.4 Substation

A High voltage substation, with associated infrastructure including high voltage transformers, switch rooms and other equipment to meet Generator Performance Standards (e.g., harmonic filters and/or synchronous condensers, if required) will be constructed.

2.4.5 Operations and Maintenance Facilities

Control room, offices, amenities, workshop, warehouse buildings, car parking, co-located with the substation.

2.4.6 Other Ancillary Infrastructure

- Security fencing, lighting, and CCTV.
- Establishment and upgrade of public roads and private access tracks.
- Above ground, below ground or a combination of both for electricity network distribution line and poles.
- Drainage and stormwater management.
- Construction compounds comprising various temporary support facilities, comprising but not limited to temporary construction and batching plants; laydown areas, offices, amenities, car parking.

2.4.7 BESS

- Four-hour battery located within battery enclosures mounted on hardstand or concrete footings.
- Inverters.
- Medium and low voltage transformers.
- Cabling and collector units.
- High voltage substation, with associated infrastructure including high voltage transformers and other equipment to meet Generator Performance Standards (e.g., harmonic filters and/or synchronous condensers, if required).
- Connection to a new electrical switchyard.
- Switch rooms.

- Operations and maintenance facilities (including control room, offices, amenities, workshop, warehouse buildings, car parking).
- Asset protection zones (APZ).
- Water storage tanks.
- Site access and egress via River and/or Perrins Road, internal roads.

2.4.8 Approvals Required or Obtained

Approvals or applications under the following legislation are required:

- ***Native Vegetation Act 1991*** (NV Act) – The clearance of native vegetation is necessary to facilitate Project works. This action requires approval under the NV Act, which is the subject of this Data Report.
- ***Planning, Development and Infrastructure Act 2016*** (PDI Act) – Development Approval (DA) for the Project was approved 31 January 2025 (ID 24018859). However, the *Planning, Development and Infrastructure Act 2016* will not be the sole approval pathway for the Project (see below).
- ***Hydrogen and Renewable Energy Act 2023*** (HRE Act)–The *Hydrogen and Renewable Energy Act 2023* is the relevant approval pathway for all renewable energy projects in SA as of 26 July 2024. As such, a Renewable Energy Feasibility Licence will be required prior to the commencement of operations (see **Section 2.6**).
- ***Environment Protection and Biodiversity Conservation Act 1999*** (EPBC Act) – The preparation of a Self-assessment or Referral under the EPBC Act is not considered necessary for the Project. The Project has a Not Controlled Action Decision for the wind farm and transmission line respectively (2008/4321 and 2008/4557).
- ***National Parks and Wildlife Act 1972*** (NPW Act) – The flora and fauna surveys conducted as part of this native vegetation clearance application were undertaken by Umwelt staff under Scientific Research License K25613-27.
- ***Landscapes South Australia Act 2019*** (LSA Act) – All landowners have a responsibility to promote sustainable management of their environment, which includes minimising the occurrence, transportation, and dispersal of weeds. This includes those listed as Declared plants under the *Landscape South Australia Act 2019* (LSA Act). Standard procedures, such as those outlined in a Construction Environment Management Plan (CEMP), should be in place to prevent the encroachment of weeds and to mitigate the potential for other indirect environmental impacts.
- ***Aboriginal Heritage Act 1988*** (AHA Act) – Approval will be required if any sites, objects, or remains are uncovered during Project works. A 'Stop Work' procedure must be implemented if any items of this nature are located.

2.5 Native Vegetation Regulation

Clearance is sought under **Regulation 12, Schedule 1; Clause 34 – Infrastructure**, which allows:

1. Clearance of vegetation:
    a. Incidental to the construction or expansion of a building or infrastructure where the Minister has, by instrument in writing, declared that the Minister is satisfied that the clearance is in the public interest.
    b. Required in connection with the provision of infrastructure or services to a building or proposed building, or to any place, provided that any development authorization required by or under the PDI Act* has been obtained.
2. Infrastructure refers to:
    a. The infrastructure, equipment, structures, works and other facilities used in or in connection with the supply of water or electricity, gas or other forms of energy, the provision of telecommunications, or the drainage, removal or treatment of wastewater or sewage.
    b. Roads and their supporting structures or works.
    c. Ports, wharfs, jetties, railways, trams and busways.

* Please note that the PDI Act has been supplanted by the HRE Act for the purposes of advancing renewable energy developments.

2.6 Renewable Energy Infrastructure Licence Application Information

As the approvals process for renewable energy projects in SA has now shifted to the HRE Act (as of 11 July 2024), the proponent is in the process of applying for a Renewable Energy Infrastructure Licence (REIL) which is required to be obtained prior to the commencement of works. Relevant information concerning this application is listed below in **Table 2.2**.

Table 2.2 HRE Act Application Information

Local Government Area	Port Pirie Regional Council Wakefield Regional Council
Hundred	Barunga Boucaut Koolunga Redhill
Zone	Rural
REIL	Pending

3.0 Method

3.1 Flora Assessment

Initial flora assessments within the WF area were performed by Accredited Consultants A. Carpenter and J. Skewes, and Ecologist S. Greer, from 4 to 9 September 2023. Supplementary surveys of the TL corridor, road access, BESS and switchyards were performed on 30 and 31 January 2024 by A. Carpenter and S. Greer and on 18 August 2026 by Ecologists I. Marshall and D. Bryson. All assessments were undertaken in accordance with the Bushland Assessment Method (BAM) (NVC 2024a) and Scattered Tree Assessment Method (STAM) (NVC 2024b).

3.1.1 Bushland Assessment Method

The BAM is derived from the Nature Conservation Society of South Australia's Bushland Condition Monitoring methodology (Croft *et al.* 2007). The BAM is used to assess areas of native vegetation requiring clearance and calculate the SEB requirements.

Details of site selection/stratification and assessment protocols, and the biodiversity value components assessed and the factors that influence these components are outlined in the Bushland Assessment Manual (NVC 2024a). The Conservation Significance Scores were calculated from direct observations of flora and direct and historical observations of fauna species of conservation significance.

3.1.2 Scattered Tree Assessment Method

The STAM is derived from the Scattered Tree Clearance Assessment in South Australia: Streamlining, Guidelines for Assessment and Rural Industry Extension report (Cutten and Hodder 2002). The STAM is suitable for assessing scattered trees in the following instances:

- Individual scattered trees (i.e., canopy does not overlap). The spatial distribution of trees may vary from approaching what would be considered their original distribution (pre-European) through to single isolated trees in the middle of a paddock; or
- Dead trees (when a dead tree is considered native vegetation); or
- Clumps of trees (contiguous overlapping canopies) if the clump is small (approximately <0.1 ha); and
- For both scattered trees and clumps:
    - The ground layer comprises wholly or largely of introduced species.
    - Some scattered colonising native species may be present, but represent <5% of the ground cover; and
    - The area around the trees consists of introduced pasture or crops.

Details of the scattered tree Point Scoring System are outlined in the Scattered Tree Assessment Manual (NVC 2024b).

The numbers of uncommon and threatened scattered-tree-using fauna species entered into the Scattered Tree Scoresheet were calculated by cross-referring the results of the desktop assessment and the lists of scattered trees using fauna in the Scattered Tree Assessment Manual (NVC 2024b). The resource use of each species identified was considered when determining each tree's suitability for threatened fauna species (e.g., species that only use hollows in scattered trees were only assigned to scattered trees containing hollows).

3.1.3 Threatened Ecological Communities

The listing criteria for Iron-grass Natural Temperate Grassland of South Australia (INTG) facilitates the classification of the communities into Condition Classes based on native plant species diversity, composition and native perennial tussock diversity. The listing criteria for each of the classes are presented in **Table 3.1** and the classes constitute:

- High-quality remnants (Class A).
- Moderate quality remnants (Class B).
- Remnants too degraded for formal listing but with the potential for rehabilitation (Class C).

Targeted surveys for the INTG Threatened Ecological Community (TEC) were undertaken, consistent with the EPBC Act Policy Statement 3.7: Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia (DEWR 2007).

Table 3.1 Criteria for Listing Iron-grass Natural Temperate Grassland (DEWHA 2007)

Condition Class	Minimum Size	Diversity of Native Species[1]	No. Broad-leaved Herbaceous Species[1] in Addition to Identified Disturbance Resistant Species[1]	No. Perennial Grass Species[1]	Tussock Count[3]
Listed Threatened Ecological Community					
A	0.1 ha	> 30	≥ 10	≥ 5	1/m
B	0.25 ha	> 15	≥ 3	≥ 4	1/m
Degraded Patches Amenable to Rehabilitation					
C	No Minimum	>5	No Minimum	≥ 1	No Minimum

[1]Surveyed within a 50 x 50 metre (m) (or equivalent 2,500 m^2) quadrat within a representative area of each patch. [2]Disturbance resistance species: *Ptilotus spathulatus; Sida corrugata; Oxalis perennans; Euphorbia drummondii; Maireana enchylaenoides; Convolvulus angustissimus*.

[3]Average count as measured along a 50 m transect, including all native perennial tussock species i.e. true grasses, as well as species of *Lomandra*, *Dianella*, *Gahnia*, *Lepidosperma* and other perennial sedges and rushes.

3.2 Fauna Assessment

Opportunistic observations of fauna were recorded throughout the Project Boundary Area for the duration of the vegetation assessments. All native and exotic fauna species encountered through direct observations, or from tracks, scats, burrows, nests, or other signs of presence, were documented. Potential fauna refuge sites were noted as an indication of the availability of suitable habitat. Particular attention was given to identifying potential habitat for threatened species. For each opportunistic fauna observation, the species, number of individuals, GPS location, detection methodology (i.e., sight, sound, or sign) was recorded.

3.2.1 Bird and Bat Utilisation Survey

Bird surveys undertaken during earlier field investigations (EBS 2011c, EBS 2012, EBS 2017) established point-count sites that informed the selection of monitoring locations for the Bird and Bat Utilisation Surveys (BBUS), conducted from spring 2024 to winter 2025 (Umwelt 2025).

Nine dedicated bird monitoring sites were established in 2023 as part of ongoing ecological assessments, which sampled a range of habitats across the broader area (EBS 2024). This was supplemented in spring 2024 by the establishment of two additional monitoring points, bringing the total number of bird sites to 11 (see **Figure 3.1**). All surveys were performed in accordance with the 2-ha survey methodology, with each site visited once in the morning and once in the afternoon per survey season (Birdlife Australia 2026). Overall, 88 surveys amounting to 29.3 hours of dedicated effort were performed by Umwelt staff over the four BBUS (Umwelt 2026).

3.2.2 Wedge-tailed Eagle Nest Survey

Targeted searches for Wedge-tailed Eagle (WTE) (*Aquila audax audax*) nests were undertaken from 4 to 9 September 2023 to search for active nests within, or near, the Project Boundary Area. The following attributes were recorded for each WTE nest:

- Location (gully, slope, hill crest, plain).
- GPS coordinate.
- Photograph.
- Nest condition:
    - whether the nest was intact or dilapidated.
    - visually determined to be either poor, moderate or good.
    - Nest height (measured in metres (m), from the ground to the bottom of the nest).
    - Nest depth (measured in centimetres (cm), from the bottom of the nest to the rim of the nest).
    - Nest diameter (measured in m, distance around the outer rim of the nest).
    - Size of nest:
        - Small (<60 cm depth, <1.2 m diameter).
        - Medium (60 - 100 cm deep, 1.2 m – 1.5 m diameter).
        - Large (>1 m deep, >1.5 m diameter).
- Nest activity (active, inactive).
- Whether whitewash (areas covered in droppings) and nesting material (e.g. fresh branches and/or leaves) was present or absent; and the
- Species of raptor incubating or located near the nest. Nesting success: nests that contained a large-feathered nestling were successful (i.e., fledged).

3.2.3 Threatened Fauna Surveys

Targeted surveys, performed between 17 and 19 June 2024, were conducted by Umwelt for the following threatened species:

- Flinders Ranges Worm-lizard (FRWL) (*Aprasia pseudopulchella*) – listed as Vulnerable under the EPBC Act.
- Pygmy Blue-tongue Lizard (PBTL) (*Tiliqua adelaidensis*) – listed as Endangered under the EPBC Act and Endangered under the NPW Act.

Survey methods for both species have been consistent with the Survey guidelines for Australia's threatened reptiles: Guidelines for detecting reptiles listed as threatened under the EPBC Act (Department of Sustainability, Environment, Water, Populations and Communities 2011).

3.2.3.1 Flinders Ranges Worm-lizard Survey

Accessible areas mapped as potential suitable habitat for the FRWL (open woodland, native tussock grassland, riparian habitats and rocky isolates) within the Wind Farm Site Corridor were surveyed for FRWLs (EBS 2024). Two areas of habitat were inaccessible due to the presence of lambing ewes and ploughed fields and were not surveyed.

The survey was undertaken using diurnal hand searches, with searches undertaken systematically within defined survey quadrats and on transects.

3.2.3.2 Pygmy Blue-tongue Lizard Habitat Assessment

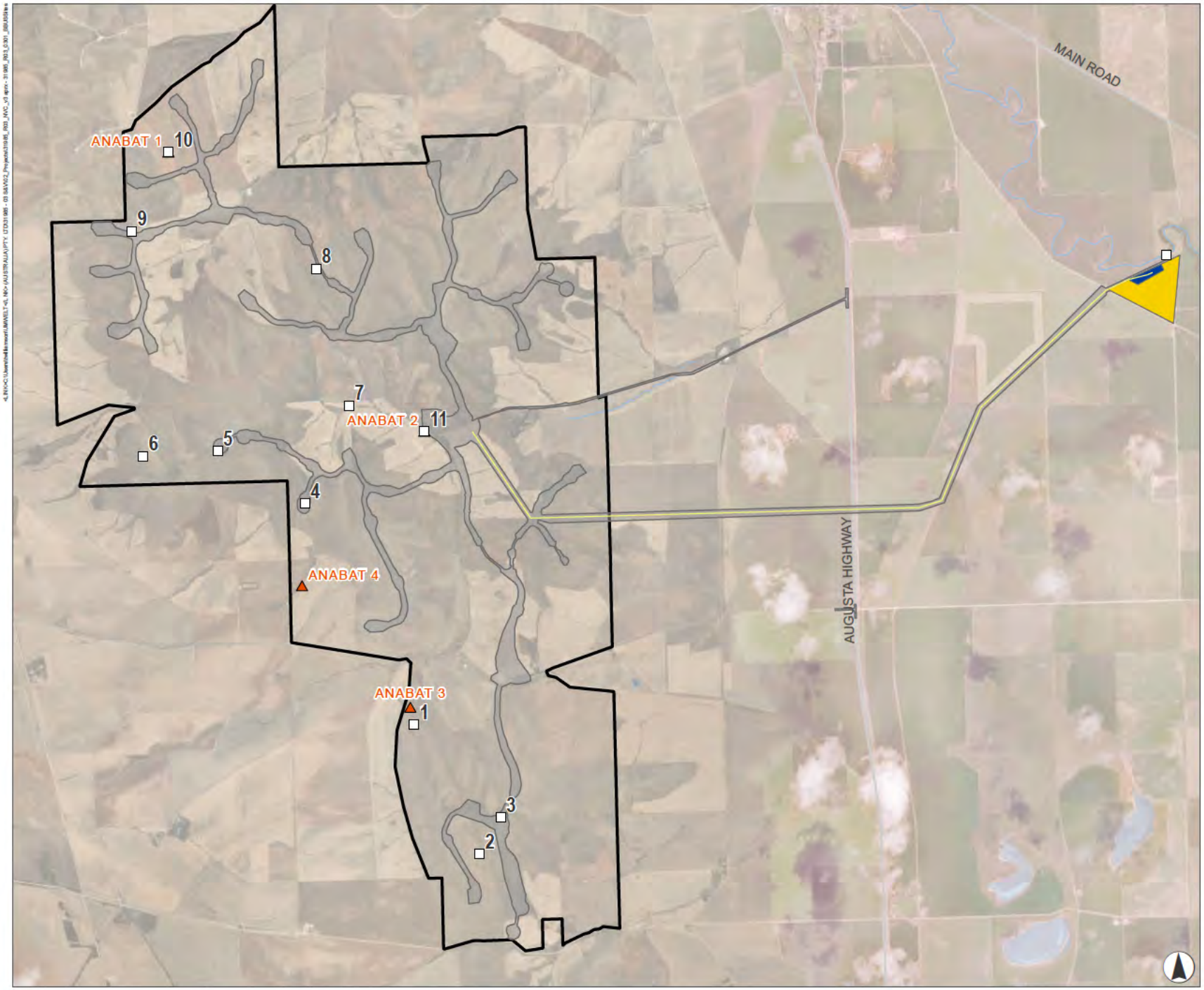
Habitat within the Project Boundary Area was characterised as either 'likely', 'possible' or 'unlikely' PBTL habitat by EBS during the initial flora and fauna assessment for the Project (EBS 2012).

Suitable PBTL habitat attributes include spider burrows within native grasslands with or without an exotic component (PBTLs have also been detected in highly modified treeless grasslands), soil of heavy sandy loam (red-brown earth), footslopes of hills and sheltered areas of footslopes.

Likely PBTL habitat is classified based on several criteria. Firstly, any areas where PBTL have been recorded are considered likely habitat. These known habitat areas are extended to incorporate adjacent areas that generally contain numerous spider burrows of suitable size and depth and are contiguous with known PBTL locations. If no PBTL are found within an area but the habitat is otherwise considered to be good quality PBTL habitat (consisting of grassland vegetation with a high density of suitable spider burrows), the areas are also marked as likely habitat.

Potential PBTL habitat is recorded in areas where no PBTL have been found. However, a low density of suitable spider burrows are present in the area. The vegetation is considered to be poor-moderate quality for PBTL. Therefore, the likelihood of finding PBTL in these areas is lower and if the species is found, it is likely to be scattered individuals.

Unlikely PBTL habitat includes areas that have been cropped/ploughed (including within the previous 5-10 years), areas lacking spider burrows, areas containing dense ground cover vegetation, steep terrain and exposed ridgelines and overly rocky areas, as based on the current research, these are considered unsuitable habitat attributes for PBTLs.



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FIGURE 3.1

The Bird and Bat Utilisation Surveys from within the Project Boundary Area

Legend

- Project Area Boundary
- BESS
- Switchyard
- Disturbance Corridor
- BBUS Sites
- Anabat Sites
- Transmission Line



0 1 2

Kilometres

Scale 1:65,000 at A4
GDA2020 MGA Zone 54

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3.3 Desktop Assessment

A desktop assessment was undertaken to determine the potential for any threatened fauna species, as listed under the EPBC Act and the NPW Act, to occur within the Project Boundary Area. This was achieved by undertaking the following database searches using a 5 km buffer of the Project Boundary Area (the Search Area).

3.3.1 Protected Matters Search Tool Report

A Protected Matters Search Tool (PMST) report was generated on 19 February 2026 to identify threatened flora, fauna and threatened ecological communities listed under the EPBC Act within the Search Area (DCCEEW 2026a). For the purposes of this assessment, only species identified by the PMST as 'Known to occur' were considered for entry into the relevant scoresheets

Those species that are listed in Appendix 4 of the Scattered Tree Assessment Manual (NVC 2024b) as scattered tree using wildlife have been entered into the STAM scoresheet.

3.3.2 Biological Database of South Australia Extract

A Biological Database of South Australia (BDBSA) search was obtained from the Department of Environment and Water (DEW) (Recordset number: DEWNRBDBSA260216-2).

The BDBSA is comprised of an integrated collection of species records from the South Australian Museum, conservation organisations, private consultancies, Birds SA, Birdlife Australia and the Australasian Wader Study Group, which meet DEW's standards for data quality, integrity and maintenance. Only species with records since 1995 and with a spatial reliability of less than 1 km were assessed for their likelihood of occurrence.

3.3.3 Likelihood of Occurrence

Threatened species and TECs that were identified by the desktop assessment were assessed for their likelihood of occurrence within the Disturbance Corridor. All species with historical records since 1995, with a spatial reliability of < 1 km, and species 'known to occur' as per the PMST report were assessed.

The criteria for the likelihood of occurrence of threatened species within the Disturbance Corridor are described in **Table 3.2**. The complete list of all species identified by the database searches is provided in **Appendix E**.

Table 3.2 Criteria for the Likelihood of Occurrence

Likelihood	Criteria
Highly Likely/Known	Recorded in the last 10 years, the species does not have highly specific niche requirements, the habitat is present and falls within the known range of the species distribution or; The species was recorded as part of field surveys.
Likely	Recorded within the previous 20 years, the area falls within the known distribution of the species and the area provides habitat or feeding resources for the species.
Possible	Recorded within the previous 20 years, the area falls inside the known distribution of the species, but the area provides limited habitat or feeding resources for the species. Recorded within 20 - 40 years, survey effort is considered adequate, habitat and feeding resources present, and species of similar habitat needs have been recorded in the area.

Likelihood	Criteria
Unlikely	Recorded within the previous 20 years, but the area provides no habitat or feeding resources for the species, including perching, roosting or nesting opportunities, corridor for movement or shelter. Recorded within 20 – 40 years; however, suitable habitat does not occur, and species of similar habitat requirements have not been recorded in the area. No records despite adequate survey effort.

