Native Vegetation Clearance – 106 Harper Road

Clearance under the Native Vegetation Regulation 2017

Final

March 2026

umwelt

Native Vegetation Clearance – 106 Harper Road

Clearance under the Native Vegetation Regulation 2017

Final

Prepared by
Umwelt (Australia) Pty Limited

On behalf of
Cedar Woods Properties Limited

Project Director:	T. How (NVC Accredited Consultant)
Project Manager:	E. West (NVC Accredited Consultant)
Report Author:	E. West (NVC Accredited Consultant), S. Bulling
Report No.:	32311/R03
Date:	March 2026

1/112 Hayward Avenue, Torrensville 5031

Acknowledgement of Country

Umwelt acknowledges the Traditional Owners of Country throughout Australia and their continuing values, culture and connection to the land, waters and sky.

We pay our respects to Elders past and present.

The below image is from the artwork *Yapung Maryiyang* (Pathway Forward) by Saretta Fielding.

Disclaimer

This document has been prepared for the sole use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by Umwelt (Australia) Pty Ltd (Umwelt). No other party should rely on this document without the prior written consent of Umwelt.

Umwelt undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. Umwelt assumes no liability to a third party for any inaccuracies in or omissions to that information. Where this document indicates that information has been provided by third parties, Umwelt has made no independent verification of this information except as expressly stated.

Document Status

Rev No.	Reviewer Name	Date	Approved for Issue Name	Date
V1 (working draft)	-	-	T. How (NVC Accredited Consultant)	8/12/2025
V2	T. How (NVC Accredited Consultant)	17/12/2025	T. How (NVC Accredited Consultant)	17/12/2025
V3	J. Skewes (NVC Accredited Consultant)	16/03/2026	T. How (NVC Accredited Consultant)	16/03/2026
V3.1	J. Skewes (NVC Accredited Consultant)	20/03/2026	T. How (NVC Accredited Consultant)	20/03/2026

Abbreviations

Abbreviation	Description
BAM	Bushland Assessment Method
BDBSA	Biological Database of South Australia (managed by DEW)
CEMP	Construction Environmental Management Plan
DCCEEW	Department of Climate Change, Energy, the Environment and Water (Commonwealth)
DEW	Department for Environment and Water (South Australia)
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.
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
GHFF	Grey-headed Flying-Fox
IBRA	Interim Biogeographical Regionalisation of Australia
LSA Act	*Landscape South Australia Act 2019* (South Australia)
MNES	Matter(s) of National Environmental Significance
NatureMaps	An online format for accessing information on South Australia's natural resources (maintained by DEW)
NPW Act	*National Parks and Wildlife Act 1972* (South Australia)
NV Act	*Native Vegetation Act 1991* (South Australia)
NVC	Native Vegetation Council
NVF	Native Vegetation Fund
PMST	Protected Matters Search Tool
Project	Residential Subdivision at Mount Barker
Project Area	106 Harper Road, Mount Barker as outlined in **Figure 2.1**
Search Area	5 km buffer of the Project Area considered in the desktop assessment database searches
SEB	Significant Environmental Benefit
sp.	Species (singular)
spp.	Species (plural)
ssp.	Subspecies
STAM	Scattered Tree Assessment Method
TEC	Threatened Ecological Community
TPZ	Tree Protection Zone
UBS	Unit Biodiversity Score
Umwelt	Umwelt (Australia) Pty Ltd
var.	Variety (a taxonomic rank below that of species and subspecies, but above that of form)
WoNS	Weed of National Significance

Contents

Figures

Tables

Photos

Appendices

Appendix 1 Flora Species List

Appendix 2 Fauna Species List

Appendix 3 Threatened Flora Likelihood Assessment

Appendix 4 Threatened Fauna Likelihood Assessment

Appendix 5 Scattered Tree Utilising Species

Attachments

Attachment 1: Bushland Assessment Scoresheet (Excel File)

Attachment 2: Scattered Trees Assessment Scoresheet (Excel File)

Attachment 3: Scattered Tree Photo File (PDF File)

Attachment 4: Spatial Data Package (SHP File).

1.0 Application Information

The details of the native vegetation clearance applicant are provided in **Table 1.1**, with a summary of the proposed action in **Table 1.2**.

Table 1.1 Applicant Details

Applicant	Cedar Woods Pty Ltd		
Key Contact			
Landowner			
Site Address	106 Harper Road, Mount Barker		
Local Government Area	Mount Barker	**Hundred**	Strathalbyn
Title ID	CT/5526/954 CT/5526/624	**Parcel ID**	H150900 S4494 H150900 S4493

Table 1.2 Summary of the Proposed Clearance

Purpose of Clearance	Clearance of native vegetation is required for the development of a residential subdivision
Native Vegetation Regulation	Regulation 12, Schedule 1, Clause 35 – Residential Subdivision
Description of the Vegetation under Application	The vegetation within the Project Area contains a mixture of large, medium and small scattered trees consisting of the following species: • *Acacia pycnantha* (Golden Wattle). • *Allocasuarina verticillata* (Drooping Sheoak). • *Eucalyptus camaldulensis* var. *camaldulensis* (River Red Gum). • *Eucalyptus fasciculosa* (Pink Gum). • *Eucalyptus leucoxylon* ssp. *leucoxylon* (South Australian Blue Gum). • *Eucalyptus viminalis* ssp. *cygnetensis* (Rough-barked Manna Gum). A total of two native vegetation associations, including: • **A1** - *Eucalyptus camaldulensis* var. *camaldulensis* + *Eucalyptus leucoxylon* ssp. *leucoxylon* Riparian Woodland in moderate condition. • **A2** - *Eucalyptus fasciculosa* + *Eucalyptus leucoxylon* ssp. *leucoxylon* Open Woodland in poor condition – State Vulnerable Ecosystem.
Total Proposed Clearance - Area (ha) and Number of Trees	A total of 1.33 ha of native vegetation and 50 scattered trees are proposed to be removed (loss factor 1). An additional 94 scattered trees, which although avoided by the design, have more than 25% of their Tree Protection Zone's (TPZ) encompassed by the proposed disturbance footprint. As such, these trees have been precautionarily assigned a loss factor of 0.4.
Level of Clearance	Level 4
Overlay (Planning and Design Code)	Native Vegetation
Map of the Proposed Clearance	See **Figure 4.2**
Mitigation Hierarchy	**Avoidance** The masterplan for the Project has undergone various iterations and design changes to ensure retention of onsite vegetation. The Project has been designed to avoid large, scattered trees where possible. The majority of the native vegetation (particularly relevant to A1) will be retained and

	incorporated as a reserve. Further, areas of exotic vegetation such as the *Pinus halepensis* forest (A4) have been incorporated within the design to reduce the necessary amount of native vegetation clearance. In total, the Project Area retains a large tree population, most of which have been tagged. The proposal seeks to avoid removal of the vast majority of vegetation on site ensuring future amenity and green space. Protection of the trees to be retained will be included in a Tree Protection Plan to be implemented by the site management team. **Minimisation** Where vegetation clearance is unavoidable, reasonable steps will be taken to minimise impacts during construction as recommended by Arborman Tree Solutions. These include: • Identification of Tree Protection Zones (TPZ) and exclusion zones for trees and/or tree groups located in or adjacent to the work areas to ensure their root systems remain undisturbed and the trees retain good health during the construction stage. • Creation of exclusion areas, TPZ's, via the installation of temporary fencing, barriers and signage. • Utilisation of Sensitive and Tree Friendly Construction Techniques and Methodologies to ensure potential damage to the tree roots, trunk or canopy is minimised. Where required/appropriate methods such as drilling and boring below the root zones will be used to avoid trenching. Other machinery or equipment which can work from a distance to help avoid the trees physical structure will be utilised as required/appropriate. • Making sure all contractors that are inducted into the site are made aware of the TPZ's and high value vegetation and the restrictions around these to ensure damage is avoided during onsite works • Pruning of existing vegetation may be undertaken to avoid proposed infrastructure where it can be completed without compromising tree health or structure. • Compaction close to trees will be avoided and mulch layers will be utilised to minimise compaction. In additional permeable pavement will be utilised in road reserves to ensure root protection is maintained. This has already been discussed with relevant authorities. • Managing weeds on site to ensure the health of trees • Controlling erosion as per the construction plan to ensure that disturbed soil and sediment do not run into the tree's root zone, preserving the soil structure and nutrient balance. • Suppressing dust and revegetating disturbed areas. The direct removal of scattered trees has been avoided as far as practicable through the creation of road reserves and land management agreements for those that fall within allotments. However, the disturbance footprint will encroach upon the TPZs of some surrounding vegetation. While the extent of these impacts and the scope for further minimisation are yet to be confirmed pending a detailed review by Arborman Tree Solutions, a precautionary approach has been adopted. Accordingly scattered trees with more than 25% of their TPZ encompassed within the disturbance footprint have been assessed using a loss factor of 0.4 to determine the SEB offset obligation. The proponent intends to develop two permanent crossings to ford the minor watercourse that runs through the centre of the Project Area (inclusive of vegetation association A1). These locations have been microsited to minimise impacts to native vegetation, with the southern crossing taking advantage of an existing access track and impacting only planted amenity vegetation and the understorey of A1. Although the northern crossing is likely to impact overstorey vegetation, forthcoming arborist assessments will endeavour to minimise direct removals as far as practicable. **Rehabilitation or restoration** Where tree removal is unavoidable suitable areas of the site will be rehabilitated with appropriate vegetation to restore and improve overall environmental outcomes. If any rehabilitation did take place, the area will be assessed to ensure appropriateness of location and species, a buffer zone will be established to keep relevant species and machinery out of the area, replanting will take place, the existing bore would be used to water with subsequent monitoring and maintenance to take place to ensure restoration. **Offset** The proponent has committed to investigating and on-ground offset for the Project and any outstanding offset will be made through payment into the Native Vegetation Fund (NVF).
SEB Offset Proposal	The total SEB obligations for the clearance of 1.33 ha of native vegetation and 50 scattered trees, in addition to TPZ impacts to an additional 94 scattered trees, with a combined Total Biodiversity Score (TBS) of 527.76, will be 317.07 SEB points or a payment of $430,004.39 (inclusive of an administration fee of $22,417.29) into the NVF.

2.0 Purpose of Clearance

2.1 Description

Cedar Woods Pty Ltd (Cedar Woods, the proponent) are proposing to develop a residential subdivision located at 106 Harper Road, Mount Barker (the Project Area) (**Figure 2.1**).

2.1.1 Objectives

This native vegetation assessment, in accordance with the *Native Vegetation Act 1991* (NV Act) and the *Native Vegetation Regulations 2017,* has the following objectives:

- To undertake a desktop assessment for the likelihood of occurrence of conservation rated ecological communities, flora and fauna, listed under the Commonwealth's *Environment Protection and Biodiversity Conservation Act 1991* (EPBC Act) and the State's *National Parks and Wildlife Act 1972* (NPW Act).
- To assess native vegetation within the Project Area by applying the Native Vegetation Council (NVC) endorsed Bushland Assessment Method (BAM) (NVC 2024a) and the Scattered Tree Assessment Method (STAM) (NVC 2024b).
- To identify any 'Declared' plants under the *Landscape South Australia Act 2019* (LSA Act) or Weeds of National Significance (WoNS) that may be significant in relation to the Projects requirements.
- To calculate the Significant Environmental Benefit (SEB) offset obligations based on the latest design drawings provided by Cedar Woods on 3 March 2026.

2.2 Background

Two terms are used to describe the location of the Project:

- **Project Area** - the area where Project works are proposed to occur (i.e., the disturbance footprint of the Project).
- **Search Area** - a 5 km buffer applied to the Project Area used for the desktop component of this Data Report.

As per the spatial layer 'Pre European Vegetation' on NatureMaps, the site is predicted to have originally contained the following native vegetation associations (DEW, 2025b):

- *Eucalyptus camaldulensis* var. *camaldulensis* (River Red Gum) Woodlands
- *Eucalyptus leucoxylon* ssp. *leucoxylon* (South Australian Blue Gum) Woodlands.

The Project Area has undergone significant modification the land has undergone, with clearance of remnant vegetation through its conversion to livestock grazing paddocks, construction of dams and planting of exotic species such as the *Pinus halepensis* (Aleppo Pine) plantation. Consequently, the Project Area currently contains pockets of remnant vegetation, isolated scattered trees, planted woodlots, and exotic grasslands.

2.2.1 Administrative Boundaries

The Project Area is located within the District Council of Mount Barker, the Hills and Fleurieu Landscape Management Region, and the Hundred of Strathalbyn (DEW 2025b). The site is contained within two cadastral parcels – H150900 S4493 and H150900 SS494 (DEW 2025b).

2.2.2 Interim Biogeographic Regionalisation of Australia

The Interim Biogeographic Regionalisation of Australia (IBRA) was designed to provide a framework for reporting on geographically distinct landscapes. IBRA entities broadly describe areas of similar topography, geology, soil, and vegetation composition.

The Project Area is represented by the Hahndorf association of the Mt Lofty Ranges subregion, encompassed by the wider Flinders Lofty Block bioregion (DEW 2025b). Approximately 8% of the Hahndorf association is mapped as containing native vegetation (5,091 ha), of which 6% (or 311 ha) is formally protected by conservation estates and Heritage Agreement areas. Outside of protected areas, remnant vegetation is largely concentrated within riparian zones (and adjacent areas), along fence lines and road corridors, and as isolated scattered trees.

2.2.3 Protected Areas

There are no on-ground SEB sites, Heritage Agreement areas or roadside significant sites (maintained by the Department for Infrastructure and Transport) within the Project Area. There are no conservation estates managed by National Parks and Wildlife Services South Australia within 5 km (DEW 2025b).

2.3 General Location Map

The Regional context of the Project Area is outlined in **Figure 2.1**.

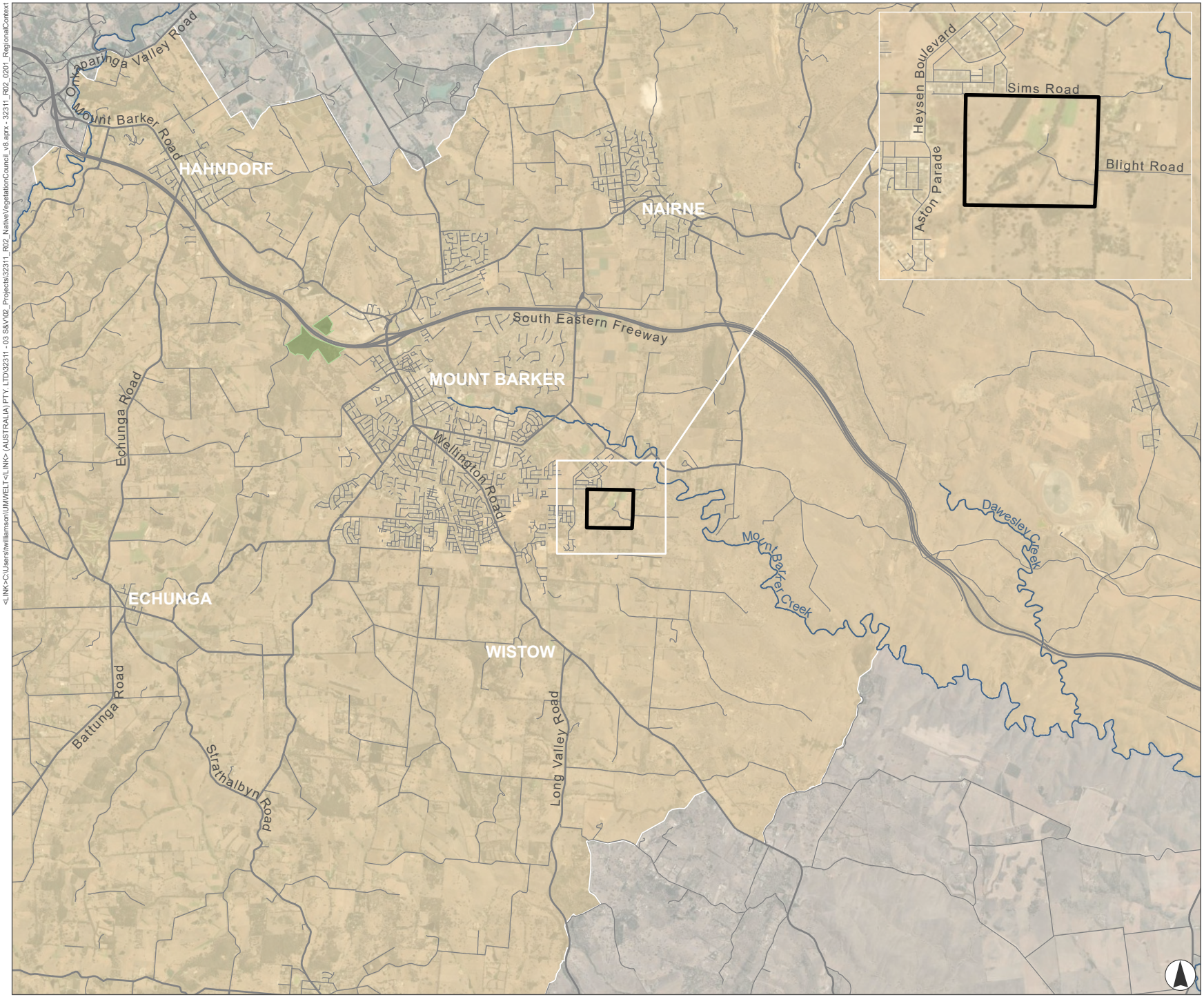

Figure 2.1

Regional Context

Legend

- Project Area
- Main road
- Local road
- Major Watercourse
- NPWSA reserve
- Mount Barker District Council

0 2 4

Kilometres

Scale 1:100,000 at A4
GDA 1994 MGA Zone 54

umwelt

Image Source: ESRI (2025) | **Data Source:** Umwelt (2025)

<LINK:C:\Users\twilliamson\UMWELT<LINK> (AUSTRALIA) PTY. LTD\32311 - 03 S&V\02_Projects\32311_R02_NativeVegetationCouncil_v9.aprx - 32311_R02_0201_RegionalContext

2.4 Details of the Proposal

An updated masterplan was supplied to Umwelt (Australia) Pty Ltd (Umwelt) by Cedar Woods on 3 March 2026 (see **Figure 2.2**) which indicates the details of the proposed development:

- A total of 990 proposed allotments.
- A total area of 64.55 ha.
- A total reserve area of 12.24 ha (19.00%).
- Allotment Area of 35.32 ha (54.70%).
- Road Reserve Area of 16.06 ha (24.90%).
- Sales centre of 0.53 ha (0.80%).
- Unit Site of 0.40 ha (0.60%).
- Length of new roads 10.03 km.

Figure 2.2 Design Plans for the Subdivision at 106 Harper Road, Mount Barker (Supplied by Cedar Woods3 March 2026)

2.5 Approvals Required or Obtained

- ***Native Vegetation Act 1991*** - 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*** - Provisions relating to Regulated and Significant Trees will apply for this Project. A Development Application is required.
- ***Environment Protection and Biodiversity Conservation Act 1999*** - The preparation of a Self-assessment or a Referral under the Act may be necessary for the Project.
- ***National Parks and Wildlife Act 1972*** - 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*** - 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 LSA Act, of which five were detected by the field surveys 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*** - 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.

2.6 Native Vegetation Regulation

The Project is to be considered under the following regulation:

Regulation 12(35) – Residential Subdivision

1. Clearance of vegetation in connection with the division of land for use for residential purposes (including clearance for the construction of roads and other infrastructure), provided that –
    a. any development authorisation for the division of the land for the use of the land for residential purposes required by or under the *Development Act 1993* has been obtained.
    b. [NVC] has been given written notification of the full extent of the clearance expected to occur in connection with the division of the land.
2. Subclause (1) does not apply to –
    a. clearance of vegetation established in accordance with condition of consent for clearance of vegetation
    b. clearance that would be contrary to –
        i. a condition of consent for clearance of vegetation
        ii. a condition imposed in connection with clearance of vegetation permitted under these [native vegetation] regulations

iii. a condition in respect of clearance permitted under the revoked [native vegetation] regulations.

Please note that the *Development Act 1993* has been superseded by the *Planning, Development and Infrastructure Act 2016*.

2.7 Development Application Information

The Project Area is located within the Native Vegetation Overlay.

The proponent is submitting this application as part of the Development Application.

3.0 Methodology

3.1 Flora Assessment

Field assessments within the Project Area were conducted by NVC Accredited Consultant E. West and Ecologists S. Bulling, Dr T. Headland, I. Marshall, and C. Panozzo across multiple days trips in July, August and November 2025. Native vegetation assessments were undertaken in accordance with the BAM (NVC 2024a) and the 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, Pedler and Milne 2007) (Corft, Pedler and Milne, Bushhland Condition Monitoring Manual - Eyre Peninsula Region 2008a) (Croft, Pedler and Milne 2009) (Corft, Pedler and Milne 2008b) (Milne and Croft 2012) (Milne and McCallum 2012). 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 fauna and historical observations of fauna species of conservation significance. All fauna identified as 'Known to occur' in the PMST report, and fauna with BDBSA records since 1995 and with a spatial reliability of less than 1 km within a 5 km buffer (Search Area), were included in the BAM scoresheets. Species determined as unlikely to occur within the Project Area will be removed by the Native Vegetation Branch if the finding is supported.

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:

- Where there are individual scattered trees (i.e., the 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.
- Dead trees (when a dead tree is considered native vegetation).
- Clumps of trees (contiguous overlapping canopies) if the clump is small (approximately < 0.1 ha.
- 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
    - The area around the trees consists of introduced pasture or crops.

All trees located within the Project Area were physically tagged with a unique identification (ID) by Alexander Symonds. For collection of STAM data, the unique tree IDs were referenced throughout the survey process and incorporated into both the data and mapping, where possible. For any trees lacking an ID, an Umwelt ID (e.g., UM001) was allocated.

Although the proponent has endeavoured to avoid the direct clearance of scattered trees as far as practicable (see **Section 4.4**), the disturbance footprint will nevertheless intrude on the Tree Protection Zones (TPZs) of surrounding vegetation. In a precautionary approach, Umwelt has captured the SEB values of these trees by adapting the *Guide for Calculating a Significant Environmental Benefit* (NVC 2024d). As per this document, the threshold for impacts to qualify as attracting an SEB offset obligation is at least a 25% canopy prune, with this concept adjusted in this instance to incorporate possible impacts to TPZs. Scattered tree status within the Project Area have been stratified on the following basis:

- **Retained** - Trees that have been entirely avoided by the Project and/or that will suffer impacts to their TPZs below the 25% threshold.
- **Limited Impact** - Trees that will not be removed, but at least 25% of their TPZ falls within the disturbance footprint. A flat loss factor of 0.4 has been applied to the vegetation in this category, with further opportunities to minimise potential impacts (see **Section 4.4**).
- **Removed** - Trees that are to be physically removed to enable Project works.