3.4 Limitations

Flora and fauna records were retrieved from the PMST and BDBSA extract. The BDBSA only includes verified flora and fauna records submitted to DEW or partner organisations. It is recognised that information is imperfectly captured, and it is possible that significant species may occur in the Disturbance Corridor that are not reflected by database records. Although much of the BDBSA data has been through a variety of validation processes, the lists may contain errors and should be used with caution. DEW gives no warranty that the data is accurate or fit for any particular purpose of the user or any person to whom the user discloses the information.

No species-specific targeted flora surveys were undertaken as part of the assessment.

The WF field survey was conducted in spring, which is the ideal time to identify annual forbs. However, due to the early timing within the season, it is possible that some flora species were present but not detected. Conditions during the survey period were not ideal for bird observations, with generally low temperatures and high winds (20 km/h to 72 km/h). A total of 22.8 mm of rain was experienced between the 4 – 10 September survey, with the majority (14.4 mm) falling the evening of 7 September. This limited access to sites on 8 September 2023 as tracks were inaccessible and this created time constraints for the days following. These weather events are also likely to have influenced bird behaviour and detectability of species.

The survey of the TL, BESS and switchyard was conducted in summer, which may have resulted in the detection of fewer spring annual flora species.

3.4.1 Spatial Data Limitations

All spatial data has been captured or converted to the following coordinate reference system.

Datum: Geocentric Datum of Australia 2020 (GDA2020).

Projection: Map Grid of Australia 2020 (MGA2020), Zone 54.

All location coordinates listed in this report are expressed using this system and are subject to standard GPS inaccuracy (approximately +\- 5 m). Spatial data converted from other coordinate reference systems may have accuracy limitations.

4.0 Assessment Outcomes

4.1 Vegetation Assessment

4.1.1 General Description of the Vegetation, the Site and Matters of Significance

Broadly, vegetation within the Project Boundary Area comprised a mix of grassland and low shrubland associations. The terrain was typically steep hills and gullies with a rocky surface layer. The hills were steep sided, however, generally they levelled out on the tops of slopes, where there was evidence of historical mechanical removal of the rocky surface layer to 'improve' the land for cropping or grazing purposes.

The access road and TL corridor occurred predominantly on flat terrain, traversing the plains east of the ranges towards the Broughton River. Vegetation was patchy and degraded, occurring predominantly in the road reserve, surrounded by cleared agricultural farmland. The Broughton River and unnamed tributaries contained remnant riparian vegetation in fair to good condition, with derived riparian vegetation patchily distributed in the surrounding floodplain areas. The proposed BESS and switchyard are located within cleared and cropped farmland.

The survey identified and mapped 13 vegetation associations (VA) across the Project Boundary Area (4499.52 ha). The VAs covered a combined area of 1286.80 ha divided between Block A, Block B and Block C, as summarised in **Table 4.1**. The remaining area within the Project Boundary Area was comprised of crops, exotic vegetation or existing roads and infrastructure.

Vegetation conditions were mostly in moderate condition. Refer to **Figure 4.1** and **Figure 4.2** for overview maps of vegetation associations. Detailed maps are provided in Appendix B. BAM scoresheets are provided as **Attachment 2** and STAM scoresheet as **Attachment 3**.

Table 4.1 Vegetation Association (VAs) Within the Barn Hill WF Boundary (Block A) and the TL Corridor (Block B and C)

Ass. #	Vegetation Association	Area (ha) within Boundary	Area (ha) Impact	% of VA Impacted	Unit Biodiversity Score (UBS)	Total Biodiversity Score (TBS)	Block
A1	*Themeda triandra* +/- *Lomandra* spp. Grassland (State Provisional Endangered TEC)	59.99	5.00	8.33	33.98	169.90	A
A2	*Bursaria spinosa* shrubland +/- emergent *Allocasuarina verticillata* over *Themeda* and *Lomandra* spp.	145.01	6.01	4.14	55.35	332.65	A
A3	*Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs	9.19	0.07	0.76	63.61	4.45	A
A4	*Austrostipa* spp. Grassland (State Provisional Vulnerable TEC)	888.95	68.83	7.74	41.88	2882.60	A
A5	*Lomandra* spp. grassland (partly EPBC TEC)	144.11	11.03	7.65	56.58	624.08	A
A8	*Acacia nyssophylla* shrubland over *Austrostipa* spp.	9.43	0	0	56.48	-	A
A9	*Pimelea stricta* shrubland	3.97	0.69	17.38	44.00	30.36	A
A10	*Hakea leucoptera* shrubland	0.36	0	0	38.18	-	A

Ass. #	Vegetation Association	Area (ha) within Boundary	Area (ha) Impact	% of VA Impacted	Unit Biodiversity Score (UBS)	Total Biodiversity Score (TBS)	Block
A11	*Senna artemisioides* ssp. *artemisioides* shrubland over native grasses	2.17	0	0	43.68	-	A
A12	Mixed tall shrubland over native grasses and forbs	1.97	0.41	20.81	62.63	25.68	A and C
B9	Chenopod shrubland *+/- Acacia victoriae*	8.54	7.59	88.88	11.74	89.11	B
B10	*Salsola australis* shrubland	11.08	3.74	33.75	9.09	34.00	B
C1	*E. camaldulensis* Riparian Woodland over *Acacia salicina* and *A. victoriae*	2.02	0.04	1.98	34.74	1.39	C
Cropping		3018.46	323.48				
Exotic vegetation		154.06	51.16				
Infrastructure / Roads		40.19	18.26				
TOTAL		**4499.52**	**496.31**				

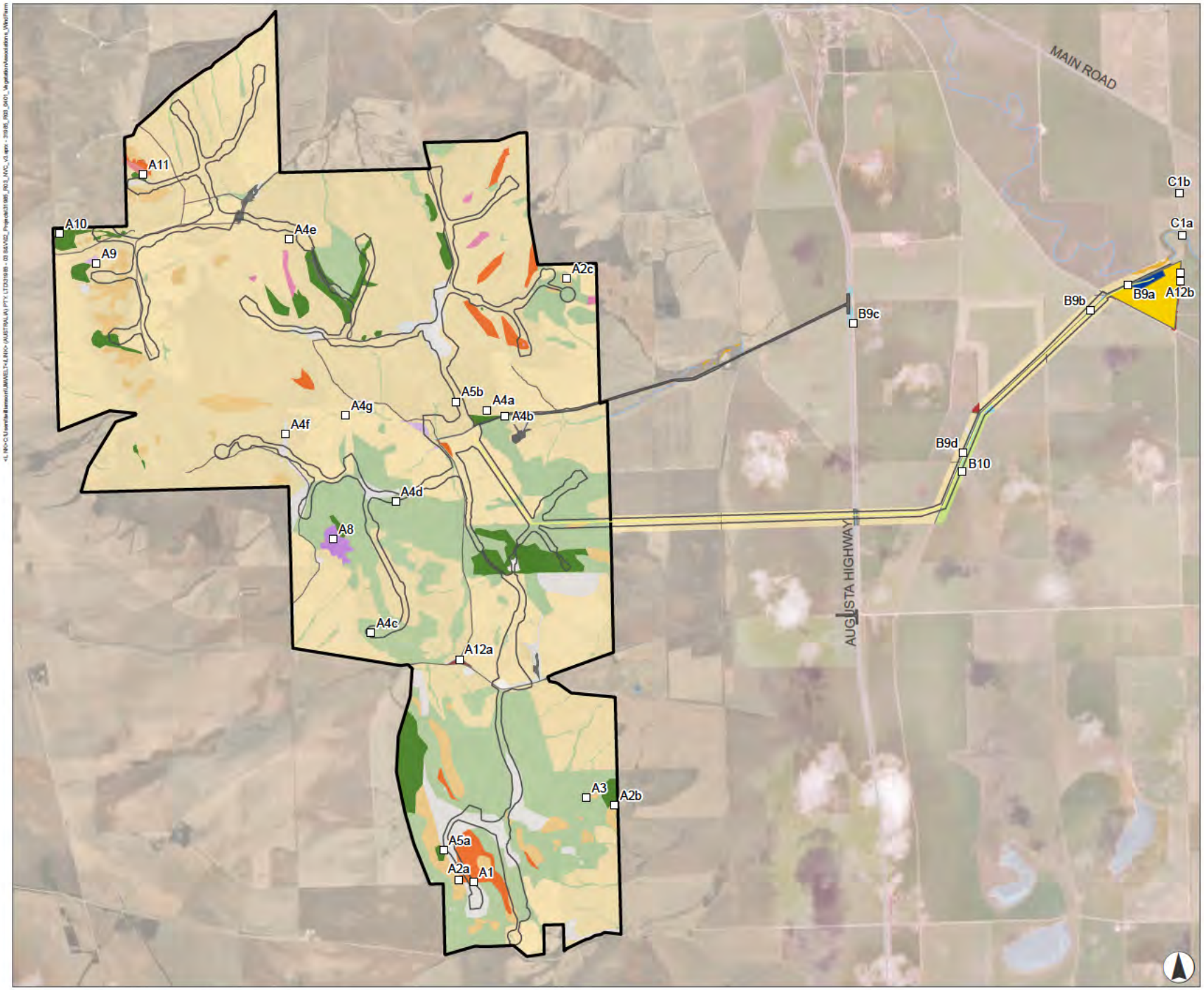


FIGURE 4.1

Vegetation Associations and BAM Sites Within the Barn Hill Wind Farm

Legend

- Project Area Boundary
- BESS
- Switchyard
- Disturbance Corridor
- BAM Site
- Transmission Line

Vegetation Association

- A1: *Themeda triandra* +/- *Lomandra spp.* grassland
- A2: *Bursaria spinosa* shrubland +/- emergent *Allocasuarina verticillata* over Themeda and *Lomandra spp.*
- A3: *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs
- A4: *Austrostipa* spp. grassland
- A5: *Lomandra spp.* grassland
- A6: *Acacia victoreae* shrubland
- A8: *Acacia nysophylla* shrubland over *Austrostipa spp.*
- A9: *Pimelea stricta* shrubland
- A10: *Hakea leucoptera* shrubland
- A11: *Senna artemisioides ssp. artemisioides* shrubland over native grasses
- A12: Mixed tall shrubland over native grasses and forbs
- B9: *Chenopod shrubland +/- Acacia victoreae*
- B10: *Salsola australis* shrubland
- C1: *Eucalyptus camaldulensis* Riparian Woodland over *Acacia salicina* and *Acacia victoreae*
- Cropping
- Exotic vegetation
- Infrastructure / Road

0 1 2

Kilometres

Scale 1:65,000 at A4
GDA2020 MGA Zone 54

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FIGURE 4.2

Vegetation Associations and BAM Sites Within the Access Road, TL Corridor and BESS Footprint

- Project Area Boundary
- BESS
- Switchyard
- Disturbance Corridor
- BAM Site
- Transmission Line

Vegetation Association

- A2: *Bursaria spinosa shrubland +/-* emergent *Allocasuarina verticillata* over Themeda and *Lomandra spp.*
- A3: *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs
- A4: *Austrostipa* spp. grassland
- A5: *Lomandra spp.* grassland
- A6: *Acacia victoreae* shrubland
- A12: Mixed tall shrubland over native grasses and forbs
- B9: *Chenopod shrubland +/- Acacia victoreae*
- B10: *Salsola australis* shrubland
- C1: *Eucalyptus camaldulensis* Riparian Woodland over *Acacia salicina* and *Acacia victoreae*
- Cropping
- Exotic vegetation
- Infrastructure / Road

0 0.5 1

Kilometres

Scale 1:35,000 at A4
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4.1.2 Details of the Vegetation Association Proposed to be Impacted

Vegetation Associations within the Project Boundary Area are described in **Table 4.2** to **Table 4.14**.

Table 4.2 Summary of A1 – *Themeda triandra* +/- *Lomandra* spp. Grassland

Vegetation Association	A1 *Themeda triandra* +/- *Lomandra* spp. grassland
Benchmark Community	NA 3.2 – Grassland
BAM Sites	A1



A1 – Photo direction North

General Description

Dense grassland dominated by *Themeda triandra* with *Lomandra* spp. co-dominant along the edge of the VA. *Bursaria spinosa* occurred as scattered individuals. The understorey is sparse, consisting of *Vittadinia gracilis* and highly grazed *Enchylaena tomentosa*.

The association occurs on clay loam to loamy soils on high undulating plains and rocky outcrops. Weeds comprised approximately 30% of the understorey biomass, and consisted of *Hypochaeris glabra*, *Sonchus oleraceus*, *Hordeum vulgare*, *Salvia verbenaca*, *Sisymbrium officinale*, *Avena barbata*, *Moraea setifolia*, *Carthamus lanatus*, *Arctotheca calendula* and *Erodium botrys*.

Overstorey	Midstorey	Understorey
N/A	*Bursaria spinosa*	*Austrostipa scabra* *Austrostipa sp.* *Enchylaena tomentosa* *Lomandra effusa* *Lomandra multiflora* *Themeda triandra* *Vittadinia gracilis*

Threatened Species or Community

This VA is considered representative of the Endangered provisional TEC '*Themeda triandra* +/- *Danthonia* spp. Tussock Grassland on heavy, fertile soils of plains and hill slopes'.

Threatened species which may utilise this VA, as identified in the desktop assessment, include:

- Blue-winged Parrot (*Neophema chrysostoma*)
- Elegant Parrot (*Neophema elegans elegans*)
- Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*)
- Grey Falcon (*Falco hypoleucos*)
- Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*)
- South-eastern Hooded Robin (*Melanodryas cucullata cucullata*)
- Southern Whiteface (*Aphelocephala leucopsis*)

Vegetation Association	A1 *Themeda triandra* +/- *Lomandra* spp. grassland				
Landscape Context Score	1.14	**Vegetation Condition Score**	21.29 (Low)	**Conservation Significance Score**	1.40
Unit Biodiversity Score	33.98	**Area (ha)**	5.00	**Total Biodiversity Score**	169.90

Table 4.3 Summary of A2 – *Bursaria spinosa* Shrubland +/- Emergent *Allocasuarina verticillata* Over *Themeda* and *Lomandra* spp.

Vegetation Association	**A2** – *Bursaria spinosa* shrubland +/- emergent *Allocasuarina verticillata* over *Themeda* and *Lomandra* spp.
Benchmark Community	NA 6 – Inland Tall shrublands
BAM Sites	A2a, A2b, A2c



A2a – Photo direction North



A2b – Photo direction South

Vegetation Association	**A2** – *Bursaria spinosa* shrubland +/- emergent *Allocasuarina verticillata* over *Themeda* and *Lomandra* spp.



A2c – Photo direction North-West

General Description

Open shrubland dominated by *Bursaria spinosa* with emergent *Allocasuarina verticillata*. The understorey has high diversity across the three BAM sites (A2a, A2b & A2c), including native grasses, climbers and forbs.

The association occurs on clay loam to loamy soils on low slopes of undulating hills. Weeds were sparse across the BAM sites with *Avena barbata* the most dominant. Other introduced understorey species consisted of *Hordeum vulgare*, *Solanum nigrum, Echium* sp., *Medicago polymorpha*, *Arctotheca calendula*, *Trifolium* sp., *Sonchus oleraceus*, *Sisymbrium officinale*, *S. orientale*, *Erodium botrys, Carthamus lanatus, Hypochaeris glabra, Moraea setifolia* and *Salvia verbenaca*.

Overstorey	Midstorey	Understorey
Allocasuarina verticillata	*Acacia nyssophylla*	*Amphipogon* sp.
Amyema sp.	*Bursaria spinosa* ssp.	*Aristida behriana*
	Cryptandra campanulata	*Arthropodium* sp.
	Dodonaea viscosa ssp.	*Austrostipa scabra* ssp.
	Maireana enchylaenoides	*Austrostipa* sp.
	Pimelea micrantha	*Bulbine bulbosa*
		Chrysocephalum apiculatum
		Convolvulus remotus
		Enchylaena tomentosa
		Gonocarpus mezianus
		Gonocarpus tetragynus
		Goodenia pusilliflora
		Lomandra effusa
		Lomandra multiflora ssp.
		Minuria sp.
		Oxalis perennans
		Plantago drummondii
		Rytidosperma sp.
		Stackhousia monogyna
		Themeda triandra
		Thysanotus patersonii
		Velleia sp.
		Vittadinia australasica var.
		Vittadinia gracilis
		Wahlenbergia stricta
		Wurmbea latifolia ssp. *latifolia*

Vegetation Association	**A2** – *Bursaria spinosa* shrubland +/- emergent *Allocasuarina verticillata* over *Themeda* and *Lomandra* spp.
Threatened Species or Community	This VA is not part of a TEC. Although Lomandra was present; the cover was less than 10 % and the presence of a shrub / tree layer eliminates this TEC. One threatened flora species was identified in this VA: • *Cryptandra campanulata* (Long-flower Cryptandra) (NPW Act: Rare) Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*) • Grey Falcon (*Falco hypoleucos*) • Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*)

Landscape Context Score	1.14	**Vegetation Condition Score**	42.14	**Conservation Significance Score**	1.14
Unit Biodiversity Score	55.35	**Area (ha)**	6.01	**Total Biodiversity Score**	332.65

Table 4.4 Summary of A3 – *Cryptandra campanulata* and *Bursaria spinosa* Shrubland Over Native Forbs

Vegetation Association	**A3** – *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs
Benchmark Community	NA 6 – Inland Tall shrublands
BAM Sites	A3



A3 – Photo direction East

General Description

Open shrubland dominated by *Cryptandra campanulata* and *Bursaria spinosa*. The understorey has high diversity across the VA, including native grasses, climbers and forbs. The association occurs on clay loam to loamy soils on slopes and undulating hills. Weeds were sparse, consisting of *Arctotheca calendula*, *Avena barbata, Moraea setifolia, Hypochaeris glabra, Vulpia* sp., *Bromus rubens, Oxalis pes-caprae, Trifolium* sp., *Salvia verbenaca* and *Anagallis* sp.

Overstorey	Midstorey	Understorey
N/A	*Bursaria spinosa* ssp. *Cryptandra campanulata*	*Austrostipa sp.* *Calandrinia eremaea* *Chrysocephalum apiculatum* *Crassula sp.* *Enneapogon nigricans* *Glycine rubiginosa* *Gonocarpus elatus* *Lomandra multiflora ssp.* *Oxalis perennans* *Ptilotus spathulatus* *Rytidosperma sp.* *Themeda triandra* *Thysanotus patersonii* *Vittadinia gracilis* *Wurmbea latifolia ssp. latifolia*

Threatened Species or Community

This VA is not part of a TEC. One threatened flora species was identified in this VA:

- *Cryptandra campanulata* (Long-flower Cryptandra) (NPW Act: Rare).

Threatened species which may utilise this VA, as identified in the desktop assessment, include:

- Blue-winged Parrot (*Neophema chrysostoma*)
- Elegant Parrot (*Neophema elegans elegans*)
- Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*)
- Grey Falcon (*Falco hypoleucos*)
- Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*)
- South-eastern Hooded Robin (*Melanodryas cucullata cucullata*)
- Southern Whiteface (*Aphelocephala leucopsis*)

Vegetation Association	**A3** – *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs				
Landscape Context Score	1.14	**Vegetation Condition Score**	47.29	**Conservation Significance Score**	1.18
Unit Biodiversity Score	63.61	**Area (ha)**	0.07	**Total Biodiversity Score**	4.45

Table 4.5 Summary of A4 – *Austrostipa* Grassland

Vegetation Association	**A4** – *Austrostipa* Grassland
Benchmark Community	NA 3.2 - Grassland
BAM Sites	A4a, A4b, A4c, A4d, A4e, A4f, A4g



A4a – Photo direction South



A4b – Photo direction South-East

Vegetation Association	**A4** – *Austrostipa* Grassland



A4c – Photo direction unknown



A4d – Photo direction South-East



A4e – Photo direction unknown

Vegetation Association	**A4** – *Austrostipa* Grassland



A4f – Photo direction unknown



A4g – Photo direction unknown

General Description

Mid-dense to dense grassland dominated by *Austrostipa* spp. +/- emergent *Acacia victoriae* (A4a) and emergent *A. nyssophylla* (A4b). The understorey had high native biodiversity scores (>80%) in all BAM sites except A4g, located in a drainage line. The association is widespread across the Project Boundary Area, occurring on soils ranging from hard clay and rock to loamy soils, on plains, slopes, drainage channels and rocky outcrops.

Weeds are widespread across the BAM sites and are dominated by *Avena barbata*. Three species (*Convolvulus arvensis, Cynara cardunculus* and *Marrubium vulgare*) which are declared under the LSA Act are present. An additional 37 weed species were present in the understorey across the 7 BAM sites (A4a-A4g).

Overstorey	Midstorey	Understorey
Acacia victoriae	*Acacia nyssophylla*	*Aristida behriana*
	Enneapogon nigricans	*Arthropodium sp.*
	Maireana enchylaenoides	*Arthropodium strictum*
	Maireana excavata	*Asperula conferta*
		Austrostipa blackii
		Austrostipa eremophila
		Austrostipa nodosa
		Austrostipa sp.
		Bulbine bulbosa
		Chrysocephalum apiculatum
		Convolvulus remotus
		Crassula sp.

Vegetation Association	**A4** – *Austrostipa* Grassland				
				Dichanthium sericeum ssp. sericeum *Enneapogon nigricans* *Euphorbia drummondii* *Glycine rubiginosa* *Gonocarpus mezianus* *Goodenia pusilliflora* *Lomandra effusa* *Lomandra multiflora ssp.* *Neurachne sp.* *Oxalis perennans* *Podotheca angustifolia* *Ptilotus nobilis ssp.* *Ptilotus spathulatus* *Rytidosperma sp.* *Setaria jubiflora* *Stackhousia monogyna* *Themeda triandra* *Thysanotus patersonii* *Velleia sp.* *Vittadinia cuneata var.* *Vittadinia gracilis* *Vittadinia megacephala* *Wurmbea latifolia ssp. latifolia*	
Threatened Species or Community	This VA is considered representative of the Vulnerable provisional TEC 'Spear Grass *Austrostipa* spp. grassland'. Two State listed species were identified within this VA: • *Maireana excavata* (NPW: Vulnerable) • *Wurmbea latifolia* ssp. latifolia (NPW: Rare). Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*) • Grey Falcon (*Falco hypoleucos*) • Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*).				
Landscape Context Score	1.14	**Vegetation Condition Score**	26.92	**Conservation Significance Score**	1.35
Unit Biodiversity Score	41.88	**Area (ha)**	68.83	**Total Biodiversity Score**	2882.60

Table 4.6 Summary of A5 – *Lomandra* spp. Grassland

Vegetation Association	**A5** – *Lomandra* spp. Grassland
Benchmark Community	NA 3.2 – Grassland
BAM Sites	A5a, A5b



A5a – Photo direction West



A5b – Photo direction West

General Description

Mid-dense grassland dominated by *Lomandra effusa* and *Lomandra multiflora*. In A5a, scattered low shrubs of *Cryptandra campanulata* and *Maireana enchylaenoides* were present. The understorey is mainly comprised of native grasses with small patches of forbs with high coverage. In A5b, emergent mid-storey shrubs were present; however, these species formed <5 % coverage. The understorey has high diversity across the VA, including native grasses, climbers and forbs. Evidence of grazing is present.

The association occurs on clay loam to loamy soils on slopes and undulating hills. Two species (*Marrubium vulgare* and *Cynara cardunculus*) which are declared under the LSA Act are present. Total weeds are sparse, consisting of *Arctotheca calendula, Hordeum vulgare, Avena barbata, Carthamus lanatus, Hypochaeris glabra, Sisymbrium orientale, Moraea setifolia, Salvia verbenaca*, *Oxalis pes-caprae, Medicago polymorpha, Echium plantagineum*, and *Erodium botrys*.

Overstorey	Midstorey	Understorey
N/A	*Bursaria spinosa* ssp.	*Asperula conferta*
	Cryptandra campanulata	*Austrostipa scabra*
	Enchylaena tomentosa var.	*Austrostipa* sp.
	Hakea leucoptera ssp. *leucoptera*	*Convolvulus remotus*
	Maireana aphylla	*Glycine rubiginosa*

Vegetation Association	**A5** – *Lomandra* spp. Grassland				
		Maireana enchylaenoides		*Lomandra effusa* *Lomandra multiflora* *Scleranthus pungens* *Themeda triandra* *Vittadinia gracilis* *Wurmbea latifolia*	
Threatened Species or Community	Part of this VA (A5a) was assessed as INTG TEC (B class). Two State listed species were identified within this VA: • *Cryptandra campanulata* (NPW Act: Rare) • *Wurmbea latifolia* (NPW Act: Rare). Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*) • Grey Falcon (*Falco hypoleucos*) • Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*).				
Landscape Context Score	1.14	**Vegetation Condition Score**	34.92	**Conservation Significance Score**	1.36
Unit Biodiversity Score	56.58	**Area (ha)**	11.03	**Total Biodiversity Score**	624.08

Table 4.7 Summary of A8 – *Acacia nyssophylla* Shrubland Over *Austrostipa* spp

Vegetation Association	**A8** – *Acacia nyssophylla* shrubland over *Austrostipa spp.*
Benchmark Community	NA 6 – Inland Tall shrublands
BAM Sites	A8



A8 – Photo direction South

Vegetation Association	**A8** – *Acacia nyssophylla* shrubland over *Austrostipa spp.*		
General Description	Open shrubland dominated by *Acacia nyssophylla*, with scattered *Bursaria spinosa, Cryptandra campanulata* and *Senna artemisioides* midstorey. The understorey is dominated by *Austrostipa* sp., with *Lomandra effusa* and forbs present. The association occurs on a hill slope on loamy soil. Weeds are diverse, consisting of *Convolvulus arvensis, Carthamus lanatus, Avena barbata, Hordeum vulgare, Hypochaeris glabra, Sisymbrium orientale, Trifolium sp., Medicago polymorpha, Salvia verbenaca, Moraea setifolia* and *Echium plantagineum*.		
	Overstorey	**Midstorey**	**Understorey**
	N/A	*Acacia nyssophylla* *Bursaria spinosa* ssp. *Cryptandra campanulata* *Enchylaena tomentosa* *Pimelea stricta* *Senna artemisioides* ssp.	*Austrostipa* sp. *Glycine rubiginosa* *Lomandra effusa* *Stackhousia monogyna* *Themeda triandra*
Threatened Species or Community	This VA is not part of a TEC. One State listed species was identified within this VA: • *Cryptandra campanulata* (NPW Act: R). Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*) • Grey Falcon (*Falco hypoleucos*) • Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*).		

Landscape Context Score	1.14	**Vegetation Condition Score**	43.46	**Conservation Significance Score**	1.14
Unit Biodiversity Score	56.48	**Area (ha)**	0 – Not Impacted	**Total Biodiversity Score**	N/A

Table 4.8 Summary of A9 – *Pimelea stricta* Shrubland

Vegetation Association	**A9** – *Pimelea stricta* shrubland
Benchmark Community	NA 6 - Inland Tall shrublands
BAM Sites	A9



A9 – Photo direction East

General Description

Open shrubland dominated by *Pimelea stricta* (approximately 30% coverage). The understorey is comprised of native grasses and forbs, with high density of *Lomandra effusa* (5-10%).

The association occurs on a rocky hill slope on clay loam soil. Weeds were dominated by *Avena barbata* and *Bromus diandrus*. Additional weeds were sparse and consist of *Carthamus lanatus, Erodium botrys, Carrichtera annua, Hypochaeris glabra, Medicago polymorpha* and *Osteospermum* sp.

One Red Fox (*Vulpes vulpes*) and two Euros (*Macropus robustus*) were observed within this VA.

Overstorey	Midstorey	Understorey
N/A	*Pimelea stricta*	*Aristida behriana*. *Austrostipa* sp. *Convolvulus remotus*. *Glycine rubiginosa*. *Lomandra effusa*. *Ptilotus spathulatus*. *Sida corrugata* var. *Vittadinia megacephala*. *Wahlenbergia* sp.

Threatened Species or Community

This VA is not part of a TEC. One State listed species was identified within this VA:

- *Cryptandra campanulata* (NPW Act: R).

Threatened species which may utilise this VA, as identified in the desktop assessment, include:

- Blue-winged Parrot (*Neophema chrysostoma*)
- Elegant Parrot (*Neophema elegans elegans*)
- Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*)
- Grey Falcon (*Falco hypoleucos*)
- Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*)
- South-eastern Hooded Robin (*Melanodryas cucullata cucullata*)
- Southern Whiteface (*Aphelocephala leucopsis*).

Landscape Context Score	1.14	**Vegetation Condition Score**	35.09	**Conservation Significance Score**	1.10
Unit Biodiversity Score	44.00	**Area (ha)**	0.69	**Total Biodiversity Score**	30.36

Table 4.9 Summary of A10 – *Hakea leucoptera* Shrubland

Vegetation Association	**A10** – *Hakea leucoptera* shrubland
Benchmark Community	NA 6 – Inland Tall Shrublands
BAM Site	A10



A10 – Photo direction South-West

General Description

Open shrubland dominated by *Hakea leucoptera* (approximately 40% coverage) with scattered *Acacia oswaldii, Pittosporum angustifolium and chenopod shrubs*. The understorey consisted mainly of native grasses with some forbs present.

The association occurs on low plain on clay loam soil. One species, *Marrubium vulgare*, which is declared under the LSA Act is present. Additional weeds consist of *Spergularia rubra, Avena barbata, Sisymbrium officinale, Hypochaeris glabra, Bromus diandrus, Salvia verbenaca, Lactuca serriola* and Medicago *polymorpha*.

Over Storey	Mid Storey	Under Storey
Acacia oswaldii	*Enchylaena tomentosa* var. *Hakea leucoptera* *Maireana excavata* *Pimelea stricta* *Pittosporum angustifolium* *Rhagodia parabolica*	*Aristida behriana* *Austrostipa* sp. *Lomandra effusa* *Nicotiana goodspeedii* *Poa annua* *Ptilotus nobilis* ssp. *Rytidosperma* sp. *Salsola australis*

Threatened Species or Community

This VA is not part of a TEC. One State listed species was identified within this VA:

- *Maireana excavata* (NPW: V).

Threatened species which may utilise this VA, as identified in the desktop assessment, include:

- Blue-winged Parrot (*Neophema chrysostoma*)
- Elegant Parrot (*Neophema elegans elegans*)
- Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*)
- Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*)
- South-eastern Hooded Robin (*Melanodryas cucullata cucullata*)
- Southern Whiteface (*Aphelocephala leucopsis*).

Landscape Context Score	1.14	**Vegetation Condition Score**	28.38	**Conservation Significance Score**	1.18
Unit Biodiversity Score	38.18	**Area (ha)**	0 – Not Impacted	**Total Biodiversity Score**	N/A

Table 4.10 Summary of A11 – *Senna artemisioides* ssp. *artemisioides* Shrubland Over Native Grasses

Vegetation Association	**A11** – *Senna artemisioides* ssp. *artemisioides* shrubland over native grasses
Benchmark Community	NA 6 – Inland Tall Shrublands
BAM Sites	A11



Note: The BAM photo is unavailable, but the VA can be seen in the background of the photo above featuring *Cullen australasicum*.

General Description

Open shrubland dominated by *Senna artemisioides* ssp. (approximately 40% coverage with high regeneration present). The understorey is dominated by native grasses.

The association occurs on a hill slope on clay loam soil. One species, *Convolvulus arvensis*, which is declared under the LSA Act is present. Additional weed coverage is low and consists of *Sisymbrium orientale, Avena barbata, Medicago polymorpha* and *Sonchus oleraceus*.

Over Storey	Mid Storey	Under Storey
N/A	*Senna artemisioides* ssp.	*Aristida behriana* *Aristida contorta* *Cullen australasicum* *Enneapogon nigricans* *Glycine rubiginosa* *Goodenia pusilliflora* *Lomandra effusa* *Ptilotus nobilis* *Themeda triandra*

Vegetation Association	**A11** – *Senna artemisioides* ssp. *artemisioides* shrubland over native grasses				
Threatened Species or Community	This VA is not part of a TEC. Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*) • Pygmy Blue-tongue Lizard (*Tiliqua adelaidensis*).				
Landscape Context Score	1.14	**Vegetation Condition Score**	34.83	**Conservation Significance Score**	1.10
Unit Biodiversity Score	43.68	**Area (ha)**	0 – Not Impacted	**Total Biodiversity Score**	N/A

Table 4.11 Summary of A12 – Mixed Tall Shrubland Over Native Grasses and Forbs

Vegetation Association	**A12** – Mixed tall shrubland over native grasses and forbs.
Benchmark Community	NA 6 – Inland Tall Shrublands
BAM Sites	A12a, A12b



A12a – Photo direction South



A12b – Photo direction South

Vegetation Association	**A12** – Mixed tall shrubland over native grasses and forbs.				
General Description	This VA occurs between cropping and roadside. Planted Eucalyptus sp. are present around the perimeter of the VA, with native mallee, shrubs, forbs and grasses widespread in good condition. Weeds are widespread, dominated by grasses. Species include *Asphodelus fistulosus, Avena barbata, Bromus* sp., *Heliotropium* sp., *Hypericum perforatum* ssp. *veronense, Malva parviflora, Olea europaea* ssp., *Panicum capillare* var. *brevifolium, Piptatherum miliaceum, Salvia verbenaca var*., *Scabiosa atropurpurea, Schinus molle* and *Sonchus asper*.				
	Overstorey	**Midstorey**	**Understorey**		
	Acacia cupularis *Acacia salicina* *Acacia victoriae* ssp. *Eremophila glabra* ssp. *Eucalyptus fasciculosa*	*Bursaria spinosa* ssp. *Cryptandra campanulata* *Enchylaena tomentosa* var. *Maireana brevifolia* *Senna artemisioides* ssp. *artemisioides x* ssp. *coriacea*	*Austrostipa* sp. *Chrysocephalum* sp. *Convolvulus remotus* *Dianella brevicaulis* *Dianella revoluta* var. *Dichanthium sericeum* ssp. *Enneapogon nigricans* *Euphorbia drummondii group* *Lomandra effusa* *Lomandra multiflora* ssp. *Panicum decompositum* var. *decompositum* *Salsola australis* *Scaevola albida* *Sida corrugata* var. *Solanum* sp. *Themeda triandra* *Vittadinia blackii*		
Threatened Species or Community	This VA is not part of a TEC. One State listed species was identified within this VA: • *Cryptandra campanulata* (Long-flower Cryptandra) (NPW Act: Rare). Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Australian Painted Snipe (*Rostratula australis*) • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • Flinders Ranges Worm-lizard (*Aprasia pseudopulchella*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*).				
Landscape Context Score	1.14	**Vegetation Condition Score**	47.59	**Conservation Significance Score**	1.14
Unit Biodiversity Score	62.63	**Area (ha)**	0.41	**Total Biodiversity Score**	25.68

Table 4.12 Summary of B9 – *Chenopod* Shrubland +/- *Acacia victoriae*

Vegetation Association	**B9** – Chenopod shrubland +/- *Acacia victoriae*
Benchmark Community	NA 6 – Inland Tall Shrublands
BAM Sites	B9a, B9b, B9c



B9a – Photo direction West



B9b – Photo direction West



B9c – Photo direction North

Vegetation Association	**B9** – Chenopod shrubland +/- *Acacia victoriae*				
General Description	This VA occurs along linear roadsides on clay loam soils. Planted Eucalyptus overstorey occurs in B9b, with the midstorey of chenopod species consistent across all 3 BAM sites. The State Rare *Maireana rohrlachii* is dominant in B9a. Disturbance present to varying degrees. Two species (*Lycium ferocissimum* and *Marrubium vulgare*) which are Declared under the LSA Act are present. Additional weeds within the VA include *Arctotheca calendula, Avena barbata, Bromus diandrus, Carrichtera annua, Centaurea calcitrapa, Hordeum* sp., *Medicago polymorpha, Oxalis pes-caprae, Piptatherum miliaceum, Salvia verbenaca, Scabiosa atropurpurea, Sisymbrium* sp. and *Sonchus oleraceus*.				
	Overstorey	**Midstorey**	**Understorey**		
	Acacia victoriae *Santalum acuminatum* *Senna artemisioides* ssp. *artemisioides*	*Duma florulenta* *Enchylaena tomentosa* *Maireana aphylla* *Maireana brevifolia* *Maireana rohrlachii* *Nitraria billardierei* *Rhagodia parabolica*	*Aristida behriana* *Atriplex semibaccata* *Austrostipa nodosa* *Austrostipa* sp. *Boerhavia domini* *Chloris truncata* *Cressa australis* *Lomandra effusa* *Lomandra multiflora* *Oxalis perennans* *Panicum decompositum* var. *decompositum* *Sida corrugata* var. *Vittadinia cuneata* *Vittadinia gracilis*		
Threatened Species or Community	This VA is not part of a TEC. One threatened flora species was identified in this VA: • *Maireana rohrlachii* (Rohrlach's Bluebush) (NPW Act: R). Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*).				
Landscape Context Score	1.14	**Vegetation Condition Score**	9.90	**Conservation Significance Score**	1.04
Unit Biodiversity Score	11.74	**Area (ha)**	7.59	**Total Biodiversity Score**	89.11

Table 4.13 Summary of B10 – *Salsola* Shrubland

Vegetation Association	**B10** – *Salsola* shrubland				
Benchmark Community	NA 6 – Inland Tall Shrublands				
BAM Sites	B10				



B10 – Photo direction East

General Description	This VA occurs in previous cleared land on private property adjacent to Larcombes Track. The diversity of species is moderately low, however the coverage of *Salsola australis* and *Austrostipa* sp. is high in most of the VA. Weeds are dominated by *Carthamus lanatus*, with emergent *Heliotropium* sp., *Hordeum vulgare, Mesembryanthemum nodiflorum* and *Sonchus oleraceus*.		
	Overstorey	**Midstorey**	**Understorey**
	N/A	*Atriplex suberecta* *Maireana brevifolia*	*Austrostipa sp.* *Cressa australis* *Salsola australis*
Threatened Species or Community	This VA is not part of a TEC. Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Australian Painted Snipe (*Rostratula australis*) • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*).		

Landscape Context Score	1.14	**Vegetation Condition Score**	7.25	**Conservation Significance Score**	1.10
Unit Biodiversity Score	9.09	**Area (ha)**	3.74	**Total Biodiversity Score**	34.00

Table 4.14 Summary of C1 – *E. camaldulensis* Riparian Woodland Over *Acacia salicina* and *A. victoriae*

Vegetation Association	*E. camaldulensis* Riparian Woodland over *Acacia salicina* and *A. victoriae*
Benchmark Community	NA 7.1 – Riparian Woodlands
BAM Sites	C1a, C1b, C1c



C1a – Photo direction East



C1b – Photo direction South



C1c – Photo direction North

Vegetation Association	*E. camaldulensis* Riparian Woodland over *Acacia salicina* and *A. victoriae*				
General Description	This VA occurs on a creekline (Broughton River) (C1a) and associated floodplain (C1b and C1c). The overstorey is dominated by *Eucalyptus camaldulensis* (regeneration present) with hollows in various sizes. A midstorey of *Acacia salicina* and *Acacia victoriae* is consistent throughout the VA, over native and exotic grasses. Large stands of *Phragmites australis* is present within C1a. Weeds are dominated by *Avena barbata* and *Bromus diandrus*. Four species (*Lycium ferocissimum, Marrubium vulgare, Opuntia* sp. and *Cynara cardunculus*) which are declared under the LSA Act are present. Other introduced species present include *Chenopodium album, Erigeron* sp., *Fumaria* sp., *Hordeum* sp., *Lolium* sp., *Oxalis pes-caprae, Piptatherum miliaceum, Salvia verbenaca, Schinus molle, Sisymbrium officinale, Solanum nigrum, Sonchus oleraceus* and *Vicia* sp.				
	Over Storey	**Mid Storey**	**Under Storey**		
	Eucalyptus camaldulensis *Myoporum insulare* *Nitraria billardierei*	*Acacia salicina* *Acacia victoriae* ssp. *Atriplex cinerea* *Duma florulenta* *Enchylaena tomentosa* *Maireana brevifolia*	*Atriplex semibaccata* *Austrostipa* sp. *Distichlis distichophylla* *Salsola australis*		
Threatened Species or Community	This VA is not part of a TEC. Threatened species which may utilise this VA, as identified in the desktop assessment, include: • Australian Painted Snipe (*Rostratula australis*) • Blue-winged Parrot (*Neophema chrysostoma*) • Elegant Parrot (*Neophema elegans elegans*) • South-eastern Hooded Robin (*Melanodryas cucullata cucullata*) • Southern Whiteface (*Aphelocephala leucopsis*).				
Landscape Context Score	1.16	**Vegetation Condition Score**	27.35	**Conservation Significance Score**	1.10
Unit Biodiversity Score	34.74	**Area (ha)**	0.04	**Total Biodiversity Score**	1.39

4.1.3 Scattered Trees Proposed to be Impacted

Three scattered trees will be impacted by the proposed clearance as shown in **Table 4.15** to **Table 4.17** and on **Figure 4.3**.

Table 4.15 Summary of Scattered Tree 2

Tree ID – Tree 2	
Tree spp. – *Casuarina pauper* (Black Oak)	
Number of trees – 1	
Height (m) – 8.5	
Hollows – None	
Diameter (cm) – 30	
Canopy dieback (%) – 5	
Total Biodiversity Score – 1.95	

Table 4.16 Summary of Scattered Tree 12

Tree ID – Tree 12a
Tree spp. – *Eucalyptus porosa* (Mallee Box)
Number of trees – 1
Height (m) – 4
Hollows – 3 small, 1 large
Diameter (cm) – 30
Canopy dieback (%) – 70
Total Biodiversity Score – 0.59





A Wedge-tailed Eagle (*Aquila audax*) was observed perching in scattered tree 12a during the September 2023 bird surveys.