Please note that, as a caveat, scattered trees outside of the Project Area have been excluded as the TPZ encompassed by the proposed infrastructure will likely require minimal earthworks (i.e., fencing).

3.1.3 Provisional List of Threatened Ecosystems

The *Provisional List of Threatened Ecosystems* was reviewed to determine whether any vegetation to be impacted met the criteria for listing as a State threatened ecosystem (Department for Environment and Heritage, in progress).

3.2 Fauna Assessment

A desktop assessment was undertaken to determine the potential for any threatened fauna species, listed under the EPBC Act and the NPW Act, to occur within the Project Area. The following databases were utilised to obtain records of threatened species:

- A Protected Matters Search Tool (PMST) report, generated by Department of Climate Change, Energy, the Environment and Water (DCCEEW), to identify any Matters of National Significance (MNES) that are known to occur from within the Search Area.
- A Biological Database of South Australia (BDBSA) data extract obtained from the Department for Environment and Water (DEW) that identifies the location of historical records of flora and fauna from within the Search Area.

3.2.1 Protected Matters Search Tool

The PMST report was generated on 25 July 2025 to identify flora, fauna, and ecological communities listed under the EPBC Act as threatened within the Search Area (DCCEEW 2025a). Only species identified by the PMST as 'Known to occur' were entered into BAM scoresheets.

3.2.2 Biological Database of South Australia

A BDBSA data extract was obtained from DEW to identify flora and fauna species that have prior records within the Search Area (DEW 2025a, data extracted 21 July 2025, Recordset Number: DEWNRBDBSA250721-1).

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 a spatial reliability of less than 1 km were assessed for their likelihood of occurrence.

3.2.3 Field Surveys

Opportunistic observations of fauna were recorded throughout the Project Area for the duration of the vegetation assessments. All native and exotic fauna species encountered - directly observed, 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 habitat for the threatened species identified in the desktop assessment. For each opportunistic fauna observation, the species, number of individuals, GPS location, detection methodology (i.e., sight, sound, or sign) was recorded.

3.2.3.1 Bird Utilisation Surveys

Bird Utilisation Surveys (BUS) were undertaken at one location within the Project Area (**Figure 3.1**), on the following dates:

- 24 July 2025
- 30 July 2025
- 13 August 2025.

The BUS involved traversing a 2-ha area over 20 minutes in adherence to the standard Birdlife Australia 2-ha survey method (Birdlife Australia 2025a), originally adapted from (Lyon 1986). The surveys were conducted twice per survey date, once in the morning (before 12 pm) and once in the afternoon (after 12 pm). Data collected for each site was as follows:

- The species observed.
- The number of individuals observed.
- Behaviour, classified into the following categories:
    - flying in a single direction
    - flying (hovering or circling) over or around a single point
    - foraging (feeding) on ground
    - perching/resting/walking on ground
    - perching/resting/climbing on trees or shrubs
    - foraging on trees or shrubs.

All birds observed or heard while traversing the monitoring site were recorded, including those that were observed directly outside of the 2 ha area up to a distance where a positive species identification could reasonably be obtained. Birds observed outside of the 2 ha were also recorded as 'offsite'.

Outside of the BUS, birds and other fauna species were also opportunistically recorded during the vegetation surveys.

Figure 3.1

Location of the Bird Utilisation Site within the Project Area

Legend

- Harper Road Project Area
- Bird Utilisation Survey Area
- Watercourse

0 50 100 150

Metres

Scale 1:5,000 at A4
GDA 1994 MGA Zone 54

umwelt

Image Source: ESRI (2025) | **Data Source:** Umwelt, DEW (2025)

3.2.4 Likelihood of Occurrence Assessment

Threatened species and Threatened Ecological Communities (TECs) identified by the PMST and the BDBSA data extract were assessed for their likelihood of occurrence within the Project Area. All species with historical records since 1995 (with a spatial reliability of <1 km) and those that were identified by the PMST were assessed.

As per the criterion provided **Table 3.1**, the assessment was based on the recency of records, habitat preferences, and the results of the field surveys. The complete list of all species identified by the database searches, including those excluded from assessment, is provided in **Appendix 2**.

Table 3.1 Criteria for the Likelihood of Occurrence Assessment

Likelihood	Criteria
Known	The species was recorded as part of field surveys.
Highly Likely	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.
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, **or** 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.
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, **or** Recorded within 20–40 years; however, suitable habitat does not occur, and species of similar habitat requirements have not been recorded in the area, **or** No records despite adequate survey effort.

3.3 Limitations

3.3.1 Desktop Assessment

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 Project Area 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.

3.3.2 Field Assessment

As the surveys were undertaken in winter and early-spring, not all plant species may have been visibly present at this time. Some species such as native orchids and lilies may not be detectable when not in flower. As such, it is possible that some flora species were present but not detected.

No species-specific targeted flora or fauna surveys were undertaken.

3.3.3 Spatial Data

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

Datum: Geocentric Datum of Australia 2020.

Projection: Map Grid of Australia 2020, Zone 54.

The location (eastings and northings) of the trees marked by Alexander Symonds were supplied to Umwelt on16 December 2025. As a georeferenced spatial dataset indicating impact status was not supplied to Umwelt for this Project, Umwelt overlaid the Master Plan depicted in **Figure 2.2**. Given the substantial number of trees mapped within the Project Area, some uncertainty exists regarding the assignment of impact status to individual trees.

4.0 Assessment Outcomes

4.1 Vegetation Assessment

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

Due to the historical and current grazing practices (livestock and horses), vegetation exists as a mix of small, medium, and large scattered remnant trees consisting of different species in varying condition. Bushland vegetation also existed in small patches and consisted of open remnant *Eucalyptus* woodlands, and a plantation of *Pinus halepensis* (Aleppo Pine). Large dead trees are also common throughout the Project Area, which offer significant hollows that may serve as suitable habitats for both common and threatened species. However, these trees are not protected under the NV Act. Planted trees were common throughout the Project Area, predominantly positioned along the internal tracks within the Project Area and along Sims and Harper Road. Regeneration of planted species were also identified across the Project Area, which are protected under the NV Act.

One minor, non-perennial watercourse is present at the Project Area. A first-order stream, it flows northeast through the site and acts as a tributary of the larger Mount Barker Creek (merging approximately 700 m north of the Project Area). Although no naturally occurring wetlands are present, there are two dams within the Project Area. The soil profile of the Project Area consists of a number of soil types, the watercourse consists of loam over brown or dark clay, with a majority of the Project Area consisting of a sandy loam over red clay or rock.

A total of three native vegetation associations were mapped across the Project Area. Two of these vegetation associations are native vegetation and are protected under the NV Act (A1 and A2). A4 vegetation association is non-native vegetation Aleppo Pine Forest and therefore not covered by the NV Act (**Table 4.1**).

Table 4.1 General Overview of the Native and Non-native Vegetation Associations Within the Project Area

Vegetation Association ID	Vegetation Association Description	Total Area in Project Area (ha)	Area Proposed to be Impacted (ha)
A1	*Eucalyptus camaldulensis* var. *camaldulensis* + *Eucalyptus leucoxylon* ssp. *leucoxylon* Riparian Woodland	5.79	1.28
A2	*Eucalyptus fasciculosa* + *Eucalyptus leucoxylon* ssp. *leucoxylon* Open Woodland	0.41	0.05
A4	*Pinus Halepensis* (Aleppo Pine) Forest	2.46	1.52
	Grand Total	**8.66**	**2.85**

A total of 73 flora species were recorded during the field assessments, this includes 28 native and 45 introduced species (**Appendix 1**). The State Rare *Eucalyptus fasciculosa* (Pink Gum) was observed as scattered trees and the dominant overstorey in the A2 vegetation association (protected under the NV Act) and assessed as a Regulated and Significant Trees (protected under the PDI Act).

Of the 45 introduced species, five are considered Declared weeds (covered under the LSA Act), this includes: *Asparagus asparagoides* (Bridal Creeper), *Fraxinus angustifolia* (Desert Ash), *Olea europaea* (Olive), *Ulex europaeus* (Gorse) and *Zantedeschia aethiopica* (White Arum Lily). Two of these species (*Asparagus asparagoides* and *Ulex europaeus*) are Weeds of National Significance (WoNs).

A full list of flora species observed during the field survey is provided in **Appendix 1**.

Scattered trees were surveyed within the Project Area and adjacent to the Project Area (along council roads Sims and Harper Road). However, these trees are not proposed to be impacted. Scattered trees consisted of the following species:

- *Acacia pycnantha* (Golden Wattle).
- *Allocasuarina verticillata* (Drooping Sheoak).
- *Eucalyptus camaldulensis* var. *camaldulensis* (River Red Gum).
- *Eucalyptus fasciculosa* (Pink Gum) - listed as Rare under the NPW Act.
- *Eucalyptus leucoxylon* ssp. *leucoxylon* (South Australian Blue Gum).
- *Eucalyptus viminalis* ssp. *cygnetensis* (Rough-barked Manna Gum).

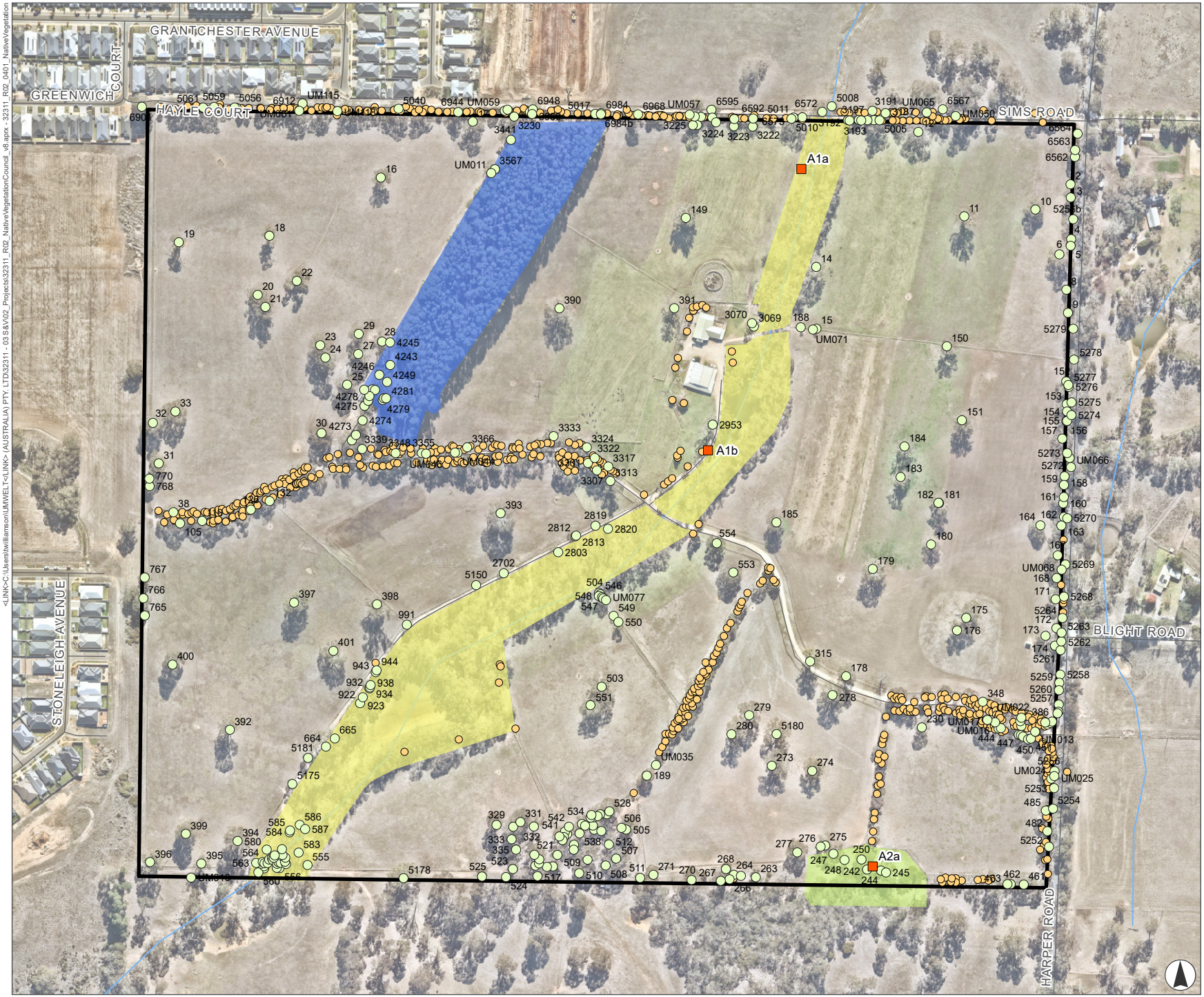

Figure 4.1

Vegetation Associations and Trees Surveyed Across the Project Area

Legend

- Project Area
- Road
- Watercourse
- Planted Trees
- Scattered Trees
- BAM Site

Vegetation Associations

- A1 | *Eucalyptus camaldulensis ssp. camaldulensis + Eucalyptus leucoxylon ssp. leucoxylon* Riparian woodland
- A2 | *Eucalyptus fasciculosa + Eucalyptus leucoxylon ssp. leucoxylon* Open woodland
- A4 | *Pinus halepensis* (Aleppo Pine) Forest

0 50 100 150

Metres

Scale 1:5,000 at A4
GDA 1994 MGA Zone 54

Image Source: Nearmap (2025) | **Data Source:** Umwelt (2025)

4.1.2 Details of the Vegetation Associations Proposed to be Impacted

The native vegetation associations under application concerning this Project are described in **Table 4.2** to **Table 4.3**. Mapping of the proposed impacts is available in **Figure 4.2**, and the relevant BAM scoresheets are provided as **Attachment 1**.

Table 4.2 Summary of Vegetation Association A1

Vegetation Association	A1 - *Eucalyptus camaldulensis* var. *camaldulensis* + *Eucalyptus leucoxylon* ssp. *leucoxylon* Riparian Woodland
BAM Sites	A1a and A1b
Benchmark Community	SMLR 5.1 Drainage Line in Grassy Woodland

A1a. Coordinates: -35.087989, 138.899691 **Photograph Direction:** Southeast

A1b. Coordinates: -35.085024, 138.900491 **Photograph Direction:** Southeast

Coordinates: -35.090344, 138.8969400
Photograph Direction: North

Coordinates: -35.090188, 138.897168038
Photograph Direction: East

General Description	This vegetation association is situated within a drainage line that traverses the Project Area. The drainage line is predominantly characterised by mature *Eucalyptus camaldulensis* and *E. leucoxylon* ssp. *leucoxylon*. Further from the drainage line, this association comprises a mixture of tree ages, interspersed with a varied mid-storey of other regenerating native and cultivated species.

Vegetation Association	A1 - *Eucalyptus camaldulensis* var. *camaldulensis* + *Eucalyptus leucoxylon* ssp. *leucoxylon* Riparian Woodland				
	Within this association, there are two constructed dams, and a substantial population of self-seeded *E. camaldulensis*. The understorey consists primarily of introduced herbaceous and grass species and low coverage of native Rush (*Juncus* sp.) and Wallaby Grass (*Rytidosperma* sp.) Images above are representative of the areas of VA1 proposed to be impacted by the Project.				
	Overstorey		**Midstorey**	**Understorey**	
	Eucalyptus camaldulensis var. *camaldulensis* (River Red Gum) *Eucalyptus leucoxylon* ssp. *leucoxylon* (South Australian Blue Gum)		*Allocasuarina verticillata* (Drooping Sheoak) *Callistemon sieberi* (River Bottlebrush)	**Understorey** **Dactylis glomerata* (Cocksfoot) **Cenchrus clandestinus* (Kikuyu) Rytidosperma sp. (Wallaby Grass)	
	* Denotes exotic species				
Threatened Species or Community	**Known threatened species within the Project Area:** • Eastern Shriketit (*Falcunculus frontatus frontatus*) – observed • Grey-headed Flying-Fox (*Pteropus poliocephalus*) – historical record (DEW 2025) • Yellow-tailed Black Cockatoo (*Zanda funerea whiteae*) – heard For all other species with BDBSA records within the Search Area, please refer to Attachment 1				
Landscape Context Score	1.16	**Vegetation Condition Score**	30.76	**Conservation Significance Score**	1.10
Average Unit Biodiversity Score	39.26	**Area (ha)**	1.28	**Total Biodiversity Score**	50.25

Table 4.3 Summary of Vegetation Association A2

Vegetation Association	A2 - *Eucalyptus fasciculosa* + *Eucalyptus leucoxylon* ssp. *leucoxylon* Open Woodland
BAM Sites	A2a
Benchmark Community	SMLR 3.1 Smooth Barked Gum Woodlands with an Open Shrubland and Grassy Understorey

A2a. Coordinates -35.091558, 138.901000 **Photograph Direction:** East

General Description

This vegetation area, found on a southern slope of the Project Area, is mainly comprised of remnant State Rare *E. fasciculosa* and *E. leucoxylon* ssp. *leucoxylon*, along with several healthy *Amyema* species (Mistletoes). Dead trees are common here. The midstory features predominantly native *Acacia paradoxa*, while the understorey is mostly exotic species, with a few scattered natives like *Lomandra multiflora* (Many-flower Mat-rush) and *Rytidosperma* sp. (Wallaby-grass).

Overstorey	Midstorey	Understorey
Eucalyptus fasciculosa (Pink Gum) *Eucalyptus leucoxylon* ssp. *leucoxylon* (South Australian Blue Gum)	*Acacia paradoxa* (Kangaroo Thorn)	**Dactylis glomerata* (Cocksfoot) **Hordeum leporinum* (Wall Barley Grass)

* Denotes exotic species

Threatened Species or Community

This vegetation association is considered a State Vulnerable (Provisional List of Threatened Ecosystems of SA) ecosystem of the Agricultural Region - *E. fasciculosa* +/- *E. leucoxylon* Heathy Woodland on sandy loams of flats and slopes.

Known threatened flora within the Project Area:

- *Eucalyptus fasciculosa* (Pink Gum) – NPW Act: Rare

Known threatened fauna within the Project Area:

- Eastern Shriketit (*Falcunculus frontatus frontatus*) – NPW Act: Rare (observed)
- Grey-headed Flying-Fox (*Pteropus poliocephalus*) – EPBC Act: Vulnerable, NPW Act: Rare (BDBSA record)
- Yellow-tailed Black Cockatoo (*Zanda funerea whiteae*) – NPW Act: Vulnerable (heard)

For all other species with BDBSA records within the Search Area, please refer to Attachment 1

Landscape Context Score	1.16	**Vegetation Condition Score**	18.02	**Conservation Significance Score**	1.34
Unit Biodiversity Score	28.01	**Area (ha)**	0.05	**Total Biodiversity Score**	1.46

4.1.3 Details of the Scattered Trees Proposed to be Impacted

The scattered trees under application concerning this Project are described in **Table 4.4**. Mapping of the proposed impacts is available in **Figure 4.2** and the relevant STAM scoresheets are provided as **Attachment 2.**

Table 4.4 Scattered Trees Proposed to Be Impacted by the Project. Shaded Cells Indicate Tree to Be Removed.

Tree ID	Tree Species	No. of Trees	Height (m)	Diameter (cm)	Dieback (%)	Hollows (S, M, L)	TBS	Scattered Tree Status
2	*Allocasuarina verticillata*	1	6.2	35	10	0, 0, 0	1.98	Limited impact
3	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	7.5	89	5	2, 1, 0	3.96	Limited impact
4	*Allocasuarina verticillata*	1	6.5	38.5	2	0, 0, 0	2.20	Limited impact
6	*Eucalyptus camaldulensis* var. *camaldulensis*	1	13	146	5	1, 1, 0	7.12	Removed
8	*Allocasuarina verticillata*	1	5.5	24.5	0	0, 0, 0	1.09	Limited impact
9	*Allocasuarina verticillata*	1	6.5	37.5	0	0, 0, 0	2.16	Limited impact
10	*Eucalyptus camaldulensis* var. *camaldulensis*	1	12.5	133	2	0, 0, 0	4.37	Limited impact
14	*Eucalyptus camaldulensis* var. *camaldulensis*	1	17	186	15	0, 1, 2	9.40	Limited impact
15	*Eucalyptus camaldulensis* var. *camaldulensis*	1	5.5	19	0	0, 0, 0	0.40	Limited impact
17	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14	155	5	1, 3, 0	8.04	Limited impact
18	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	16	134	5	2, 2, 0	8.03	Limited impact
19	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	16	142	40	3, 3, 0	6.87	Removed
20	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	108	5	1, 0, 0	4.73	Limited impact
21	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14	117	0	2, 0, 0	6.23	Limited impact
22	*Eucalyptus leucoxylon ssp. leucoxylon*	1	12	127	15	1, 0, 0	5.97	Limited impact
23	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14	120	25	2, 0, 0	4.30	Limited impact
24	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	18	121	0	0, 2, 0	8.26	Limited impact
30	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	16	180	0	2, 0, 0	8.50	Limited impact
31	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	130	0	0, 0, 0	4.58	
38	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	78	2	1, 0, 0	4.14	Removed
105	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	9	75	0	0, 0, 0	2.39	Removed
110	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	9	74	5	0, 0, 0	2.37	Removed
126	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	8	32	90	2, 0, 0	0.31	Removed
132	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	9	41	70	0, 0, 0	0.48	Removed
150	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	19	117	10	0, 0, 0	6.79	Limited impact
152	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	110	2	0, 2, 0	6.44	Limited impact
153	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	115	0	2, 0, 0	4.86	Limited impact