Table 4.17 Summary of Scattered Tree 13

Tree ID – Tree 13
Tree spp. – *Allocasuarina verticillata* (Drooping Sheoak)
Number of trees – 1
Height (m) – 9
Hollows – 1 small
Diameter (cm) – 55
Canopy dieback (%) – 30
Total Biodiversity Score – 3.92

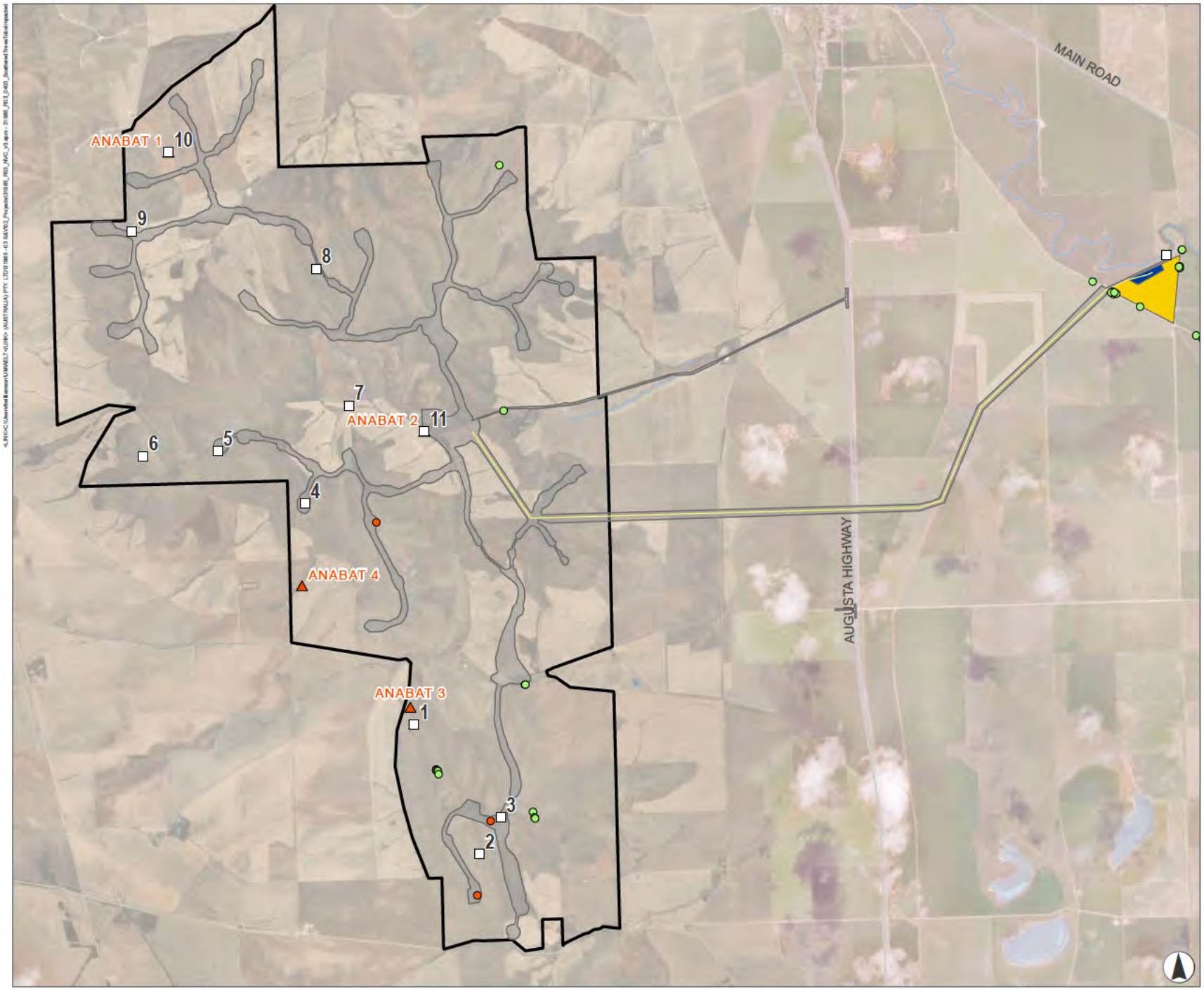


4.1.4 Site Map Showing Areas of Proposed Impact

Native vegetation under application and the proposed impact of the Project are presented in **Figure 4.1** and **Figure 4.2** with impacted scattered trees being presented in **Figure 4.3** and a more detailed map series in **Appendix B**.

FIGURE 4.3

Scattered Trees to be Impacted by the Project



Legend

- Project Area Boundary
- BESS
- Switchyard
- Disturbance Corridor
- Transmission Line
- BBUS Sites
- Scattered Tree - Impacted
- Scattered Tree - Not Impacted



0 1 2

Kilometres

Scale 1:65,000 at A4
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Image Source: ESRI Basemap (2025) | **Data Source:** SA DIT, SA DEW (2024)

4.1.5 Photo Log

Features associated with the Project Boundary Area are presented below in **Photo 4.1** through to **Photo 4.4**.



Photo 4.1 An example of the spider burrows that were subject to targeted surveys for PBTLs



Photo 4.2 *Wurmbea latifolia* ssp. *latifolia* (Broad-leaf Nancy) (State threatened) recorded by the field surveys



Photo 4.3 Representative conditions for much of the Project Boundary Area



Photo 4.4 Blue-winged Parrot (*Neophema chrysostoma*) on the western side of the Project Boundary Area

4.2 Threatened Ecological Communities

The PMST report identified two TECs that had the potential to occur within the Search Area (DCCEEW 2026a):

- Iron-grass Natural Temperate Grassland of South Australia.
- Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia.

Vegetation in the Project Boundary Area has been assessed against the definitions of each TEC, as defined in **Table 4.18**. The assessment found that the INTG TEC is present.

Table 4.18 Assessment for the Presence of Threatened Ecological Communities in the Project Boundary Area

Threatened Ecological Community	Conservation Status	Definition	Assessment
Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia (PBGW)	Critically Endangered	Consists of open to dense woodlands dominated by *Eucalyptus odorata*, often in association with *E. leucoxylon*, *E. microcarpa*, and *E. porosa*. Categorised into condition classes A, B, and C – based on the remnant patch size and native species diversity (DEWR 2007).	**Absent** – This TEC was not detected during the field survey.
Iron-grass Natural Temperate Grassland of South Australia (INTG)	Critically Endangered	Consists of grasslands of tussock-forming perennial Iron-grasses (*Lomandra effusa* and/or *L. multiflora* ssp. *dura*) with a low presence (< 10 %) of trees and tall shrubs (DEWR 2007).	**Present** – Class B and Class C are present within A5 (*Lomandra* spp. grassland). Refer to **Section 4.1.2**.

4.2.1 Iron-grass Natural Temperate Grassland

INTG is listed as Critically Endangered under the EPBC Act, effective as of June 2007 (DCCEEW 2026b). Endemic to SA, the community relates to tussock grasslands comprised of *Lomandra effusa* and/or *L. multiflora* ssp. *dura* (Turner 2012). Between 10 % and 70 % of the ground is to be covered by *Lomandra* spp. with a diverse herbaceous assemblage in the inter-tussock spaces (DEWR 2007). Remaining patches of this ecological community typically occur on gentle-to-moderate slopes, hilltops, and adjacent plains, with annual precipitation between 300 and 600 mm (TSSC 2007).

Within the Project Boundary Area, based on the conditional criteria for listing (**Section 3.1.3**), 59.97 ha were classified as Class B of the TEC, of which 4.59 ha will be impacted by the Project.

Table 4.19 Occurrence of Lomandra Grassland and INTG within the Project Boundary Area and Disturbance Footprint

Condition Class	INTG TEC (Yes/No)	Project Boundary Area (ha)	Disturbance Corridor (ha)	Lomandra Class to be Impacted (%)
Class A	Yes	0	0	0
Class B	Yes	59.97	4.59	7.65
Class C	No	84.15	6.44	7.65
Total all Lomandra Grassland		144.11	11.03	7.65
Total TEC (A/B)		59.97	4.59	7.65

4.3 Threatened Species Assessment

4.3.1 Threatened Flora

No EPBC Act-listed flora species were identified by the PMST as 'Known to occur' (DCCEEW 2026a). Three conservation rated flora species have historical records from within the Search Area (DEW 2026b):

- *Maireana excavata* (Bottle Fissureplant) – listed as Vulnerable under the NPW Act.
- *Maireana rohrlachii* (Rohrlach's Bluebush) – listed as Rare under the NPW Act.
- *Wurmbea latifolia* ssp. *latifolia* (Broad-leaf Nancy) – listed as Vulnerable under the NPW Act.

These species were all encountered by Umwelt at BAM sites, along with two other species not identified by the desktop assessment:

- *Cryptandra campanulata* (Long-flower Cryptandra) – listed as Rare under the NPW Act.
- *Eucalyptus fasciculosa* (Pink Gum) – listed as Rare under the NPW Act.

An additional threatened species with no historical records, *Mentha satureioides* (Native Pennyroyal) (listed as Rare under the NPW Act) was recorded from two different locations during a previous November survey (EBS 2012) and in a 2017 survey. Approximately 200 plants were observed in two patches, located in minor drainage lines, both of which are avoided by the Project. While this species was not detected at the time of the 2023/24 surveys, it nevertheless has precautionarily been assessed as 'Highly Likely' to occur.

A summary of all threatened flora species assessed as being at least 'possible' to occur is provided in **Table 4.20**.

The full likelihood of occurrence assessment is presented in **Appendix E**. Records of threatened species from within the Search Area are provided in **Figure 4.4**.

Table 4.20 Threatened Flora Species Considered to have at least a 'Possible' Probability of Occurrence as per the Likelihood Assessment

Scientific Name	Common Name	Conservation Status		Source	PMST / Year of Last Sighting	Likelihood of Occurrence Assessment
		EPBC Act	NPW Act			
Cryptandra campanulata	Long-flower Cryptandra	-	R	3	2024	Known
Eucalyptus fasciculosa	Pink Gum	-	R	3	2024	Known
Maireana excavata	Bottle Fissure-plant	-	V	3	2024	Known
Maireana rohrlachii	Rohrlach's Blue-bush	-	R	3	2024	Known
Mentha satureioides	Native Pennyroyal	-	R	3	2017	Highly Likely
Wurmbea latifolia ssp. *latifolia*	Broad-leaf Nancy	-	V	2, 3	2024	Known

Conservation Codes
EPBC Act: *Environment Protection and Biodiversity Conservation Act 1999*, **NPW Act**: *National Parks and Wildlife Act 1972*.
Conservation Status
VU/V: Vulnerable, **R**: Rare.
Source
1. **PMST Report** (DCCEEW 2026) - 5 km buffer applied to the Project Boundary Area
2. **BDBSA Data Extract** (DEW 2026) - 5 km buffer applied to the Project Boundary Area.
3. **Recorded during a field survey.**

4.3.2 Threatened Fauna

One EPBC Act-listed species was identified by the PMST as 'Known to occur' within the Search Area (DCCEEW 2026a):

- Australian Painted Snipe (*Rostratula australis*) – listed as Endangered under the EPBC Act and Endangered under the NPW Act.

This species also has historical records from within the Search Area (DEW 2026b). Given its habitat requirements (i.e., suitable watercourses/wetlands with dense fringing vegetation), it has been assessed as Possible to occur (DEW 2026b). However, given that suitable habitat occurs only at C1, it has been excluded from all other scoresheets.

One State threatened fauna species also has historical records from within the Search Area (DEW 2026b):

- Common Brushtail Possum (*Trichosurus vulpecula*) – listed as Rare under the NPW Act.

Given the species requirement for specific habitat features (i.e., hollow-bearing trees with large hollows and fallen timber), the species has been assessed as Possible to occur. However, given that this only occurs at C1 and Tree 12, it has been excluded from all other scoresheets.

Although no conservation-rated species were encountered during the BBUS (see **Section 3.2.1**), the Blue-winged Parrot was opportunistically recorded during the vegetation surveys (EBS 2024, Umwelt 2026).

The targeted surveys identified 15 individual FRWLs from within the Project Boundary Area (see **Section 3.2.3.1**). Although these surveys did not detect PBTLs, the species has nevertheless precautionarily been assessed as 'possible' to occur.

A summary of all threatened fauna species assessed as being at least 'possible' to occur is provided in **Table 4.21**. The full likelihood of occurrence assessment is presented in **Appendix E**. Records of threatened species from within the Search Area are provided in **Figure 4.5**.

Table 4.21 Threatened Fauna Species Considered to have at Least a 'Possible' Probability of Occurrence as per the Likelihood Assessment

Scientific Name	Common Name	Conservation Status		Source	PMST / Year of Last Sighting	Likelihood of Occurrence Assessment
		EPBC Act	NPW Act			
Aves						
Neophema chrysostoma	Blue-winged Parrot	VU	V	1, 3	Likely to occur, 2024	Known
Rostratula australis	Australian Painted Snipe	EN	EN	1, 2	Known to occur, 2001	Possible
Mammalia						
Trichosurus vulpecula	Common Brushtail Possum	-	R	2	2020	Highly Likely
Reptilia						
Aprasia pseudopulchella	Flinders Ranges Worm-lizard	VU	-	1, 3	Likely to occur, 2024	Known
Tiliqua adelaidensis	Pygmy Blue-tongue Lizard	EN	E	1	Likely to occur	Possible

Conservation Codes

EPBC Act: *Environment Protection and Biodiversity Conservation Act 1999*, **NPW Act**: *National Parks and Wildlife Act 1972*.

Conservation Status

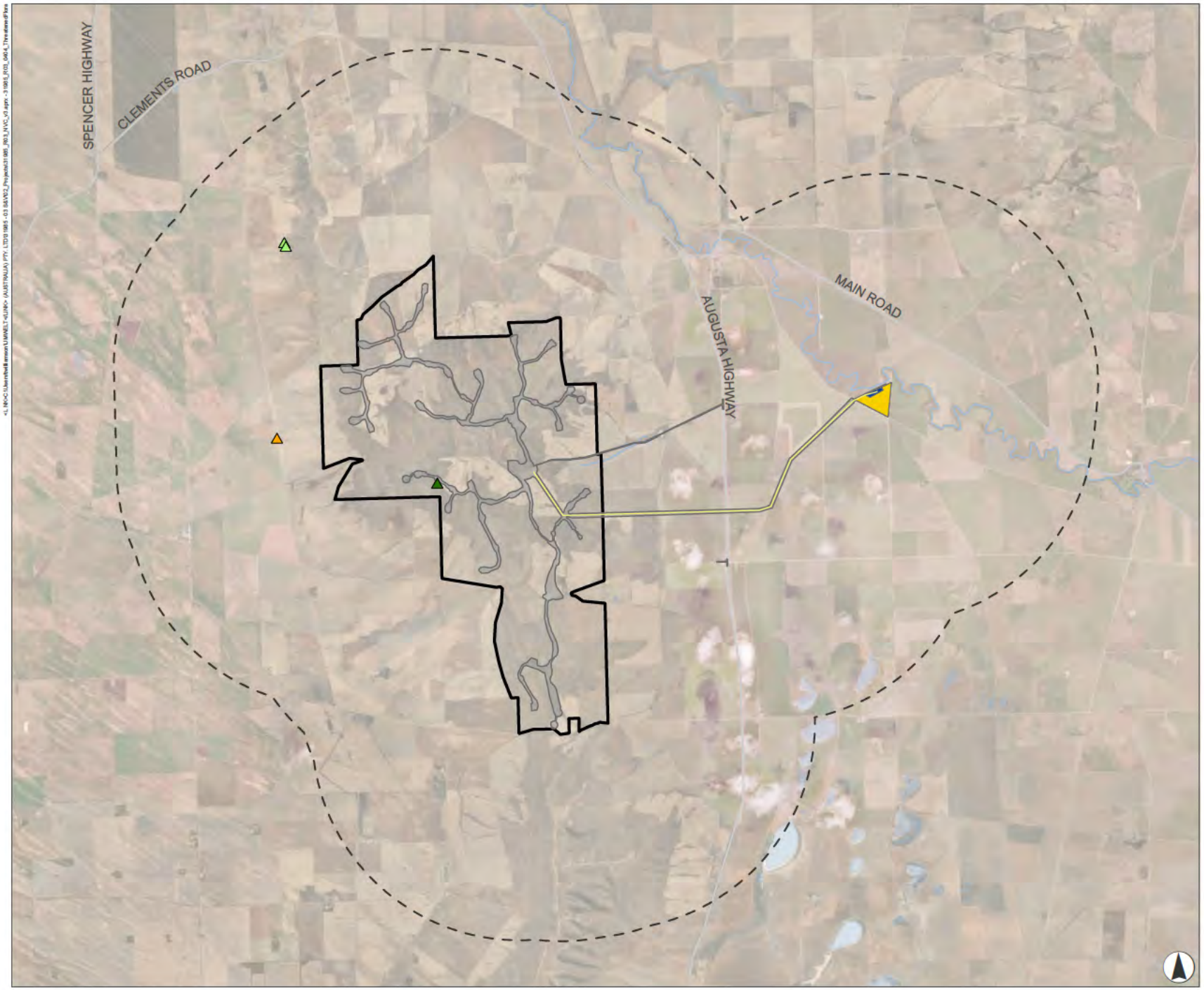
EN/E: Endangered, **VU/V**: Vulnerable, **R**: Rare.

Source

1. **PMST Report** (DCCEEW 2026) - 5 km buffer applied to the Project Boundary Area
2. **BDBSA Data Extract** (DEW 2026) - 5 km buffer applied to the Project Boundary Area.
3. **Recorded during a field survey.**

FIGURE 4.4

Records of Threatened Flora Species from Within the Search Area



Legend

- Project Area Boundary
- BESS
- Switchyard
- Disturbance Corridor
- Transmission Line

Threatened Flora (BDBSA)

- *excavata* (Bottle Fissure-plant) - NPW: V
- *latifolia* (Broad-leaf Nancy) - NPW: V
- *rohrlachii* (Rohrlach's Bluebush) - NPW: R



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Kilometres

Scale 1:128,502 at A4
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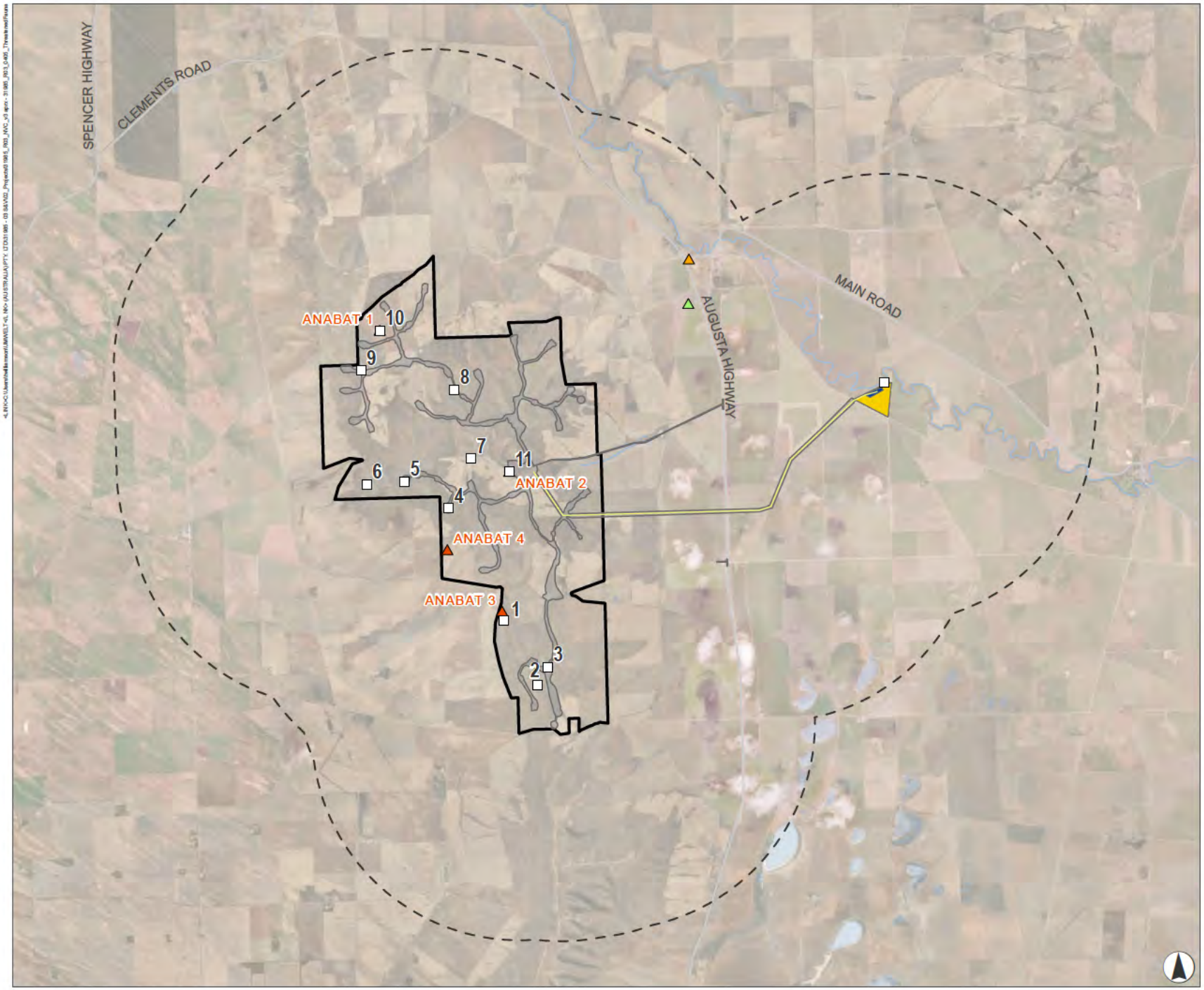


FIGURE 4.5

Records of Threatened Fauna Species from Within the Search Area

Legend

- Project Area Boundary
- BESS
- Switchyard
- Disturbance Corridor
- BBUS Sites
- Transmission Line

Threatened Fauna (BDBSA)

- Australian Painted-snipe (*australis*) - NPW: E EPBC: EN
- Common Brushtail Possum (*vulpecula*) - NPW: R



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Kilometres

Scale 1:128,502 at A4
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4.4 Cumulative Impacts

When exercising a power or making a decision under Division 5 of the Native Vegetation Regulations 2017, the NVC must consider the potential cumulative impact, both direct and indirect, that is reasonably likely to result from a proposed clearance activity.

4.4.1 Direct Clearance

To calculate the impact to native vegetation, all infrastructure associated with the Project, including WTG sites, access tracks, cable routes and construction compounds have been mapped in Arc GIS and overlaid onto native vegetation association information. This includes all associated infrastructure and construction areas, such as turbine site hardstands, crane hardstands, stockpiles, batter slopes and construction compounds/laydown areas, which will require clearance of native vegetation.

4.4.2 Indirect Clearance

The construction and operation of the Project have the potential to cause indirect impacts to native vegetation associated with construction machinery, dust, weeds, herbicide use, altered hydrology/stormwater drainage and potentially changes to local grazing regimes/levels. However, the construction contractor and wind farm operator will be required to implement a Construction Environmental Management Plan (CEMP) and Operational Environmental Management Plan (OEMP) (respectively) to identify and document potential impacts to flora and fauna (and the environment in general) as well as the management measures that will be implemented to avoid, minimise, manage and mitigate these potential indirect impacts. In particular, as part of the CEMP, a Flora and Fauna Management Plan will be implemented to specifically address (avoid/minimise/manage/mitigate) potential impacts to flora and fauna.

4.5 Addressing the Mitigation Hierarchy

When exercising a power or making a decision under Division 5 of the Native Vegetation Regulations 2017, the NVC must have regard to the mitigation hierarchy. The NVC will also consider, with the aim to minimize, impacts on biological diversity, soil, water and other natural resources, threatened species or ecological communities under the EPBC Act or listed species under the NPW Act.

a. Avoidance – outline measures taken to avoid clearance of native vegetation

All stages of the Project's design have been undertaken considering vegetation/TEC mapping, the known locations of threatened species populations, and Wedge-tailed Eagle nest locations. Several iterations of the Project design have been undertaken, aiming to avoid the INTG TEC, better-quality vegetation and Wedge-tailed Eagle nests. Whilst every effort has been made to avoid sensitive areas wherever possible, such as locating turbines outside of *Lomandra* spp. grasslands, engineering and landscape constraints mean that clearing of native vegetation cannot be completely avoided.

Moreover, to mitigate the potential for direct impacts to FRWL and PBTL within the Disturbance Corridor, a suitably qualified and experienced ecologist will perform supplementary targeted surveys within and surrounding the application area prior to the commencement of works, with the option to micro site away from any detected individual(s) or relocate the individual to an appropriate habitat area nearby, if micro siting is not possible. All relocation would be conducted under appropriate permits.

b. Minimization – if clearance cannot be avoided, outline measures taken to minimize the extent, duration and intensity of impacts of the clearance on biodiversity to the fullest possible extent (whether the impact is direct, indirect or cumulative).

As far as is practicable, the development has been placed in areas with no native vegetation or avoided native vegetation in better condition or of higher conservation value. The majority of the clearance (392.90 ha of the 496.31 or 79% of impact) is located in cropland, exotic vegetation or is part of existing infrastructure and roads. Within the native vegetation which will be impacted, efforts have been made to avoid more diverse vegetation types.

The area under application allows for flexibility in the final design and during the construction phase, to avoid scattered trees and sensitive vegetation as much as possible. Of the 103.41 ha under application only 53.13 ha (51%) is likely to be required (equivalent to the Construction Corridor).

c. Rehabilitation or restoration – outline measures taken to rehabilitate ecosystems that have been degraded, and to restore ecosystems that have been degraded, or destroyed by the impact of clearance that cannot be avoided or further minimized, such as allowing for the re-establishment of the vegetation.

The Project includes areas of both temporary and permanent vegetation clearance. Temporary clearance areas including laydown areas and temporary construction compounds will be rehabilitated according to the strategies discussed in a CEMP.

d. Offset – any adverse impact on native vegetation that cannot be avoided or further minimized should be offset by the achievement of a significant environmental benefit that outweighs that impact.

The NVC will only consider an offset once avoidance, minimization and restoration have been documented and fulfilled. The SEB Policy explains the biodiversity offsetting principles that must be met.

Offsetting will be made by way of payment into the Native Vegetation Fund. Investigations have been conducted into on-ground offsets, however no suitable offset was found. Refer to **Attachment 4** for the SEB investigations report.

4.6 Principles of Clearance (Schedule 1, *Native Vegetation Act 1991*)

The Native Vegetation Council will consider Principles 1(b), 1(c) and 1(d) when assigning a level of Risk under Regulation 16 of the Native Vegetation Regulations. The Native Vegetation Council will consider all the Principles of clearance of the Act as relevant, when considering an application referred under the Planning, Development and Infrastructure Act 2016.

The clearance is assessed against the Principles of Clearance as set out in **Table 4.22**.

Table 4.22 Principles of Clearance

<table>
<tr><th>Principle of Clearance</th><th>Relevant Information</th><th>Assessment Against the Principles</th><th>Moderating Factors that May be Considered by the NVC</th></tr>
<tr><td>Principle 1(a) – it comprises a high level of diversity of plant species</td><td>The following table summarises the bushland plant diversity score for vegetation associations impacted.
<table><tr><th>Vegetation Association</th><th>Native Plant Diversity Score</th><th>Criteria for determining if at Variance or Seriously at Variance from the Principles of Clearance (NVC 2024c)</th></tr><tr><td>A1</td><td>12</td><td>10 - 20 At variance</td></tr><tr><td>A2</td><td>18</td><td>10 - 20 At variance</td></tr><tr><td>A3</td><td>18</td><td>10 - 20 At variance</td></tr><tr><td>A4</td><td>12.29</td><td>10 - 20 At variance</td></tr><tr><td>A5</td><td>14</td><td>10 - 20 At variance</td></tr><tr><td>A9</td><td>14</td><td>10 - 20 At variance</td></tr><tr><td>A12</td><td>21</td><td>>20 Seriously at variance</td></tr><tr><td>B9</td><td>6</td><td><10 Not at variance</td></tr><tr><td>B10</td><td>6</td><td><10 Not at variance</td></tr><tr><td>C1</td><td>11</td><td>10 - 20 At variance</td></tr></table></td><td><u>Seriously at Variance</u>
A12
<u>At Variance</u>
A1, A2, A3, A4, A5, A9, C1
<u>Not at Variance</u>
B9, B10</td><td>The spatial layer ‘Native Vegetation Areas’ on NatureMaps indicates that, from a central point, there is 0 % coverage of native vegetation within a 5 km radius (DEW 2026a). This appears to be erroneous given that the vegetation surveys for the proposed BHWF mapped 1286.80 ha of native vegetation within the Project Boundary Area. As such, the clearance of 103.41 ha represents approximately 8.04 % of this remnant native vegetation.</td></tr>
<tr><td>Principle 1(b) – significance as a habitat for wildlife</td><td><u>Relevant Information</u>
Two threatened fauna species have been recorded by surveys relevant to the Disturbance Corridor:
• Blue-winged Parrot (Neophema chrysostoma) - listed as Vulnerable under the EPBC Act and Vulnerable under the NPW Act.
• Flinders Ranges Worm-lizard (Aprasia pseudopulchella) - listed as Vulnerable under the EPBC Act.
Three additional threatened fauna species have been assessed as having at least a possible probability of occurrence
Highly Likely
• Common Brushtail Possum (Trichosurus vulpecula).
Possible
• Australian Painted Snipe (Rostratula australis) - listed as Endangered under the EPBC Act and Endangered under the NPW Act.
• Pygmy Blue-tongue Lizard (Tiliqua adelaidensis) - listed as Endangered under the EPBC Act and Endangered under the NPW Act.
The Disturbance Corridor has been heavily cleared of trees and shrubs and has</td><td><u>Seriously at Variance</u>
A1, A2, A3, A4, A5, A9, A12, B10, C1, Trees: 2, 12 and 13
<u>At Variance</u>
B9</td><td>The Project is likely to impact the relevant threatened species in different ways contingent on their specific behaviour and ecology.
The Blue-winged Parrot is a highly-mobile migrant, with breeding restricted to the southeastern corner of Australia (and Tasmania). While the composition of vegetation at the Project Boundary Area would be favourable to support transient foraging activities during the non-breeding period, given that significant quantities of comparable habitat in the surrounding landscape are to be retained, it is unlikely for the proposed action to significantly impact this species. While the species may be at a higher risk during the operational phase of the wind farm through collisions with WTGs, their apparent scarcity</td></tr>
</table>

Principle of Clearance	Relevant Information	Assessment Against the Principles	Moderating Factors that May be Considered by the NVC

a high proportion of cropped land. Vegetation is now largely dominated by grasslands with a long history of grazing.

Vegetation Association/ Trees	Threatened Fauna Score / Fauna Habitat Score	Unit Biodiversity Score	Criteria for determining if at Variance or Seriously At Variance from the Principles of Clearance (NVC 2024c)
A1	0.1	33.98	Threatened Fauna Score of ≥0.05 is Seriously at Variance
A2	0.1	55.35	Threatened Fauna Score of ≥0.05 is Seriously at Variance and UBS of >50
A3	0.1	63.61	Threatened Fauna Score of ≥0.05 is Seriously at Variance and UBS of >50
A4	0.1	41.88	Threatened Fauna Score of ≥0.05 is Seriously at Variance
A5	0.1	56.58	Threatened Fauna Score of ≥0.05 is Seriously at Variance and UBS of >50
A9	0.1	44.00	Threatened Fauna Score of ≥0.05 is Seriously at Variance
A12	0.1	62.63	Threatened Fauna Score of ≥0.05 is Seriously at Variance and UBS of >50
B9	0.04	11.74	Threatened Fauna Score of <0.05 is at Variance
B10	0.1	9.09	Threatened Fauna Score of ≥0.05 is Seriously at Variance
C1	0.1	34.74	Threatened Fauna Score of ≥0.05 is Seriously at Variance
STAM 2	1.8	1.95	Fauna Habitat Score of ≥1.2 is Seriously at Variance
STAM 12	1.8	0.59	Fauna Habitat Score of ≥1.2 is Seriously at Variance

at a regional level (with no historical records from within the Search Area) suggests that this would not significantly threaten the species either.

The Australian Painted Snipe and Common Brushtail Possum are only associated with vegetation groups that are to be avoided by the Project (C1 and Tree 12a). As such, they are unlikely to be threatened by the development.

The cryptic, fossorial reptiles (FRWL and PBTL) are far less mobile and may be directly impacted by the Project. Although neither has historical records from within the Search Area, 15 individual FRWLs were detected during the targeted surveys.

Principle of Clearance	Relevant Information				Assessment Against the Principles	Moderating Factors that May be Considered by the NVC
	STAM 13	1.8	3.92	Fauna Habitat Score of ≥1.2 is Seriously at Variance		
Principle 1(c) – plants of a rare, vulnerable or endangered species	NPW Act state species have been recorded within the Project Boundary Area: • *Cryptandra campanulata* (Long-flower Cryptandra) (NPW Act R), widespread but sparse in A2, A3, A5, A8, A12 in 2023. • *Eucalyptus fasciculosa* (Pink Gum) (NPW Act R), one possibly planted tree in vegetation association A12; • *Maireana excavata* (Bottle Fissure-plant) (NPW Act V), individual plants recorded in vegetation association A4, A10; • *Maireana rohrlachii* (Rohrlach's Bluebush), (NPW Act R), widespread in vegetation association B9; • *Mentha satureioides* (Native Pennyroyal) (NPW Act R), recorded in narrow rocky drainage depressions in 2011/17. Not recorded in 2023/24. • *Wurmbea latifolia* ssp. Latifolia (Broad-leaf Nancy) (NPW Act V), widespread in vegetation association A2, A3, A4.				**At Variance** A2, A3, A4, A5, A12	Not Applicable.

Vegetation Association	Threatened Flora Score	Criteria for determining if at Variance or Seriously at Variance from the Principles of Clearance (NVC 2020c)
A1	0	Score of 0 is Not at variance
A2	0.04	Score of <0.1 is At Variance
A3	0.08	Score of <0.1 is At Variance
A4	0.05	Score of <0.1 is At Variance
A5	0.06	Score of <0.1 is At Variance
A9	0	Score of 0 is Not at variance
A12	0.04	Score of <0.1 is At Variance
B9	0	Score of 0 is Not at variance
B10	0	Score of 0 is Not at variance
C1	0	Score of 0 is Not at variance
STAM 2	0	Score of 0 is Not at variance
STAM 12	0	Score of 0 is Not at variance
STAM 13	0	Score of 0 is Not at variance

<table>
<tr><th>Principle of Clearance</th><th>Relevant Information</th><th>Assessment Against the Principles</th><th>Moderating Factors that May be Considered by the NVC</th></tr>
<tr><td>Principle 1(d) – the vegetation comprises the whole or part of a plant community that is Rare, Vulnerable or endangered</td><td>A1 is likely to be a State Provisional listed Endangered Ecosystem TEC Themeda triandra +/- Lomandra spp. Grassland as it falls within the correct bioregion and matches the description. More than 8 % of the total area mapped is proposed to be cleared.
A4 is likely to be a State Provisional listed Vulnerable Ecosystem TEC Spear Grass Austrostipa spp. grassland as it falls within the correct bioregion and matches the description. More than 7 % of the total area mapped is proposed to be cleared.
Within A5 (Lomandra spp. Grassland), a total of 13 sites were surveyed for INTG TEC. Five sites were deemed to be Class B INTG (59.97 ha). Eight sites were deemed to be Class C which is not the TEC (84.15 ha). No sites were deemed to be Class A INTG. Of the two BAM sites within the Lomandra spp. Grassland, A5a was the TEC and A5b was not, therefore the averaged score is 1.2. More than 4 % of the total area mapped within the WF Boundary is proposed to be cleared.
<table>
<tr><th>Vegetation association</th><th>Threatened Community Score</th><th>Criteria for determining if at Variance or Seriously At Variance from the Principles of Clearance (NVC 2020c).</th></tr>
<tr><td>A1</td><td>1.3</td><td>Score of >1 which is Seriously at Variance</td></tr>
<tr><td>A2</td><td>1</td><td>Score of 1 is not At Variance</td></tr>
<tr><td>A3</td><td>1</td><td>Score of 1 is not At Variance</td></tr>
<tr><td>A4</td><td>1.2</td><td>Score of >1 which is Seriously at Variance</td></tr>
<tr><td>A5</td><td>1.2</td><td>Score of >1 which is Seriously at Variance</td></tr>
<tr><td>A9</td><td>1</td><td>Score of 1 is not At Variance</td></tr>
<tr><td>A12</td><td>1</td><td>Score of 1 is not At Variance</td></tr>
<tr><td>B9</td><td>1</td><td>Score of 1 is not At Variance</td></tr>
<tr><td>B10</td><td>1</td><td>Score of 1 is not At Variance</td></tr>
<tr><td>C1</td><td>1</td><td>Score of 1 is not At Variance</td></tr>
</table></td><td><u>Seriously at Variance</u>
A1, A4, A5</td><td>The Lomandra vegetation was either Class B of the TEC or Class C (not the TEC). No patches met the best condition class of A.
As per (NVC (2020c), an action has, will have, or is likely to have a significant impact on a threatened plant community if it does, will, or is likely to:
lead to a long-term adverse effect on a plant community, or
reduce the extent of a community, or
fragment an occurrence of the community, or
adversely affect habitat critical to the survival of a plant community, or
modify or destroy abiotic (non-living) factors (such as water, nutrients, or soil) necessary for the community's survival, or
result in invasive species that are harmful to the threatened plant community becoming established in an occurrence of the community, or
interfere with the recovery of a plant community.</td></tr>
<tr><td>Principle 1(e) – it is significant as a remnant of vegetation in an</td><td>The Project Boundary Area is located within the Eyre Yorke Block IBRA bioregion and the St Vincent IBRA subregion. The Project Boundary Area spans two IBRA associations: Crystal Brook and Barung.</td><td><u>Seriously At Variance</u>
All vegetation patches</td><td>As per NVC (2020c), an action has, will have, or is likely to have a significant impact on a remnant in a highly cleared landscape if it does, will, or is likely to:</td></tr>
</table>

Principle of Clearance	Relevant Information	Assessment Against the Principles	Moderating Factors that May be Considered by the NVC
area which has been extensively cleared	Approximately 8 percent (%) of the St Vincent IBRA Subregion is mapped as remnant vegetation. Approximately 2% and 4% of the Crystal Brook and Barung IBRA Environmental Association respectively is mapped as remnant vegetation. Total Biodiversity Score – 4200.68 The Total Biodiversity Score is >500 and the remancy of the IBRA Subregion and IBRA Environmental Associations are below 10 %, therefore the Project is Seriously at Variance with Principle 1 (e).		• Impact on a tree species or vegetation community that has been selectively removed within the IBRA Association or IBRA Subregion and are therefore underrepresented in the vegetation that remains. • Impact on a remnants in relatively good condition, particularly if the vegetation within the IBRA Association or IBRA Subregion where vegetation has largely been degraded. If the vegetation is in poor to very poor condition, is continuing to degrade and its long term (next 20 to 50 years) persistence is unlikely, then it may be reduced to 'At variance'. The remnant vegetation which is proposed to be impacted by the Project is in Poor to Moderate. It has been subjected to direct and indirect impacts from a history of cropping and grazing in the immediate vicinity which have degraded the quality of the remnants.
Principle 1(f) – it is growing in, or in association with, a wetland environment	No vegetation proposed to be impacted is associated with a wetland.	Not at Variance	Not Applicable
Principle 1(g) – it contributes significantly to the amenity of the area in which it is growing or is situated	A wind farm exists to the north of the proposed Project. An existing telecommunications tower is present in a visible position. The Project is unlikely to negatively impact the amenity of the area.	Not at Variance	Not Applicable
Principles of Clearance *(h-m) will be considered by comments provided by the local NRM Board or relevant Minister. The Data Report should contain information on these principles where relevant and where sufficient information or expertise is available.*			

4.7 Risk Assessment

The Guide for applications to clear native vegetation (NVC, 2020b) sets out how the risk level of a clearance application is assessed. This is summarised in **Table 4.23**. The risk level of this clearance application is presented in **Table 4.24**. The table indicates that this is a Level 4 clearance.

Table 4.23 Risk Assessment

	Patches – Clearance	Trees – Clearance	Escalating Matters – Clearance assessment will be raised to the next level if;
Level 1	**0.05 ha** or less	**5 Trees** or less	The site contains a listed species or contains a threatened community under either the NP&W Act or EPBC Act Or Clearance of any trees of the specified circumference.
	And clearance does not involve any trees with a trunk circumference measured at 1 m above the ground of (for multi stemmed trees, measure the largest trunk/stem): 5 0cm or more.		
Level 2	**>0.05 ha to 0.5 ha**	**6 – 20 trees**	Clearance is seriously at variance with Principle of Clearance 1(b), 1(c) or 1(d).
Level 3	Total Biodiversity Score of less than or equal to **250**		Clearance is seriously at variance with Principle of Clearance 1(b), 1(c) or 1(d).
Level 4	Total Biodiversity Score of greater than **250**		

Table 4.24 Summary of the Level of Risk Associated with the Application

Total Clearance	**No. of Trees**	3
	Area (ha)	103.41
	Total Biodiversity Score	4200.68
Seriously at Variance with Principle 1(b) 1(c) or 1(d)		1 (b), 1 (d)
Risk Assessment Outcome		Level 4

5.0 Clearance Summary

Clearance summary tables for the clearance application are shown in **Table 5.1** (native vegetation patches) and **Table 5.2** (scattered trees). The summary tables indicate the SEB points and SEB payment obligations of the clearances.

The total SEB obligations of the clearance are summarised in **Table 5.3**.