Tree ID	Tree Species	No. of Trees	Height (m)	Diameter (cm)	Dieback (%)	Hollows (S, M, L)	TBS	Scattered Tree Status
155	*Eucalyptus camaldulensis* var. *camaldulensis*	1	13	63	5	0, 0, 0	2.44	Limited impact
156	*Eucalyptus camaldulensis* var. *camaldulensis*	1	10	79	10	0, 0, 0	2.48	Limited impact
157	*Eucalyptus camaldulensis* var. *camaldulensis*	1	15	129	10	0, 0, 0	4.73	Limited impact
168	*Allocasuarina verticillata*	1	4.5	21.5	0	0, 0, 0	0.60	Limited impact
171	*Eucalyptus camaldulensis* var. *camaldulensis*	1	9	81	10	0, 0, 0	2.41	Limited impact
172	*Eucalyptus camaldulensis* var. *camaldulensis*	1	13	79	5	0, 0, 0	3.52	Limited impact
173	*Eucalyptus camaldulensis* var. *camaldulensis*	1	9	76	15	0, 0, 0	2.30	Limited impact
174	*Eucalyptus camaldulensis* var. *camaldulensis*	1	13	124.5	5	2, 0, 0	4.86	Limited impact
175	*Eucalyptus camaldulensis* var. *camaldulensis*	1	16	160	0	0, 1, 0	7.45	Limited impact
178	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	148	15	0, 2, 1	7.44	Limited impact
179	*Eucalyptus camaldulensis* var. *camaldulensis*	1	20	193	0	5, 2, 0	10.57	Limited impact
180	*Eucalyptus camaldulensis* var. *camaldulensis*	1	12	107	0	0, 0, 0	3.84	Limited impact
181	*Eucalyptus camaldulensis* var. *camaldulensis*	1	11	71	0	0, 0, 0	2.40	Limited impact
182	*Eucalyptus camaldulensis* var. *camaldulensis*	1	11	78	0	0, 0, 0	2.56	Limited impact
183	*Eucalyptus camaldulensis* var. *camaldulensis*	1	12	116	5	2, 1, 0	6.12	Limited impact
184	*Eucalyptus camaldulensis* var. *camaldulensis*	1	11	126	20	0, 1, 0	3.66	Limited impact
185	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	13	142	10	3, 1, 0	7.38	Limited impact
189	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	11.5	115	0	0, 0, 0	4.10	Removed
230	*Eucalyptus camaldulensis* var. *camaldulensis*	1	10	91	5	0, 0, 0	3.30	Removed
263	*Eucalyptus camaldulensis* var. *camaldulensis*	1	7	70	15	0, 0, 2	3.30	Limited impact
264	*Allocasuarina verticillata*	1	4	12	0	0, 0, 0	0.44	Limited impact
266	*Allocasuarina verticillata*	1	5.5	15	0	0, 0, 0	0.59	Limited impact
267	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14.5	130	10	5, 3, 0	7.48	Limited impact
268	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	8.5	45	0	0, 0, 0	1.30	Limited impact
270	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	13	123	0	3, 1, 0	6.87	Limited impact
271	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	9	69	0	0, 0, 0	2.26	Limited impact
272	*Allocasuarina verticillata*	1	3.5	11.25	0	0, 0, 0	0.39	Limited impact
278	*Eucalyptus camaldulensis* var. *camaldulensis*	1	11	142	10	0, 2, 0	6.53	Limited impact
315	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14.5	155	0	0, 0, 0	6.18	Limited impact

Tree ID	Tree Species	No. of Trees	Height (m)	Diameter (cm)	Dieback (%)	Hollows (S, M, L)	TBS	Scattered Tree Status
348	*Acacia pycnantha*	1	4	30.25	60	0, 0, 0	0.52	Removed
374	*Eucalyptus camaldulensis* var. *camaldulensis*	2	6	9	15	0, 0, 0	0.62	Removed
384	*Eucalyptus camaldulensis* var. *camaldulensis*	1	4.5	14	0	0, 0, 0	0.32	Removed
385	*Eucalyptus camaldulensis* var. *camaldulensis*	3	4.5	6	30	0, 0, 0	0.51	Removed
386	*Eucalyptus camaldulensis* var. *camaldulensis*	1	8	28	30	0, 0, 0	0.42	Removed
387	*Eucalyptus camaldulensis* var. *camaldulensis*	1	5	27	30	0, 0, 0	0.34	Removed
390	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	258	20	0, 0, 0	7.44	Limited impact
391	*Eucalyptus camaldulensis* var. *camaldulensis*	1	15	173	30	3, 2, 0	7.01	Limited impact
392	*Eucalyptus camaldulensis* var. *camaldulensis*	1	20	170	0	1, 2, 3	9.79	Limited impact
394	*Eucalyptus camaldulensis* var. *camaldulensis*	1	17.5	183	5	2, 1, 0	9.45	Limited impact
395	*Eucalyptus camaldulensis* var. *camaldulensis*	1	18	157.5	25	3, 2, 1	7.35	Limited impact
396	*Eucalyptus camaldulensis* var. *camaldulensis*	1	16	218	5	2, 3, 0	10.14	Limited impact
397	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	192.5	10	2, 1, 1	8.73	Limited impact
398	*Eucalyptus camaldulensis* var. *camaldulensis*	1	20	208	25	3, 2, 2	9.40	Limited impact
399	*Eucalyptus camaldulensis* var. *camaldulensis*	1	13.5	148	0	0, 0, 0	4.82	Limited impact
400	*Eucalyptus camaldulensis* var. *camaldulensis*	1	17	182	5	0, 1, 1	9.27	Limited impact
444	*Eucalyptus camaldulensis* var. *camaldulensis*	1	7	13	0	0, 0, 0	0.37	Removed
447	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	6	30	10	0, 0, 0	0.56	Removed
448	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	12	34	0	0, 0, 0	1.31	Removed
449	*Eucalyptus camaldulensis* var. *camaldulensis*	1	10	49	60	0, 0, 0	0.53	Removed
450	*Eucalyptus camaldulensis* var. *camaldulensis*	1	11	46	60	0, 0, 0	0.54	Removed
451	*Eucalyptus camaldulensis* var. *camaldulensis*	1	8	38	90	0, 0, 0	0.28	Removed
461	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14	111	0	0, 0, 0	4.50	Limited impact
462	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14	102	0	0, 0, 0	4.33	Limited impact
463	*Allocasuarina verticillata*	1	7	58	40	0, 0, 0	2.23	Limited impact
482	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14	65	0	0, 0, 0	3.46	Limited impact

Tree ID	Tree Species	No. of Trees	Height (m)	Diameter (cm)	Dieback (%)	Hollows (S, M, L)	TBS	Scattered Tree Status
485	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	11.5	63.5	0	0, 0, 0	2.43	Limited impact
511	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	8.5	45	0	0, 0, 0	1.30	Limited impact
525	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	17	123	5	3, 4, 4	8.02	Limited impact
527	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	13	85	0	0, 0, 0	3.86	Limited impact
528	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	13.5	115	0	2, 0, 0	6.05	Limited impact
529	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	8	40	30	0, 0, 0	0.60	Limited impact
532	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	10	86	0	0, 0, 0	3.37	Limited impact
534	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	7	32	10	0, 0, 0	0.63	Limited impact
535	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	6	35	0	0, 0, 0	0.63	Limited impact
549	*Eucalyptus camaldulensis* var. *camaldulensis*	1	5	26	60	0, 0, 0	0.22	Removed
550	*Eucalyptus camaldulensis* var. *camaldulensis*	1	8.5	78	0	0, 0, 0	2.30	Removed
553	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	11	136	10	0, 0, 0	4.38	Limited impact
554	*Eucalyptus viminalis* ssp. *cygnetensis*	1	12	141	0	0, 0, 0	6.18	Limited impact
765	*Eucalyptus camaldulensis* var. *camaldulensis*	1	6	14.5	0	0, 0, 0	0.36	Limited impact
767	*Eucalyptus camaldulensis* var. *camaldulensis*	1	8	63	0	0, 0, 0	1.94	Removed
768	*Eucalyptus camaldulensis* var. *camaldulensis*	1	6.5	57	0	0, 0, 0	1.27	Removed
770	*Eucalyptus camaldulensis* var. *camaldulensis*	1	8	46.5	0	0, 0, 0	1.22	Limited impact
991	*Eucalyptus camaldulensis* var. *camaldulensis*	1	9	51	0	0, 0, 0	1.35	Limited impact
2702	*Eucalyptus camaldulensis* var. *camaldulensis*	1	9.5	66	0	0, 0, 0	2.14	Limited impact
2803	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14.5	126	15	6, 0, 0	6.97	Limited impact
2812	*Eucalyptus camaldulensis* var. *camaldulensis*	1	9	52	0	0, 0, 0	1.36	Limited impact
2813	*Eucalyptus camaldulensis* var. *camaldulensis*	1	9	37	20	0, 0, 0	0.56	Limited impact
2819	*Eucalyptus camaldulensis* var. *camaldulensis*	1	7	30.5	15	0, 0, 0	0.58	Limited impact
2953	*Eucalyptus camaldulensis* var. *camaldulensis*	1	17	127	15	0, 0, 0	6.08	Limited impact
3222	*Eucalyptus camaldulensis* var. *camaldulensis*	1	5	14	0	0, 0, 0	0.33	Limited impact
3223	*Eucalyptus camaldulensis* var. *camaldulensis*	1	6	24.5	0	0, 0, 0	0.47	Limited impact

Tree ID	Tree Species	No. of Trees	Height (m)	Diameter (cm)	Dieback (%)	Hollows (S, M, L)	TBS	Scattered Tree Status
3224	*Acacia pycnantha*	1	4	13	0	0, 0, 0	0.63	Limited impact
3225	*Acacia pycnantha*	1	6	18	5	0, 0, 0	2.10	Limited impact
3230	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	13	118	10	8, 3, 1	6.75	Limited impact
3301	*Eucalyptus camaldulensis* var. *camaldulensis*	1	8	87	5	0, 0, 0	2.37	Removed
3307	*Eucalyptus camaldulensis* var. *camaldulensis*	1	8	39	5	0, 0, 0	1.12	Removed
3313	*Eucalyptus camaldulensis* var. *camaldulensis*	1	13	93	0	1, 0, 0	4.28	Removed
3317	*Eucalyptus camaldulensis* var. *camaldulensis*	1	10	87	0	0, 0, 0,	2.59	Removed
3322	*Eucalyptus camaldulensis* var. *camaldulensis*	1	10	76	0	0, 0, 0	2.41	Removed
3324	*Eucalyptus camaldulensis* var. *camaldulensis*	1	10	67	0	0, 0, 0	2.21	Removed
3333	*Eucalyptus camaldulensis* var. *camaldulensis*	1	7	121	0	0, 0, 0	3.31	Removed
3339	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	11	124	45	3, 1, 0	4.34	Removed
3348	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	12	61	0	0, 0, 0	2.43	Removed
3441	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	12	78	10	2, 0, 0	4.03	Limited impact
3567	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14	100	15	0, 0, 0	4.30	Limited impact
4272	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	14.5	104	0	0, 0, 0	4.46	Removed
4273	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	11	68	20	3, 0, 0	2.24	Removed
5150	*Eucalyptus camaldulensis* var. *camaldulensis*	1	5	9.5	0	0, 0, 0	0.29	Limited impact
5178	*Eucalyptus camaldulensis* var. *camaldulensis*	1	22	139	0	0, 0, 0	7.60	Limited impact
UM011	*Acacia pycnantha*	1	4	7.5	0	0, 0, 0	0.55	Limited impact
UM012	*Allocasuarina verticillata*	1	1.8	1	0	0, 0, 0	0.09	Limited impact
UM013	*Eucalyptus camaldulensis* var. *camaldulensis*	4	4.5	4.5	80	0, 0, 0	0.36	Removed
UM014	*Eucalyptus camaldulensis* var. *camaldulensis*	1	6	12	90	0, 0, 0	0.09	Removed
UM015	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	4.5	7.5	20	0, 0, 0	0.18	Removed
UM016	*Eucalyptus camaldulensis* var. *camaldulensis*	1	6	9	20	0, 0, 0	0.21	Removed
UM017	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	4	9	10	0, 0, 0	0.28	Removed
UM021	*Eucalyptus leucoxylon* ssp. *leucoxylon*	1	6	14	10	0, 0, 0	0.37	Removed

Tree ID	Tree Species	No. of Trees	Height (m)	Diameter (cm)	Dieback (%)	Hollows (S, M, L)	TBS	Scattered Tree Status
UM022	*Eucalyptus fasciculosa*	1	4	9	0	0, 0, 0	0.44	Removed
UM035	*Eucalyptus camaldulensis* var. *camaldulensis*	1	0.3	1	0	0, 0, 0	0.06	Removed
UM068	*Eucalyptus camaldulensis* var. *camaldulensis*	1	14	111	20	0, 0, 0	3.41	Limited impact
UM071	*Eucalyptus camaldulensis* var. *camaldulensis*	1	4	6	0	0, 0, 0	0.24	Limited impact

Hollows: S: Small, M: Medium. L: Large. TBS: Total Biodiversity Score

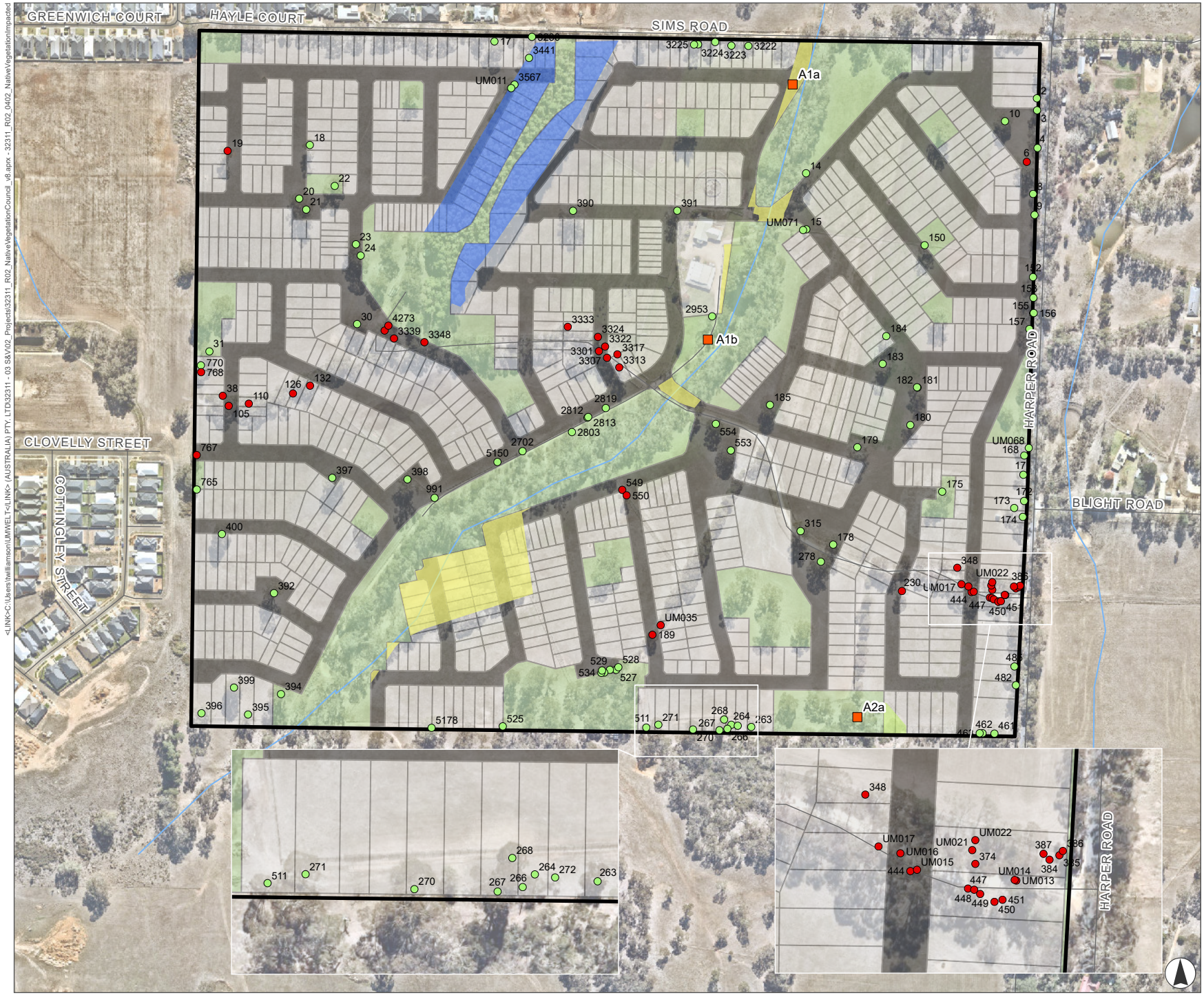

Figure 4.2

Native Vegetation Proposed to Be Impacted by the Project

Legend

- Project Area
- Proposed Lots
- Proposed Reserve
- Proposed Road
- Road
- Watercourse
- BAM Site

Scattered Trees

- Limited impact
- Removed

Vegetation Associations

- A1 | *Eucalyptus camaldulensis ssp. camaldulensis + Eucalyptus leucoxylon ssp. leucoxylon* Riparian woodland
- A2 | *Eucalyptus fasciculosa + Eucalyptus leucoxylon ssp. leucoxylon* Open woodland
- A4 | *Pinus halepensis* (Aleppo Pine) Forest

0 50 100 150

Metres

Scale 1:5,500 at A4
GDA2020 MGA Zone 54

umwelt

Image Source: Nearmap (2025) | **Data Source:** Umwelt (2025)

4.1.4 Photo Log

Features associated with the Project Area are presented below, in **Figure 4.1** to **Figure 4.4.**

Photo 4.1 **A4: *Pinus halepensis* (Aleppo Pine) Forest (north), -35.087159, 138.896447**

Photo 4.2 **Dieback of Aleppo Pine**

Photo 4.3 **Dam 1 located in Vegetation Association A1 (north), -35.087827, 138.899709**

Photo 4.4 **Dam 2 located in Vegetation Association A1 (east), -35.089798, 138.896018**

4.2 Threatened Species Assessment

4.2.1 Threatened Ecological Communities

The PMST report identified one TEC that had the potential to occur within the Search Area:

- Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia.

The criteria for this TEC was assessed against the results of the field survey, which determined that the community was absent from within the Project Area (see **Table 4.5**).

Table 4.5 Threatened Ecological Communities Occurring within the Project Area

Threatened Ecological Community	Conservation Status	Definition	Umwelt Likelihood Assessment
Peppermint Box (*Eucalyptus odorata*) Grassy Woodland of South Australia	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 (Department of the Environment and Water Resources 2007).	**Unlikely** – The diagnostic species, *Eucalyptus odorata,* was absent from the Project Area.

4.2.2 Threatened Flora

A total of 26 threatened flora species were identified in the desktop assessment (DCCEEW 2025a, DEW 2025a). This includes 15 listed nationally threatened species protected under the EPBC Act and 11 State threatened species protected under the NPW Act, were identified as potentially occurring within the Search Area (**Appendix 3**). No species were identified by the PMST as "Known" to occur.

Out of the 26 threatened flora species identified in the desktop assessment, one species was recorded in the Project Area during the field surveys:

- *Eucalyptus fasciculosa* (Pink Gum) (NPW Act: Rare).

A total of 30 *Eucalyptus fasciculosa* were recorded across the Project Area (planted and native individuals) (**Figure 4.6**), five individuals classified as native vegetation and protected under the NV Act. Four of these trees are proposed to be impacted by the Project. Additionally, vegetation mapped in A2 contains a number of mature Pink Gum trees.

The State Rare *Acacia iteaphylla* (Flinders Range Wattle) was identified within the Project Area. However, this species is likely to be planted and is now considered weedy outside of its natural range, which is the Eyre Peninsula and Flinders Ranges.

An additional five species were assessed as possibly occurring within Project Area, based on suitability of habitat and recent records (**Table 4.6**).

The full likelihood assessment for all threatened flora species identified by the desktop is presented in and mapping of historical records within the Search Area is presented in **Figure 4.3**.

Table 4.6 Threatened Flora Species with at least a 'Possible' Probability of Occurrence

Scientific Name	Common Name	Conservation Status		Source	Last Sighting / PMST Likelihood Search Area	Umwelt Likelihood Assessment Project Area
		EPBC Act	NPW Act			
Deyeuxia densa	Heath Bent-grass	-	R	2	2014	Possible
Echinopogon ovatus	Rough-beard Grass	-	R	2	2014	Possible
Eucalyptus fasciculosa	Pink Gum	-	R	2, 3	2014	**Known**
Eucalyptus viminalis ssp. *viminalis*	Manna Gum	-	R	2	2014	Possible
Ptilotus erubescens	Hairy-tails	-	R	2	2014	Possible
Senecio pinnatifolius var. *pinnatifolius*	-	-	R	2	2014	Possible

Conservation Codes
EPBC Act: *Environment Protection and Biodiversity Conservation Act 1999*. **NPW Act**: *National Parks and Wildlife Act 1972*. **Conservation Status**
R = Rare.
Source
1. PMST Report – 5 km buffer applied to the Project Area (DCCEEW 2025a)
2. BDBSA Data Extract – 5 km buffer applied to the Project Area (DEW 2025a)
3. Recorded during the Field Survey

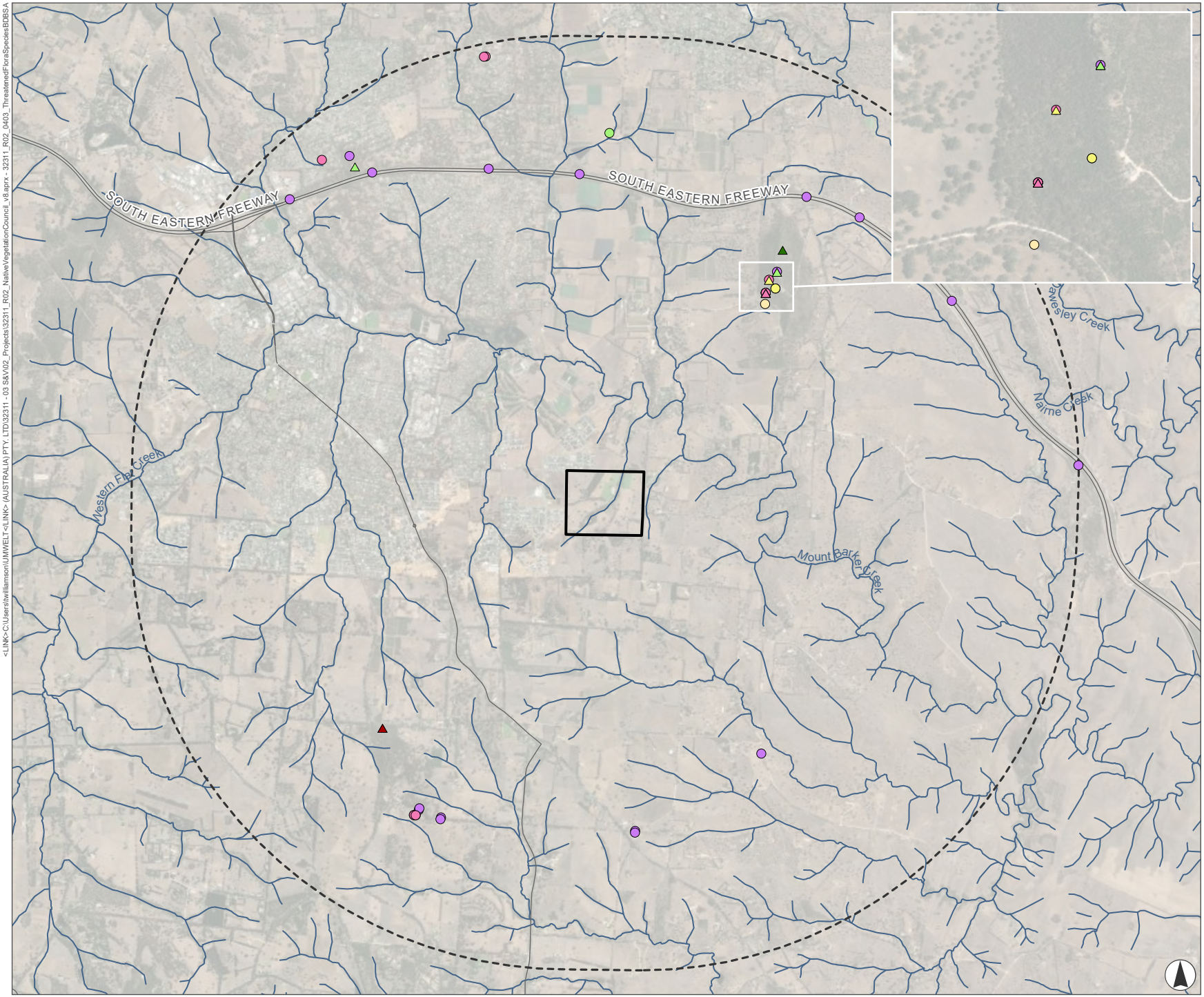

Figure 4.3

BDBSA Threatened Flora Species within the Search Area

Legend

- Project Area
- Search Area (5km)
- Watercourse
- Road

BDBSA Threatened Flora

- *Caladenia leptochila ssp. leptochila* (Narrow-lip Spider-orchid) NPW: R
- *Deyeuxia densa* (Heath Bent-grass) NPW: R
- *Echinopogon ovatus* (Rough-beard Grass) NPW: R
- *Eryngium ovinum* (Blue Devil) NPW: V
- *Eucalyptus fasciculosa* (Pink Gum) NPW: R
- *Eucalyptus viminalis ssp. viminalis* (Manna Gum) NPW: R
- *Prasophyllum pallidum* (Pale Leek-orchid) NPW: R, EPBC: VU
- *Ptilotus erubescens* (Hairy-tails) NPW: R
- *Senecio pinnatifolius var. pinnatifolius* NPW: R
- *Thelymitra aristata* (Great Sun-orchid) NPW: E*
- *Thelymitra batesii* NPW: R
- *Thelymitra grandiflora* (Great Sun-orchid) NPW: R
- *Thelymitra ixioides* (Spotted Sun-orchid) NPW: E*

0 1 2 3

Kilometres

Scale 1:60,000 at A4
GDA 1994 MGA Zone 54

umwelt

Image Source: ESRI (2025) | **Data Source:** Umwelt, DEW (2025)

4.2.3 Threatened Fauna

A total of 60 threatened fauna species, 22 fauna species area listed under the EPBC Act, 32 are listed under the NPW Act, and six bird species are listed as Migratory (not EPBC and NWP act listed) were identified in the desktop assessment (DCCEEW 2025a, DEW 2025a). Of the 60 species, 12 species were assessed as either "likely/highly likely" to occur, based on each given recent records and species-specific habitat requirements and the conditions of the Project Area (**Table 4.7**).

Two threatened fauna species identified in the desktop assessment were recorded during the field surveys:

- Eastern Shriketit (*Falcunculus frontatus frontatus*) – listed as Rare under the NPW Act.
    - Two individuals of the Eastern Shriketit were observed foraging within A1 (**Figure 4.6)**.
- Yellow-tailed Black Cockatoo (*Zanda funerea whiteae*) – listed as Vulnerable under the NPW Act.
    - Two individuals were heard flying over the Project Area, not observed.

The nationally Vulnerable and State Rare Grey-headed Flying-fox (*Pteropus poliocephalus*) has a historical record within the Project Area.

Mapping of all historical records of EPBC Act threatened fauna within the Search Area is presented in **Figure 4.4** and mapping of NPW Act threatened fauna within the Search Area is presented in **Figure 4.5**.

The full likelihood assessment for all threatened fauna species identified by the desktop assessment is presented in **Appendix 4**.

Table 4.7 Threatened Fauna Species With at Least a 'Possible' Probability of Occurrence Within the Project Area

Scientific Name	Common Name	Conservation Status		Source	Last Sighting / PMST Likelihood Search Area	Umwelt Likelihood Assessment Project Area
		EPBC Act	NPW Act			
BIRDS						
Anhinga novaehollandiae novaehollandiae	Australasian Darter	-	R	2	2024	Likely
Falco peregrinus macropus	Peregrine Falcon	-	R	2	2022	Likely
Falcunculus frontatus frontatus	Eastern Shriketit	-	R	2, 3	2024	**Known**
Gallinago hardwickii	Latham's Snipe	VU, Mi (W)	R	1, 2	2024/Known	Likely
Hieraaetus morphnoides	Little Eagle	-	V	2	2016	Likely
Microeca fascinans fascinans	Jacky Winter	-	R	2	2014	Likely
Neophema elegans elegans	Elegant Parrot	-	R	2	2024	Likely
Petroica boodang boodang	Scarlet Robin	-	R	2	2010	Likely
Stagonopleura guttata	Diamond Firetail	VU	V	1, 2	2024/Known	Highly Likely
Zanda funerea whiteae	Yellow-tailed Black Cockatoo	-	V	2, 3	2024	**Known**

Scientific Name	Common Name	Conservation Status		Source	Last Sighting / PMST Likelihood Search Area	Umwelt Likelihood Assessment Project Area
		EPBC Act	NPW Act			
MAMMALS						
Pteropus poliocephalus	Grey-headed Flying-fox	VU	R	1, 2	2020/Likely	**Known**
Trichosurus vulpecula	Common Brushtail Possum	-	R	2	2025	Highly Likely

Conservation Codes
EPBC Act: *Environment Protection and Biodiversity Conservation Act 1999*. **NPW Act**: *National Parks and Wildlife Act 1972*. **Mi:** Migratory species, **W:** Wetlands, **M:** Marine.
Conservation Status
EN/E = Endangered, **VU/V** = Vulnerable, **R** = Rare.
Source
1. PMST Report – 5 km buffer applied to the Project Area (DCCEEW 2025a)
2. BDBSA Data Extract – 5 km buffer applied to the Project Area (DEW 2025a)
3. Recorded during the Field Survey

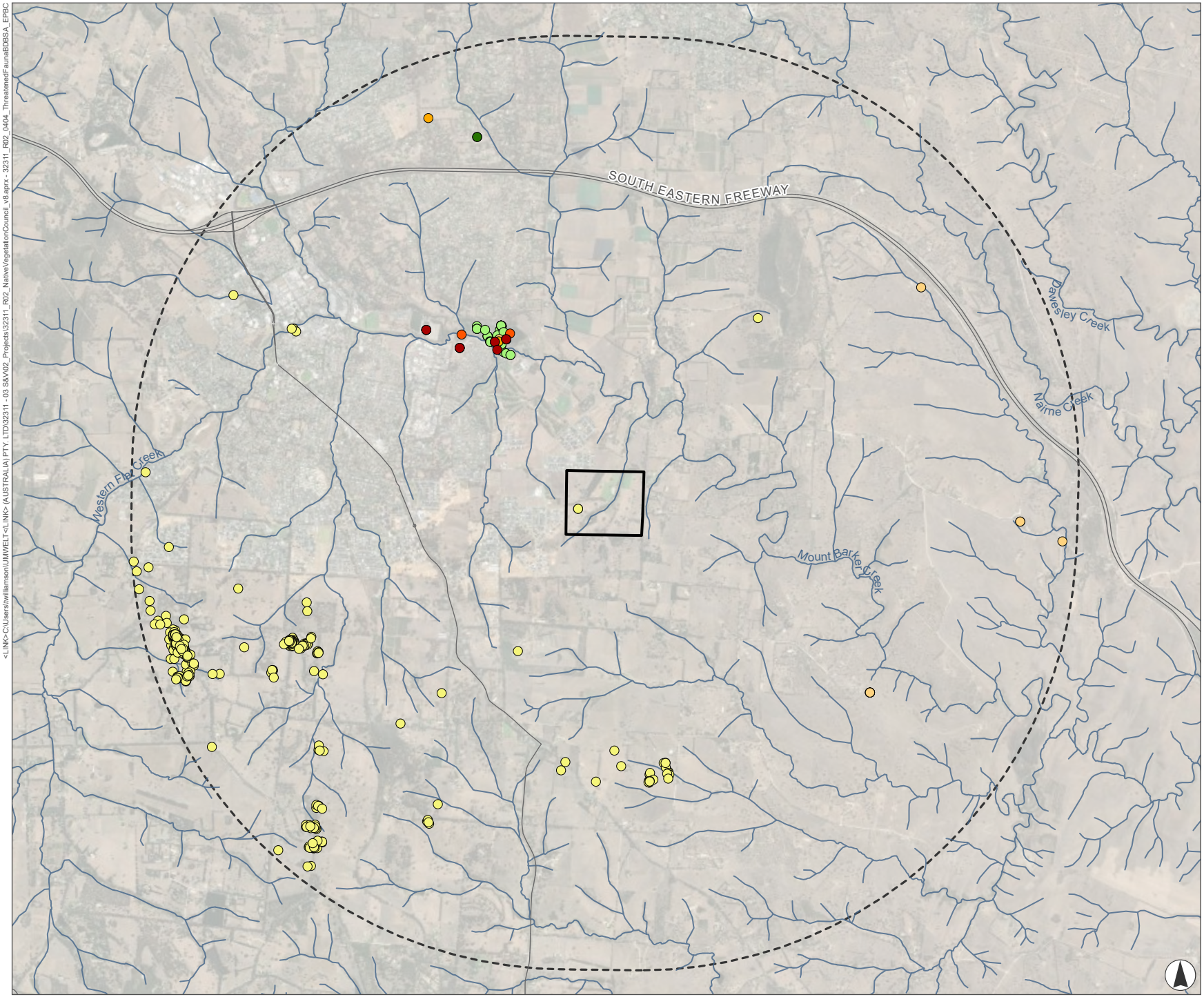

Figure 4.4

BDBSA Threatened EPBC Act Fauna Species within the Search Area

Legend

- Project Area
- Search Area (5km)
- Watercourse
- Road

BDBSA Threatened Fauna (EPBC)

- Australasian Bittern (*Botaurus poiciloptilus*) EPBC: EN, NPW: E
- Australian Painted-snipe (*Rostratula australis*) EPBC: EN, NPW: E
- Common Greenshank (*Tringa nebularia*) EPBC: EN
- Diamond Firetail (*Stagonopleura guttata*) EPBC: VU, NPW: V
- Grey-headed Flying-fox (*Pteropus poliocephalus*) EPBC: VU, NPW: R
- Latham's Snipe (*Gallinago hardwickii*) EPBC: VU, NPW: R
- Regent Honeyeater (*Anthochaera phrygia*) EPBC: CR, NPW: E
- Sharp-tailed Sandpiper (*Calidris acuminata*) EPBC: VU
- Spotted Quailthrush (*Cinclosoma punctatum*) EPBC: CE

0 1 2 3

Kilometres

Scale 1:60,000 at A4
GDA 1994 MGA Zone 54

Image Source: ESRI (2025) | **Data Source:** Umwelt, DEW (2025)

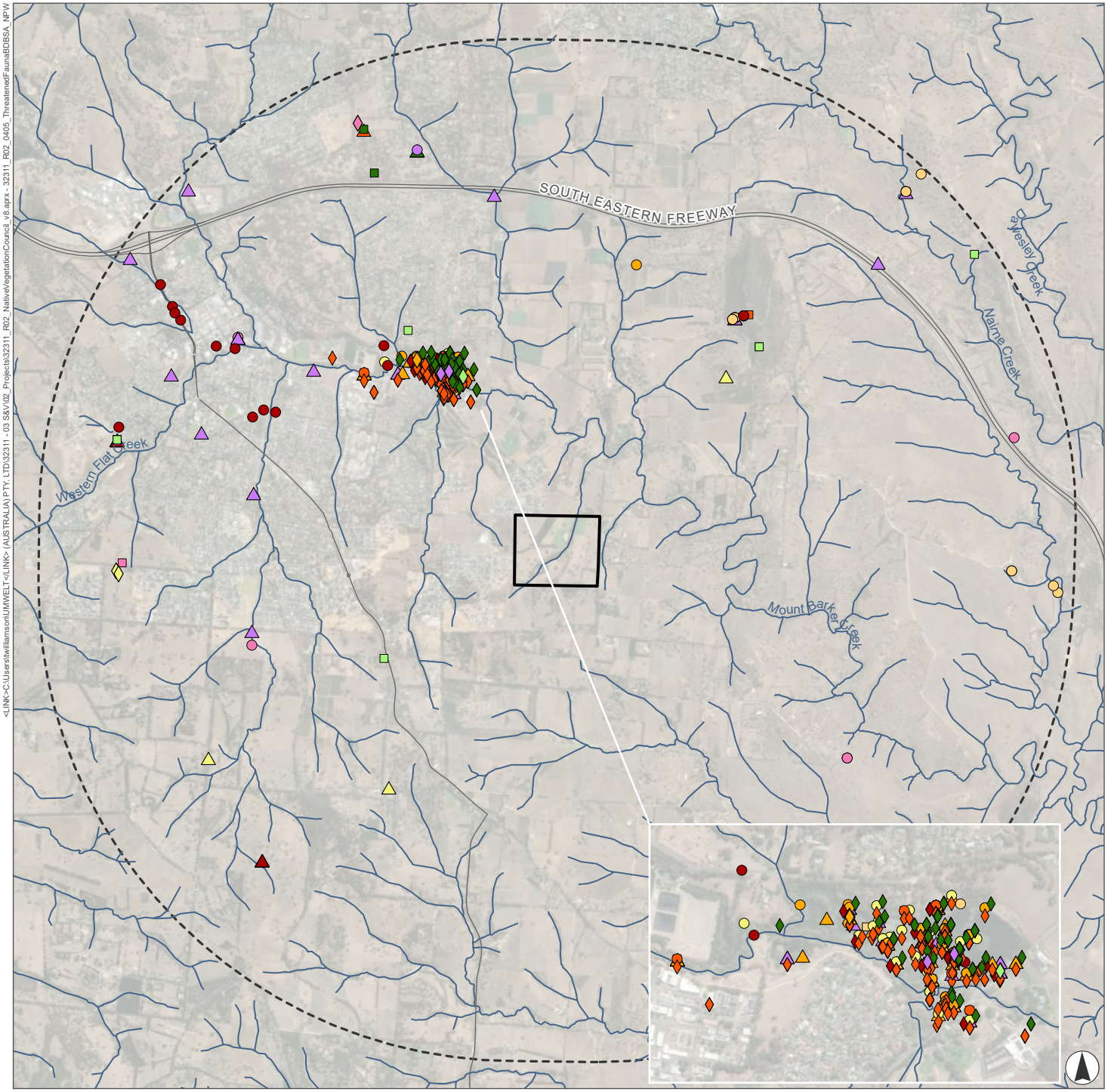

Figure 4.5

BDBSA Threatened NPW Act Fauna Species within the Search Area

Legend

- Project Area
- Search Area (5km)
- Watercourse
- Road

BDBSA Threatened Fauna (NPW)

- Australasian Darter (*Anhinga novaehollandiae novaehollandiae*) NPW: R
- Australasian Shoveler (*Spatula rhynchotis*) NPW: R
- Banded Stilt (*Cladorhynchus leucocephalus*) NPW: V
- Bassian Thrush (*Zoothera lunulata*) NPW: R
- Black-backed Bittern (Australian Little Bittern) (*Ixobrychus dubius*) NPW: E
- Blue-billed Duck (*Oxyura australis*) NPW: R
- Brown Quail (*Coturnix ypsilophora australis*) NPW: V
- Cape Barren Goose (*Cereopsis novaehollandiae novaehollandiae*) NPW: R
- Common Brushtail Possum (*Trichosurus vulpecula*) NPW: R
- Common Sandpiper (*Actitis hypoleucos*) NPW: R
- Eastern Shriketit (*Falcunculus frontatus frontatus*) NPW: R
- Elegant Parrot (*Neophema elegans elegans*) NPW: R
- Freckled Duck (*Stictonetta naevosa*) NPW: V
- Glossy Ibis (*Plegadis falcinellus*) NPW: R
- Great Crested Grebe (*Podiceps cristatus australis*) NPW: R
- Hooded Robin (*Melanodryas cucullata*) NPW: R
- Jacky Winter (*Microeca fascinans fascinans*) NPW: R
- Lewin's Rail (*Lewinia pectoralis pectoralis*) NPW: V
- Little Eagle (*Hieraaetus morphnoides*) NPW: V
- Little Egret (*Egretta garzetta nigripes*) NPW: R
- Macquarie River Turtle (*Emydura macquarii*) NPW: V
- Musk Duck (*Biziura lobata menziesi*) NPW: R
- Peregrine Falcon (*Falco peregrinus macropus*) NPW: R
- Pied Oystercatcher (*Haematopus longirostris*) NPW: R
- Plumed Egret (*Ardea intermedia plumifera*) NPW: R
- Restless Flycatcher (*Myiagra inquieta*) NPW: R
- Scarlet Robin (*Petroica boodang boodang*) NPW: R
- Sooty Oystercatcher (*Haematopus fuliginosus fuliginosus*) NPW: R
- Spotless Crake (*Zapornia tabuensis*) NPW: R
- White-winged Chough (*Corcorax melanorhamphos*) NPW: R
- Wood Sandpiper (*Tringa glareola*) NPW: R
- Yellow-footed Antechinus (*Antechinus flavipes*) NPW: V
- Yellow-tailed Black Cockatoo (*Zanda funerea whiteae*) NPW: V

0 1 2 3

Kilometres

Scale 1:60,000 at A4
GDA 1994 MGA Zone 54

umwelt

Image Source: ESRI (2025) | **Data Source:** Umwelt, DEW (2025)

Figure 4.6

Sightings of Threatened Flora and Fauna

Legend

- Harper Road Project Area
- Road
- Watercourse

Threatened Flora

- *Eucalyptus fasciculosa* (Pink Gum) NPW Act: Rare

Threatened Fauna

- Eastern Shriketit (*Falcunculus frontatus frontatus*) NPW Act: Rare

0 50 100 150

Metres

Scale 1:5,000 at A4
GDA 1994 MGA Zone 54

Image Source: Nearmap (2025) | **Data Source:** Umwelt (2025)

4.3 Cumulative Impact

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

In the Project Area, all expected direct impacts will occur within the area of clearance covered by this application.

4.3.1 Direct Impacts

The Project will entail the clearance of 1.33 ha of bushland vegetation (consisting of three different vegetation associations) and 50 scattered trees, including:

- One *Acacia pycnantha* (Golden Wattle).
- Thirty-three *Eucalyptus camaldulensis* var. *camaldulensis* (River Red Gum).
- One *Eucalyptus fasciculosa* (Pink Gum) - listed as Rare under the NPW Act.
- Fifteen *Eucalyptus leucoxylon* ssp. *leucoxylon* (South Australian Blue Gum).

Although avoided by the design, the following 94 scattered trees, have more than 25% of their TPZ encompassed by the proposed disturbance footprint and have been assessed as suffering limited impacts (thereby accruing an SEB obligation):

- Three *Acacia pycnantha* (Golden Watle).
- Ten *Allocasuarina verticillata* (Drooping Sheoak).
- Fifty *Eucalyptus camaldulensis* var. *camaldulensis* (River Red Gum).
- Thirty *Eucalyptus leucoxylon* ssp. *leucoxylon* (South Australian Blue Gum).
- One *Eucalyptus viminalis* ssp. *cygnetensis* (Rough-barked Manna Gum).

4.3.2 Indirect Impacts

Indirect impacts of the Project may include, but are not limited to, the following:

- Temporary noise generation during construction, which may impact fauna species (nesting and non-nesting individuals), including those species listed as threatened, migratory or local common species.
- Possible alteration to local hydrology, specifically the water course located within the centre of the Project Area.
- Possible impacts to TPZs beyond that captured by the current precautionary approach. This may include trenching/digging for infrastructure, adding fill, and the addition of hard surfaces which may reduce water infiltration into the soil and impacting remaining the remaining vegetation.
- Possible pollution into the existing water course from construction activities.
- Possible temporary dust generation during construction works, which may smother existing vegetation, especially in areas where vegetation associations occur and will remain.

4.4 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

The masterplan for the Project has undergone various iterations and design changes to ensure retention of onsite vegetation. The Project has been designed to avoid large, scattered trees where possible. The majority of the native vegetation (A1) will be retained and incorporated as a reserve.

In total, the Project Area retains a large tree population, most of which have been tagged. The proposal seeks to avoid removal of the vast majority of vegetation on site ensuring future amenity and green space. Protection of the trees to be retained will be included in a Tree Protection Plan to implemented by the site management team.

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).

Where vegetation clearance is unavoidable, reasonable steps will be taken to minimise impacts during construction as recommended by Arborman Tree Solutions. These include:

- Identification of TPZs and exclusion zones for trees and/or tree groups located in or adjacent to the work areas to ensure their root systems remain undisturbed and the trees retain good health during the construction stage.
- Creation of exclusion areas, TPZs, via the installation of temporary fencing, barriers and signage.
- Utilisation of Sensitive and Tree Friendly Construction Techniques and Methodologies to ensure potential damage to the tree roots, trunk or canopy is minimised. Where required/appropriate methods such as drilling and boring below the root zones will be used to avoid trenching. Other machinery or equipment which can work from a distance to help avoid the trees' physical structure will be utilised as required/appropriate.
- Making sure all contractors that are inducted into the site are made aware of the TPZ's and high value vegetation and the restrictions around these to ensure damage is avoided during onsite works
- Pruning of existing vegetation may be undertaken to avoid proposed infrastructure where it can be completed without compromising tree health or structure.
- Compaction close to trees will be avoided and mulch layers will be utilised to minimise compaction. In additional permeable pavement will be utilised in road reserves to ensure root protection is maintained. This has already been discussed with relevant authorities.
- Managing weeds on site to ensure the health of trees
- Controlling erosion as per the construction plan to ensure that disturbed soil and sediment do not run into the tree's root zone, preserving the soil structure and nutrient balance.
- Suppressing dust and revegetating disturbed areas.

The direct removal of scattered trees has been avoided as far as practicable through the creation of road reserves and land management agreements for those that fall within allotments. Nevertheless, the disturbance footprint will encroach upon the TPZs of surrounding vegetation. Although the extent of this impact, and the potential for minimisation, is currently unknown (pending a detailed review by Arborman Tree Solutions), precautionarily Umwelt has assessed that for scattered trees with more than 25% of their TPZ encompassed within the disturbance footprint that these will attract an SEB offset obligation (with a flat loss factor of 0.4 applied).

The proponent intends to develop two permanent crossings to ford the minor watercourse that runs through the centre of the Project Area (inclusive of vegetation association A1). These locations have been microsited to minimise impacts to native vegetation, with the southern crossing taking advantage of an existing access track and impacting only planted amenity vegetation and the understorey of A1. Although the northern crossing is likely to impact overstorey vegetation, forthcoming arborist assessments will endeavour to minimise direct removals as far as practicable.

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.

Where tree removal is unavoidable suitable areas of the site will be rehabilitated with appropriate vegetation to restore and improve overall environmental outcomes.