Table 5.1 Clearance Summary and Total SEB Obligations for Bushland Vegetation Associations Impacted by the Project

Block	Site	Species Diversity Score	Threatened Ecological Community Score	Threatened Flora Score	Threatened Fauna Score	UBS	Area of Impact (ha)	Total Biodiversity Score	Loss factor	Loadings	Reductions	SEB Points Required	SEB Payment	Admin Fee
A	A1	12.00	1.30	0.00	0.10	33.98	5.00	169.90	1	0	0	168.44	$163,144.93	$8,972.97
	A2a	10.00	1.00	0.00	0.10	25.48	6.01	153.13	1	0	0	171.42	$155,904.21	$8,574.73
	A2b	18.00	1.00	0.04	0.10	61.61	6.01	370.28	1	0	0	407.31	$348,906.87	$19,189.88
	A2c	26.00	1.00	0.08	0.10	78.96	6.01	474.55	1	0	0	522.01	$417,791.75	$22,978.55
A	A2	18.00	1.00	0.04	0.10	55.35	6.01	332.65	1	0	0	366.91	$307,534.28	$16,914.39
A	A3	18.00	1.00	0.08	0.10	63.61	0.07	4.45	1	0	0	4.90	$4,735.57	$260.46
	A4a	8.00	1.20	0.08	0.10	36.53	68.83	2514.36	1	0	0	2765.80	$2,339,101.86	$128,650.60
	A4b	12.00	1.20	0.08	0.10	43.83	68.83	3016.82	1	0	0	3318.50	$2,716,194.15	$149,390.68
	A4c	12.00	1.20	0.00	0.10	37.33	68.83	2569.42	1	0	0	2826.36	$2,559,590.38	$140,777.47
	A4d	4.00	1.20	0.00	0.10	17.49	68.83	1203.84	1	0	0	1324.22	$1,199,231.79	$65,957.75
	A4e	20.00	1.20	0.12	0.10	61.81	68.83	4254.38	1	0	0	4679.82	$3,855,914.96	$212,075.32
	A4f	22.00	1.20	0.08	0.10	69.41	68.83	4777.49	1	0	0	5255.24	$5,007,192.67	$275,395.60
	A4g	8.00	1.20	0.00	0.10	26.76	68.83	1841.89	1	0	0	2026.08	$1,764,981.96	$97,074.01
A	A4	12.29	1.20	0.05	0.10	41.88	68.83	2882.60	1	0	0	3170.86	$2,777,458.25	$152,760.20
	A5a	18.00	1.40	0.08	0.10	80.42	11.03	887.03	1	0	0	975.73	$892,488.52	$49,086.87
	A5b	10.00	1.00	0.04	0.10	32.74	11.03	361.12	1	0	0	397.23	$349,644.12	$19,230.43
A	A5	14.00	1.20	0.06	0.10	56.58	11.03	624.08	1	0	0	686.48	$621,066.32	$34,158.65
A	A9	14.00	1.00	0.00	0.10	44.00	0.69	30.36	1	0	0	33.40	$27,580.38	$1,516.92
	A12a	26.00	1.00	0.08	0.10	87.09	0.41	35.71	1	0	0	39.28	$31,152.68	$1,713.40
	A12b	16.00	1.00	0.00	0.10	38.16	0.41	15.65	1	0	0	17.22	$13,657.05	$751.14
A and C	A12	21.00	1.00	0.04	0.10	62.63	0.41	25.68	1	0	0	28.25	$22,404.87	$1,232.27
	B9a	6.00	1.00	0.00	0.04	11.74	7.59	89.11	1	0	0	98.02	$66,696.00	$3,668.28
	B9b	6.00	1.00	0.00	0.04	11.74	7.59	89.11	1	0	0	98.02	$66,873.86	$3,678.06

Block	Site	Species Diversity Score	Threatened Ecological Community Score	Threatened Flora Score	Threatened Fauna Score	UBS	Area of Impact (ha)	Total Biodiversity Score	Loss factor	Loadings	Reductions	SEB Points Required	SEB Payment	Admin Fee
	B9c	6.00	1.00	0.00	0.04	11.74	7.59	89.11	1	0	0	98.02	$68,474.56	$3,766.10
B	B9	6.00	1.00	0.00	0.04	11.74	7.59	89.11	1	0	0	98.02	$67,348.14	$3,704.15
B	B10	6.00	1.00	0.00	0.10	9.09	3.74	34.00	1	0	0	37.40	$25,453.37	$1,399.94
	C1a	12.00	1.00	0.00	0.10	50.53	0.04	2.02	1	0	0	2.22	$1,693.82	$93.16
	C1b	9.00	1.00	0.00	0.10	18.58	0.04	0.74	1	0	0	0.81	$618.01	$33.99
	C1c	12.00	1.00	0.00	0.10	35.11	0.04	1.40	1	0	0	1.54	$1,369.26	$75.31
C	C1	11.00	1.00	0.00	0.10	34.74	0.04	1.39	1	0	0	1.52	$1,227.03	$67.49
						Total	**103.41**	**4,194.22**				**4,596.19**	**$4,017,953.13**	**$220,987.43**

Table 5.2 Clearance Summary and Total SEB Obligations for Scattered Trees Impacted by the Project

Tree Number	Number of Trees	Fauna Habitat Score	Threatened Flora Score	Biodiversity Score	Loss Factor	SEB Points Required	SEB Payment	Admin Fee
2	1	1.8	0	1.95	1	2.15	$2,147.84	$118.13
12	1	1.8	0	0.59	1	0.65	$649.35	$35.71
13	1	1.8	0	3.92	1	4.31	$4,305.67	$236.81
			Scattered Tree SEB Total			7.11	$7,102.86	$390.65

Table 5.3 Summary of the Total SEB Obligations of the Clearance

Economies of Scale Factor	0.5	SEB Uplift Factor	1.10
Rainfall (mm) Factor	449		
SEB Points of Gain/ha Factor	6.92	Management Cost ($/ha)	25,581.71

	Total Biodiversity score	Total SEB points required	SEB Payment	Admin Fee	Total Payment
Application	4200.68	4603.30	$4,025,055.99	$221,378.08	$4,246,434.08

6.0 Significant Environmental Benefit

A SEB is required for approval to clear under Division 5 of the Native Vegetation Regulations 2017. The NVC must be satisfied that as a result of the loss of vegetation from the clearance that an SEB will result in a positive impact on the environment that is over and above the negative impact of the clearance. The Data Report must propose how the SEB will be achieved in accordance with the SEB Policy and Guide, by providing the following information.

ACHIEVING AN SEB

Indicate how the SEB will be achieved by ticking the appropriate box and providing the associated information:

☐ Establish a new SEB Area on land owned by the proponent. Provide information below.

☐ Use SEB Credit that the proponent has established. Provide the SEB Credit Ref. No. _____

☐ Apply to have SEB Credit assigned from another person or body. The application form needs to be submitted with this Data Report.

☐ Apply to have an SEB to be delivered by a Third Party. The application form needs to be submitted with this Data Report.

☒ Pay into the Native Vegetation Fund. Provide details below.

Payment SEB

If a proponent proposes to achieve the SEB by paying into the Native Vegetation Fund, summary information must be provided on the amount required to be paid and the manner of payment:

Payment amount required (including admin. fee)

The total SEB payment required for the clearance of 103.41 ha of native vegetation with a Total Biodiversity Score of 4200.68, requiring an SEB payment of $4,246,434.08 which includes an administration fee of $221,378.08, or 659.15 ha on-ground SEB Offset Area.

The proponent investigated on-ground offset options (see **Attachment 4**). No suitable offset was found in the region.

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Appendix A

Parcel ID and Title ID within the Project Boundary Area



umwelt

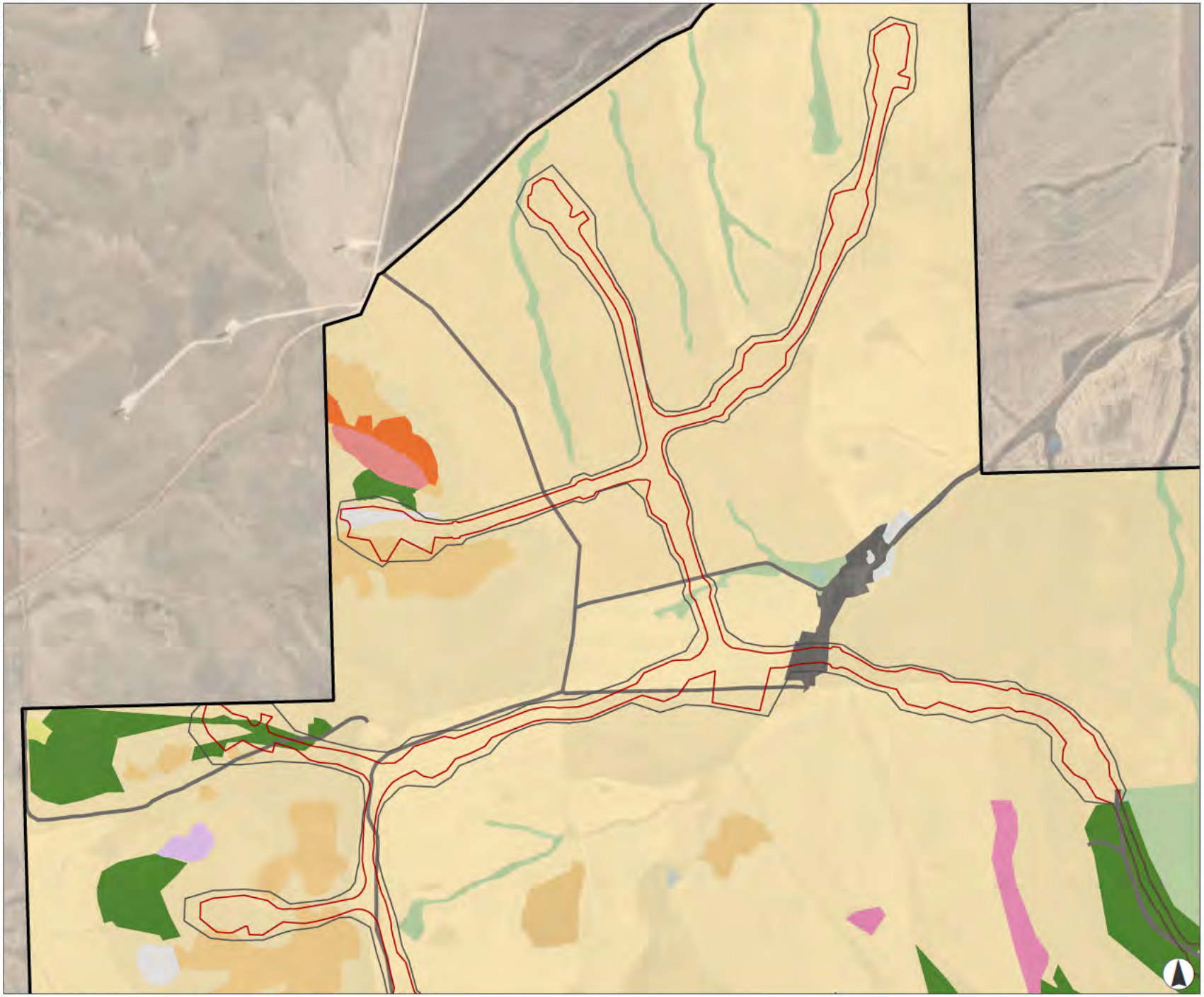
Supplied separately as Attachment 1

Appendix B

Native Vegetation Under Application



"<UNC>C:\Users\tbeaumont\UMWELT <dUNC> (AUSTRALIA) PTY LTD\1989 - 03 SWD2_Projects\31985_R03_NAC_v3.aprx - 31985_R03_App8_NativeVegetationUnderApplication



APPENDIX B.A

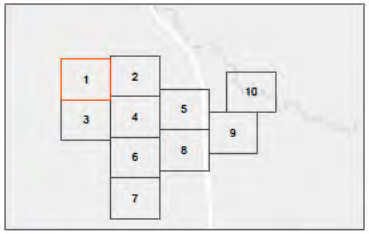
Native Vegetation Under Application

Legend

- Project Area Boundary
- Disturbance Corridor
- Construction Corridor

Vegetation Association

- A1: *Themeda triandra* +/- *Lomandra spp.* grassland
- A2: *Bursaria spinosa shrubland* +/- emergent *Allocasuarina verticillata* over Themeda and *Lomandra spp.*
- A3: *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs
- A4: *Austrostipa* spp. grassland
- A5: *Lomandra spp.* grassland
- A9: *Pimelea stricta* shrubland
- A10: *Hakea leucoptera* shrubland
- A11: *Senna artemisioides ssp. artemisioides* shrubland over native grasses
- Cropping
- Exotic vegetation
- Infrastructure / Road



0 0.25 0.5

Kilometres

Scale 1:15,500 at A4
GDA2020 MGA Zone 54

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Image Source: ESRI Basemap (2025) | **Data Source:** SA DIT, SA DEW (2024)

"C:\Users\hwilkinson\UMWELT <dUNK> (AUSTRALIA) PTY. LTD\1985-03 SAVS2_Projects\31985_R03_NVC_v3.aprx - 31985_R03_App8_Native Vegetation Under Application



APPENDIX B.B

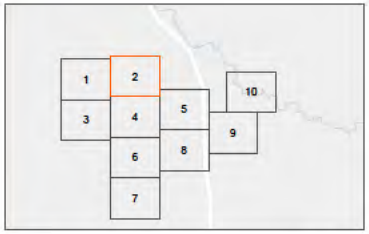
Native Vegetation Under Application

Legend

- Project Area Boundary
- Disturbance Corridor
- Construction Corridor
- Scattered Tree - Not Impacted

Vegetation Association

- A1: *Themeda triandra* +/- *Lomandra spp.* grassland
- A2: *Bursaria spinosa shrubland* +/- emergent *Allocasuarina verticillata* over Themeda and *Lomandra spp.*
- A3: *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs
- A4: *Austrostipa* spp. grassland
- A5: *Lomandra spp.* grassland
- Cropping
- Infrastructure / Road



0 0.25 0.5

Kilometres

Scale 1:15,500 at A4
GDA2020 MGA Zone 54

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APPENDIX B.C

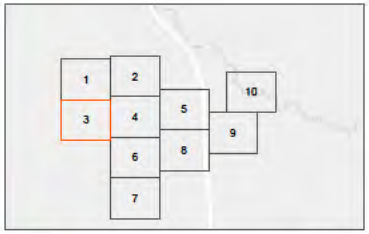
Native Vegetation Under Application

Legend

- Project Area Boundary
- Disturbance Corridor
- Construction Corridor

Vegetation Association

- A1: *Themeda triandra* +/- *Lomandra spp.* grassland
- A2: *Bursaria spinosa shrubland* +/- emergent *Allocasuarina verticillata* over Themeda and *Lomandra spp.*
- A3: *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs
- A4: *Austrostipa* spp. grassland
- A5: *Lomandra spp.* grassland
- Cropping
- Exotic vegetation
- Infrastructure / Road



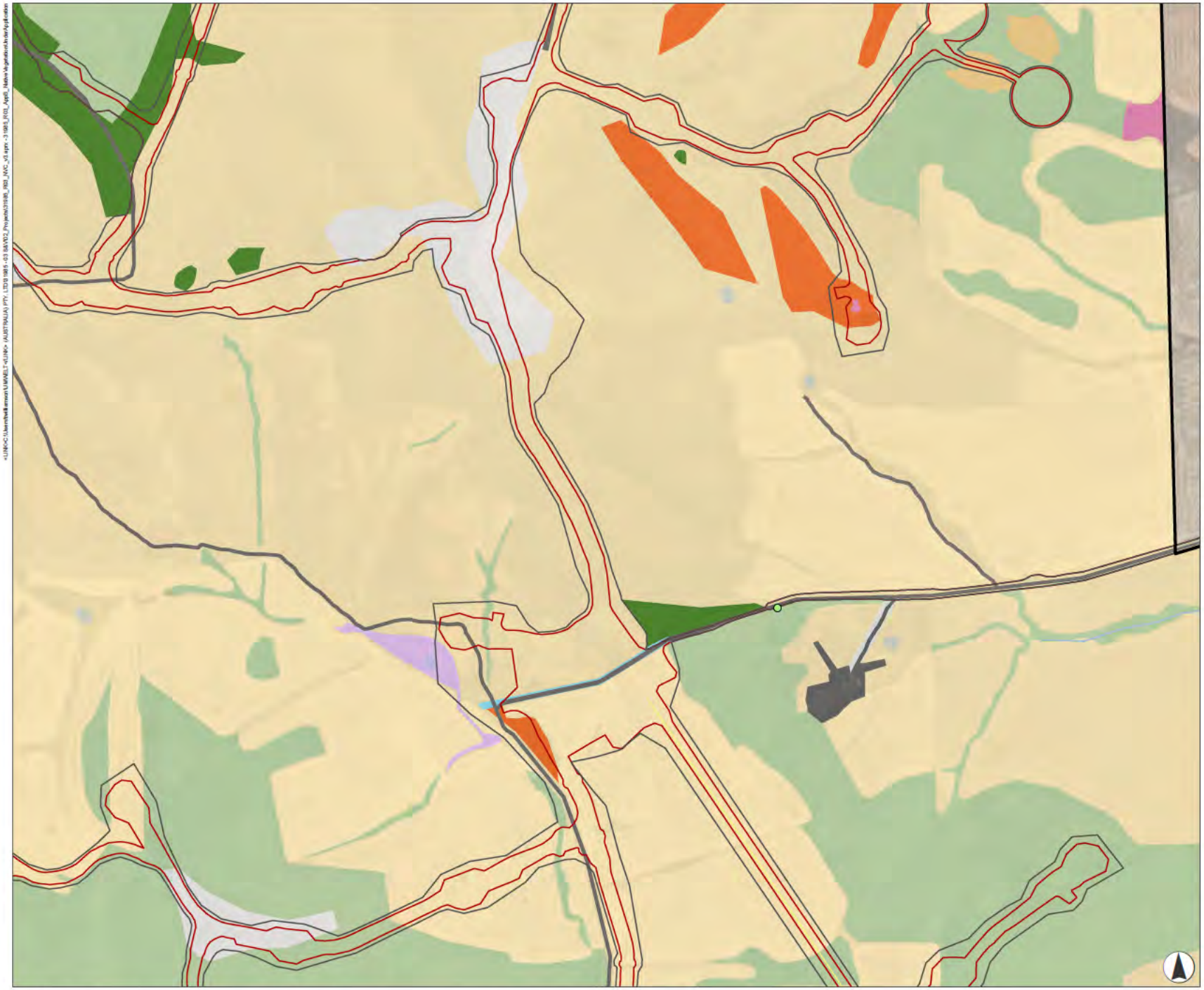
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Kilometres

Scale 1:15,500 at A4
GDA2020 MGA Zone 54

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APPENDIX B.D

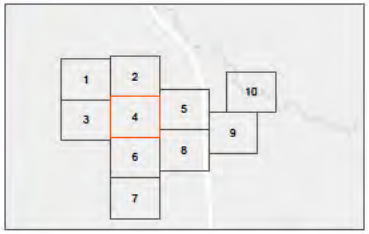
Native Vegetation Under Application

Legend

- Project Area Boundary
- Disturbance Corridor
- Construction Corridor
- Transmission Line
- Scattered Tree - Not Impacted

Vegetation Association

- A1: *Themeda triandra +/- Lomandra spp.* grassland
- A2: *Bursaria spinosa shrubland +/-* emergent *Allocasuarina verticillata* over Themeda and *Lomandra spp.*
- A3: *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs
- A4: *Austrostipa* spp. grassland
- A5: *Lomandra spp.* grassland
- A9: *Pimelea stricta* shrubland
- B9: *Chenopod shrubland +/- Acacia victoreae*
- Cropping
- Exotic vegetation
- Infrastructure / Road



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Kilometres

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APPENDIX B.E

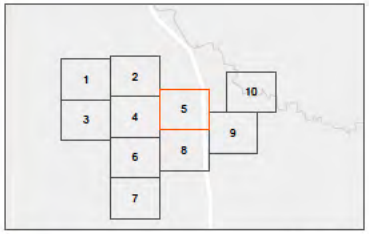
Native Vegetation Under Application

Legend

- Project Area Boundary
- Disturbance Corridor
- Construction Corridor

Vegetation Association

- A3: *Cryptandra campanulata* and *Bursaria spinosa* shrubland over native forbs
- A4: *Austrostipa* spp. grassland
- A6: *Acacia victoreae* shrubland
- B9: *Chenopod shrubland +/- Acacia victoreae*
- C1: *Eucalyptus camaldulensis* Riparian Woodland over *Acacia salicina* and *Acacia victoreae*
- Cropping
- Exotic vegetation
- Infrastructure / Road



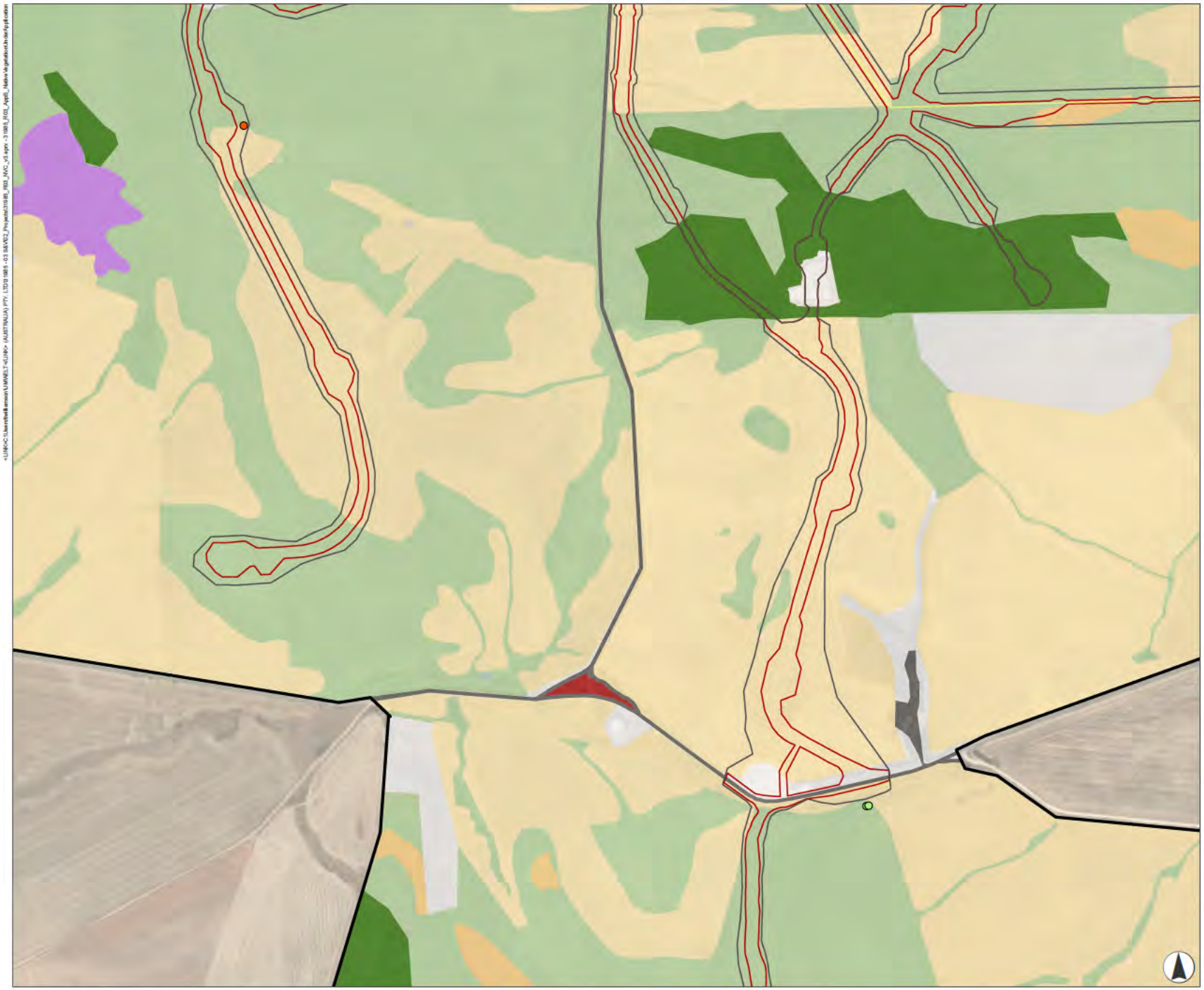
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Kilometres