If any rehabilitation did take place, the area will be assessed to ensure appropriateness of location and species, a buffer zone will be established to keep relevant species and machinery out of the area, replanting will take place, the existing bore would be used to water with subsequent monitoring and maintenance to take place to ensure restoration.

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.

The proponent has committed to investigating and on-ground offset for the Project and any outstanding offset will be made through payment into the Native Vegetation Fund (NVF).

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

The NVC 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 NVC 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

An assessment against the Principles of Clearance is provided below in **Table 4.8**.

Table 4.8 Assessment Against the 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 1a – it comprises a high diversity of plant species</td><td>
<table>
<tr><th>Vegetation association</th><th>Native Species</th><th>Weed species</th><th>Bushland Plant Diversity score</th></tr>
<tr><td>A1a</td><td>14</td><td>32</td><td>18</td></tr>
<tr><td>A1b</td><td>7</td><td>9</td><td>10</td></tr>
<tr><td>A1 average</td><td>10.5</td><td>20.5</td><td>14</td></tr>
<tr><td>A2</td><td>8</td><td>8</td><td>10</td></tr>
</table>
</td><td><u>At Variance</u>
A1 and A2</td><td>Amount of clearance related to area of remnant
A total of 573.06 ha of native vegetation currently exists within the Search Area (a 5 km radius). A total of 1.33 ha of native vegetation is proposed to be removed, comprising 0.23% of native vegetation mapped within a 5 km radius.</td></tr>
<tr><td>Principle 1(b) - Significance as a Habitat for Wildlife</td><td>A total of 41 fauna species were observed during the field assessments (two mammals and 39 bird species), two of which were observed during the field survey, this includes:
Two Eastern Shriketit (Falcunculus frontatus frontatus) – listed as Rare under the NPW Act. Foraging within A1
Yellow-tailed Black Cockatoo (Zanda funerea whiteae) – listed as Vulnerable under the NPW Act. – approximately two heard overhead.
On species has a record within the Project Area:
Grey-headed Flying-fox (GHFF) (Pteropus poliocephalus) (EPBC Act: Vulnerable, NPW Act: Rare).</td><td><u>Seriously at Variance</u>
<u>Patches</u>
A1 and A2
<u>Trees</u>
All trees (except UM012 and UM035)

<u>Not at Variance</u>
UM035</td><td>Impact significance
The area under application includes impacts to a large number of scattered trees and minor impacts on patches (A1 and A2) in poor to moderate condition. The mid and understorey of the Project Area has suffered from long term grazing and farming practices resulting in the introduction of exotic species.

The vegetation does provide habitat to threatened species like the Eastern Shriketit and Yellow-tailed Black Cockatoo, though it is unlikely they serve as critical habitat. Parts of A1, A2 and A4 are proposed as reserves, therefore retaining suitable habitat for these threatened species.

Additionally, the Project Area is not recognised as a camp for the Grey-headed Flying-fox and does not qualify as critical habitat for this species.</td></tr>
</table>

Observations of two Eastern Shriketits foraging among mature River Red Gums suggest potential nesting activity by this species within the area. Yellow-tailed Black Cockatoos are expected to feed in the pine plantation (A4). Furthermore, a historical record of the Grey-headed Flying-fox within the Project Area indicates that this species likely uses large Eucalyptus species as a foraging resource during the flowering season.

Additionally, the desktop assessment identified 10 additional species which are likely to utilise the habitat within the Project Area include:

- Australasian Darter (*Anhinga novaehollandiae novaehollandiae*) (NPW Act: Rare)
- Peregrine Falcon (*Falco peregrinus macropus*) (NPW Act: Rare)
- Little Eagle (*Hieraaetus morphnoides*) (NPW Act: Vulnerable)
- Jacky Winter (*Microeca fascinans fascinans*) (NPW Act: Rare)
- Elegant Parrot (*Neophema elegans elegans*) (NPW Act: Rare)
- Scarlet Robin (*Petroica boodang boodang*) (NPW Act: Rare)
- Diamond Firetail (*Stagonopleura guttata*) (EPBC Act: Vulnerable, NPW Act: Vulnerable)
- Common Brushtail Possum (*Trichosurus vulpecula* (NPW Act: Rare).

Several habitat types within the area support both threatened and locally common species. The riparian corridor (A1) and constructed dams serve as habitats for waterbirds, including the State Rare Australasian Darter.

Various woodland bird species, including the Jacky Winter, Elegant Parrot, Scarlet Robin, and Diamond Firetail, may utilise A1 and A2 habitat patches within the Project Area, as well as the numerous scattered remnant and planted trees for foraging activities. The Common Brushtail Possum is anticipated to forage throughout the Project Area and make use of trees with medium to large hollows for nesting. Larger birds of prey, such as the Peregrine Falcon and Little Eagle, are more likely to use the Project Area's habitat as hunting and foraging grounds. It should be noted that no suitable breeding habitat for Peregrine Falcons, such as cliffs or rock faces, exists within the Project Area. While larger remnant River Red Gums with A1 quality or those scattered across the area may offer potential nesting sites for the Little Eagle, no substantial nests were observed during the assessment.

The Project Area does contain mature hollow-bearing trees which may be suitable for use by species such as the Common Brushtail Possum and Elegant Parrot. Clearance of hollow-bearing trees may impact suitable habitat for these species as large number of scattered trees are proposed to be impacted. However, suitable habitat will remain within the Project Area and outside. Therefore, the Project Area is unlikely to provide important or critical habitat for any other threatened species and is unlikely to:

- lead to a long-term decrease in the size of a population
- reduce the area of occupancy of a species
- fragment an existing population into two or more populations.
- decrease availability of habitat such that the extent of a species is likely to decline.
- result in invasive species becoming established in the threatened species habitat.
- interfere with the recovery of a species.

Common species

Areas of native vegetation exist in the broader area, providing habitat for these species. The area of clearance is not considered essential habitat to maintain local populations of common species.

Non-essential habitat

Given the preservation of dispersed trees and most vegetation patches, it is anticipated that the clearance will not have a long-term effect on local fauna species.

Principle of Clearance	Relevant Information	Assessment Against the Principles	Moderating Factors that may be Considered by the NVC
	The vegetation associations and scattered trees may act as a corridor for some species, but the clearance of vegetation is likely to disrupt the movement given the large area of unimpacted vegetation. **Patches** *Threatened fauna score*: 0.1 for all vegetation associations *Unit Biodiversity Score(s)*: **A1** (Average): 40.16 **A2**: 28.01 **Trees** *Fauna habitat score:* 1.80 for all trees (except UM012 and UM035) *Biodiversity score*: individual biodiversity scores are outlined in **Table 4.4.** The total biodiversity score for all trees is **476.05**		
Principle 1(c) - Plants of a Rare, Vulnerable or Endangered Species	A total of 72 (28 native, 45 introduced) flora species were observed during the field assessment. One species was listed as State Rare under the NPW Act: • *Eucalyptus fasciculosa* (Pink Gum). A total of 30 trees were recorded across the Project Area (five individuals assessed as scattered trees). Existing 25 individuals were planted. Of the five scattered trees, one is proposed to be impacted. Additionally, the dominant overstorey of A2 vegetation consisted of Pink Gum, of which 0.05 ha is proposed to be impacted. **Patches** *Threatened Flora Score(s)* A1: 0 A2: 0.04 **Trees** *Threatened Flora Score(s)* UM022 – 0.30	**At Variance** *Patches* - A2 *Trees* – UM022 **Not at Variance** A1	*Impact Significance* One scattered Pink Gum tree is proposed to be impacted by the Project and a small portion of A2. The clearance of the tree and the vegetation association is unlikely to have a significant impact on this species as this species is well represented in the local area. *Number of plants to be cleared* 0.30 ha of Pink Gum woodland will be retained within the Project Area and the immediate surrounds, which includes several small, medium and large Pink Gum trees.
Principle 1(d) - the Vegetation Comprises the Whole or Part of a Plant Community that is Rare, Vulnerable or Endangered	A2 satisfies the criteria for the State Vulnerable *E. fasciculosa* +/- *E. leucoxylon* Heathy Woodland on sandy loams of flats and slope. Of the 0.30 ha mapped in the Project Area, 0.05 ha is proposed to be impacted. **Threatened Community Score(s)** A1 – 1 A2 – 1.2	**Seriously at Variance** A2 **Not At Variance** A1	*Impact Significance* According to DEH (in progress), this ecosystem exists only in small, isolated patches and is generally in poor condition, which was consistent with observations in the Project Area. A total of 0.05 ha of the 0.30 ha within the Project Area (16.7 %) is proposed to be impacted.

Principle of Clearance	Relevant Information	Assessment Against the Principles	Moderating Factors that may be Considered by the NVC
Principle 1e - it is significant as a remnant of vegetation in an area which has been extensively cleared.	**Hierarchy Level** / **Remnancy%** IBRA Association – Hahndorf: 8 IBRA Sub-region: 15 As the remnancy at the IBRA Association level of native vegetation is 8% and a TBS of 527.76 this application is Seriously at Variance with *Principle 1(e)*. Vegetation in the Project Area has been heavily affected by past clearing and grazing, no longer reflecting pre-European conditions. Most vegetation consists of scattered trees and associations in poor to moderate conditions. Total Biodiversity Score – 527.76	**Seriously at Variance** All	*Quality of remnant* Vegetation associations are in poor to moderate condition and due to the lack of management of this vegetation they are likely to continue to deteriorate in the long-term.
Principle 1f - it is growing in, or in association with, a wetland environment	No wetlands are located within the Project Area.	**Not at Variance**	NA
Principle 1g - it contributes significantly to the amenity of the area in which it is growing or is situated.	The Project Area is situated adjacent to Harper Road, which does not serve as a primary access route to Mount Barker. This road is predominantly utilised by residents living on or near it. Harper Road includes a road reserve that features numerous remnant and planted trees, which are not expected to be impacted by the Project. These trees obscure much of the vegetation within the Project Area. The Project Area does not provide any cultural or historical values. The Project Area is situated in a rural, agricultural setting, surrounded by many properties with similar characteristics. Building a residential development here could potentially diminish the overall amenity of the area. Especially the removal of large, scattered trees in close proximity to the Harper Road (eastern boundary).	To be determined by local council	NA

4.6 Risk Assessment

The *Guide for Applications to Clear Native Vegetation* outlines how the risk level of a native vegetation clearance application is to be assessed (NVC 2024c, see **Table 4.9**). The risk level of the Project, presented in **Table 4.10** indicates that this will be a Level 4 Clearance due to the Total Biodiversity Score being >250.

Table 4.9 Risk Assessment for the NVC Clearance Application

	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	Clearance involves **any** tree with a trunk circumference measured at 1 m above the ground (for multi-stemmed trees, measure the largest trunk) 50 cm or more in the agricultural zone, 30 cm or more in the pastoral zone; or The site contains a listed species or contains a threatened community under either the NPW Act or the EPBC Act.
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 4.10 Summary of Risk Level Associated with the Clearance Application

Total Clearance	**No. of Trees (loss factor 1)**	50
	No. of Trees (loss factor 0.4)	94
	Area (ha) (loss factor 1)	1.33
	Total Biodiversity Score	527.76
Seriously at Variance with Principle 1(b), 1(c) or 1 (d)		1(b) and1(d)
Risk Assessment Outcome		Level 4

5.0 Clearance Summary

The clearance summary table for vegetation associations and scattered trees is presented in **Table 5.1** and **Table 5.2**, respectively. The total SEB obligations of the clearance supplied in **Table 5.3**, respectively.

Table 5.1 Clearance Summary for the Vegetation Associations to be Impacted by the Project

Block	Site	Species Diversity Score	Threatened Ecological Community Score	Threatened Plant Score	Threatened Fauna Score	Unit Biodiversity Score	Area (ha)	Total Biodiversity Score	Loss Factor	Loadings	Reductions	SEB Points Required	SEB Payment	Admin Fee
A	A1a	18	1	0	0.1	46.87	1.28	59.99	1	-	-	65.99	$83,354.65	$4,584.51
	A1b	10	1	0	0.1	31.64	1.28	40.50	1	-	-	44.55	$56,272.91	$3,095.01
	A1 mean	**14**	**1**	**0**	**0.1**	**39.26**	**1.28**	**50.25**	**1**	**-**	**-**	**55.27**	**$69,813.78**	**$3,839.76**
	A2	**10**	**1.2**	**0.04**	**0.1**	**28.01**	**0.05**	**1.46**	**1**	**-**	**-**	**1.61**	**$2,033.66**	**$111.85**
						Total(s)	**1.33**	**51.71**				**56.88**	**$71,847.44**	**$3,951.61**

Table 5.2 Clearance Summary for Scattered Trees to be Impacted by the Project

Tree ID	Number of Trees	Fauna Habitat Score	Threatened Flora Score	Total Biodiversity Score	Loss Factor	SEB Points Required	SEB Payment (includes admin fee)
2	1	1.80	0.00	1.98	0.4	0.87	$1,184.36
3	1	1.80	0.00	3.96	0.4	1.74	$2,368.72
4	1	1.80	0.00	2.20	0.4	0.97	$1,320.49
6	1	1.80	0.00	7.12	1.0	7.83	$10,659.24
8	1	1.80	0.00	1.09	0.4	0.48	$653.44
9	1	1.80	0.00	2.16	0.4	0.95	$1,293.27
10	1	1.80	0.00	4.37	0.4	1.92	$2,613.76
14	1	1.80	0.00	9.40	0.4	4.14	$5,635.92

Tree ID	Number of Trees	Fauna Habitat Score	Threatened Flora Score	Total Biodiversity Score	Loss Factor	SEB Points Required	SEB Payment (includes admin fee)
15	1	1.80	0.00	0.40	0.4	0.18	$245.04
17	1	1.80	0.00	8.04	0.4	3.54	$4,819.12
18	1	1.80	0.00	8.03	0.4	3.53	$4,805.51
19	1	1.80	0.00	6.87	1.0	7.56	$10,291.68
20	1	1.80	0.00	4.73	0.4	2.08	$2,831.57
21	1	1.80	0.00	6.23	0.4	2.74	$3,730.05
22	1	1.80	0.00	5.97	0.4	2.63	$3,580.31
23	1	1.80	0.00	4.30	0.4	1.89	$2,572.92
24	1	1.80	0.00	8.26	0.4	3.63	$4,941.64
30	1	1.80	0.00	8.50	0.4	3.74	$5,091.39
31	1	1.80	0.00	4.58	0.4	2.02	$2,749.89
38	1	1.80	0.00	4.14	1.0	4.55	$6,194.07
105	1	1.80	0.00	2.39	1.0	2.63	$3,580.31
110	1	1.80	0.00	2.37	1.0	2.61	$3,553.08
126	1	1.80	0.00	0.31	1.0	0.34	$462.85
132	1	1.80	0.00	0.48	1.0	0.53	$721.51
150	1	1.80	0.00	6.79	0.4	2.99	$4,070.39
152	1	1.80	0.00	6.44	0.4	2.83	$3,852.57
153	1	1.80	0.00	4.86	0.4	2.14	$2,913.25
155	1	1.80	0.00	2.44	0.4	1.07	$1,456.63
156	1	1.80	0.00	2.48	0.4	1.09	$1,483.85
157	1	1.80	0.00	4.73	0.4	2.08	$2,831.57
168	1	1.80	0.00	0.60	0.4	0.26	$353.95
171	1	1.80	0.00	2.41	0.4	1.06	$1,443.01
172	1	1.80	0.00	3.52	0.4	1.55	$2,110.07
173	1	1.80	0.00	2.30	0.4	1.01	$1,374.95
174	1	1.80	0.00	4.86	0.4	2.14	$2,913.25
175	1	1.80	0.00	7.45	0.4	3.28	$4,465.17
178	1	1.80	0.00	7.44	0.4	3.27	$4,451.56
179	1	1.80	0.00	10.57	0.4	4.65	$6,330.20
180	1	1.80	0.00	3.84	0.4	1.69	$2,300.65
181	1	1.80	0.00	2.40	0.4	1.06	$1,443.01
182	1	1.80	0.00	2.56	0.4	1.13	$1,538.31

Tree ID	Number of Trees	Fauna Habitat Score	Threatened Flora Score	Total Biodiversity Score	Loss Factor	SEB Points Required	SEB Payment (includes admin fee)
183	1	1.80	0.00	6.12	0.4	2.69	$3,661.99
184	1	1.80	0.00	3.66	0.4	1.61	$2,191.75
185	1	1.80	0.00	7.38	0.4	3.25	$4,424.33
189	1	1.80	0.00	4.10	1.0	4.51	$6,139.61
230	1	1.80	0.00	3.30	1.0	3.63	$4,941.64
263	1	1.80	0.00	3.30	0.4	1.45	$1,973.93
264	1	1.80	0.00	0.44	0.4	0.19	$258.65
266	1	1.80	0.00	0.59	0.4	0.26	$353.95
267	1	1.80	0.00	7.48	0.4	3.29	$4,478.79
268	1	1.80	0.00	1.30	0.4	0.57	$775.96
270	1	1.80	0.00	6.87	0.4	3.02	$4,111.23
271	1	1.80	0.00	2.26	0.4	0.99	$1,347.72
272	1	1.80	0.00	0.39	0.4	0.17	$231.43
278	1	1.80	0.00	6.53	0.4	2.87	$3,907.03
315	1	1.80	0.00	6.18	0.4	2.72	$3,702.83
348	1	1.80	0.00	0.52	1.0	0.57	$775.96
374	2	1.80	0.00	0.62	1.0	0.68	$925.71
384	1	1.80	0.00	0.32	1.0	0.35	$476.47
385	3	1.80	0.00	0.51	1.0	0.56	$762.35
386	1	1.80	0.00	0.42	1.0	0.46	$626.21
387	1	1.80	0.00	0.34	1.0	0.37	$503.69
390	1	1.80	0.00	7.44	0.4	3.27	$4,451.56
391	1	1.80	0.00	7.01	0.4	3.08	$4,192.91
392	1	1.80	0.00	9.79	0.4	4.31	$5,867.35
394	1	1.80	0.00	9.45	0.4	4.16	$5,663.15
395	1	1.80	0.00	7.35	0.4	3.23	$4,397.11
396	1	1.80	0.00	10.14	0.4	4.46	$6,071.55
397	1	1.80	0.00	8.73	0.4	3.84	$5,227.52
398	1	1.80	0.00	9.40	0.4	4.14	$5,635.92
399	1	1.80	0.00	4.82	0.4	2.12	$2,886.03
400	1	1.80	0.00	9.27	0.4	4.08	$5,554.24
444	1	1.80	0.00	0.37	1.0	0.41	$558.15
447	1	1.80	0.00	0.56	1.0	0.62	$844.03

Tree ID	Number of Trees	Fauna Habitat Score	Threatened Flora Score	Total Biodiversity Score	Loss Factor	SEB Points Required	SEB Payment (includes admin fee)
448	1	1.80	0.00	1.31	1.0	1.44	$1,960.32
449	1	1.80	0.00	0.53	1.0	0.58	$789.57
450	1	1.80	0.00	0.54	1.0	0.59	$803.19
451	1	1.80	0.00	0.28	1.0	0.31	$422.01
461	1	1.80	0.00	4.50	0.4	1.98	$2,695.44
462	1	1.80	0.00	4.33	0.4	1.91	$2,600.15
463	1	1.80	0.00	2.23	0.4	0.98	$1,334.11
482	1	1.80	0.00	3.46	0.4	1.52	$2,069.23
485	1	1.80	0.00	2.43	0.4	1.07	$1,456.63
511	1	1.80	0.00	1.30	0.4	0.57	$775.96
525	1	1.80	0.00	8.02	0.4	3.53	$4,805.51
527	1	1.80	0.00	3.86	0.4	1.70	$2,314.27
528	1	1.80	0.00	6.05	0.4	2.66	$3,621.15
529	1	1.80	0.00	0.60	0.4	0.26	$353.95
532	1	1.80	0.00	3.37	0.4	1.48	$2,014.77
534	1	1.80	0.00	0.63	0.4	0.28	$381.17
535	1	1.80	0.00	0.63	0.4	0.28	$381.17
549	1	1.80	0.00	0.22	1.0	0.24	$326.72
550	1	1.80	0.00	2.30	1.0	2.53	$3,444.17
553	1	1.80	0.00	4.38	0.4	1.93	$2,627.37
554	1	1.80	0.00	6.18	0.4	2.72	$3,702.83
765	1	1.80	0.00	0.36	0.4	0.16	$217.81
767	1	1.80	0.00	1.94	1.0	2.13	$2,899.64
768	1	1.80	0.00	1.27	1.0	1.40	$1,905.87
770	1	1.80	0.00	1.22	0.4	0.54	$735.12
991	1	1.80	0.00	1.35	0.4	0.59	$803.19
2702	1	1.80	0.00	2.14	0.4	0.94	$1,279.65
2803	1	1.80	0.00	6.97	0.4	3.07	$4,179.29
2812	1	1.80	0.00	1.36	0.4	0.60	$816.80
2813	1	1.80	0.00	0.56	0.4	0.25	$340.33
2819	1	1.80	0.00	0.58	0.4	0.26	$353.95
2953	1	1.80	0.00	6.08	0.4	2.68	$3,648.37
3222	1	1.80	0.00	0.33	0.4	0.15	$204.20

Tree ID	Number of Trees	Fauna Habitat Score	Threatened Flora Score	Total Biodiversity Score	Loss Factor	SEB Points Required	SEB Payment (includes admin fee)
3223	1	1.80	0.00	0.47	0.4	0.21	$285.88
3224	1	1.80	0.00	0.63	0.4	0.28	$381.17
3225	1	1.80	0.00	2.10	0.4	0.92	$1,252.43
3230	1	1.80	0.00	6.75	0.4	2.97	$4,043.16
3301	1	1.80	0.00	2.37	1.0	2.61	$3,553.08
3307	1	1.80	0.00	1.12	1.0	1.23	$1,674.44
3313	1	1.80	0.00	4.28	1.0	4.71	$6,411.88
3317	1	1.80	0.00	2.59	1.0	2.85	$3,879.80
3322	1	1.80	0.00	2.41	1.0	2.65	$3,607.53
3324	1	1.80	0.00	2.21	1.0	2.43	$3,308.04
3333	1	1.80	0.00	3.31	1.0	3.64	$4,955.25
3339	1	1.80	0.00	4.34	1.0	4.77	$6,493.56
3348	1	1.80	0.00	2.43	1.0	2.67	$3,634.76
3441	1	1.80	0.00	4.03	0.4	1.77	$2,409.56
3567	1	1.80	0.00	4.30	0.4	1.89	$2,572.92
4272	1	1.80	0.00	4.46	1.0	4.91	$6,684.15
4273	1	1.80	0.00	2.24	1.0	2.46	$3,348.88
5150	1	1.80	0.00	0.29	0.4	0.13	$176.97
5178	1	1.80	0.00	7.60	0.4	3.34	$4,546.85
UM011	1	1.80	0.00	0.55	0.4	0.24	$326.72
UM012	1	0.00	0.00	0.09	0.4	0.04	$54.45
UM013	4	1.80	0.00	0.36	1.0	0.40	$544.53
UM014	1	1.80	0.00	0.09	1.0	0.10	$136.13
UM015	1	1.80	0.00	0.18	1.0	0.20	$272.27
UM016	1	1.80	0.00	0.21	1.0	0.23	$313.11
UM017	1	1.80	0.00	0.28	1.0	0.31	$422.01
UM021	1	1.80	0.00	0.37	1.0	0.41	$558.15
UM022	1	1.80	0.30	0.44	1.0	0.48	$653.44
UM035	1	0.00	0.00	0.06	1.0	0.07	$95.29
UM068	1	1.80	0.00	3.41	0.4	1.50	$2,042.00
UM071	1	1.80	0.00	0.24	0.4	0.11	$149.75

Table 5.3 Summary of the Total SEB Obligations for the Clearance

	Total Biodiversity Score	Total SEB Points Required	SEB Payment	Admin Fee	Total Payment
Application	527.76	317.07	$401,586.91	$22,417.29	$430,004.39
Economies of Scale Factor		0.5			
Rainfall (mm)		696 to 711			

6.0 Significant Environmental Benefit

A SEB is required for approval to clear under Division 5 of the Regulations. The NVC must be satisfied that as a result of the loss of vegetation from the clearance that a SEB will result in a positive impact on the environment that is over and above the negative impact of the clearance.

ACHIEVING A 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.

☐ 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 a 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.

PAYMENT SEB

The total SEB obligations for the clearance of 1.33 ha of native vegetation and 50 scattered trees, in addition to TPZ impacts to an additional 94 scattered trees, with a combined TBS of 527.76, will be 317.07 SEB points or a payment of $430,004.39 (inclusive of an administration fee of $22,417.29) into the NVF.

The proponent has committed to investigating an on-ground offset for the Project. Any outstanding offset will be paid into the NVF.

7.0 References

ALA. 2025d. *Antechinus flavipes*. https://bie.ala.org.au/species/https://biodiversity.org.au/afd/taxa/a581c303-95b9-4e2f-8fdc-103e394dd85f.

2025f. *Ardea intermedia plumifera*. https://bie.ala.org.au/species/https://biodiversity.org.au/afd/taxa/866cd259-3371-49b5-bff0-33afddf29eaa.

2025. *Echinopogon ovatus*. https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2910214.

2025e. *Emydura macquarii, Macquarie River Turtle*. https://bie.ala.org.au/species/https://biodiversity.org.au/afd/taxa/9379c61b-207f-41aa-a48a-2492d897f951.

2025a. *Eucalyptus fasciculosa*. https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2896820.

2025b. *Eucalyptus viminalis ssp. viminalis*. https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2899781.

2025c. *Ptilotus erubescens*. https://bie.ala.org.au/species/https://id.biodiversity.org.au/node/apni/2918780.

Australian Museum. 2024b. *Banded Stilt*. https://australian.museum/learn/animals/birds/banded-stilt-cladorhynchus-leucocephalus/.

2024c. *Cape Barren Goose*. https://australian.museum/learn/animals/birds/cape-barren-goose/.

2024a. *Freckled Duck*. https://australian.museum/learn/animals/birds/freckled-duck/.

2024d. *Musk Duck*. https://australian.museum/learn/animals/birds/musk-duck-biziura-lobata/.

Benshemesh, J. 2007. *National Recovery Plan for Malleefowl (Leipoa ocellata)*. Adelaide: Department for Environment and Heritage.

Birdlife Australia. 2025. *Online Resources*. https://birdata.birdlife.org.au/bird-profiles/.

2025a. *Survey Techniques - 2-ha, 20 min Search*. https://birdata.birdlife.org.au/help/survey-techniques.

2025b. *Yellow-tailed Black Cockatoo*. https://birdlife.org.au/bird-profiles/yellow-tailed-black-cockatoo/.

Birds SA. 2025a. *Australasian Darter*. https://resources.birdssa.au/birddirectory/australasian-darter/.

2025b. *Great Crested Grebe*. https://resources.birdssa.au/birddirectory/great-crested-grebe/.

Burbidge, A., K. Casperson, and P. Fuller. 1987. *A biological survey of the Nullarbor region south and western australia in 1984*. Adelaide: D. J. Woolman Government Printer.

Corft, S., J. Pedler, and T. Milne. 2008a. *Bushhland Condition Monitoring Manual - Eyre Peninsula Region*. Adelaide: Nature Conservation of South Australia.

Corft, S., J. Pedler, and T. Milne. 2008b. *Bushland Condition Monitoring Manual - Southern Mt Lofty Ranges*. Adelaide: Nature Conservation of South Australia.

Croft, S., J. Pedler, and T. Milne. 2009. *Bushland Condition Monitoring Manual – Murray Darling Basin Region*. Adelaide: Nature Conservation Society of South Australia.

Croft, S., J. Pedler, and T. Milne. 2007. *Bushland Condition Monitoring Manual - Northern Agricultural and Yorke Peninsula Regions*. Adelaide: Nature Conservation Society of South Australia.

Cutten, J., and M. Hodder. 2002. "Scattered Tree Clearance Assessment in South Australia: Streamlining, Guidelines for Assessment and Rural Industry Extension." Adelaide.

DCCEEW. 2008a. *Approved Conservation Advice for Acacia menzelii (Menzel's Wattle)*. Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2013a. *Approved Conservation Advice for Olearia pannosa subsp. pannosa (silver daisy-bush)*. Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2008b. *Approved Conservation Advice for Prasophyllum pallidum (Pale Leek-orchid)*. Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2009. *Approved Conservation Advice for: Veronica derwentiana subsp. homalodonta (Mount Lofty Speedwell)*. Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2023b. *Conservation Advice for Aphelocephala leucopsis (Southern Whiteface)*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2024a. *Conservation Advice for Calidris acuminata (sharp-tailed sandpiper)*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2023c. *Conservation Advice for Calidris ferruginea (Curlew Sandpiper)*. Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2020. *Conservation Advice for Falco hypoleucos (Grey Falcon)*. Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2024b. *Conservation Advice for Gallinago hardwickii (Latham's snipe)*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2023f. *Conservation Advice for Isoodon obesulus obesulus (Southern Brown Bandicoot (Eastern))*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2024d. *Conservation Advice for Litoria raniformis (southern bell frog)*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2023d. *Conservation Advice for Melanodryas cucullata cucullata (hooded robin(South-eastern)*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2021b. *Conservation Advice for Nannoperca australis (Southern Pygmy Perch)*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2023e. *Conservation Advice for Neophema chrysostoma (blue-winged parrot)*. Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2013b. *Conservation Advice for Rostratula australis (Australian painted snipe)*. Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2023a. *Conservation Advice for Stagonopleura guttata (Diamond Firetail).* Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2024e. *Conservation Advice for Thelymitra matthewsii (spiral sun-orchid).* Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2024c. *Conservation Advice for Tringa nebularia (common greenshank).* Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2015. *Conservation Advice for Zoothera lunulata halmaturina (Bassian thrush (South Australian)).* Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2021c. *National Recovery Plan for the Clover Glycine (Glycine latrobeana).* Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2021a. *National Recovery Plan for the Grey-headed Flying-fox (Pteropus poliocephalus).* Canberra: Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2010. *National Recovery Plan for the Large-fruit Groundsel (senecio macrocarpus).* Canberra: The Department of Climate Change, Energy, the Environment and Water.

DCCEEW. 2011. *National Recovery Plan for the Regent Parrot (eastern subspecies) (Polytelis anthopeplus monarchoides).* Canberra: The Department of Climate Change, Energy, the Environment and Water.

2025a. *Protected Matters Search Tool.* Accessed July 9, 2025. https://pmst.environment.gov.au/#/map?lng=131.52832031250003&lat=-28.6905876542507&zoom=5&baseLayers=Imagery,ImageryLabels.

2025c. *Species Profile and Threats Database.* https://www.environment.gov.au/cgi-bin/sprat/public/sprat.pl.

2025b. *The Coorong, and Lakes Alexandrina and Albert Wetland.* Accessed September 10, 2025. https://www.environment.gov.au/cgi-bin/wetlands/ramsardetails.pl?refcode=25.

DEH. 2008b. *Adelaide and Mount Lofty Ranges Threatened Species Profile: Microeca fascinans fascinans, Jacky Winter.* Adelaide: Department of Environment and Heritage.

DEH. 2007. *Adelaide and Mount Lofty Ranges Threatened Species Profile: Porzana tabuensis (Spotless Crake).* Adelaide: Department for Environment and Heritage.

DEW. 2025a. *Biological Databases of South Australia (BDBSA) data extract: Recordset number DEWNRBDBSA250721-1.* Adelaide: Department for Environment and Water. Accessed July 21, 2025.

DEW. 2025b. *NatureMaps.* Department of Environment and Water. Accessed September 02, 2025. http://spatialwebapps.environment.sa.gov.au/naturemaps/?locale=en-us&viewer=naturemaps.

DEWHA. 2008. *Approved Conservation Advice for Aprasia pseudopulchella (Flinders Ranges Worm-lizard).* Canberra: Department of the Environment, Water, Heritage, and the Arts.

DEWR. 2007 . *EPBC Act Policy Statement 3.7: Peppermint Box (Eucalyptus odorata) Grassy Woodland of South Australia and Iron-grass Natural Temperate Grassland of South Australia.* Government of Australia, Department of the Environment and Water Resources: Canberra.

Garnett, S., J. Szabo, and G. Dutson. 2011. *The action plan for Australian birds 2010.* Collingwood, Victoria: CSIRO Publishing.

Higgins, P. 1999. *Handbook of Australian, New Zealand and Antarctic Birds. Volume 4: Parrots to Dollarbirds*. Melbourne: Oxford University Press.

Higgins, P., and J. Peter. 2002. *Handbook of Australian, New Zealand and Antarctic Birds'. Vol. 6. Pardalotes to Spangled Drongo*. Melbourne: Oxford University Press.

Higgins, P., and S. Davies. 1996. *Handbook of Australian, New Zealand and Antarctic Birds. Volume 3: Snipe to Pigeons*. Melbourne: Oxford University Press.

Jones, D. 2024. *Complete Guide to Native Orchids of Australia*. Wahroonga, NSW: New Holland Publishers.

Lyon, R.H. 1986. "The 20-minute search - a simple method for counting forest birds." *Corella, Volume 10(2)* 58-60.

Marchant, S., and P. Higgins. 1993. *Handbook of AUstralia, New Zealand and Antarctic Birds. Volume 2: Raptors to Lapwings*. Canberra: Oxford University Press.

Milne, T., and B. McCallum. 2012. *Bushland Condition Monitoring Manual – Benchmark Communities of Kangaroo*. Adelaide: Nature Conservation Society of South Australia.

Milne, T., and T. Croft. 2012. *Bushland Condition Monitoring Manual – Benchmark Communities of the South East*. Adelaide: Nature Conservation Society of South Australia.

Morcombe, M. 2021. *The Michael Morcombe eGuide to Australian Birds*. Brisbane: Steve Parish Publishing, in partnership with Birds Australia, on PDA Solutions.

Moritz, K., and D. Bickerton. 2010. *Recovery Plan for the Endangered Osborn's Eyebright Euphrasia collina subsp. osbornii*. Adelaide: Department for Environment and Heritage.

NVC. 2024a. *Bushland Assessment Manual*. Adelaide: Government of South Australia, Native Vegetation Council. https://cdn.environment.sa.gov.au/environment/docs/Native-Veg/Sept-2025-score-and-data-sheets/Bushland-Assessment-Manual_1-Sept-2024.pdf.

NVC. 2024b. *Guide for applications to clear native vegetation*. Adelaide: Native Vegetation Council.

Pizzey, G., and F. Knight. 2007. *The Field Guide to the Birds of Australia*. Pymble: HarperCollins Publishers.

TSSC. 2019. *Conservation Advice Botaurus poiciloptilus Australasian Bittern*. Canberra: Department of Climate Change, Energy, the Environment and Water.

TSSC. 2021. *Conservation Advice for Caladenia argocalla (White-beauty Spider-orchid)*. Canberra: Threatened Species Scientific Committee.

TSSC. 2016a. *Conservation Advice for Caladenia concolor (crimson spider orchid)*. Canberra: Threatened Species Scientific Committee.

TSSC. 2016b. *Conservation Advice for Galaxias rostratus (Flathead galaxias)*. Canberra: Threatened Species Scientific Committee.

Turner, J. 2012. *National Recovery Plan for the Irongrass Natural Temperate Grassland of South Australia ecological community 2012*. Adelaide: Department of Environment and Natural Resources, South Australia. http://www.environment.gov.au/biodiversity/threatened/recovery-plans/national-recovery-plan-iron-grass-natural-temperate-grassland-sa.

Umwelt. 2025. "Regulated and Significant Tree Report."

Umwelt. 2025. “Regulated and Significant Tree Report.”

Williams, N., M. Mcdonnell, G. Phelan, L. Keim, and R. Van Der Ree. 2006. “Range expansion due to urbanization: Increased food resources attract Grey-headed Flying-foxes (Pteropus poliocephalus) to Melbourne.” *Austral Ecology* 31 (2): 190-198.

Appendix 1

Flora Species List

Scientific Name	Common Name	Conservation Status		Declared	WoNS	Covered Under NV Act
		EPBC Act	NPW Act			
Acacia argyrophylla	Silver Mulga	-	-	-	-	✓
*Acacia baileyana**	Cootamundra Wattle	-	-	-	-	-
Acacia dealbata ssp. *dealbata**	Silver Wattle	-	-	-	-	-
*Acacia decurrens**	Black Wattle	-	-	-	-	-
*Acacia fimbriata**	Fringed Wattle	-	-	-	-	-
*Acacia iteaphylla**	Flinders Ranges Wattle	-	-	-	-	-
Acacia melanoxylon	Australian Blackwood	-	-	-	-	✓
Acacia paradoxa	Kangaroo Thorn	-	-	-	-	✓
Acacia pycnantha	Golden Wattle	-	-	-	-	✓
Acacia sp.	Wattle	-	-	-	-	✓
Agapanthus praecox ssp. *orientalis**	African Blue Lily	-	-	-	-	-
*Allium triquetrum**	Three-cornered Garlic	-	-	-	-	-
Allocasuarina muelleriana ssp.	Common Oak-bush	-	-	-	-	✓
Allocasuarina verticillata	Drooping Sheoak	-	-	-	-	✓
Amyema sp.	Mistletoe	-	-	-	-	✓
*Arctotheca calendula**	Cape Weed	-	-	-	-	-
*Araucaria heterophylla**	Norfolk Island Pine	-	-	-	-	-
*Asparagus asparagoides**	Bridal Creeper	-	-	✓	✓	-
Banksia marginata	Silver Banksia	-	-	-	-	✓
*Bromus diandrus**	Great Brome	-	-	-	-	-
Bromus sp.*	Brome	-	-	-	-	-
Bursaria spinosa ssp.	Bursaria	-	-	-	-	✓
Callistemon rugulosus	Scarlet Bottlebrush	-	-	-	-	✓
Callistemon sieberi	River Bottlebrush	-	-	-	-	✓
Callitris sp.	Cypress Pine	-	-	-	-	✓
Casuarinaceae sp.	Sheoak Family	-	-	-	-	-
*Cenchrus clandestinus**	Kikuyu	-	-	-	-	-
*Corymbia citriodora**	Lemon-scented Gum	-	-	-	-	-
*Corymbia maculata**	Spotted Gum	-	-	-	-	-
*Dactylis glomerata**	Cocksfoot	-	-	-	-	-
Dianella brevicaulis	Short-stem Flax-lily	-	-	-	-	✓
Dodonaea viscosa ssp.	Sticky Hop-bush	-	-	-	-	✓
*Eragrostis cilianensis**	Stink Grass	-	-	-	-	-
Eucalyptus camaldulensis ssp. *camaldulensis*	River Red Gum	-	-	-	-	✓
*Eucalyptus cladocalyx**	Sugar Gum	-	-	-	-	-
Eucalyptus fasciculosa	Pink Gum	-	R	-	-	✓
Eucalyptus leucoxylon ssp. *leucoxylon*	South Australian Blue Gum	-	-	-	-	✓

Scientific Name	Common Name	Conservation Status		Declared	WoNS	Covered Under NV Act
		EPBC Act	NPW Act			
Eucalyptus sideroxylon ssp. *sideroxylon**	Red Ironbark	-	-	-	-	-
Eucalyptus sp.	Eucalyptus	-	-	-	-	✓
Eucalyptus viminalis ssp. *cygnetensis*	Rough-bark Manna Gum	-	-	-	-	✓
Exocarpos cupressiformis	Native Cherry	-	-	-	-	✓
*Fraxinus angustifolia**	Desert Ash	-	-	✓	-	-
Fumaria sp.*	Fumitory	-	-	-	-	-
*Galium aparine**	Cleavers	-	-	-	-	-
*Geranium molle**	Soft Geranium	-	-	-	-	-
*Hedera helix**	English Ivy	-	-	-	-	-
*Hordeum leporinum**	Wall Barley-grass	-	-	-	-	-
Juncus sp.	Rush	-	-	-	-	✓
*Laurus nobilis**	Bay Laurel	-	-	-	-	-
*Lactuca serriola f.**	Prickly Lettuce	-	-	-	-	-
Lomandra multiflora ssp.	Many-flower Mat-rush	-	-	-	-	✓
Melaleuca lanceolata	Dryland Tea-tree	-	-	-	-	✓
Moraea sp.*	Cape Tulip	-	-	-	-	-
Olea europaea ssp.*	Olive	-	-	✓	-	-
*Onopordum acanthium**	Scotch Thistle	-	-	-	-	-
*Oxalis pes-caprae**	Soursob	-	-	-	-	-
*Phalaris aquatica**	Phalaris	-	-	-	-	-
Plantago coronopus ssp.*	Bucks-horn Plantain	-	-	-	-	-
Plantago lanceolata var.*	Ribwort	-	-	-	-	-
*Poa annua**	Winter Grass	-	-	-	-	-
*Pittosporum crassifolium**	Karo	-	-	-	-	-
*Reichardia tingitana**	False Sowthistle	-	-	-	-	-
Romulea rosea var. *australis**	Common Onion-grass	-	-	-	-	-
*Rumex crispus**	Curled Dock	-	-	-	-	-
Rytidosperma sp.	Wallaby-grass	-	-	-	-	✓
*Solanum nigrum**	Black Nightshade	-	-	-	-	-
*Sonchus oleraceus**	Common Sow-thistle	-	-	-	-	-
*Trifolium angustifolium**	Narrow-leaf Clover	-	-	-	-	-
Typha sp.	Bulrush	-	-	-	-	✓
*Ulex europaeus**	Gorse	-	-	✓	✓	-
*Urtica urens**	Small Nettle	-	-	-	-	-
*Zantedeschia aethiopica**	White Arum Lily	-	-	✓	-	-

Conservation Codes

EPBC Act: *Environment Protection and Biodiversity Conservation Act 1999*. **NPW Act**: *National Parks and Wildlife Act 1972*. **WoNS**: Weeds of National Significance. **NV Act**: *Native Vegetation Act 1991*.

Conservation Status

R = Rare.

Note: *Indicates introduced species (includes Australian species which are not locally native to the area).

Appendix 2

Fauna Species List

Scientific Name	Common Name	Conservation Status	
		EPBC Act	NPW Act
AVES			
Anas gracilis gracilis	Grey Teal	-	-
Anas superciliosa	Pacific Black Duck	-	-
Anthochaera carunculata	Red Wattlebird	-	-
Aquila audax audax	Wedge-tailed Eagle	-	-
Cacatua galerita	Sulphur-crested Cockatoo	-	-
Cacatua sanguinea gymnopis	Little Corella	-	-
Chenonetta jubata	Australian Wood Duck	-	-
Colluricincla harmonica	Grey Shrikethrush	-	-
*Columba livia**	Rock Dove	-	-
Corvus coronoides	Australian Raven	-	-
Corvus mellori	Little Raven	-	-
Corvus sp.	Raven	-	-
Dacelo novaeguineae	Kookaburra	-	-
Egretta novaehollandiae	White-faced Heron	-	-
Elanus axillaris	Black Shouldered Kite	-	-
Eolophus roseicapilla	Galah	-	-
Falco cenchroides cenchroides	Nankeen Kestrel	-	-
Falcunculus frontatus frontatus	Eastern Shriketit	-	R
Gallinula tenebrosa	Dusky Moorhen	-	-
Gavicalis virescens	Singing Honeyeater	-	-
Glossopsitta concinna	Musk Lorikeet	-	-
Grallina cyanoleuca	Magpielark	-	-
Gymnorhina tibicen	Australian Magpie	-	-
Hirundo neoxena neoxena	Welcome Swallow	-	-
Malurus cyaneus leggei	Superb Fairywren	-	-
Manorina melanocephala	Noisy Miner	-	-
Pardalotus striatus	Striated Pardalote	-	-
Phylidonyris novaehollandiae	New Holland Honeyeater	-	-
Platycercus elegans	Crimson Rosella	-	-
Ptilotula penicillata	White-plumed Honeyeater	-	-
Rhipidura leucophrys leucophrys	Willie Wagtail	-	-
Sericornis frontalis	White-browed Scrubwren	-	-
Smicrornis brevirostris	Weebill	-	-
Strepera versicolor	Grey Currawong	-	-
Threskiornis molucca	Australian White Ibis	-	-
Trichoglossus moluccanus	Rainbow Lorikeet	-	-
*Turdus merula**	Common Blackbird	-	-
Zanda funerea whiteae	Yellow-tailed Black Cockatoo	-	R
Zosterops lateralis	Silvereye	-	-
MAMMALIA			

Scientific Name	Common Name	Conservation Status	
		EPBC Act	NPW Act
Phascolarctos cinereus	Koala	-	-
Macropus fuliginosus	Western Grey Kangaroo	-	-

Conservation Codes

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

Conservation Status

R = Rare.

Note: *Indicates introduced species.