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APPENDIX B.F

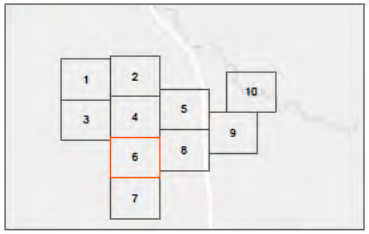
Native Vegetation Under Application

Legend

- Project Area Boundary
- Disturbance Corridor
- Construction Corridor
- Transmission Line
- Scattered Tree - Impacted
- Scattered Tree - Not Impacted

Vegetation Association

- A2: *Bursaria spinosa shrubland* +/- emergent *Allocasuarina verticillata* over Themeda and *Lomandra spp.*
- A4: *Austrostipa* spp. grassland
- A5: *Lomandra spp.* grassland
- A8: *Acacia nysophylla* shrubland over *Austrostipa spp.*
- A12: Mixed tall shrubland over native grasses and forbs
- Cropping
- Exotic vegetation
- Infrastructure / Road



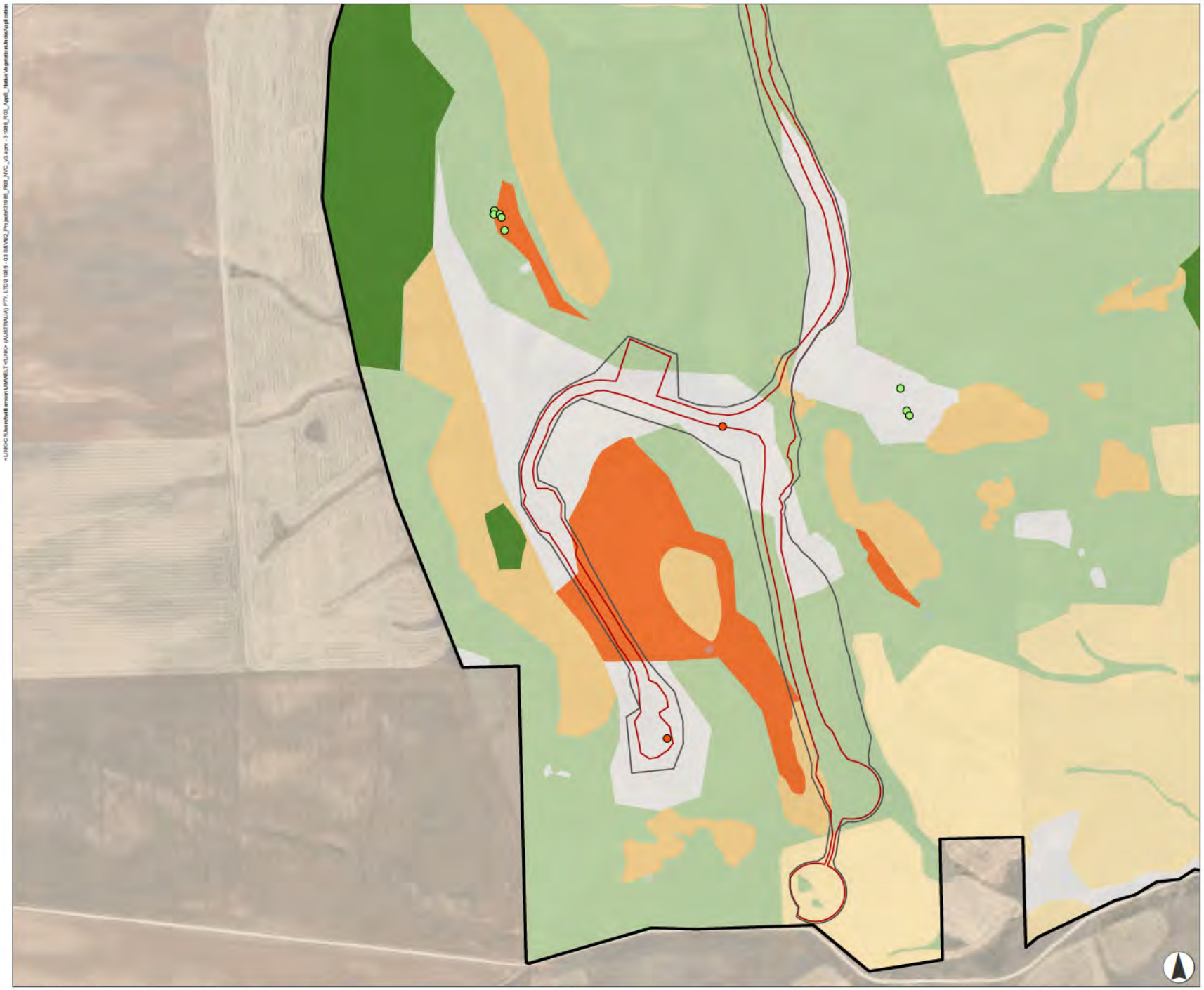
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Kilometres

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APPENDIX B.G

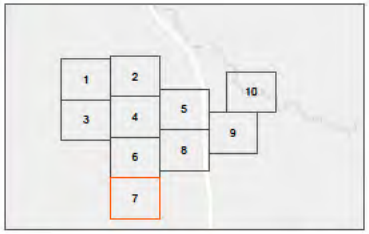
Native Vegetation Under Application

Legend

- Project Area Boundary
- Disturbance Corridor
- Construction Corridor
- Scattered Tree - Impacted
- Scattered Tree - Not Impacted

Vegetation Association

- A1: *Themeda triandra* +/- *Lomandra spp.* grassland
- A2: *Bursaria spinosa shrubland* +/- emergent *Allocasuarina verticillata* over Themeda and *Lomandra spp.*
- A4: *Austrostipa* spp. grassland
- A5: *Lomandra spp.* grassland
- Cropping
- Exotic vegetation



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Kilometres

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APPENDIX B.H

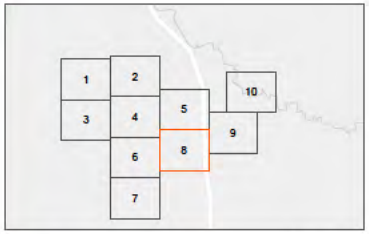
Native Vegetation Under Application

Legend

- Project Area Boundary
- Disturbance Corridor
- Construction Corridor
- Transmission Line

Vegetation Association

- A2: *Bursaria spinosa shrubland +/- emergent Allocasuarina verticillata over Themeda and Lomandra spp.*
- A4: *Austrostipa* spp. grassland
- B9: *Chenopod shrubland +/- Acacia victoreae*
- Cropping
- Exotic vegetation
- Infrastructure / Road



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Kilometres

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APPENDIX B.I

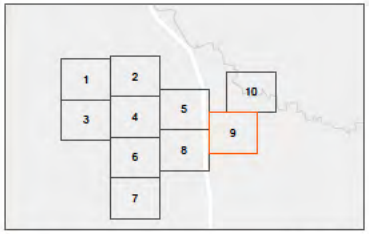
Native Vegetation Under Application

Legend

- Disturbance Corridor
- Construction Corridor
- Transmission Line

Vegetation Association

- A12: Mixed tall shrubland over native grasses and forbs
- B9: *Chenopod shrubland +/- Acacia victoreae*
- B10: *Salsola australis* shrubland
- Cropping
- Exotic vegetation
- Infrastructure / Road



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Kilometres

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Native Vegetation Under Application

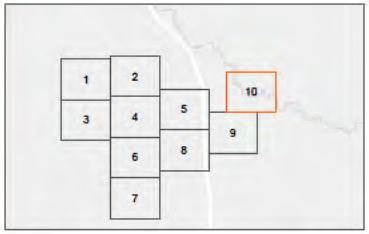


Legend

- BESS
- Switchyard
- Disturbance Corridor
- Construction Corridor
- Transmission Line
- Scattered Tree - Not Impacted

Vegetation Association

- A12: Mixed tall shrubland over native grasses and forbs
- B9: *Chenopod shrubland +/- Acacia victoreae*
- C1: *Eucalyptus camaldulensis* Riparian Woodland over *Acacia salicina* and *Acacia victoreae*
- Cropping
- Infrastructure / Road



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Appendix C

Flora Species Recorded by the Field Surveys

Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Acacia cupularis	Cup Wattle	A12	-	-	
Acacia nyssophylla	Spine Bush	A2, A4, A8	-	-	
Acacia oswaldii	Umbrella Wattle	A10	-	-	
Acacia salicina	Willow Wattle	A12, B10, C1	-	-	
Acacia victoriae ssp.	Elegant Wattle	A4, A12, B9, C1	-	-	
Allocasuarina verticillata	Drooping Sheoak	A2	-	-	
Amphipogon sp.	Grey-beard Grass	A2	-	-	
Amyema sp.	Mistletoe	A2	-	-	
Anagallis sp.		A3, A4	-	-	*
Arctotheca calendula	Cape Weed	A2, A3, A4, A5, B9,	-	-	*
Aristida behriana	Brush Wire-grass	A2, A4, A5, A9, A10, A11, B9	-	-	
Aristida contorta	Curly Wire-grass	A11	-	-	
Arthropodium sp.	Vanilla-lily	A2, A4	-	-	
Arthropodium strictum	Common Vanilla-lily	A4	-	-	
Asperula conferta	Common Woodruff	A4, A5	-	-	
Asphodelus fistulosus	Onion Weed	A12	-	-	*
Atriplex cinerea	Coast Saltbush	C1	-	-	
Atriplex semibaccata	Berry Saltbush	B9, C1	-	-	
Atriplex suberecta	Lagoon Saltbush	B10	-	-	
Austrostipa blackii	Crested Spear-grass	A4	-	-	
Austrostipa eremophila	Rusty Spear-grass	A4	-	-	
Austrostipa nodosa	Tall Spear-grass	A4, B9	-	-	
Austrostipa scabra ssp.	Rough Spear-grass	A1, A2, A5	-	-	
Austrostipa sp.	Spear-grass	A1, A2, A3, A4, A5, A8, A9, A10, A12, B9, C1	-	-	

Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Avena barbata	Bearded Oat	A1, A2, A3, A4, A5, A8, A9, A10, A11, A12, B9, B10, C1	-	-	*
Boerhavia dominii	Tar-vine	B9	-	-	
Bromus diandrus	Great Brome	A4, A9, A10, B9, C1	-	-	*
Bromus rubens	Red Brome	A3	-	-	*
Bromus sp.	Brome	A12	-	-	*
Bulbine bulbosa	Bulbine-lily	A2, A4	-	-	
Bursaria spinosa ssp.	Bursaria	A1, A2, A3, A5, A8, A12	-	-	
Calandrinia eremaea	Dryland Purslane	A3	-	-	
Carrichtera annua	Ward's Weed	A9, B9	-	-	*
Carthamus lanatus	Saffron Thistle	A1, A2, A4, A5, A8, A9, B10	-	-	*
Centaurea calcitrapa	Star Thistle	B9	-	-	*
Chenopodium album	Fat Hen	C1	-	-	*
Chloris truncata	Windmill Grass	B9	-	-	
Chrysocephalum apiculatum	Common Everlasting	A2, A3, A4	-	-	
Chrysocephalum sp.	Everlasting	A12	-	-	
Convolvulus arvensis	Field Bindweed	A4, A8, A11	-	-	*
Convolvulus remotus	Grassy Bindweed	A2, A4, A5, A9, A12	-	-	
Crassula sp.	Crassula/Stonecrop	A3, A4	-	-	
Cressa australis	Rosinweed	B9, B10	-	-	
Cryptandra campanulata	Long-flower Cryptandra	A2, A3, A5, A8, A12	-	**R**	
Cullen australasicum	Tall Scurf-pea	A11	-	-	
Cynara cardunculus ssp. *flavescens*	Artichoke Thistle	A4, A5, C1	-	-	*
Dianella brevicaulis	Short-stem Flax-lily	A12	-	-	

Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Dianella revoluta var.		A12	-	-	
Dichanthium sericeum ssp.	Silky Blue-grass	A4, A12	-	-	
Distichlis distichophylla	Emu-grass	C1	-	-	
Dodonaea viscosa ssp.	Sticky Hop-bush	A2	-	-	
Duma florulenta	Lignum	B9, C1	-	-	
Echium plantagineum	Salvation Jane	A4, A5, A8	-	-	*
Echium sp.	Bugloss	A2	-	-	*
Enchylaena tomentosa var.	Ruby Saltbush	A1, A2, A5, A8, A10, A12, B9, B10, C1	-	-	
Enneapogon nigricans	Black-head Grass	A3, A4, A11, A12	-	-	
Eremophila glabra ssp.	Tar Bush	A12	-	-	
Erigeron sp.	Fleabane	C1	-	-	
Erodium aureum		A4	-	-	*
Erodium botrys	Long Heron's-bill	A1, A2, A4, A5	-	-	*
Eucalyptus camaldulensis ssp. *camaldulensis*	River Red Gum	C1	-	-	
Eucalyptus fasciculosa	Pink Gum	A12	-	**R**	
Eucalyptus sp.		A12	-	-	
Euphorbia drummondii group		A4, A12	-	-	
Fumaria sp.	Fumitory	C1	-	-	*
Glycine rubiginosa	Twining Glycine	A3, A4, A5, A8, A11, A9	-	-	
Gonocarpus elatus	Hill Raspwort	A3	-	-	
Gonocarpus mezianus	Broad-leaf Raspwort	A2, A4	-	-	
Gonocarpus tetragynus	Small-leaf Raspwort	A2	-	-	
Goodenia pusilliflora	Small-flower Goodenia	A2, A4, A11	-	-	
Hakea leucoptera ssp. *leucoptera*	Silver Needlewood	A5, A10	-	-	

Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Heliotropium sp.	Heliotrope	A12, B9, B10	-	-	*
Hordeum sp.		A1, A2, B9, C1	-	-	*
Hordeum vulgare	Barley	A2, A4, A5, A8, B10	-	-	*
Hypericum perforatum ssp. *veronense*	St John's Wort	A12	-	-	*
Hypochaeris glabra	Smooth Cat's Ear	A2, A3, A4, A5, A8, A9, A10	-	-	*
Lactuca serriola f.	Prickly Lettuce	A4, A10	-	-	*
Lolium sp.	Ryegrass	C1	-	-	*
Lomandra effusa	Scented Mat-rush	A1, A2, A4, A5, A8, A9, A10, A11, A12, B9	-	-	
Lomandra multiflora ssp.	Many-flower Mat-rush	A1, A2, A3, A4, A5, A12, B9	-	-	
Lycium ferocissimum	African Boxthorn	B9, C1	-	-	*
Maireana aphylla	Cotton-bush	A5, B9	-	-	
Maireana brevifolia	Short-leaf Bluebush	A12, B9, B10, C1	-	-	
Maireana enchylaenoides	Wingless Fissure-plant	A2, A4, A5	-	-	
Maireana excavata	Bottle Fissure-plant	A4, A10	-	**V**	
Maireana rohrlachii	Rohrlach's Bluebush	B9	-	**R**	
Malva parviflora	Small-flower Marshmallow	A12	-	-	*
Marrubium vulgare	Horehound	A4, A5, A10, B9, C1	-	-	*
Medicago polymorpha	Burr-medic	A2, A4, A5, A8, A9, A10, A11, B9	-	-	*
Mesembryanthemum nodiflorum	Slender Iceplant	B10	-	-	*
Minuria sp.	Minuria	A2	-	-	
Moraea setifolia	Thread Iris	A2, A3, A4, A5, A8	-	-	*
Myoporum insulare	Common Boobialla	C1	-	-	
Neurachne sp.	Mulga-grass	A4	-	-	

Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Nicotiana goodspeedii	Small-flower Tobacco	A10	-	-	
Nitraria billardierei	Nitre-bush	B9, C1	-	-	
Olea europaea ssp.	Olive	A12	-	-	*
Opuntia sp.		C1	-	-	*
Osteospermum sp.		A9	-	-	*
Oxalis perennans	Native Sorrel	A2, A3, A4, B9	-	-	
Oxalis pes-caprae	Soursob	A3, A5, B9, C1	-	-	*
Panicum capillare var. *brevifolium*	Witch-grass	A12	-	-	*
Panicum decompositum var. *decompositum*	Native Millet	A12, B9	-	-	
Papaver sp.	Poppy	A4	-	-	*
Peganum harmala	African Rue	B9	-	-	*
Phragmites australis	Common Reed	C1	-	-	
Pimelea micrantha	Silky Riceflower	A2	-	-	
Pimelea stricta	Erect Riceflower	A8, A9, A10	-	-	
Piptatherum miliaceum	Rice Millet	A12, B9, C1	-	-	*
Pittosporum angustifolium	Native Apricot	A10	-	-	
Plantago drummondii	Dark Plantain	A2	-	-	
Poa annua	Winter Grass	A10	-	-	*
Podotheca angustifolia	Sticky Long-heads	A4	-	-	
Polygonum sp.	Knotweed	B9	-	-	*
Ptilotus nobilis	Yellow-tails	A11	-	-	
Ptilotus nobilis ssp.		A4, A10	-	-	
Ptilotus spathulatus	Pussy-tails	A3, A4, A9	-	-	
Rhagodia parabolica	Mealy Saltbush	A10, B9	-	-	

Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Romulea rosea var. *australis*	Common Onion-grass	A4	-	-	*
Romulea sp.	Onion-grass	A4	-	-	*
Rytidosperma sp.	Wallaby-grass	A2, A3, A4, A10	-	-	
Salsola australis	Buckbush	A10, A12, C1	-	-	
Salvia sp.	Sage	B9, C1	-	-	*
Salvia verbenaca var.	Wild Sage	A1, A2, A3, A4, A5, A8, A10, B9, B10	-	-	*
Santalum acuminatum	Quandong	B9	-	-	
Scabiosa atropurpurea	Pincushion	A12, B9	-	-	*
Scaevola albida	Pale Fanflower	A12	-	-	
Schinus molle	Pepper-tree	A12, C1	-	-	*
Scleranthus pungens	Prickly Knawel	A5	-	-	
Senna artemisioides ssp. artemisioides x ssp. coriacea	Desert Senna	A8, A12, B9	-	-	
Senna artemisioides ssp. artemisioides x ssp. filifolia	Desert Senna	A11	-	-	
Setaria jubiflora	Warrego Summer-grass	A4	-	-	
Sida corrugata var.	Corrugated Sida	A9, A12, B9	-	-	
Sisymbrium officinale	Hedge Mustard	A1, A2, A4, A10, C1	-	-	*
Sisymbrium orientale	Indian Hedge Mustard	A2, A4, A5, A8, A11	-	-	*
Sisymbrium sp.	Wild Mustard	B9	-	-	*
Solanum nigrum	Black Nightshade	A2, C1	-	-	*
Solanum sp.	Nightshade/Potato-bush	A12	-	-	
Sonchus asper	Rough Sow-thistle	A12	-	-	*
Sonchus oleraceus	Common Sow-thistle	A1, A2, A4, A11, B9, B10, C1	-	-	*
Spergularia rubra	Red Sand-spurrey	A10	-	-	*

Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Stackhousia monogyna	Creamy Candles	A2, A4, A5, A8	-	-	
Themeda triandra	Kangaroo Grass	A1, A2, A3, A5, A8, A11, A12	-	-	
Thysanotus patersonii	Twining Fringe-lily	A2, A4	-	-	
Trifolium sp.	Clover	A2, A3, A4, A8	-	-	*
Velleia sp.	Velleia	A2, A4	-	-	
Vicia sp.	Vetch	A4, B9, C1	-	-	*
Vittadinia australasica var.	Sticky New Holland Daisy	A2	-	-	
Vittadinia blackii	Narrow-leaf New Holland Daisy	A12	-	-	
Vittadinia cuneata var.	Fuzzy New Holland Daisy	A4, B9	-	-	
Vittadinia gracilis	Woolly New Holland Daisy	A1, A2, A3, A4, A5, B9	-	-	
Vittadinia megacephala	Giant New Holland Daisy	A4, A9	-	-	
Vulpia sp.	Fescue	A3	-	-	*
Wahlenbergia sp.	Native Bluebell	A9	-	-	
Wahlenbergia stricta ssp. *stricta*	Tall Bluebell	A2	-	-	
Wurmbea latifolia ssp. *latifolia*	Broad-leaf Nancy	A2, A3, A4	-	**V**	

Conservation Status: EPBC Act (*Environment Protection and Biodiversity Conservation Act 1999*). NPW Act: South Australia (*National Parks and Wildlife Act 1972*). Conservation codes: CE: Critically Endangered. EN/E: Endangered. VU/V: Vulnerable. R: Rare. Int: Introduced, *: yes.