Appendix 3

Threatened Flora Likelihood Assessment

umwelt

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
Acacia menzelii	Menzel's Wattle	VU	V	May	Menzel's Wattle is endemic to South Australia, with scattered populations from the northern Flinders Ranges to Murray Bridge. The species grows on gentle slopes and undulating plains in calcareous loamy earths, where the average annual rainfall is 350–400 mm. It occurs as scattered shrubs in low open shrubby woodland on more rocky sites which have only been partly cleared or along roadsides (DCCEEW 2008a).	**Unlikely** - No records and this species would have been detectable during the surveys.
Caladenia argocalla	White-beauty Spider-orchid	EN	E	May	The White-beauty Spider-orchid grows in a diversity of Eucalyptus woodland communities, usually containing Yellow Box. The species generally grows on gentle hill slopes, often with a southerly aspect. Soils are typically clay loams with high humus content in the surface layer (TSSC 2021).	**Unlikely** - No records and Project Area is largely degraded and unsuitable for this species.
Caladenia colorata	Coloured Spider-orchid	EN	E	May	S.A. (Murray region, SE), Vic. (Little Desert in Wimmera); 50–150 m altitude. Highly localised and rare; growing in mallee/broom bush shrubland, Callitris and sheoak woodland in freely draining sand; also in mixed yellow gum and mallee woodland (Jones 2024).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.
Caladenia concolor	Crimson Spider-orchid	VU	-	May	The Crimson Spider-orchid can be found on grassy or heathy open woodlands, on well drained, gravely sand and clay loams. It also occurs within dry eucalypt forests, heathlands, closed scrubs and grasslands (TSSC 2016a).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.
Caladenia leptochila ssp. leptochila	Narrow-lip Spider-orchid	-	R	2014	S.A. (Mt Lofty Ranges, Fleurieu Peninsula); 250–450 m altitude. Locally common on ridges and slopes; growing in shrubby forest, in freely draining clay and gravelly loam (Jones 2024).	**Unlikely** - Record within the last 20 years. Sloping sections to the north of the Project Area may provide habitat. Although the understorey is degraded and dominated by weeds and subject to intense grazing pressure.
Caladenia rigida	Stiff White Spider-orchid	EN	E	May	S.A. (S Mt Lofty Ranges); 200–500 m altitude. Once common, but now highly localised and known from very few sites; growing among shrubs and grass trees on ridges and slopes in open forest dominated by yellow	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					gum and long-leaved box in freely draining, sandy loam (Jones 2024).	
Caladenia tensa	Greencomb Spider-orchid	EN	-	Likely	The Greencomb Spider-orchid occurs in aeolian sand deposits in Native Pine, Blue Gum Woodland and Broombush mallee in Murray-Darling Depression bioregion. Winter active geophyte, with long narrow leaf emerging, followed by 1-2 flowers (DCCEEW 2025c).	**Unlikely** - No records and Project Area outside the distribution for this species.
Deyeuxia densa	Heath Bent-grass	-	R	2014	Endemic. Occurs from within a few kms of the N.S.W. border in eastern Vic. to Kangaroo Is., S.A. Fringing the coast in Tas., but apparently rare in the north. On the mainland, commonly in heaths, sedgelands and on stream banks in damp, open to lightly shaded sites, often near the coast. In rocky sites at higher altitudes in the Grampians, Vic., where often more robust than lowland occurrences.	**Possible** - Record within the last 20 years, although no suitable habitat within the Project Area.
Echinopogon ovatus	Rough-beard Grass	-	R	2014	Flinders Ranges, Northern Lofty, Southern Lofty, Kangaroo Island, South-eastern. Widespread in wet sclerophyll woodland and by creeks (ALA 2025).	**Possible** - Record within the last 20 years, although no suitable habitat within the Project Area.
Eucalyptus fasciculosa	Pink Gum	-	R	2015	Pink Gums are mainly found in SA, on Kangaroo Island, southern Mount Lofty Ranges and the South-east, growing on well-drained sandy soils of low fertility. Also found in Victoria (ALA 2025a).	**Known** - This species was observed within the Project Area.
Eucalyptus viminalis ssp. viminalis	Manna Gum	-	R	2015	The Manna Gum is found in the southern Mount Lofty Ranges in SA, growing in high rainfall areas on well-drained soils in open forest vegetation. Also found in New South Wales, Victoria and Tasmania (ALA 2025b).	**Possible** - Recent records within the Search Area, however the field survey did not record this large tree
Euphrasia collina ssp. osbornii	Osborn's Eyebright	EN	E	May	There are specific habitat types that appear to be preferred by the Osborn's Eyebright which includes open eucalyptus woodland, coastal cliffs and inland swamps. Even though these habitats vary greatly, they have two features in common; they are relatively moist and relatively open (Moritz and Bickerton 2010).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.
Glycine latrobeana	Clover Glycine	VU	V	Likely	Clover Glycine is found across south-eastern Australia in native grasslands, dry sclerophyll forests, woodlands	**Unlikely** - No records and Project Area does not contain

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					and low open woodlands with a grassy ground layer. Soils generally have a sandy component being either sand or loamy sand but Clover Glycine has also been found on clay soils. Soils with Clover Glycine populations in Tasmania are generally well draining, however the associated soils in South Australia are reported to have water retaining capacity (DCCEEW 2021c).	any suitable habitat for this species.
Olearia pannosa ssp. pannosa	Silver Daisy-bush	VU	V	Likely	The Silver Daisy-bush occurs in sandy, flat areas and in hilly, rocky areas in woodland or mallee. Hilly area soil types include hard pedal mottled-yellow duplex and hard pedal red duplex (DCCEEW 2013a).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.
Prasophyllum pallidum	Pale Leek-orchid	VU	R	Likely	The Pale Leek-orchid is known singly or in groups in better soils of woodland and grassy open forest. Recorded in woodlands and forests dominated by Eucalypts species and Drooping Sheoak (DCCEEW 2008b).	**Unlikely** - Record within the last 5 years. However, Project Area is largely degraded and subject to intense grazing pressure.
Prasophyllum pruinosum	Plum Leek-orchid	EN	E	May	S.A. (Mt Lofty Ranges); 250–450 m altitude. Once common, but now localised and rare; found growing in woodland in freely draining loam and alluvial soil (Jones 2024).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.
Ptilotus erubescens	Hairy-tails	-	R	2014	Hairy-tails are found mainly in the southern Flinders Ranges and Mount Lofty Ranges in SA with an isolated destruction near Bordertown, growing fertile soil in grassy woodland. Also found in New South Wales and Victoria (ALA 2025c).	**Possible** - Record within the last 5 years. Project Area largely degraded.
Senecio macrocarpus	Large-fruit Fireweed	VU	V	May	The Large-fruit Fireweed occurs most commonly in depressions in low lying closed sedgeland but may occur in sedgeland, herb land, low shrubland to low open woodland where competition from understory plants is low. The soils range from clay to loamy sand. (DCCEEW 2010).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species. Understorey is dominated by exotic species which compete with this species.

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
Senecio pinnatifolius var. pinnatifolius	Coast Groundsel	-	R	2014	Occurs from near Onslow, Western Australia, around southern Australia, excluding the region of the Great Australian Bight, to Shoalwater Bay, Queensland, mostly within 400 km of the coast. Grows in a range of environments, including dry hills and coastal dunes, in forest, woodland and scrubland.	**Possible** - Record within the last 20 years. Suitable habitat may exist for this species.
Thelymitra aristata	Great Sun-orchid	-	E	2012	S.A. (rare, confined to SE), N.S.W. (far SE). Widespread and locally common; found growing in open forest, woodland, heathy forest, heathland, buttongrass moorland and around swamp margins in freely draining to moist, sandy, peaty and clay soil; occurs less commonly in dense, winter-wet swamps with the plants in standing water (Jones 2024).	**Unlikely** - Based on the BDBSA taxonomy this species is now extinct.
Thelymitra batesii	Bates Sun-orchid	-	R	2010	S.A. (N Lofty Region, S Lofty Region); 300–600 m altitude. Widespread and locally common in hilly country; found growing in heathy forest in freely draining, sandy or gravelly clay loam (Jones 2024).	**Unlikely** - Record within the last 20 years. Understorey is dominated by exotic species which compete with this species and Project Area subject to intense grazing regime
Thelymitra epipactoides	Metallic Sun-orchid	EN	E	May	The Metallic Sun-orchid is found primarily in mesic coastal heathlands, grasslands and woodlands, but may also be found in drier inland heathlands, open forests and woodlands. The species occurs across south-eastern Australia from the Eyre Peninsula in SA to East Gippsland west of Bairnsdale in Victoria. Formerly, the species was also found in the Mount Lofty ranges, although the species is considered extinct in this area (DCCEEW 2024e).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species. Understorey is dominated by exotic species which compete with this species and Project Area subject to intense grazing regime.
Thelymitra grandiflora	Great Sun-orchid	-	R	2014	S.A. (S Flinders Ranges, Mt Lofty Ranges, SE, Kangaroo Island where it's now very rare or extinct); 5–600 m altitude. Locally common; found growing in open forest, shrubland and heathland, often on rocky slopes and ridges in hard clay or freely draining, gravelly soil (Jones 2024).	**Unlikely** - Record within the last 20 years. Suitable habitat may exist for this species. Understorey is dominated by exotic species which compete with this species and Project

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
						Area subject to intense grazing regime
Thelymitra ixioides	Spotted Sun-orchid	-	E	2014	Found in the southern Mount Lofty Ranges and the lower South-east in South Australia, growing in woodland or swampy ground (Jones 2024).	**Unlikely** - Based on the BDBSA taxonomy this species is now extinct.
Thelymitra matthewsii	Spiral Sun-orchid	EN	E	Likely	Little is known of the specific habitat requirements of the Spiral Sun-orchid. It grows in heathy open forest and woodlands, on well-drained sand, gravel and clay loam soils, especially areas where there has been some soil disturbance, such as around old quarries and gravel pits, and on road and track verges, including those periodically slashed for fire breaks. Most sites tend to have a relatively open ground layer (DCCEEW 2024e).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.
Veronica derwentiana ssp. homalodonta	Mount Lofty Speedwell	CE	E	Likely	The Mount Lofty Speedwell has restricted habitat requirements for high moisture, with excellent drainage and a high light requirement. On creek lines, the subspecies typically occurs above the waterline where there is a gap in the tree canopy or where rocky outcrops create high light conditions with good drainage. The Mount Lofty Speedwell has been recorded from Woolly Tea Tree closed shrubland and rocky gully banks. The majority of records for the species are from Stringybark forests with or without additional overstorey species such as Eucalyptus species. Associated species include Blackthorn, Golden Wattle, Myrtle Wattle, and Native Cherry. Soil types are acidic siliceous sands to coarse-grained quartz rich sands in high rainfall areas (DCCEEW 2009).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.

Appendix 4

Threatened Fauna Likelihood Assessment

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
BIRDS						
Actitis hypoleucos	Common Sandpiper	Mi (W)	R	2015/Likely	The Common Sandpiper can be found in varied coastal and interior wetlands like narrow muddy edges of billabongs, river pools, mangroves, among rocks reefs and rocky beaches (Morcombe 2021). The habitat of the species includes is banks, rocks and sandy beaches near water. Found in coastal or inland wetlands, both saline or fresh (Birdlife Australia 2025).	**Possible** - Record within the last 10 years no suitable habitat within the Project Area
Anhinga novaehollandiae novaehollandiae	Australasian Darter	-	R	2024	Darters are moderately common in the north-east and especially along the River Murray, they are rare elsewhere. They are mainly to be found in still, shallow inland waters but also in slow flowing rivers, swamps and reservoirs (Birds SA 2025a).	**Likely** - Very recent record and species may utilise the dam as habitat
Aphelocephala leucopsis	Southern Whiteface	VU	-	Likely	The Southern Whiteface occur across most of mainland Australia south of the tropics. The species live in a wide range of open woodlands and shrublands where there is an understory of grasses or shrubs, or both. These areas are usually in habitats dominated by acacias or eucalypts on ranges, foothills and lowlands, and plains (DCCEEW 2023b).	**Unlikely** - No records, species was not observed during any of the field surveys
Apus pacificus	Fork-tailed Swift	Mi (M)	-	Likely	In South Australia the Fork-tailed Swift is widespread from the Victorian border west to the Spencer Gulf. It is also common in coastal parts of Eyre Peninsula as far west as Franklin Island, off Streaky Bay and north to 32° S. There have been a few recently published records beyond these bounds, such as in Flinders Ranges and the Lake Eyre Drainage Basin from Billa Kallina Station, Lake Eyre South and Marree. Sightings have also been recorded north to Moorayepe and east to Innamincka and Moomba (Higgins, Handbook of Australian, New Zealand and Antarctic Birds. Volume 4: Parrots to Dollarbirds 1999). They mostly occur over dry or open habitats, including riparian woodland and tea-tree swamps, low scrub, heathland or saltmarsh. They are also found at treeless grassland and sandplains covered with spinifex, open farmland and inland and coastal sand-dunes. The sometimes occur above rainforests, wet sclerophyll forest or open forest or plantations of pines (Higgins, Handbook of Australian, New Zealand and Antarctic Birds. Volume 4: Parrots to Dollarbirds 1999).	**Possible** - No records, suitable habitat exists within the Project Area (riparian woodland and pine plantation)

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
Ardea intermedia plumifera	Plumed Egret	-	R	2012	The plumed egret is found in Australasia and breeds in eastern Indonesia, Timor-Leste, New Guinea and Australia, with vagrants occurring in New Zealand and the Solomon Islands. This species is found in the shallow water at the edges of freshwater wetlands and the intertidal zone (ALA 2025f).	**Possible** - Records within the last 20 years. Unsuitable habitat.
Biziura lobata menziesi	Musk Duck	-	R	2023	Species occur around Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria. Musk Ducks have been observed on ephemeral wetlands on the Nullarbor after major flooding, but never in large numbers (Burbidge, Casperson and Fuller 1987). They also occur on, and forage in, marine habitats and have been observed in small flocks on the coast of the Nullarbor (Australian Museum 2024d).	**Possible** - Record within the last 10 years no suitable habitat within the Project Area
Botaurus poiciloptilus	Australasian Bittern	EN	E	Known	The Australasian Bittern is found mainly in freshwater wetlands and, rarely, in estuaries or tidal wetlands, favouring wetlands dominated by sedges, rushes and reeds growing over a muddy or peaty substrate. It favours wetlands with tall dense vegetation, where it forages in still and shallow water, often at the edges of pools or waterways, or from platforms or mats of vegetation over deep water. It also favours permanent and seasonal freshwater habitats, particularly those dominated by sedges, rushes and reeds or cutting grass growing over a muddy or peaty substrate (TSSC 2019).	**Unlikely** - No records and survey effort considered adequate
Calidris acuminata	Sharp-tailed Sandpiper	VU, Mi (W)		May	Sharp-tailed sandpipers occur within all states of Australia. They are found mostly in the south-east and are widespread in both inland and coastal locations. The species also occurs in both freshwater and saline habitats. The species is widely but sparsely scattered inland. Sharp-tailed sandpipers are considered widespread in the eastern half of South Australia and may be found as far north as Lake Eyre (DCCEEW 2024a).	**Unlikely** - No records and survey effort considered adequate
Calidris ferruginea	Curlew Sandpiper	CE, Mi (W)	E	May	The Curlew Sandpiper mainly occur on intertidal mudflats in sheltered coastal areas, such as estuaries, bays, inlets and lagoons, and also around non-tidal swamps, lakes and lagoons near the coast, and ponds in saltworks and sewage farms. They	**Unlikely** - No records and survey effort considered adequate

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					occur in both fresh and brackish waters. Occasionally they are recorded around floodwater (DCCEEW 2023c).	
Calidris melanotos	Pectoral Sandpiper	Mi (W)	R	May	The Pectoral Sandpiper shallow fresh to saline wetlands ranging from coastal lagoons, estuaries, bays, swamps, lakes, inundated grasslands, saltmarshes, river pools, creeks, floodplains, and artificial wetlands (DCCEEW 2025c).	**Unlikely** - No records and survey effort considered adequate
Calidris subminuta	Long-toed Stint	-	R	2014	In Australia, the Long-toed Stint occurs in a variety of terrestrial wetlands. They prefer shallow freshwater or brackish wetlands including lakes, swamps, river floodplains, streams, lagoons and sewage ponds. The species is also fond of areas of muddy shoreline, growths of short grass, weeds, sedges, low or floating aquatic vegetation, reeds, rushes and occasionally stunted samphire. It has also been observed at open, less vegetated shores of larger lakes and ponds and is common on muddy fringes of drying ephemeral lakes and swamps. The Long-toed Stint also frequents permanent wetlands such as reservoirs and artificial lakes. They are uncommon, but not unknown, at tidal estuaries, saline lakes, saltponds and bore swamps (Higgins and Davies 1996).	**Possible** - Records within the last 20 years. May utilise dam, creek and pond within the Project Area.
Cereopsis novaehollandiae novaehollandiae	Cape Barren Goose	-	R	2009	The Cape Barren Goose (south-western) occurs on offshore islands and rocks, and at adjacent sites on the mainland. It inhabits grasslands and low fields of succulent herbs (comprised of Carpobrotus sp.), and occasionally occurs in open areas in taller and denser vegetation (although islands that are covered by woodlands or thickets support few birds). The bird has also been recorded on beaches, and near lakes and freshwater 'soaks', on the mainland (Australian Museum 2024c).	**Possible** - Records within the last 20 years. Habitat in the Project Area is not intact.
Cladorhynchus leucocephalus	Banded Stilt	-	V	2013	Banded Stilts are endemic to Australia, mainly in the south and inland. Banded Stilts are found mainly in saline and hypersaline (very salty) waters of the inland and coast, typically large, open and shallow (Australian Museum 2024b).	**Possible** - Records within the last 20 years. Habitat in the Project Area is not intact.
Corcorax melanorhamphos	White-winged Chough	-	R	2021	White-winged Choughs are found in open forests and woodlands. They tend to prefer the wetter areas, with lots of leaf-litter, for feeding, and available mud for nest building (Birdlife Australia 2025).	**Possible** - Record within the 10 years, habitat large disturbed and small

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
						pockets of woodland exist.
Coturnix ypsilophora australis	Brown Quail	-	V	2012	Found across northern and eastern Australia, from the Kimberley region in WA to VIC and TAS, as well as in south-western Australia. Cryptic species that occurs in dense crops (especially oats), irrigated pastures, rank grasslands and sedgelands, especially where native species predominate, and often bordering swamps (G. Carpenter pers. comm.). Prefers dense grasslands, often on the edges of open forests and bracken.	**Possible** - Records within the last 20 years. Habitat in the Project Area is not intact and disturbed.
Egretta garzetta nigripes	Little Egret	-	R	2012	The little Egret inhabits wetlands, both fresh and marine, Usually forages in shallows of open waters like swamps, billabongs, floodplain pools, mudflats and mangroves channels (Morcombe 2021).	**Possible** - Records within the last 20 years. Habitat in the Project Area is not intact and disturbed.
Falco hypoleucos	Grey Falcon	VU	V	Likely	The Grey Falcon occurs in arid and semi-arid Australia. The species is mainly found where annual rainfall is less than 500 mm, except when wet years are followed by drought, when the species might become marginally more widespread, although it is essentially confined to the arid and semi-arid zones at all times. The species frequents timbered lowland plains, particularly acacia shrublands that are crossed by tree-lined water courses. The species has been observed hunting in treeless areas and frequents tussock grassland and open woodland, especially in winter (DCCEEW 2020).	**Unlikely** - No records and survey effort considered adequate
Falco peregrinus macropus	Peregrine Falcon	-	R	2022	The Peregrine Falcon is found in most habitats, from rainforests to the arid zone, and at most altitudes, from the coast to alpine areas. Sparsely distributed in SA, with most records in Red Gum woodlands (especially near water), in gorges with rock faces and along coastal cliffs (Birdlife Australia 2025).	**Likely** - Recent records and large scattered red gum trees throughout Project Area.

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
Falcunculus frontatus frontatus	Eastern Shriketit	-	R	2024	The Eastern Shriketit occurs predominantly in Eucalypt woodlands and forests. This species has a predilection for Eucalypts with decorticating bark, their preferred foraging substrate, however they will occupy a wide range of woodland/forest communities, including those dominated by stringybarks (Birdlife Australia 2025).	**Known** - Observed during field survey
Gallinago hardwickii	Latham's Snipe	VU, Mi (W)	R	2024/Known	The Latham's Snipe usually inhabit open, freshwater wetlands with low, dense vegetation. However, they can also occur in habitat with saline or brackish water, in modified or artificial wetlands, and in areas located close to humans or human activity. Smaller numbers inhabit drier habitat, including open woodlands and high-altitude grasslands or herblands, usually those being in proximity to surface water (DCCEEW 2024b).	**Likely** - Recent records and suitable habitat within the Project Area, although this species was not observed during any bird surveys.
Grantiella picta	Painted Honeyeater	VU	V	Likely	The Painted Honeyeater is dependent on mistletoe berries (Morcombe 2021) and is found in dry open forests and woodlands and is strongly associated with mistletoe. It may also be found along rivers, on plains with scattered trees and on farmland with remnant vegetation. It has been seen in urban parks and gardens where large eucalypts are available (Birdlife Australia 2025).	**Unlikely** - No historical records and species not observed during any of the bird surveys.
Haematopus fuliginosus fuliginosus	Sooty Oystercatcher	-	R	2009	The Sooty Oystercatcher is endemic to Australia and is widespread in coastal eastern, southern and western Australia. The Sooty Oystercatcher is strictly coastal, usually within 50 m of the ocean. It prefers rocky shores, but will be seen on coral reefs or sandy beaches near mudflats (Marchant and Higgins 1993). It Haematopus fuliginosus breeds on offshore islands and isolated rocky headlands. Mostly resident and territorial, moving to islands to breed.	**Possible** - Record within the last 20 years. However, habitat within Project is not suitable.
Haematopus longirostris	Pied Oystercatcher	-	R	2002	The Australian Pied Oystercatcher occurs along most Australian coasts except in unbroken stretches of cliffs, such as sections of the Great Australian Bight. The Australian Pied Oystercatcher inhabits mudflats, sandbanks, sandy ocean beaches, and less often along rocky or shingle coasts. It is seldom recorded far from the coast (Birdlife Australia 2025).	**Possible** - Record within the last 20 years. However, habitat within Project is not suitable.
Hieraaetus morphnoides	Little Eagle	-	V	2016	The Little Eagle is endemic to Australia and is distributed throughout the mainland. Typical habitat for the Little Eagle	**Likely** - Records within 10 years and suitable habitat

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					includes woodland or open forest. Higher abundance of the species is associated with hillsides where there is a mosaic of wooded and open areas such as riparian woodlands, forest margins and wooded farmland. Little Eagles usually avoid large areas of dense forest, preferring to hunt in open woodland, where the birds use trees for lookouts (Marchant and Higgins 1993).	exists within the Project Area (open wooded farmland).
Hirundapus caudacutus	White-throated Needletail	VU, Mi (T)	V	Likely	In Australia, the White-throated Needletail is mostly aerial, from heights of less than 1 m up to more than 1000 m above the ground. Although they occur over most types of habitats, they are recorded most often above wooded areas, including open forest and rainforest, and may also fly below the canopy between trees or in clearings. When flying above farmland, they are more often recorded above partly cleared pasture, plantations or remnant vegetation at the edge of paddocks (DCCEEW 2025c).	**Unlikely** - No recent records, survey effort considered adequate to identify this species.
Ixobrychus dubius	Black-backed Bittern (Australian Little Bittern)	-	E	2006	Black Bitterns are found in coastal south-western, northern and eastern Australia south to far eastern Victoria. The Black Bittern inhabits both terrestrial and estuarine wetlands, generally in areas of permanent water and dense vegetation. Where permanent water is present, this species may occur in flooded grassland, forest, woodland, rainforest and mangroves (Marchant and Higgins 1993).	**Possible** - Record within the last 20 years. However, habitat within Project is not suitable.
Leipoa ocellata	Malleefowl	VU	V	Likely	The Malleefowl is found in semi-arid to arid shrublands and low woodlands, especially those dominated by mallee and/or acacias. A sandy substrate and abundance of leaf litter are required for breeding. Densities of the birds are generally greatest in areas of higher rainfall and on more fertile soils where habitats tend to be thicker and there is an abundance of food plants (Benshemesh 2007).	**Unlikely** - No recent records and no suitable habitat within the Project Area.
Lewinia pectoralis pectoralis	Lewin's Rail	-	V	2006	The Lewin's Rail (western) is extinct, but formerly occurred in far south-west Western Australia, from Margaret River to Albany, and inland to Bridgetown (Marchant and Higgins 1993). It was last recorded in 1932. The Lewin's Rail (western) inhabited swamps. Other subspecies inhabit dense fringing or emergent vegetation of various permanent or ephemeral wetlands with fresh, brackish or saline water (Marchant and	**Possible** - Record within the last 20 years. However, habitat within Project Area is not suitable.

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					Higgins 1993). Some also occasionally occur away from wetlands, such as grasslands, or in the undergrowth below coastal scrub.	
Limosa lapponica baueri	Nunivak Bar-tailed Godwit	EN, Mi (W)	R	May	In Australia, L. l. baueri mainly occur along the north and east coasts (Garnett, Szabo and Dutson 2011). In South Australia it has mostly been recorded around coasts from Lake Alexandrina to Denial Bay (Higgins and Davies 1996). The bar-tailed godwit (western Alaskan) occurs mainly in coastal habitats such as large intertidal sandflats, banks, mudflats, estuaries, inlets, harbours, coastal lagoons and bays. It has also been recorded in coastal sewage farms and saltworks, saltlakes and brackish wetlands near coasts, sandy ocean beaches, rock platforms, and coral reef-flats (Higgins and Davies 1996).	**Unlikely** – No recent records and no suitable habitat within the Project Area.
Melanodryas cucullata cucullata	South-eastern Hooded Robin	EN	R	Likely	The Hooded Robin prefers dry eucalypt and acacia woodlands and shrublands with an open understory, some grassy areas and a complex ground layer. They avoid woodlands with tall trees or dense trees but sometimes occur in tall, dense heaths with scattered open areas. While they can occur in patches as small as 2.9 ha, in agricultural landscapes they prefer larger patches greater than 10 ha with moderately deep to deep soils (DCCEEW 2023d).	**Possible** - No records but habitat within the Project Area may be suited for this species.
Microeca fascinans fascinans	Jacky Winter	-	R	2014	The Jacky Winter prefers open woodland (Eucalypt and mallee) with an open shrub layer and bare ground. Often seen in farmland and parks (DEH 2008b).	**Likely** - Records within the last 20 years and suitable open woodland within Project Area
Motacilla cinerea	Grey Wagtail	Mi (T)	-	May	The Grey Wagtail is a European and Asian species that Migrates south in winter, usually to Indonesia and NG. Rarely reaches Australia, but when it does, favours habitat near freshwater streams, also mown grass, ploughed land or near sewage ponds (Morcombe 2021).	**Unlikely** - No recent records and no suitable habitat within the Project Area.
Motacilla flava	Yellow Wagtail	Mi (T)	-	May	The Yellow Wagtail prefers open country near swamps, salt marshes, sewage ponds, grassed surrounds to airfields, bare ground. Occasionally on drier inland plans (Morcombe 2021).	**Unlikely** - No recent records and no suitable habitat within the Project Area.

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
Myiagra inquieta	Restless Flycatcher	-	R	2013	The Restless Flycatcher is found in open forests and woodlands and is frequently seen in farmland (Birdlife Australia 2025). Occupies open forests, woodlands and mallee, inland coastal scrubs (Pizzey and Knight 2007).	**Possible** - Records within the last 20 years and suitable open woodland within Project Area
Neophema chrysostoma	Blue-winged Parrot	VU	V	Known	The Blue-winged Parrot inhabits a range of habitats from coastal, sub-coastal and inland areas, through to semi-arid zones. They tend to favour grasslands and grassy woodlands and are often found near wetlands both near the coast and in semi-arid zones. The species can also be seen in altered environments such as airfields, golf courses and paddocks (DCCEEW 2023e).	**Unlikely** - No historical records and species not observed during any of the bird surveys.
Neophema elegans elegans	Elegant Parrot	-	R	2024	The Elegant Parrot can be found in a wide variety of habitats, including grasslands, shrublands, mallee, woodlands and thickets, bluebush plains, heathlands, saltmarsh and farmland (Birdlife Australia 2025).	**Likely** - Very recent record and suitable habitat within the Project Area
Neophema petrophila zietzi	Rock Parrot	-	R	2010	The Rock Parrot lives on the rocky coastline of south and west Australia. There are two major populations, in the east along the coast from Kingston to Ceduna in South Australia and in Western Australia from Cape Arid National Park to Geraldton. The Rock Parrot is restricted to coastlines and offshore rocky islands, frequenting windswept coastal dunes, mangroves, saline swamps and rocky islets. It is seldom seen more than a few hundred metres from the sea.	**Possible** – Record within the last 10 years although no suitable habitat within the Project Area.
Oxyura australis	Blue-billed Duck	-	R	2024	Blue-billed Ducks are secretive, preferring stable, deep, fresh well-vegetated wetlands for much of the year, particularly for breeding. These swamps often contain rushes or sedges, but lignum *Muehlenbeckia* spp. or Melaleuca swamps are also used. In winter, flocks congregate on large, open, fresh to saline wetlands, including artificial areas such as sewage ponds when local populations may be supplemented by influxes of other birds, which may consist of largely juvenile and immature birds. Occasionally large flocks have been observed during summer (A. Corrick pers. comm.).	**Possible** - Very recent record. However. No suitable habitat within the Project Area, bird surveys adequate to detect this species if present.
Pandion haliaetus	Osprey	Mi (W)	E	May	The breeding range of the Eastern Osprey extends around the northern coast of Australia (including many offshore islands) from Albany in Western Australia to Lake Macquarie in NSW;	**Unlikely** - No historical records and species not observed during any of the

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					with a second isolated breeding population on the coast of South Australia, extending from Head of Bight east to Cape Spencer and Kangaroo Island (Marchant and Higgins 1993). Eastern Ospreys occur in littoral and coastal habitats and terrestrial wetlands of tropical and temperate Australia and offshore islands.	bird surveys and no suitable habitat
Petroica boodang boodang	Scarlet Robin	-	R	2010	The Scarlet Robin occurs predominantly in Eucalypt woodlands and forests. Good leaf litter, perches in height range 1-2 m, and fallen logs are important components of habitat. Within the Mount Lofty Ranges, the preferred broad vegetation groups are Grassy Woodland, Heathy Woodland, and Heathy Forest. The species forage extensively on Manna Gum, due to support high invertebrate abundance (Higgins and Peter 2002).	**Likely** - Record within the last 20 years. Grassy woodland to the south of the Project Area may provide foraging habitat for this species.
Plegadis falcinellus	Glossy Ibis	-	R	2017	Within Australia, the Glossy Ibis is generally located east of the Kimberley in Western Australia and Eyre Peninsula in South Australia. The species is also known to be patchily distributed in the rest of Western Australia. The species is rare or a vagrant in Tasmania (Beehler *et al.* 1986; Coates & Bishop 1997; Marchant & Higgins 1990). The Glossy Ibis' preferred habitat for foraging and breeding are freshwater marshes at the edges of lakes and rivers, lagoons, flood-plains, wet meadows, swamps, reservoirs, sewage ponds, rice-fields and cultivated areas under irrigation. The species is occasionally found in coastal locations such as estuaries, deltas, saltmarshes and coastal lagoons (Marchant and Higgins 1993).	**Possible** - Record within the last 10 years. No suitable habitat within the Project Area and survey effort considered adequate.
Podiceps cristatus australis	Great Crested Grebe	-	R	2024	The Great Crested Grebe has been recorded in all Australian states and territories. It is found in coastal Queensland, throughout New South Wales, coastal South Australia, coastal and south-west Western Australia, and the Northern Territory. This species is distributed throughout Europe, Africa and Asia to Australasia, but not New Guinea. Favouring large deep open bodies of freshwater, the Great Crested Grebe is most commonly found inhabiting rivers, lagoons, lakes, swamps, reservoirs, saltfields, estuaries and bays (Birds SA 2025b).	**Possible** - Very recent record. However. No suitable habitat within the Project Area, bird surveys adequate to detect this species if present.

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
Polytelis anthopeplus monarchoides	Regent Parrot (eastern)	VU	V	May	The Regent Parrot (eastern) is restricted to a single population occurring in inland south-eastern Australia, in the lower Murray-Darling basin region of South Australia, New South Wales and Victoria. Primarily inhabits riparian or littoral River Red Gum forests or woodlands and adjacent Black Box woodlands. Nearby open mallee woodland or shrubland, usually with a ground cover of spinifex or other grasses, supporting various eucalypts, especially Christmas Mallee and Yellow Mallee, as well as Belah, Buloke or Slender Cypress Pine also provide important habitat for this subspecies. They often occur in farmland, especially if the farmland supports remnant patches of woodland along roadsides or in paddocks. The subspecies seldom occurs in more extensively cleared areas (DCCEEW 2011).	**Unlikely** - No records and Project Area outside the distribution of this species
Rostratula australis	Australian Painted Snipe	EN	E	2012/Likely	The Australian Painted Snipe occurs in shallow freshwater (occasionally brackish) wetlands, both ephemeral and permanent, such as lakes, swamps, claypans, inundated or waterlogged grassland/saltmarsh, dams, rice crops, sewage farms and bore drains, rushes and reeds, low scrub, open timber or samphire (DCCEEW 2013b).	**Possible** - Record within the last 20 years. However, no suitable habitat within the Project Area.
Spatula rhynchotis	Australasian Shoveler	-	R	2024	The Australasian Shoveler uses wide variety of wetlands but prefers large permanent lakes or swamps that have abundant cover (Morcombe 2021).	**Possible** - Recent record, no suitable habitat within the Project Area.
Stagonopleura guttata	Diamond Firetail	VU	V	2024/Known	Diamond firetails occur in eucalypt, acacia or casuarina woodlands, open forests and other lightly timbered habitats, including farmland and grassland with scattered trees. They prefer areas with relatively low tree density, few large logs, and little litter cover but high grass cover (DCCEEW 2023a).	**Highly Likely** - Recent record and suitable habitat within the Project Area (large amount of dead timber and logs).
Stictonetta naevosa	Freckled Duck	-	V	2024	The Freckled Duck is found primarily in the southeast and southwest of Australia, occurring as a vagrant elsewhere. It breeds in large temporary swamps created by floods in the Bulloo and Lake Eyre Basins and the Murray Darling System. It prefers permanent freshwater swamps and creeks with heavy growth of cumbungi (bullrushes), lignum or tea-tree. During drier times, it moves from ephemeral (not permanent) breeding swamps to more permanent waters such as lakes, reservoirs,	**Possible** - Very recent record. However, no suitable habitat within the Project Area.

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					farm dams and sewerage ponds. They generally rest in dense cover (Australian Museum 2024a).	
Tringa glareola	Wood Sandpiper	-	R	2024	The Wood Sandpiper uses well-vegetated, shallow, freshwater wetlands, such as swamps, billabongs, lakes, pools and waterholes. They are typically associated with emergent, aquatic plants or grass, and dominated by taller fringing vegetation, such as dense stands of rushes or reeds, shrubs, or dead or live trees, especially Melaleuca and River Red Gums Eucalyptus camaldulensis and often with fallen timber. They also frequent inundated grasslands, short herbage or wooded floodplains, where floodwaters are temporary or receding, and irrigated crops. They are also found at some small wetlands only when they are drying. They are rarely found using brackish wetlands, or dry stunted saltmarsh. Typically, they do not use coastal flats, but are occasionally recorded in stony wetlands. This species uses artificial wetlands, including open sewage ponds, reservoirs, large farm dams, and bore drains (Higgins and Davies 1996).	**Possible** - Very recent record. However, no suitable habitat within the Project Area.
Tringa nebularia	Common Greenshank	EN, Mi (W)	-	Likely	The Common Greenshank is found in a wide variety of inland wetlands and sheltered coastal habitats of varying salinity. It occurs in sheltered coastal habitats, typically with large mudflats and saltmarsh, mangroves or seagrass. Habitats include embayments harbours, river estuaries, deltas and lagoons and are recorded less often in round tidal pools, rock-flats and rock platforms. The species uses both permanent and ephemeral terrestrial wetlands, including swamps, lakes, dams, rivers, creeks, billabongs, waterholes and inundated floodplains, claypans and saltflats. It will also use artificial wetlands, including sewage farms and saltworks dams, inundated rice crops and bores (DCCEEW 2024c).	**Unlikely** - No historical records and survey effort considered adequate within area of suitable habitat.
Zanda funerea whiteae	Yellow-tailed Black Cockatoo	-	V	2024	The Yellow-tailed Black-Cockatoo inhabits a variety of habitat types, but favours eucalypt woodland and pine plantations. Small to large flocks can be seen in these areas, either perched or flying on slowly flapping wings (Birdlife Australia 2025b).	**Known** - Heard during field survey
Zapornia tabuensis	Spotless Crake	-	R	2024	Around Adelaide (inner and northern suburbs and northern coast), around Onkaparinga River and Aldinga and isolated records near Strathalbyn, Finniss, Willunga and Deep Creek	**Possible** - Recent record however not suitable habitat for this species

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					(DEH 2007). Other locations include nearby Clayton and Milang area, Lake Albert shoreline and Coorong NP. Found in well vegetated freshwater wetlands with rushes, reeds and cumbungi (Pizzey and Knight 2007). Will also frequent muddy areas, reedbeds or wetlands (DEH 2007).	within the Project Area. Survey effort considered adequate.
Zoothera lunulata halmaturina	South Australian Bassian Thrush	EN	R	2015/Known	The SA Bassian Thrush mostly inhabits damp eucalypt forest or woodland. Its habitat consists of densely forested areas and gullies, usually with a thick canopy overhead, a thick understory of small trees and tall shrubs, and leaf-litter below. However, birds have also been recorded breeding in exotic Monterey Pine plantations, and on Kangaroo Island within mature mallee eucalypt woodland. In much of the subspecies' range, suitable habitat is confined to creek lines or mallee swales where birds forage for worms among damp leaf litter. Damp habitats have been suggested to be particularly important in summer (DCCEEW 2015).	**Possible** - Record within the last 10 years. Habitat within the Project Area no suitable for this species.
MAMMALS						
Antechinus flavipes	Yellow-footed Antechinus	-	V	-	In South Australia, a small population occurs in the southern Mt Lofty Ranges, on the Fleurieu Peninsula. Is known to occur in a wide range of habitats, from tropical vine forests, swamps, stringybark forests and dry mulga country (ALA 2025d).	**Possible** - One BDBSA record (no date) suitable habitat may exist within the Project Area. This species is cryptic and may be difficult to detect.
Isoodon obesulus obesulus	Southern Brown Bandicoot (eastern)	EN	V	Likely	Southern Brown Bandicoots (eastern) are known to inhabit a variety of habitats including heathland, shrubland, sedgeland, heathy open forest and woodland and are usually associated with infertile, sandy and well drained soils, but can be found in a range of soil types. Within these vegetation communities they typically inhabit areas of dense ground cover. Species experts define suitable habitat for the species to be any patches of native or exotic vegetation, within their distribution, which contains understory vegetation structure with 50–80% average foliage density in the 0.2–1 m height range (DCCEEW 2023f).	**Unlikely** - No records and Project Area contains habitat that is too open for this species.
Pteropus poliocephalus	Grey-headed Flying-fox	VU	R	2020/Likely	The Grey-headed Flying-fox requires foraging resources and roosting sites. It is a canopy-feeding frugivore and nectarivore, which utilises vegetation communities including rainforests, open forests, closed and open woodlands, Melaleuca swamps	**Known** - Record within the last five years. It is likely that this species feeds on

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
					and Banksia woodlands. It also feeds on commercial fruit crops and on introduced tree species in urban areas (DCCEEW 2021a).	the large Eucalyptus trees within the Project Area.
Trichosurus vulpecula	Common Brushtail Possum	-	R	2025	Common Brushtail Possums are found in Eucalyptus and Sheoak woodlands. As arboreal animals, they make their nests (also known as dens) in tree hollows or other dark confined spaces such as hollow logs, dense vegetation or cork crevices (Government of South Australia, ND).	**Highly Likely** - Record dating this year. It is likely that this species feeds and nests within the large Eucalyptus trees within the Project Area.
REPTILES						
Aprasia pseudopulchella	Flinders Ranges Worm-lizard	VU	-	Likely	The Flinders Ranges Worm-lizard 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 (DEWHA 2008).	**Unlikely** - No records and Project Area does not contain any suitable habitat for this species.
Emydura macquarii	Macquarie River Turtle	-	V	2017	In South Australia, in the billabongs and channels of Cooper Creek, and also along the Murray River; also, introduced populations in the Adelaide city area (ALA 2025e).	**Possible** - records within the last 10 years Project Area contains suitable habitat for this species.
FISH						
Galaxias rostratus	Flathead Galaxias	CE	-	May	The flathead galaxias inhabits a variety of habitats including billabongs, lakes, swamps and rivers, with a preference for still or slow flowing waters. The species prefers schooling in midwater (TSSC 2016b).	**Unlikely** - No records and no suitable habitat for this species within the Project Area.
Nannoperca australis Murray-Darling Basin lineage	Southern Pygmy Perch (Murray-Darling Basin lineage)	VU	-	Likely	Southern Pygmy Perch prefer habitats in low-gradient waterways and floodplains with slow flowing or still water and aquatic macrophyte cover or wood at shallow depths, which may have little or no flow in summer. Found in the Murray-Darling Basin in three major regions being from the lowland to the upland zones, coastal river catchments in South Australia and Victoria, and coastal river catchments in northern Tasmania (DCCEEW 2021b).	**Unlikely** - No records and no suitable habitat for this species within the Project Area.

Scientific Name	Common Name	Conservation Status		Last Sighting (Year) / PMST Likelihood	Species Known Habitat Preference	Likelihood of Use for Habitat - Comments
		EPBC Act	NPW Act			
AMPHIBIANS						
Litoria raniformis	Southern Bell Frog	VU	V	May	In South Australia, there are three distinct groups of records of the Growling Grass Frog. One group is located in the far south-east of the state (to near Keith) and adjoining Victorian populations, one group along the Murray River from Victoria to the coast, and a small group in the Mt Lofty Ranges. This species is found mostly amongst emergent vegetation, including Typha sp. (bullrush), Phragmites sp. (reeds) and Eleocharis sp.(sedges), in or at the edges of still or slow-flowing water bodies such as lagoons, swamps, lakes, ponds and farm dams (DCCEEW 2024d). The Growling Grass Frog can be found floating in warmer waters in temperatures between 18–25°C.	**Possible** - No records, but suitable habitat does exist within the Project Area. This species is cryptic and may be difficult to detect.

Appendix 5

Scattered Tree Utilising Species

Common Name	Species Name	EPBC Act	NPW Act	SA Rating (MLR)	Resource Use	Habitat/Status
Australian Magpie	*Gymnorhina tibicen*	-	-	LC	P, N	r
Australian Raven	*Corvus coronoides*	-	-		P, N	w
Black-shouldered Kite	*Elanus axillaris*	-	-	LC	P, N	s
Blue-winged Parrot	*Neophema chrysostoma*	-	V	VU	P, H	w
Common Brushtail Possum	*Trichosurus vulpecula*	-	R	LC	H, N, F	w/r
Crimson Rosella	*Platycercus elegans*	-	-	LC	P, H, F	w/r
Diamond Firetail	*Stagonopleura guttata*	VU	V	VU	P, N	w
Eastern Shriketit	*Falcunculus frontatus frontatus*	-	R	RA	F	w
Elegant Parrot	*Neophema elegans elegans*	-	R	VU	P, H	w
Galah	*Eolophus roseicapilla*	-	-	LC	P, H	w/r
Grey Shrikethrush	*Colluricincla harmonica*	-	-	LC	F	w
Grey-headed Flying-fox	*Pteropus poliocephalus*	VU	R	RA	P, F	r
Jacky Winter	*Microeca fascinans fascinans*	-	-		P	w
Laughing Kookaburra	*Dacelo novaeguineae novaeguineae*	-	-	LC	P, H	w/r
Little Corella	*Cacatua sanguinea gymnopis*	-	-	LC	P, H	w/r
Little Eagle	*Hieraaetus morphnoides*	-	V	EN	P	w
Little Lorikeet	*Parvipsitta pusilla*	-	E	CR	P, H, F	w/s
Little Raven	*Corvus mellori*	-	-	LC	P, N	w/r
Magpielark	*Grallina cyanoleuca cyanoleuca*	-	-	LC	P, N	w/r
Maned Duck Australian Wood Duck	*Chenonetta jubata*	-		LC	H	s
Musk Lorikeet	*Glossopsitta concinna*	-	-	LC	P, H, F	w/s
Nankeen Kestrel	*Falco cenchroides cenchroides*	-	-	LC	P, N	w/r
New Holland Honeyeater	*Phylidonyris novaehollandiae*	-	-	LC	P, F	w
Pacific Black Duck	*Anas superciliosa*	-	-	RA	H	s
Peregrine Falcon	*Falco peregrinus macropus*	-	R	RA	P, H, N	w/r
Red Wattlebird	*Anthochaera carunculata*	-	-	LC	P, F	w/r
Regent Parrot (eastern subspecies)	*Polytelis anthopeplus monarchoides*	VU	V		P, H	w
Scarlet Robin	*Petroica boodang boodang*	-	R	VU	P	w
Sulphur-crested Cockatoo	*Cacatua galerita*	-	-	LC	P, H	w/r
Wedge-tailed Eagle	*Aquila audax audax*	-	-	LC	P, N	w
White-faced Heron	*Egretta novaehollandiae*	-	-	LC	P, N	s

Common Name	Species Name	EPBC Act	NPW Act	SA Rating (MLR)	Resource Use	Habitat/Status
Yellow-tailed Black Cockatoo	*Zanda funerea whiteae*	-	V	VU	P, H	w

Resource Use (Res Use): P=perching/roosting, N=nesting, H=using hollow for nesting/roosting, F=feeding
Habitat/status: s=seasonal (includes waterbirds using trees near seasonal wetlands, seasonal and nomadic species), w=woodland birds that occasionally use adjacent scattered trees, r=species that can reside in scattered trees

umwelt

P 1300 793 267 E info@umwelt.com.au W umwelt.com.au

NSW | ACT | WA | QLD | VIC | SA ABN 18 059 519 041