Appendix D

Fauna Species Recorded by the Field Surveys



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Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Acanthiza chrysorrhoa	Yellow-rumped Thornbill	Opportunistic	-	-	
Alauda arvensis	Eurasian Skylark	1, 2, 4, 5, 6, 8, 9	-	-	
Anas gracilis gracilis	Grey Teal	10	-	-	
Anthus novaeseelandiae	Australasian Pipit	1, 2, 4, 5, 6, 8, Opportunistic	-	-	
Aquila audax	Wedge-tailed Eagle	2, 5, 6, Opportunistic	-	-	
Artamus cyanopterus	Dusky woodswallow	Opportunistic	-	-	
Barnardius zonarius	Mallee Ringneck	10, Opportunistic	-	-	
Cacatua galerita	Sulphur-crested Cockatoo	10	-	-	
Cacomantis pallidus	Pallid Cuckoo	Opportunistic	-	-	
Chenonetta jubata	Australian Wood Duck	10, Opportunistic	-	-	
Cheramoeca leucosterna	White-backed Swallow	10	-	-	
Circus assimilis	Spotted Harrier	Opportunistic	-	-	
Colluricincla harmonica	Grey Shrikethrush	10	-	-	
Columba livia domestica	Feral Pigeon	2	-	-	*
Coracina novaehollandiae	Black-faced Cuckooshrike	Opportunistic	-	-	
Corvus coronoides	Australian Raven	1, 7, 8, 9, 10	-	-	
Coturnix pectoralis	Stubble Quail	7, 9, Opportunistic	-	-	
Egretta novaehollandiae	White-faced Heron	Opportunistic	-	-	
Elanus axillaris	Black-shouldered Kite	2, 3, 9, Opportunistic	-	-	
Eolophus roseicapilla	Pink Galah	2, 10	-	-	
Epthianura albifrons	White-fronted Chat	Opportunistic	-	-	
Falco berigora	Brown Falcon	1, 10, Opportunistic	-	-	
Falco cenchroides cenchroides	Nankeen Kestrel	1, 3, 5, 6, 9, Opportunistic	-	-	
Felis catus	Cat	Opportunistic	-	-	*
Geopelia striata	Peaceful Dove	10	-	-	
Grallina cyanoleuca	Magpielark	10	-	-	

Scientific Name	Common Name	Site	Conservation Status		Int
			EPBC Act	NPW Act	
Gymnorhina tibicen	Australian Magpie	7, 8, 9, 10	-	-	
Haliastur sphenurus	Whistling Kite	Opportunistic	-	-	
Hirundo neoxena	Welcome Swallow	4, Opportunistic	-	-	
Lichenostomus virescens	Singing Honeyeater	1, 2, 4, 6, 9, 10,	-	-	
Macropus robustus	Euro	9	-	-	
Manorina melanocephala	Noisy Miner	1, Opportunistic	-	-	
Megalurus cruralis	Brown Songlark	1, 2, 3, 4, 5, 7, 8, 9	-	-	
Merops ornatus	Rainbow Bee-eater		-	-	
Microcarbo melanoleucos melanoleucos	Little Pied Cormorant	10	-	-	
Milvus migrans	Black Kite	Opportunistic	-	-	
Mirafra javanica	Horsfield's Bushlark	3, 4, 5, 9	-	-	
Mus musculus	House Mouse	Opportunistic	-	-	*
Neophema chrysostoma	Blue-winged Parrot	Opportunistic	**VU**	**V**	
Ocyphaps lophotes	Crested Pigeon	10, Opportunistic	-	-	
Passer domesticus	House Sparrow	10, Opportunistic	-	-	*
Psephotus haematonotus	Red-rumped Parrot	10, Opportunistic	-	-	
Ptilotula penicillata	White-plumed Honeyeater	10, Opportunistic	-	-	
Rhipidura albiscapa	Grey Fantail	9	-	-	
Rhipidura leucophrys	Willie Wagtail	9, 10	-	-	
Spilopelia chinensis	Spotted Dove	10, Opportunistic	-	-	
Sturnus vulgaris	Starling	2, 3, 10	-	-	*
Tiliqua rugosa	Shingleback Lizard	Opportunistic	-	-	
Vanellus tricolor	Banded Lapwing	Opportunistic	-	-	
Vulpes vulpes	Red Fox	Opportunistic	-	-	*

Conservation Status: EPBC Act (*Environment Protection and Biodiversity Conservation Act 1999*). NPW Act: South Australia (*National Parks and Wildlife Act 1972*). Conservation codes: CE: Critically Endangered. EN/E: Endangered. VU/V: Vulnerable. R: Rare. Int: Introduced, *: yes.

Appendix E

Likelihood of Occurrence Assessment



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Likelihood of Occurrence Assessment for Threatened Ecological Communities and Threatened/Migratory Species Identified by the Desktop Assessment (DCCEEW 2026a, DEW 2026b)

Scientific Name	Common Name	EPBC Act	NPW Act	PMST / Last Record	Source	Habitat Preference(s)	Likelihood of Occurrence Assessment – Umwelt
Threatened Ecological Communities							
Iron-grass Natural Temperate Grassland of South Australia		CE	-	May occur	1, 3	Consists of grasslands of tussock-forming perennial Iron-grasses (*Lomandra effusa* and/or *L. multiflora* ssp. *dura*) with a low presence (< 10 %) of trees and tall shrubs (Department of the Environment and Water Resources 2007).	**Known** - Class B INTG was identified by the field surveys in A5.
Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia		CE	-	Likely to occur	1	Consists of open to dense woodlands dominated by *Eucalyptus odorata*, often in association with E. leucoxylon, *E. microcarpa and E. porosa* (Department of the Environment and Water Resources 2007).	**Unlikely** - The diagnostic species, *Eucalyptus odorata* (Peppermint Box), was not recorded during the field surveys.
Flora			-				
Caladenia tensa	Greencomb Spider-orchid	EN	-	Likely to occur	1	Grows in dry woodland and mallee on red-brown sandy loam rises (DCCEEW 2026b).	**Unlikely** - No historic records and Disturbance Corridor not within distribution of known populations.
Cryptandra campanulata	Long-flower Cryptandra	-	R	2023	3	Grows in shallow soils over rocks, mostly in grassland, in the southern Flinders Ranges and the Northern Mount Lofty Ranges.	**Known** - Recorded by the field surveys within A2, A3, A5, A8, and A12.
Dodonaea subglandulifera	Peep Hill Hop-bush	EN	E	May occur	1	Occurs primarily on low hills on loamy soils associated with rocky (limestone, slate, shale) outcrops (DEH 2010).	**Unlikely** - There are no historical records within the Search Area, although suitable habitat was present. As a large perennial shrub capable of growing to 2 m tall, it is unlikely to have been overlooked by the field surveys.

Scientific Name	Common Name	EPBC Act	NPW Act	PMST / Last Record	Source	Habitat Preference(s)	Likelihood of Occurrence Assessment – Umwelt
Eucalyptus fasciculosa	Pink Gum	-	R	2024	3	Occurs on well-drained sandy soils of low fertility (SASCC 2026).	**Known** - Recorded by the field surveys within A12. The individual appears to have been planted, given that it is significantly outside of the species known geographic range. As the Project avoids the vegetation association, there will be no direct impact to this individual.
Maireana excavata	Bottle Fissure-plant	-	V	2023	3	Grows in grasslands (PlantNET 2026).	**Known** - Recorded by the field surveys within A4 and A10.
Maireana rohrlachii	Rohrlach's Bluebush		R	2024	2, 3	Grows in a variety of habitats on sandy loam soils (PlantNET 2026).	**Known** - Recorded by the field surveys within B9.
Mentha satureioides	Native Pennyroyal	-	R	2017	3	Found scattered from the Gammon, Flinders and Mount Lofty Ranges, southern Eyre Peninsula and the upper South-east in South Australia, growing on heavy, seasonally wet soils.	**Highly Likely** - Recorded by EBS in 2011 and 2017, although it could not be located by Umwelt in the relevant vegetation assessments. Given that suitable habitat was present within the Project Boundary Area, the species is highly likely to occur.
Olearia pannosa ssp. *pannosa*	Silver Daisy-bush	VU	V	May occur	1	Grows in a variety of habitats, typically with sandy soils and rocky outcrops (DCCEEW 2026b).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. As a large perennial shrub capable of growing up to 2 m tall, it is unlikely to have been overlooked by the field surveys.
Prasophyllum pallidum	Pale Leek-orchid	VU	V	May occur	1	Grows in grassy woodlands and well-grassed open forests (DEH 2008).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. The field surveys did not detect this species despite occurring within its flowering window (September to November) (DEH 2008).
Prasophyllum validum	Sturdy Leek-orchid	VU	V	May occur	1	Grows in dry woodland habitats (DCCEEW 2026b).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. While the species was not detected by the relevant vegetation assessments, these did not occur within the species known flowering

Scientific Name	Common Name	EPBC Act	NPW Act	PMST / Last Record	Source	Habitat Preference(s)	Likelihood of Occurrence Assessment – Umwelt
							window (mid-October to November) (SASCC 2026). However, previous vegetation assessments performed by EBS did occur within this period, and these did not detect the species (EBS 2012).
Pterostylis xerophila	Desert Greenhood	VU	V	May occur	1	In South Australia, the species occurs in dry woodland on fertile red loamy soils on or around granite or quartzite rock outcrops (DCCEEW 2026b).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. The field surveys did not detect this species despite occurring within its flowering window (September to November) (DCCEEW 2026b).
Senecio macrocarpus	Large-fruit Fireweed	VU	V	May occur	1	Grows in low-lying areas on basalt-derived clay or clay-loam soils, in grassland, sedgeland and woodland (DCCEEW 2026b).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. The field surveys did not detect this species despite occurring within its flowering window (September to November) (DCCEEW 2026b).
Swainsona pyrophila	Yellow Swainson-pea	VU	R	May occur	1	Grows in mallee scrub on sandy or loamy soils (OEH 2022).	**Unlikely** - There are no historical records within the Search Area, and the habitat was unsuitable for the species.
Tecticornia flabelliformis	Bead Glasswort	VU	V	May occur	1	Grows on the margins of salt lakes and coastal salt marshes over gypsum deposits, and is often associated with other *Tecticornia* species (Department of Sustainability and Environment 2010).	**Unlikely** - There are no historical records within the Search Area, and the habitat was unsuitable for the species.
Wurmbea latifolia ssp. *latifolia*	Broad-leaf Nancy		V	2023	2, 3	Grows on heavy soils (PlantNET 2026).	**Known** - Recorded by the field surveys within A2, A3, and A4.
Fauna							
Aves							
Actitis hypoleucos	Common Sandpiper	Mi (W)	R	May occur	1	Found along all coastlines of Australia and in inland areas, widespread in small numbers. The Australian population is concentrated in the north and west of the	**Unlikely** - There are no historical records from within the Search Area. Habitat was marginal and would be restricted to C1. The species was not recorded during the

Scientific Name	Common Name	EPBC Act	NPW Act	PMST / Last Record	Source	Habitat Preference(s)	Likelihood of Occurrence Assessment – Umwelt
						continent. Inhabits in saltwater and freshwater ecosystems (Higgins & Davies 1996).	field surveys (either from the BBUS or during vegetation assessments).
Aphelocephala leucopsis leucopsis	Southern Whiteface	VU	-	Likely to occur	1	Southern Whiteface occupies a range of habitats, primarily open woodlands and shrublands with a grassy/shrubby understorey (DCCEEW 2026b).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Apus pacificus pacificus	Fork-tailed Swift	Mi (M)	-	Likely to occur	1	Almost entirely aerial, Fork-tailed Swifts occur mostly occurring over open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh (Higgins & Davies 1996).	**Unlikely** - There are no historical records within the Search Area. As the species is nearly entirely aerial while in Australia, it would not utilise the habitat at the Disturbance Corridor.
Botaurus poiciloptilus	Australian Bittern	EN	E	May occur	1	Favours permanent freshwater wetlands with tall, dense vegetation, particularly bullrushes (*Typha* spp.) and rushes (*Eleocharis* spp.) (OEH 2017b).	**Unlikely** - There are no historical records within the Search Area. Habitat was marginal and would be restricted to C1. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Calidris acuminata	Sharp-tailed Sandpiper	VU, Mi (W)	-	May occur	1	Inhabits tidal mudflats, salt marshes and shallow fresh, brackish or saline wetlands and flood waters (DCCEEW 2026b).	**Unlikely** - There are no historical records within the Search Area. Habitat was marginal and would be restricted to C1. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Calidris ferruginea	Curlew Sandpiper	CE, Mi (W)	E	Likely to occur	1	Mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and around non-tidal swamps. They are also recorded inland, though less often, including around ephemeral and permanent lakes, dams, waterholes and bore drains (DCCEEW 2026b).	**Unlikely** - There are no historical records within the Search Area. Habitat was marginal and would be restricted to C1. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).

Scientific Name	Common Name	EPBC Act	NPW Act	PMST / Last Record	Source	Habitat Preference(s)	Likelihood of Occurrence Assessment – Umwelt
Calidris melanotos	Pectoral Sandpiper	Mi (W)	R	May occur	1	In Australasia, the Pectoral Sandpiper prefers shallow fresh to saline wetlands (Higgins & Davies 1996).	**Unlikely** - There are no historical records within the Search Area. Habitat was marginal and would be restricted to C1. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Falco hypoleucos	Grey Falcon	VU	R	Likely to occur	1	Found where annual rainfall is less than 500 mm and is essentially confined to the arid and semi-arid zones. The species frequents timbered lowland plains, particularly that are crossed by tree-lined water courses (DCCEEW 2026b).	**Unlikely** - There are no historical records within the Search Area, and the Disturbance Corridor is likely to be insufficiently arid for the species.
Gallinago hardwickii	Latham's Snipe	VU, Mi (W)	R	May occur	1	Latham's Snipe is a non-breeding visitor to south-eastern Australia, including the Adelaide Plains, Mount Lofty Ranges, and the Eyre Peninsula. Usually inhabits open, freshwater wetlands with low, dense vegetation (DCCEEW 2026b).	**Unlikely** - There are no historical records within the Search Area. Habitat was marginal and would be restricted to C1. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Grantiella picta	Painted Honeyeater	VU	R	May occur	1	Occurs in dry open forests, usually in association with its primary food species – mistletoe of the *Amyema* genus (Pizzey & Knight 1999).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Melanodryas cucullata cucullata	South-eastern Hooded Robin	EN	R	Likely to occur	1	Occupies dry eucalypt and acacia woodlands and shrublands remnants with an open understorey, some grassy areas and a complex ground layer, often in or near clearings or open areas (DCCEEW 2026b).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Motacilla cinerea	Grey Wagtail	Mi (T)	-	May occur	1	The Grey Wagtail is considered a regular visitor to marshes of northern Australia between August and April, overflying normal wintering grounds (Pizzey & Knight 1999).	**Unlikely** - There are no historical records within the Search Area, and the Disturbance Corridor is outside of the species typical geographic range (i.e., northern Australia).

Scientific Name	Common Name	EPBC Act	NPW Act	PMST / Last Record	Source	Habitat Preference(s)	Likelihood of Occurrence Assessment – Umwelt
Motacilla flava	Yellow Wagtail	Mi (T)	-	May occur	1	The Yellow Wagtail is considered a regular visitor to marshes of northern Australia between August and April, overflying normal wintering grounds (Pizzey & Knight 1999).	**Unlikely** - There are no historical records within the Search Area, and the Disturbance Corridor is outside of the species typical geographic range (i.e., northern Australia).
Neophema chrysostoma	Blue-winged Parrot	VU	V	Likely to occur, 2024	1, 3	This species mainly occurs in Tasmania and Victoria, particularly in southern Victoria and the midlands and eastern areas of Tasmania. Sparser populations are also found in western New South Wales and eastern South Australia, extending to south-west Queensland. Prefers grasslands and grassy woodlands but will inhabit a range of habitats from coastal, sub-coastal and inland areas, right through to semi-arid zones (DCCEEW 2026b).	**Known** - Recorded opportunistically during a vegetation assessment.
Numenius madagascariensis	Eastern Curlew	CE, Mi (W)	E	May occur	1	The Eastern Curlew is found on intertidal mudflats and sandflats, often with beds of seagrass, on sheltered coasts, especially estuaries, mangrove swamps, bays, harbours and lagoons (Birds in Backyards 2026).	**Unlikely** - There are no historical records within the Search Area. Habitat was marginal and would be restricted to C1. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Pandion haliaetus cristatus	Eastern Osprey	Mi (W)	E	May occur	1	The Eastern Osprey requires large-bodies of water for hunting purposes. Largely coastal, much rarer further inland (OEH 2020).	**Unlikely** - There are no historical records within the Search Area, and the habitat was unsuitable for the species.
Pedionomus torquatus	Plains-wanderer	CE	E	May occur	1	Occurs at scattered sites in NSW and Victoria and more marginal habitat in QLD and SA. Inhabits sparse, treeless, lowland native grasslands and/or low shrubland (Pizzey & Knight 1999).	**Unlikely** - There are no historical records within the Search Area.

Scientific Name	Common Name	EPBC Act	NPW Act	PMST / Last Record	Source	Habitat Preference(s)	Likelihood of Occurrence Assessment – Umwelt
Rostratula australis	Australian Painted Snipe	EN	E	Known to occur, 2006	1, 2	The species is primarily concentrated in the south-east of Australia, strongly associated with the Murray-Darling Basin. The Australian Painted Snipe occupies the fringes of swamps, dams, and nearby marshy areas where there is dense fringing vegetation (OEH 2017c).	**Likely** - There are recent records within the Search Area (< 20 years old). The Disturbance Corridor contains appropriate habitat features within C1 to support a population of this species.
Stagonopleura guttata	Diamond Firetail	VU	V	Likely to occur	1	Diamond Firetails occur in eucalypt, acacia and casuarina woodlands, open forests and other lightly timbered habitats, including farmland and grassland with scattered trees (DCCEEW 2023).	**Unlikely** - There are no historical records from within the Search Area, although suitable habitat was present. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Tringa nebularia	Common Greenshank	EN, Mi (W)	-	May occur	1	Found on both the coast and inland, in estuaries and mudflats, mangrove swamps, lagoons, billabongs, swamps, sewage farms and flooded crops (Birds in Backyards 2026).	**Unlikely** - There are no historical records within the Search Area. Habitat was marginal and would be restricted to C1. The species was not recorded during the field surveys (either from the BBUS or during vegetation assessments).
Mammalia							
Petrogale xanthopus xanthopus	Yellow-footed Rock-wallaby (SA and NSW)	VU	V	May occur	1	Inhabits semi-arid country, occurring on rock outcrops in association with woodlands, shrublands, and grasslands (OEH 2025)	**Unlikely** - There are no historical records within the Search Area. The Disturbance Corridor likely had insufficient habitat features (i.e., rocky escarpments) to support a population of the species.
Trichosurus vulpecula	Common Brushtail Possum	-	R	2020	2	Occupies urban areas, forests, woodlands and heath (Australian Museum 2026).	**Highly Likely** - There are very recent records from within the Search Area (< 10 years old) and suitable habitat was available at C1 and Tree 12a.
Reptilia							

Scientific Name	Common Name	EPBC Act	NPW Act	PMST / Last Record	Source	Habitat Preference(s)	Likelihood of Occurrence Assessment – Umwelt
Aprasia pseudopulchella	Flinders Ranges Worm-lizard	VU	-	Likely to occur, 2024	1, 3	Known from the Flinders Ranges, extending south to the western slopes and northern and central MLR. The species inhabits open woodland, native tussock grassland, riparian habitats, and rocky isolates, preferring stony or clay soils with a stony / rocky surface, but has also been found sheltering in soil beneath sones and rotting stumps (DCCEEW 2026b).	**Known** – Although there are no historical records from within the Search Area, the targeted surveys identified 15 individuals within the Project Boundary Area.
Tiliqua adelaidensis	Pygmy Blue-tongue Lizard	EN	-	Likely to occur	1	The species uses empty spider burrows (trapdoor, wolf spider) as refuges and basking sites and requires these to occur in moderate abundance in the landscape (DCCEEW 2026b).	**Possible** - Although there are no historical records from within the Search Area, and the targeted surveys did not identify any individuals, precautionarily (given their cryptic nature) the species has been assessed as potentially occurring at the Disturbance Corridor.

Conservation Codes

EPBC Act: *Environment Protection and Biodiversity Conservation Act 1991*, **NPW Act**: *National Parks and Wildlife Act 1972*.

Conservation Status

CE: Critically Endangered, **EN/E**: Endangered, **VU/V**: Vulnerable, **R**: Rare, **Mi**: Migratory (Migratory Status: **M**: Marine, **T**: Terrestrial, **W**: Wetland).

Source

1. **PMST Report** (DCCEEW 2026a) - 5 km buffer applied to the Project Boundary Area
2. **BDBSA Data Extract** (DEW 2026b) - 5 km buffer applied to the Project Boundary Area.
3. **Recorded during the Field Surveys.**

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